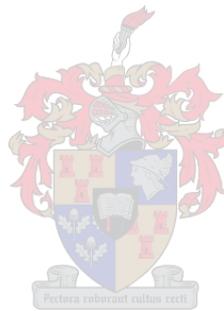


**An investigation into the adequacy of  
Cinque's functional theory as a framework for  
the analysis of adverbs in Afrikaans**

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**Thesis presented in partial fulfilment of the requirements for the degree of MA in  
Linguistics for the Language Professions**

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**December 2013**

## **Declaration**

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**Johan Smit**

**December 2013**

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## ABSTRACT

This study provides a description of Afrikaans adverbs within the framework of proposals set out by Cinque (1999). Previous analyses of adverbs in Afrikaans have generally been done within a non-generative framework (e.g. Oosthuizen 1964, Theron 1964). The aim of the study is to determine whether Cinque's functional head-based theory provides an adequate framework for the analysis of adverbs in Afrikaans. The main focus is therefore on the functional aspect of adverbs. However, alternative theoretical frameworks, namely those of Ernst (2002), Tenny (2000), and Holmer (2012), are also briefly described. The study is presented with the broad theoretical framework of Minimalist Syntax. Cinque's research procedure is outlined, starting with his analysis of adverbs in Romance languages and then as it is extended cross-linguistically. Here the focus is especially on the conclusions that Cinque draws with regard to the relative order of adverb types, and that of clausal functional heads. Adverbs in Afrikaans are subsequently analysed in the light of Cinque's findings. The main question addressed in this study, namely whether Cinque's hierarchies of adverb and functional category orders can be successfully applied to Afrikaans, is answered in the affirmative. Despite limitations in the diagnostic procedure, Afrikaans adverb and functional head orders seem to comply with Cinque's proposed hierarchies. That the facts of Afrikaans adverbs seem to comply with Cinque's functional theory regarding adverbs, provides support for his proposed framework and also provides further credence to his claims about a universal, cross-linguistic hierarchy of adverb-functional head order.

## OPSOMMING

Hierdie studie bied 'n beskrywig van Afrikaanse bywoorde binne die raamwerk van voorstelle van Cinque (1999). Vorige analyses van Afrikaanse bywoorde is grotendeels binne 'n nie-generatiewe raamwerk gedoen (bv. Oosthuizen 1964, Theron 1964). Die doel van die studie is om vas te stel of Cinque se funksionele hoof-gebaseerde teorie 'n toereikende raamwerk bied vir die analise van Afrikaanse bywoorde. Die klem val dus op die funksionele aspek van bywoorde. Alternatiewe teoretiese raamwerke, naamlik die van Ernst (2002), Tenny (2000) en Holmer (2012) word egter ook kortliks beskryf. Die studie word aangebied binne die breë teoretiese raamwerk van Minimalistiese Sintaksis. Cinque se navorsingsprosedure, beginnende met sy analise van bywoorde in Romaanse tale, en daarna soos uitgebrei na tale van ander families, word beskryf. Hierin is die fokus veral op die gevolgtrekkings waartoe Cinque kom rakende die relatiewe volgorde van bywoord-tipes en van funksionele hoofde in sinsverband. Afrikaanse bywoorde word dan in die lig van Cinque se bevindinge geanaliseer. Die hoofvraag wat in die studie aangespreek word, naamlik of Cinque se hierargieë van bywoord- en funksionele hoof-volgordes suksesvol toegepas kan word in Afrikaans, word positief beantwoord. Ondanks beperkings in die toetsingsprosedure, blyk dit dat die volgorde van bywoorde en funksionele hoofde in Afrikaans wel met Cinque se voorgestelde hierargieë ooreenstem. Die bevinding dat die feite van Afrikaans klop met die bewerings van Cinque se funksionele teorie van bywoorde, bied ondersteuning vir die oënskynlike toereikendheid van sy voorgestelde raamwerk, en verskaf verdere geloofwaardigheid aan sy voorstel van 'n universele hiërargie van bywoord-funksionele hoof- volgorde, oor verskillende tale heen.

## **ACKNOWLEDGEMENTS**

I would like to express thanks to the following:

My dear wife Anita, for her constant support, insightful comments, and computer wizardry;

Johan Oosthuizen, my supervisor, for his guidance, encouragement, help and many enjoyable discussions;

My Heavenly Father, for teaching me to relax and trust, when things got hectic.

Stellenbosch

September, 2013

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## Chapter 1

### INTRODUCTION

Adverbs represent a notoriously “difficult” category to account for. Jackendoff (1972:47) puts this point as follows:

- (1) In the literature of generative grammar, perhaps the least studied and most maligned part of speech has been the adverb. This is to some extent understandable, considering the variety of semantic and syntactic roles adverbs play in English. Adjectives submit fairly docilely ... a rather simple set of transformations suffices. Adverbs are more unruly, since the constructions they occur in are less homogeneous, and since their paraphrase relations are much more widely varied. Hence they are neglected in favour of more tractable constructions.

Decades after Jackendoff’s observations, the “adverb problem” still persists. This is clear from the following comments by Ernst (2002:1):

- (2) Nobody seems to know exactly what to do with adverbs. The literature of the last 30 years in formal syntax and semantics is peppered with analyses of the distribution or interpretation (or both) of small classes of adverbs but has few attempts at an overall theory; there have been popular proposals for other phenomena based crucially on assumptions about adverbial syntax that have little or no foundation; and almost everyone who has looked at the overall landscape has felt obliged to observe what a swamp it is.<sup>1</sup>

However, in recent literature several interesting new attempts have been made to come to terms with the challenging nature of adverbs, especially those by Cinque (1999) and Ernst (2002)<sup>2</sup>. These researchers propose vastly different solutions to the question of adverb

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<sup>1</sup> On a more positive note, Delfitto (2000:13) remarks that “it is fair enough to conclude that the inquiries within generative syntax in the course of the last thirty years have considerably enhanced our ability to formulate problems and options about the formal nature and role of adverbs in an intelligible and interesting way.”

<sup>2</sup> Another study, along similar lines to that of Cinque, is that of Alexiadou (1997).

distribution: Cinque advocates a functional approach, whereas Ernst approaches the phenomenon from a semantic perspective.<sup>3</sup>

In the current study an attempt is made to provide a description of Afrikaans adverbs within the framework of proposals set out by Cinque (1999). More specifically, the aim is to provide an answer to the following question:

- (3) Does Cinque's (1999) functional theory provide an adequate framework for the analysis of adverbs in Afrikaans?

Since Cinque's theory makes strong cross-linguistic predictions, the question posed in (3) is very much in the spirit of his investigation into the behaviour of adverbs. Moreover, as far as could be ascertained, an investigation of the grammatical<sup>4</sup> properties of adverbs in Afrikaans has not yet been attempted within the framework of generative grammar<sup>5</sup>, and certainly not within Minimalist Syntax (MS), the most recent theory of grammar within the generative approach.<sup>6</sup>

As suggested by the title of Cinque's work, *Adverbs and Functional Heads*, the main focus will be on the functional aspect of adverbs, rather than on strictly semantic features. However, in Chapter 3 brief attention will also be given to other frameworks – specifically Ernst (2002) and Tenny (2000), which both have a more semantic focus – in order to provide a broader theoretical background before narrowing down to Cinque's functional approach.

While Cinque's theory regarding adverb syntax raises many issues that are potentially interesting from a theoretical and a cross-linguistic perspective, the current study focuses on only one issue, namely whether the theory is compatible with the syntactic behaviour of adverbs in Afrikaans. The study is therefore not intended as a systematic critique of

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<sup>3</sup> These approaches are described in Chapter 3.

<sup>4</sup> Unless otherwise stated, the term "grammatical" is used in this study to refer to syntactic, morphological and semantic aspects.

<sup>5</sup> For non-generative studies of Afrikaans adverbs, see for example Oosthuizen (1964) and Theron (1964).

<sup>6</sup> For useful characterisations of MS, see e.g. Finch (2005:97), Hornstein et al. (2005), and Radford (2009). The core assumptions and devices of MS are set out in, amongst others, Chomsky (1995, 2000, 2001, 2004, 2005).

Cinque's empirical claims and theoretical proposals regarding the grammatical properties of adverbs. The aim is much more modest, namely to determine whether his proposals represent an adequate framework for describing the grammatical properties of adverbs in Afrikaans. A detailed investigation of the empirical and theoretical merit of Cinque's theory falls outside the scope of this study.<sup>7</sup>

While Cinque does apply his theory to a wide range of language families, including Germanic (1999:33), he does not specifically refer to Afrikaans. By focusing on Afrikaans, the present study therefore extends the scope of Cinque's ideas in a small way.

The grammatical properties of adverbs are discussed in Chapter 2. In Chapter 3 the frameworks for the analysis of adverbs put forward by Ernst (2002), Tenny (2000), and Holmer (2012), which represent alternatives to that of Cinque (1999), are briefly outlined. Chapter 4 provides a description of Cinque's (1999) theory. This theory forms the framework within which an analysis of Afrikaans adverbs is attempted in Chapter 5. The main findings of the study are summarised in Chapter 6, the concluding chapter.

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<sup>7</sup> In such an investigation, the merits of Cinque's approach to adverb syntax could also be compared with that of, for example, the adjunct theory put forward by Ernst (2002). The latter is briefly discussed in Chapter 3, but only by way of providing a larger context for Cinque's theory.

## Chapter 2

### ADVERBS AND ADVERBIAL EXPRESSIONS

#### 2.1 Introduction

As pointed out in Chapter 1, adverbs are difficult to classify. Jackendoff (1972:47) remarks that the category of adverbs has “traditionally been a catch-all term”. The suggestion is therefore that words which do not fit into other categories of word classes are relegated to adverb status. Quirk et al. (1972:267) also comment that “some grammarians have removed certain types of items from the class entirely and established several additional classes rather than retain these as subsets within a single adverb class.”<sup>1</sup> Despite these classificatory problems, however, the assumption of a grammatical category of “adverb” persists, and will also be adopted in this study.

The similarity between the terms “adverbs” and “adverbials” is also problematic. The distinction between these two terms will be clarified in the course of this chapter.

#### 2.2 Towards defining adverbs

McGregor (2009:328) defines an adverb as “a part-of-speech consisting of words that normally qualify a verb, indicating the manner in which an action was performed ..., the frequency of the event ..., or the time or location of an event”. Radford (2009:440) describes an adverb as “a category of word which typically indicates manner ... or degree”.<sup>2</sup>

Crystal (2003:13) defines an adverb as “a term used in the grammatical classification of words to refer to a heterogeneous group of items *whose most frequent function is to*

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<sup>1</sup> The existence of universal word classes, and specifically adverbs, is also disputed. See for example Evans and Levinson (2009:434), who remark that “Many languages lack an open adverb class, making do with other forms of modification”.

<sup>2</sup> Pinker (1994:473) describes adverbs as “One of the minor syntactic categories comprising words that typically refer to the manner or time of an action”.

*specify the mode of action of the verb* [italics added – JS].” The common denominator in each of the above definitions is the assertion that adverbs indicate “mode of action” or “manner”.

Fitting in the above definition of adverbs would be a word like *slowly* in the following sentence:

(1) Matilda lifted the hammer *slowly*.

However, a word like *very* is also commonly classified as an adverb, even though it modifies another adverb rather than a verb, as in the following example:

(2) Matilda lifted the hammer *very* slowly.

Also problematic in terms of conventional classification would be a (putative) adverb which modifies a preposition (Quirk et al. 1972:278), as in the following example:

(3) Matilda’s hammer propelled the nail *right* through the plank.

Both (2) and (3), however, can still be reconciled with Crystal’s definition of adverbs as words which “specify the mode of action of the verb”, in that *very* and *right* both serve to qualify more precisely the property which the adverb/adverbial ascribes to the action expressed by the verb. In the case of (2) *very* modifies the degree of “slowness” of the adverb; in (3) *right* intensifies the degree of “throughness” of the adverbial PP.<sup>3</sup>

Some adverbs, however, appear in sentences where there is no verb expressing overt action, and where they serve to modify an adjective, as for example in:<sup>4</sup>

(4) Matilda was *quite* shocked.

At a fundamental level, adverbs can be divided into two types, namely those which fit into a lexical/substantive category, and those which belong to a functional category. Lexical

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<sup>3</sup> The distinction between adverbs and adverbials is addressed in section 2.3.

<sup>4</sup> For more adverb types which are problematic in terms of classification, cf. Quirk et al. (1972:271-86).

category adverbs are ones with significant semantic content; functional category adverbs are words which provide essentially grammatical information. Lexical adverbs have strong descriptive content, whereas functional adverbs mark grammatical properties/features (Radford 2009:2). The difference between the two can be illustrated by comparing a lexical adverb like *slowly* with a functional adverb like *very* in (2). It is clear that *slowly* has a distinct independent descriptive content, but that *very* in contrast lacks such independent descriptive content. Instead, *very* has an intensifying (modifying) effect on another word, in this case the adverb *slowly*. A serious dichotomy thus exists at the level of fundamental typology within the ranks of adverbs.

Van der Auwera (1994:41) remarks that none of the stereotyped properties of adverbs, like invariability<sup>5</sup>, verb modification, optionality and position is a necessary condition for membership of the adverb category; nevertheless, “at least some of the conditions ... may well make sense in terms of prototypicality”. Haser and Kortman (2006:68-9) echo this view, suggesting that word classes should be seen as having a prototypical structure, with the main members sharing certain syntactic and semantic properties, while failure of an item to meet all the prototypical properties does not necessarily exclude it from membership.<sup>6</sup>

Despite the complexity at the classificatory level, Crystal (2003:14) asserts that “verb modification has traditionally been seen as central.”<sup>7</sup> Section 2.6, which deals with the taxonomy of adverbs, will address the classification of adverbs in more detail.

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<sup>5</sup> For example, an adverb like *carefully* is invariable in the sense that its shape does not vary depending on case, number, and gender (Van der Auwera 1994:39).

<sup>6</sup> Haser and Kortman (2006:68) remark that a definition of adverbs along the lines of Huddleston and Pullum (2002:563) seems particularly promising, with “the most important defining property of adverbs” being captured as follows: “Adverbs characteristically modify verbs and other categories except nouns.” According to Haser and Kortman this definition is an improvement on the traditional textbook definition – which states that adverbs modify verbs, adjectives, or other adverbs – because it also covers elements that modify larger syntactic units such as clauses (e.g. *perhaps*). Furthermore, it specifically excludes nouns as the only category that cannot be modified by adverbs and thus allows a relatively neat distinction between adjectives and adverbs. Note that this definition does allow for adverbs that modify noun **phrases**, as opposed to mere nouns.

<sup>7</sup> Notwithstanding its reductionist quality, this assertion is still problematic. Van der Auwera (1994:40) remarks that “even with simple manner adverbs there are reasons to think that the adverb does not merely modify a verb, but rather a verb phrase or an entire clause”.

### 2.3 The distinction between adverbs and adverbials

A distinction needs to be made between the terms “adverb” and “adverbial”, as the indiscriminate usage of these terms can be confusing. Crystal (2003:13-4) remarks that:

- (5) one can relate adverbs to such questions as *how*, *where*, *when* and *why*, and classify them accordingly, as adverbs of ‘manner’, ‘place’, ‘time’, etc.; but as soon as this is done the functional equivalence of adverbs, adverb phrases, prepositional phrases, noun phrases, and adverb clauses becomes apparent ... The term adverbial is widely used as a general term which subsumes all five [of the above – JS] categories.

The term “adverb” refers to a word class or part of speech. An adverb phrase (AdvP) is a phrase with an adverb as its head. An adverbial, in contrast, is a part of clause structure, with a similar status to other clause constituents such as subject and object (Crystal 2003:14).

Cinque (2004:683), describes an adverb, and by extension its phrasal projection AdvP, as “a *syntactic* category with specific adverbial function”. Adverbials, on the other hand, are XPs of any syntactic category, such as PP, DP, AP, QP or CP, “functioning as clausal modifiers and subject to partially different licensing conditions” (Cinque 2004:683).<sup>8</sup>

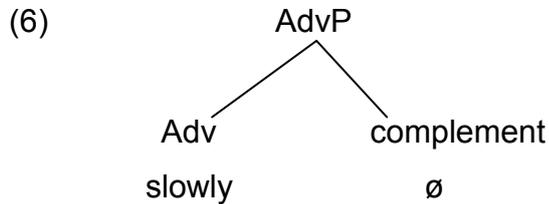
Ernst (2002:7-8) is also careful to circumscribe terminology in this regard, describing an adverb as an “adverbial of the syntactic category Adv”, while an adverbial is described in semantic terms as an “adjunct typically taking a Fact-Event Object (FEO) (proposition/event) or a time interval as its argument” (Ernst 2002:7). In other words, although the adverbial does not form part of the argument-predicate structure of the clause, as an adjunct it does exhibit its own independent propositional structure in the sense that it can take arguments such as an FEO or a time interval.

In short, then, the term “adverbial” is used as an umbrella-term for any word/phrase/clause with the functional parity of an adverb. In contrast, the term “adverb” specifically refers to a

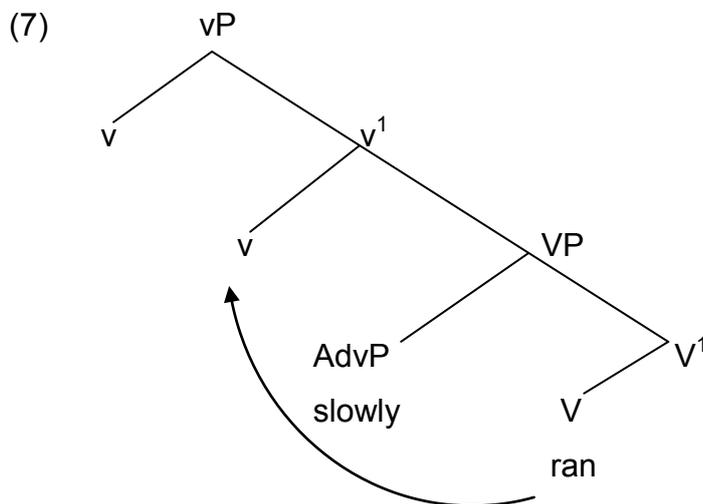
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<sup>8</sup> Crystal (1997:222) characterises licensing conditions as follows: “every element in a well-formed structure must be licensed in one of a small number of ways. For example, an element that assigns semantic roles is licensed if it has recipients in appropriate syntactic positions; a syntactically defined predicate is licensed if it has a subject”.

particular word class in traditional grammar, one which heads an AdvP in modern phrase-oriented syntactic approaches. Such an AdvP, for example one containing the typical manner adverb *slowly*, would have the structure in (6), with the adverb heading the phrase and a potential complement position that can be filled by, for example, a PP.



The derived position of a typical manner AdvP, as in *He ran **slowly***, can be represented as follows in a framework where the VP forms part of a so-called light verb shell:<sup>9</sup>



In (7) the lexical verb *ran* is raised towards an (agentive) light verb, so that the adverb occurs in a derived post-verbal position; based on the pre-raising configuration, however, the adverb still takes scope over the verb).

As stated in the introduction, the focus in this study is specifically on adverbs (AdvPs), and not on adverbials in general.

<sup>9</sup> Cf. e.g. Radford (2009:350-1).

## 2.4 Grammatical properties of adverbs

Given the difficulties in providing an adequate definition of adverbs, it is not surprising that their identification also often poses problems. In this regard, it is useful to consider the morphological, semantic, functional and syntactic properties of adverbs. While semantic and functional properties are closely related, they will be dealt with separately below. The distributional properties of adverbs will be discussed under the more general heading of “syntactic properties”.

### 2.4.1 Morphological properties

Huddleston and Pullum (2002) claim that “Adverbs differ from nouns, verbs, and adjectives in that the great majority of them are morphologically complex: there are relatively few adverbs with simple bases like *as*, *quite*, *soon*”.

In traditional grammars of English, adverbs are usually described as words which typically end on *-ly*. Quirk et al. (1972:267) state that “the most common characteristic of the adverb [in English – JS] is morphological”; the majority of adverbs are derived by adding the derivational suffix *-ly* to an appropriate adjective, e.g. *quickly*. However, if the adjective ends in *-ic*, the suffix is normally expanded into the form *-ally*, e.g. *scenically* (Quirk et al. 1972:1007).

The bound morphemes *-ly* and *-ally* are not the only ones by means of which adverbs can be derived in English. The suffixes *-wise* and *-wards* are also used in a limited number of cases, e.g. *clockwise* and *backward(s)* (Quirk et al. 1972:267,461,1007). Hyphenated additions such as *-style*, *-fashion* and *-like* are also used to form adverbs in cases such as *cowboy-style*, *peasant-fashion* and *cowboy-like* (Quirk et al. 1972:461).

Still, many adverbs in English are not derived in the above manner (Quirk et al. 1972:267), e.g. *soon*, *later*, *early*, *then*, *there*. In these cases, the adverbs cannot be analysed as having been morphologically derived from a particular adjective, and as such are sometimes termed “pure adverbs” (Bussman 1998:8).

While many adjectives provide the base from which adverbs are derived, some do not allow such a process, e.g. the adjective *old* does not allow *-ly* suffixation, as in *\*oldly*. For

some adjectives, therefore, there is no corresponding adverb form; in such cases the adjectival form also often serves as an adverb (Quirk et al. 1972:237), as in:

- (8) a. He always talks *big*. (informal)  
 b. They are running *fast*.

Quirk et al. (1972:237) state that in many cases the adjectival form and the corresponding adverb form created by *-ly* suffixation, “can be used interchangeably, with little or no semantic difference, except that some people prefer the adverb form”, e.g. *He spoke **loud** and **clear*** instead of *He spoke **loudly** and **clearly***.

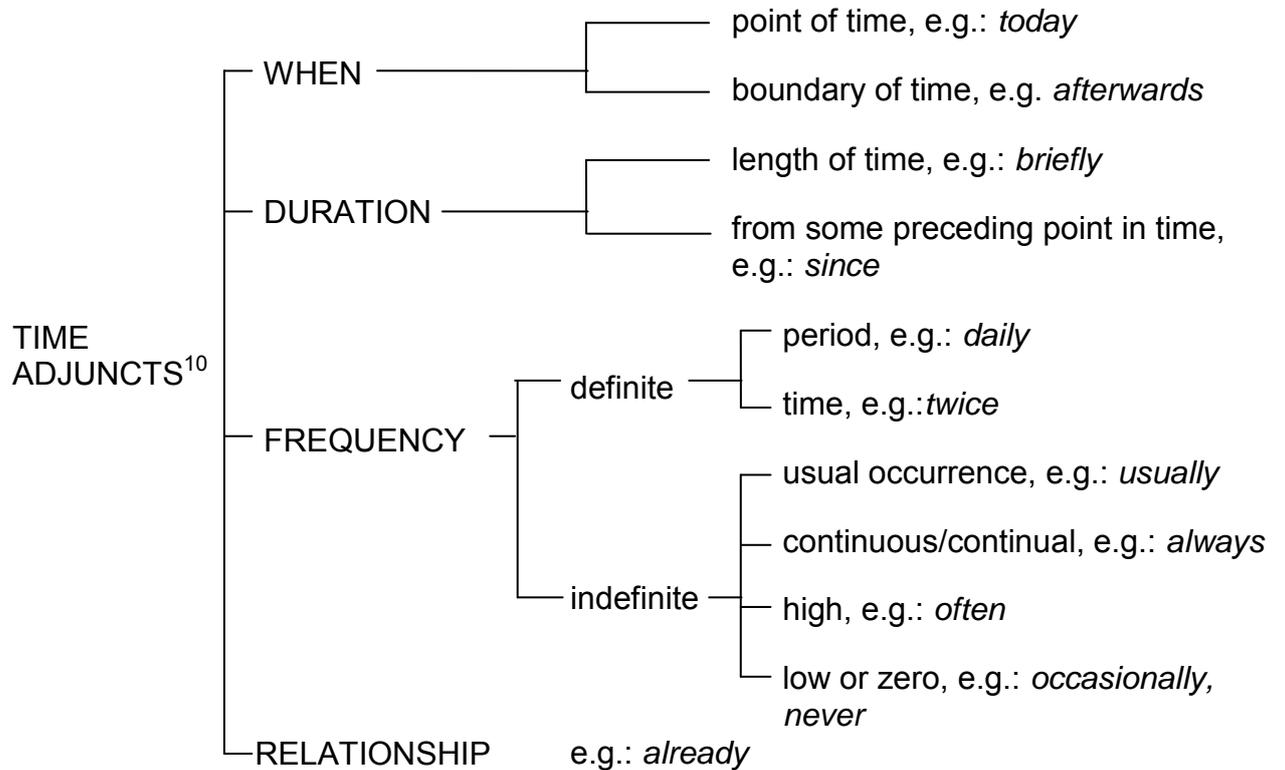
Another aspect of adverb morphology in English involves their inflection for degrees of comparison. For a few adverbs, none of which are formed by adding the *-ly* suffix, the inflected forms used for comparison are the same as those for adjectives, e.g. *fast, faster, fastest* (Quirk et al. 1972:294). As with adjectives, there is a small group of comparatives and superlatives formed from different stems, i.e. irregular forms such as *well, better, best* (Quirk et al. 1972:294). Most adverbs ending on *-ly* employ the periphrastic equivalent *more ...* and *most ...* for the comparative and superlative form respectively (Quirk et al 1972:286), e.g. *more gracefully, most gracefully*.

#### 2.4.2 Semantic criteria

A comprehensive analysis of the semantic characteristics of adverbs is beyond the scope of this study; instead, relevant samples will be provided to give a rough indication of the dynamics involved in such a venture. The adverb taxonomy in section 2.6 provides a more detailed overview, as such taxonomies are to a large extent based on semantic criteria.

Adverbials in general, and adverbs more specifically, may be placed in semantic categories such as time, place and manner (Quirk et al .1972:743). These in turn can be divided into further semantic classes and subclasses, as the following diagram of “time” adverb classes and subclasses from Quirk et al. (1972:482) illustrates:

(9)



As shown in (9), the semantic category of “time” adverbs can be divided into subclasses of increasing semantic refinement. Such classes and subclasses are not rigidly fixed and are under constant revision. Currently, the driving force for such revision is the MS agenda of greater economy and simplicity of theory.<sup>11</sup>

Quirk et al. (1972:459) assert that manner adverbs constitute by far the largest group. Some adverbs express a semantic blend of manner together with some other effect, as in e.g. *He fixed it **perfectly***, where the adverb expresses aspects of both manner and result (Quirk et al. 1972:462).

In traditional grammar, three basic classes of adverbs functioning as clause constituents are identified on the basis of semantic considerations (Quirk et al. 1972:268). These are adjuncts, disjuncts and conjuncts. Semantically, adjuncts are integrated to some extent within the structure of the clause<sup>12</sup>, e.g. *They are waiting **outside**; **Proudly**, he showed his*

<sup>10</sup> Quirk et al. (1972), in keeping with their approach to adverb syntax, use the term “adjuncts”. See more in this regard in section 3.2.

<sup>11</sup> Cf. Ernst (2002: 9), and also Hornstein et al. (2005:8).

<sup>12</sup> Specific conditions are elaborated in Quirk et al. (1972:269).

*diploma to his parents*. Disjuncts and conjuncts, in contrast, are not integrated within the clause. From a semantic perspective, disjuncts express an evaluation of the content of what is being said, either with respect to the form of the communication or its content, e.g. **Briefly**, *there is nothing I can do about it*; *She **wisely** didn't attempt to apologise* (Quirk et al. 1972:270). Semantically, conjuncts have a connecting function in that they indicate the relationship between what is being said, and what has been said before, e.g. *All our friends are going to Paris this summer. We, **however**, are going to London* (Quirk et al. 1972:270).<sup>13</sup>

### 2.4.3 Functional properties

The functional identity of adverbs has already been touched upon in section 2.1, where it was noted that “the most frequent function [of adverbs – JS] is to specify the mode of action of the verb” (Crystal 2003:13), and that “verb modification has traditionally been seen as central” (Crystal 2003:13). It was moreover observed that many adverbs do not fit neatly into this description since they can also modify an adjective or another adverb (Quirk et al. 1972:270), e.g. *They are **quite** happy*, *She drives **too** quickly*. Adverbs can also modify an ADV+ADV combination, as in:

(10) They play so very well

or an ADV+ADV+ADJ combination as in:

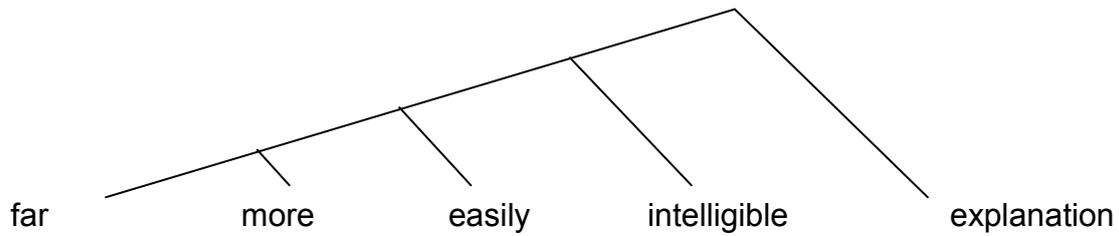
(11) He gave a *far* more easily intelligible explanation.

Using the above example, Quirk et al. (1972:270) demonstrate that there exists a hierarchy of modification, as represented in (12):

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<sup>13</sup> Conjuncts differ from coordinators in that they can be preceded by a coordinator, as in: *We paid him a very large sum, and **so** he kept quiet about what he saw* (Quirk et al. 1972:271).

(12)



In this modifier function the adverb always pre-modifies, that is to say, it comes before the adjective. An exception in this regard is *enough* which as an adverb can only post-modify, e.g. *He is stupid **enough** to do it* (Quirk et al. 1972:270).

Adverbs can also function as sentence modifiers (Crystal 2003:14), as in: ***Frankly**, I'm not mad about the idea*. Here the adverb modifies not only a verb/adjective/adverb, but the semantic complex of the whole sentence.

Another possible function of adverbs is that of sentence connector (Crystal 2003:14), where the adverb links up with the logic of a previous sentence/clause, e.g. *(It's raining hard.) **However**, I'm still going out for a jog*.

Other stray items, differing in function, have also traditionally been included in the category of adverb, e.g. intensifiers such as *very* and negative particles such as *not* (Crystal 2003:14).<sup>14</sup>

<sup>14</sup> Both of these are often re-classified as distinct word classes (Crystal 2003:14). Greenbaum (2000) lists the following thirteen functions of AdvPs: (i) premodifier of an adjective, e.g. *We're **far** too close to it*; (ii) premodifier of an adverb, e.g. *you need to have your teeth **extremely** thoroughly cleaned*; (iii) adverbial, e.g. *Refunds of fees are not **normally** available*; (iv) subject predicative, e.g. *At least we're **outside***; (v) object predicative, e.g. *Shall I move these **away***; (vi) premodifier of a preposition, e.g. *But I have a feeling they might be **right** by the door*; (vii) premodifier of a pronoun, e.g. *When I look around at my friends, **virtually** all of them seem to have got careers*; (viii) premodifier of a determiner, e.g. *Everybody knows that the results in fact have **absolutely** no meaning*; (ix) premodifier of a numeral, e.g. *The chaps **around** forty to forty-five are all called John*; (x) premodifier of a noun phrase, e.g. *This is really **quite** a problem I imagine*; (xi) postmodifier of a noun phrase, e.g. *Your friend **here** does she doodle a lot*; (xii) postmodifier of an adjective or adverb, e.g. *Well right that's fair **enough** then, And oddly **enough** it's not only outsiders who ask it*; (xiii) complement of a preposition, e.g. *Oh I should have thought he'd've had one before **now***.

#### 2.4.4 Syntactic properties

Tenny (2000:290) claims that “the syntactic distinction between sentence-level and verb phrase-level adverbs is generally accepted by syntacticians.” In other words, some adverbs affect the meaning of the whole sentence, while others only modify the verb, as shown in (13).

- (13) a. *Frankly*, I couldn't care less. (sentence level)  
 b. Johnny ate the hamburger *quickly*. (verb phrase level)

The fact that adverbs can occupy a variety of structural positions is one of the factors which complicate their syntactic analysis, for example:

- (14) a. He *often* phones his mother.  
 b. He phones his mother *often*.

Quirk et al. (1972:268) assert that “there are two types of grammatical functions that characterise the traditional adverb”. These functions are those of (i) clause constituent<sup>15</sup> and/or (ii) modifier of adjective or adverb. An adverb need only conform to one of the above criteria.

In terms of the clause constituent function, the adverb functions as an adverbial constituent distinct from subject, verb, object and complement. In this role the adverb is normally an optional element, and therefore peripheral to the structure of the clause (Quirk et al. 1972:268).<sup>16</sup> Relative to each other, there can also be differences in the way such adverbs function as a clause constituent, especially with regard to their position and their relationship to other constituents of the sentence (Quirk et al. 1972:268).

Different types of adverbs can occur in various positions in the clause. Some adverbs can only appear in one position (Quirk et al. 1972:268) in a given sentence while others have

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<sup>15</sup> “Clause constituent” includes cases where the adverb modifies (i) the clause, and (ii) the verb.

<sup>16</sup> Van der Auwera (1994:40) argues that adverbs are not always optional, on the basis of examples such as *John lived here*, in which *here* is obligatory; *My shirt washes easily*, where the verb *washes* requires a manner adverb.

more than one potential placing, as illustrated by the contrast between (15) and (16) below:

- (15) a. Maximillian is *quite* a good boy.  
 b. \*Maximillian is a good boy *quite*.
- (16) a. Maximillian *frequently* loses his pencils.  
 b. Maximillian loses his pencils *frequently*.

As shown in (15) the adverb *quite* is normally restricted to one possible position in the sentence<sup>17</sup>, whereas *always* has at least two possible positions, as in (16).

Jackendoff (1972:49) states that “there are three basic surface positions in a sentence in which a *-ly* adverb can occur”. These are “initial position”, “final position without intervening pause”, and “auxiliary position, i.e. between the subject and the main verb”.

Adverb distribution is closely linked with their mobility. The term “mobility” refers to the ability of words to take up various positions in a clause. This raises the issue of whether adverbs express different meanings in different positions. It is not immediately clear, for example, whether *stealthily* in (17a) below gives a different meaning to the sentence as compared to its use in (17b).

- (17) a. The ginger cat has *stealthily* been creeping up on the grey mouse.  
 b. The ginger cat has been creeping up on the grey mouse *stealthily*.<sup>18</sup>

Radford (2009: 350-1) illustrates how adverb order variation can subtly change meaning, using the following sentences:

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<sup>17</sup> Although the sentence *Maximillian is a quite good boy* is also acceptable, the point here is that *quite* needs to be positioned to the left of the adjective. In *quite a good boy* the question is whether *quite* is not modifying the whole nominal expression *a good boy*, rather than just the adjective *good*. Cf. also *He is quite a good man*, where *quite* also modifies the whole DP.

<sup>18</sup> In (17a) the scope of *stealthily* is smaller, only over the predicate part (VP); moreover, in (17a) the proximity of *stealthily* to the auxiliary *has* seems to place somewhat more emphasis on the aspectual aspect. In (17b) *stealthily* takes scope over the whole sentence.

- (18) a. They will *gently* roll the ball down the hill.  
 b. They will roll the ball *gently* down the hill.

According to Radford (2009:351), (18a) “means that the action which initiated the rolling motion was gentle”, whereas (18b) “means that the rolling motion itself was gentle”. The relevant difference in terms of adverb placement between (18a, b) seems to be that in (18a) the adverb *gently* is merged into the structure at a later stage in the derivation, i.e. after vP formation. Thus, when the verb *roll* adjoins to the light verb *v*, the adverb is not yet part of the structure. In the case of (18b), *gently* merges with the verb prior to vP formation, consequently when the verb *roll* raises to the *v* it is above the adverb.

Related to issues of distribution and mobility, is that of scope. This term refers to the “stretch of language affected by the meaning” (Crystal 2003:407) of, in this context, the adverb under discussion. In other words, the domain of semantic influence of an adverb can differ according to its position in the clause.<sup>19</sup>

According to Radford (2009:246), the distribution of certain types of adverbs is thematically determined.<sup>20</sup> According to this view, an adverb like *deliberately* for example can only be associated with an AGENT argument, as illustrated below (Radford 2009:246):

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<sup>19</sup> With regard to the potential ambiguity of adverbs in certain positions, Radford (2009:351) suggests that in the case of examples such as *They will roll the ball down the hill gently*, where the adverb appears at the end of the sentence, the adverb can be adjoined to and spelled out to the right of either the V-bar or the v-bar (as in (18a, b)), “so correctly predicting that the sentence is subtly ambiguous”. This is based on the assumption that “adjuncts” can be spelled out either to the left or the right of the constituent they adjoin to (Radford 2009:351).

<sup>20</sup> Using this insight together with a light verb analysis (Radford 2009:162, 465), Radford (2009:351) also accounts for the non-reversibility of certain adverb pair orders, as in:

- (i) He had *deliberately* rolled the ball *gently* down the hill.  
 (ii) \*He had *gently* rolled the ball *deliberately* down the hill.

Radford (2009:351) argues that *deliberately*, due to its semantic qualities, can only be an adjunct to a projection of an agentive verb. On the basis of the assumption that the light verb is a causative verb requiring an AGENT subject, the contrast between (i) and (ii) can be accounted for straightforwardly. In (i) *deliberately* is contained within a vP headed by a null agentive light-verb; however, in (ii) the adverb *deliberately* is contained within a VP headed by the non-agentive lexical verb *roll*.<sup>20</sup> Adverbs like *deliberately* can therefore adjoin to a v-bar headed by an agentive light verb, but not to V-bar. This explains why the adverb order of (i) is acceptable, while that of (ii) is not.

- (19) a. *John* (= AGENT) **deliberately** rolled the ball down the hill.  
 b. \**The ball* (= THEME) **deliberately** rolled down the hill.

Ernst (2002:10-11) cryptically remarks that there is substantial evidence indicating that morphological factors influence the distribution of adverbs, for example that functional class adverbs tend to be “lighter”. By this he seems to mean that the “morphological lightness” of functional adverbs plays a role in adverb distribution.

The variation in distributional characteristics of adverbs is a central aspect of the “adverb problem” mentioned in Chapter 1.

## 2.5 Taxonomy of adverbs

According to Tenny (2000:287), “the literature on adverbs demonstrates substantial agreement on some basic adverb taxonomy”.<sup>21</sup> Ernst (2007:1009), on the other hand, states that “precise classification of these adverbs [speech-act, epistemic, evaluative, subject-oriented and evidential adverbs – JS] differ, depending on the author.” There is therefore agreement on basic adverb classes, but less so at the level of the more “unusual” classes.

Since adverbs do not appear to form a unified class, it is necessary to establish accurate taxonomies in order to gain a better understanding of their grammatical properties (Tenny 2000:285). A central issue in this regard is the “relatively free distributional patterns of different kinds of adverbs” as compared to other word classes (Tenny 2000:285).

Jackendoff (1972, in Tenny 2000:287) identifies the following four adverb classes on the basis of semantic considerations.<sup>22</sup>

- (20) a. speaker-orientated adverbs, e.g. *frankly, unfortunately*;  
 b. subject-orientated adverbs, e.g. certain uses of adverbs like *carefully, clumsily*;  
 c. adverbs of manner, time or degree, e.g. *eloquently, infrequently, completely*;  
 d. focusing adverbs, e.g. *merely, utterly*.

<sup>21</sup> The discussion in this section is largely based on Tenny’s (2000:287-8) overview of adverb taxonomy.

<sup>22</sup> This information referred to by Tenny is spread out in Jackendoff (1972:49-72).

The speaker-oriented adverbs introduce information relating to the speaker, as in *Frankly, I am under a lot of stress at the moment*. Subject-oriented adverbs introduce information concerning the subject of the sentence, e.g. *Cleverly, Michael remained silent on the issue*. The members of the third class, adverbs of manner, time and degree, are self-explanatory, whereas the fourth class, focusing adverbs, requires a brief clarification. This class comprises words like *merely* and *utterly* which “require little if anything in terms of content, since their function is only to impose a focus-presupposition on some part of that content” (Ernst 2002:326). According to Jackendoff (1972:71), words such as *merely* and *utterly* do not fit into the syntactic structures which can accommodate the preceding three classes, which means that they warrant a separate category.

In addition to Jackendoff’s fourfold taxonomy, other more peripheral classes, such as relational<sup>23</sup> and linking adverbs, have been identified. Bartsch (1976:101) describes the semantic functions of relational adverbials as establishing a relationship between circumstances or events which are in nominalised forms, e.g. *John arrived during the show*. Linking adverbs are linked to conjuncts (Greenbaum 1969:35-80), i.e. they represent conjunctive adverbs rather than conjunctions.<sup>24</sup> Conjuncts can be divided into many sub-classes including those indicating an inventory of what is being said, e.g. *secondly* or *lastly*.<sup>25</sup> Greenbaum (1969:35), however, cautions that “several conjuncts belong to more than one semantic class”.

Travis (1988, in Tenny 2000:288) reduces Jackendoff’s (1972) taxonomy by drawing a basic distinction between adverbs licensed by event features in INFL<sup>26</sup> and adverbs licensed by manner features in the head verb. The basic taxonomic distinction here is therefore twofold, and is syntactically rather than semantically motivated. Adverbs licensed

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<sup>23</sup> On close inspection, the reference here is mostly to adverbial constructions, which fall outside the scope of this study, although some adverbs are mentioned. This category can be subdivided into classes such as conditional, conversive and adversative relations, which all mainly apply to adverbials.

<sup>24</sup> Cf. Greenbaum (1969:29).

<sup>25</sup> Cf. Greenbaum (1969:35-7); Quirk et al. (1972:526-32).

<sup>26</sup> According to Radford (2009:462), INFL is “(a) category devised by Chomsky (1981) whose members include finite auxiliaries (which are INFLected for tense/agreement) and the INFINitival particle *to*. INFL was ... replaced by T (= tense marker) in later work”.

by INFL<sup>27</sup>, on the one hand, include subject-sensitive adverbs<sup>28</sup>, epistemic adverbs<sup>29</sup>, and adverbs that modify an entire event, as in **Quickly** *John will be arrested by the police* (Tenny 2000:288). Adverbs licensed by the head verb, on the other hand, include agent-sensitive adverbs<sup>30</sup> and manner adverbs.

Rochette (1990, in Tenny 2000:289) proposes a refinement of the Jackendoff/Travis classes by means of the semantic selectional properties of adverbs. In terms of this proposal, “various types of adverbs may select for propositions, events, or actions; and this interacts with syntax to produce the various adverbial behaviours” (Tenny 2000:289). In this expansion of the adverb taxonomy, the nature of the clause is therefore seen as crucial to making predictions about adverb behaviour.

A further classification system, regarded as influential by Haser and Kortman (2006:66-7), is the sixfold adverb subclass division of Ramat and Ricca (1994:307-8), shown in (21).

- (21)
- a. predicate adverbs<sup>31</sup>
  - b. degree adverbs<sup>32</sup>
  - c. sentence adverbs<sup>33</sup>
  - d. setting adverbs of space and time<sup>34</sup>

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<sup>27</sup> Cf. Radford (2009:462).

<sup>28</sup> For example, subject-orientated adverbs, which modify the syntactic subject (cf. (20b) above), as in **Clumsily** *John spilled the beans* (Tenny 2000:288).

<sup>29</sup> That is, adverbs like *probably* which modify the certainty-level of an event, as in *Anne will **probably** cry when she sees her results*.

<sup>30</sup> That is, adverbs that modify the agent’s action in the sentence, as in *John will **quickly** be arrested by the police* (Tenny 2000:288).

<sup>31</sup> Ramat and Ricca (1994:307) state that “predicate adverbs” are closest to the etymology of “ad-verb”, as they can be seen as “verb or verb-phrase modifiers”.

<sup>32</sup> According to Ramat and Ricca (1994:307), degree adverbs “have the function of modifying a modifier (namely an adjective or another adverb): *very, extremely, etc.*”

<sup>33</sup> Ramat and Ricca (1994:307-8) state that sentence adverbs form a broad category of elements which are semantically and functionally very heterogeneous. These would include “domain adverbs”, and adverbs commenting on the “truth-value” of the sentence, from the speaker’s viewpoint.

<sup>34</sup> These are adverbs such as *today, now, here* and *recently*. Adverbs of this subclass are similar to sentence adverbs, but have certain unique features; see Ramat and Ricca (1994:308).

- e. focalizers<sup>35</sup>
- f. text adverbs<sup>36</sup>

According to Tenny (2000:289), Ernst (1997) claims that the grammatical behaviour of adverbs can be predicted to a large degree on the basis of the interaction of lexical scope properties with syntactic principles; more specifically, “adverbs may select for Fact/Event objects, including ... speech acts, facts, propositions, events, and specified events”.

Tenny (2000:289) remarks that all of the above approaches share the idea that certain correlations between semantic and syntactic composition together determine the grammatical behaviour of particular adverbs.

The distribution of adverbs is explained in a different way by Cinque (1999). Based on cross-linguistic research, he proposes that every bona fide adverb position reflects the existence of a distinct functional projection, which means that the distributional properties of adverbs are syntactically determined (Cinque 1999:v). An accurate taxonomy is therefore critical, as this would provide supporting evidence for any claim about the order of functional heads. In fact, Cinque’s “universal hierarchy of clausal functions” (Cinque 1999:106) ultimately determines his taxonomy of the various classes of adverbs (AdvPs), which he claims to be ordered in a rigid sequence that is the same across all languages.

Tenny (2000:290) focuses on adverb taxonomy in relation to event structure. She is especially concerned with event structure close to the verb, i.e. verb phrase adverbs. Tenny (2000:286) distinguishes between measure adverbs, restrictive adverbs and what she calls “*almost adverbs*”<sup>37</sup>; she furthermore claims that two aspects of event structure must be taken into account in adverb taxonomy, namely “the measure or path” and “the

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<sup>35</sup> Ramat and Ricca (1994:308) state that focalizers are adverbs such as *only, also, even, purely, exclusively*. According to them, focalizers are “highly deviant items among traditional adverbs, since they typically modify (have scope on) NPs rather than VPs or sentences.”

<sup>36</sup> The term “text adverbs”, according to Ramat and Ricca (1994:308), refers to items that function very similarly to conjunctions. These are words like *firstly, consequently* and *nevertheless*.

<sup>37</sup> That is, adverbs of measurement or degree that modify the end state of the core event in the verb’s lexical meaning, e.g. *Sam closed the door **partway*** (Tenny 2000:296). If it contains a measure or path, the final state for the core event is a gradable predicate, allowing a degree modification.

core event”.<sup>38</sup> According to Tenny (2000:280), lexical semantic verb classes can be defined on the basis of whether they contain these aspects of event structure. Classes of adverbs may be distinguished by whether they interact with these elements, or in her terminology, whether these elements are “visible” or “opaque” in relation to the adverb (Tenny 2000:286).

One of the most comprehensive adverb classifications is that of Ernst (2002), who incorporates both traditional views and more recent insights regarding adverb taxonomy into his schema. Ernst (2002:8-9) remarks that there are innumerable ways to classify adverbs, and asserts that the consensus in current formal syntax is that the most important factors in distribution are semantic. He (2002:9) regards his classification schema as “an informed working hypothesis about the semantic distinctions that are most relevant for predicting syntactic generalisations, to be revised as research proceeds”. Ernst’s classification, based on the way in which adverbs combine semantically with a Fact-event object (FEO), is as follows:

- (22) a. predicational  
 speaker-oriented: *frankly, maybe, luckily, obviously*  
 subject-oriented: *deliberately, stupidly*  
 exocomparative: *similarly*  
 event-internal: *tightly, partially*
- b. domain: *mathematically, chemically*
- c. participant: *on the wall, with a bowl, for his aunt*
- d. functional  
 time-related: *now, for a minute, still*  
 quantificational: *frequently, again, precisely*  
 focusing: *even, just, only*  
 negative: *not*  
 clausal relations: purpose, causal, concessive, conditional, etc.

Ernst (2002:10) states that it has become generally recognised that sets of base positions of adverbs can be organised into the following fields or zones which coincide with specific

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<sup>38</sup> Tenny (2000:295) refers to four types of verbs which involve an “inner event”, or as she calls it, a “core event”, namely “change of state verbs, incremental theme verbs, verbs of motion to a goal, and verbs of putting”. Cf. Tenny (2000:293-295) for an elaboration and examples.

syntactic positions: speech-act – CP, proposition – IP, event – VP, and event-internal – VP. In terms of this classification, manner and measure adverbs occur in the lowest zone, i.e. event-internal, corresponding approximately to VP. Non-manner adverbs like *cleverly*, *deliberately* and *already* are higher in the structure, usually around INFL and the auxiliaries. Sentential adverbs like *maybe*, *unfortunately*, *now* and *frankly* are in the highest zone, namely the speech-act zone, coinciding with CP (Ernst 2002:10). According to Ernst (2002:9), “ultimately, the most revealing classification will likely involve a small set of features based on the most important semantic properties for predicting syntactic distribution.”

As should be clear from the preceding overview, there does not yet exist a “final” adverb taxonomy, as continual refinement is taking place, and category distinctions are not always clear-cut.

## 2.6 Tests for adverbs

Adverb heterogeneity creates a serious problem for testing structures. Radford (2009:4) states that an adverb like *badly* is the only kind of word which can be used to end sentences such as *She behaved ...*, *He treats her ...*, and *He worded the statement ...*. The challenge with such a test would be to provide sentences which are semantically compatible with different adverbs, and different adverb types. For instance, a sentence such as *He treats her slowly* is grammatical but is semantically dubious. In terms of semantic compatibility specifically, the lexical verb needs to be semantically compatible with the adverb being tested, as in for example *He runs – slowly*. An adverb like *very* would not yield a grammatical sentence in such a test, as in *\*He runs – very*.

Adverb types other than manner adverbs also create specific challenges for testing whether a word is an adverb. A speaker-oriented adverb like *frankly*, on the one hand, would require a very specific type of sentence, one which reflects the orientation to the speaker (or writer), as in *She spoke – frankly*. Domain adverbs, on the other hand, require a structure reflecting their scopal quality, as in *..., our country has a lot going for it*, where adverbs like *financially*, *culturally* could be used. It is implausible, however, that there is a universal test to cover all the possible domain adverbs.

More peripheral members of the adverb class, such as conjuncts, would require structurally different testing sentences, once again designed to be sensitive to the internal logic of the construction.

Diagnostic tests for adverbs moreover need to be sensitive to different meanings for adverbs, depending on their position in a sentence, as in *The cook poisoned the soup **obviously***,<sup>39</sup> where the test phrase *in an/a ... manner* could be used for suitable manner adverbs. However, in the sentence *The cook **obviously** poisoned the soup*, the test phrase *in an/a ... manner* could provide a false prediction, as *obviously* here functions as an epistemic adverb.

In the focus area under discussion, where the semantic implications of adverb mobility is an important issue, tests of a comparative nature, involving two or more possible placings, are common. At issue would be the nuances of meaning, often related to scope or adverb licensing, as in the following test structure from Cinque (2004:705):

- (23) a. *Probably* they could be working a bit harder.  
 b. They *probably* could be working a bit harder.  
 c. They could *probably* be working a bit harder.  
 d. \*They could be *probably* working a bit harder.

The validity of the assertions based on such tests will be examined in Chapter 5 with reference to Afrikaans.

## 2.7 Summary

Defining adverbs is a complex matter due to their heterogenic nature. Verb modification has traditionally been regarded as a central characteristic of adverbs. A distinction can be made between lexical adverbs, and functional adverbs. In order to continue justifying an adverb word class, we need to make use of flexible notions such as ‘prototypicality’.

A distinction needs to be made between adverbs and adverbials. The term “adverbial” is broader, and refers to any word/phrase/clause with the functional equivalence of an

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<sup>39</sup> Example from Ifantidou-Trouki (1993:78).

adverb. The term “adverb” is narrower in scope, referring to a specific word class, one which heads an AdvP.

Adverbs are morphologically complex. Semantically they can be divided into subclasses of increasing refinement. Adverbs can moreover perform a variety of functions in a sentence. At present, there is no authoritative and generally accepted adverb taxonomy, as existing ones are subject to constant revision and refinement. Adverbs can also occupy various positions in the sentence, a characteristic which complicates syntactic analysis. Adverb diagnostic tests need to be tailored very specifically due to the wide variety of possible grammatical characteristics involved.

## Chapter 3

### THEORETICAL APPROACHES TO ADVERB SYNTAX

#### 3.1 Introduction

As stated in the previous chapter, there are several different theoretical approaches to adverb syntax. In this chapter we examine three of these approaches, namely Cinque's (2004) functional category-based approach (section 3.1), Ernst's (2007) semantically-based approach (section 3.2), and two versions of a combined syntax-semantic approach (section 3.3).

#### 3.2 A functional category-based approach to adverbs

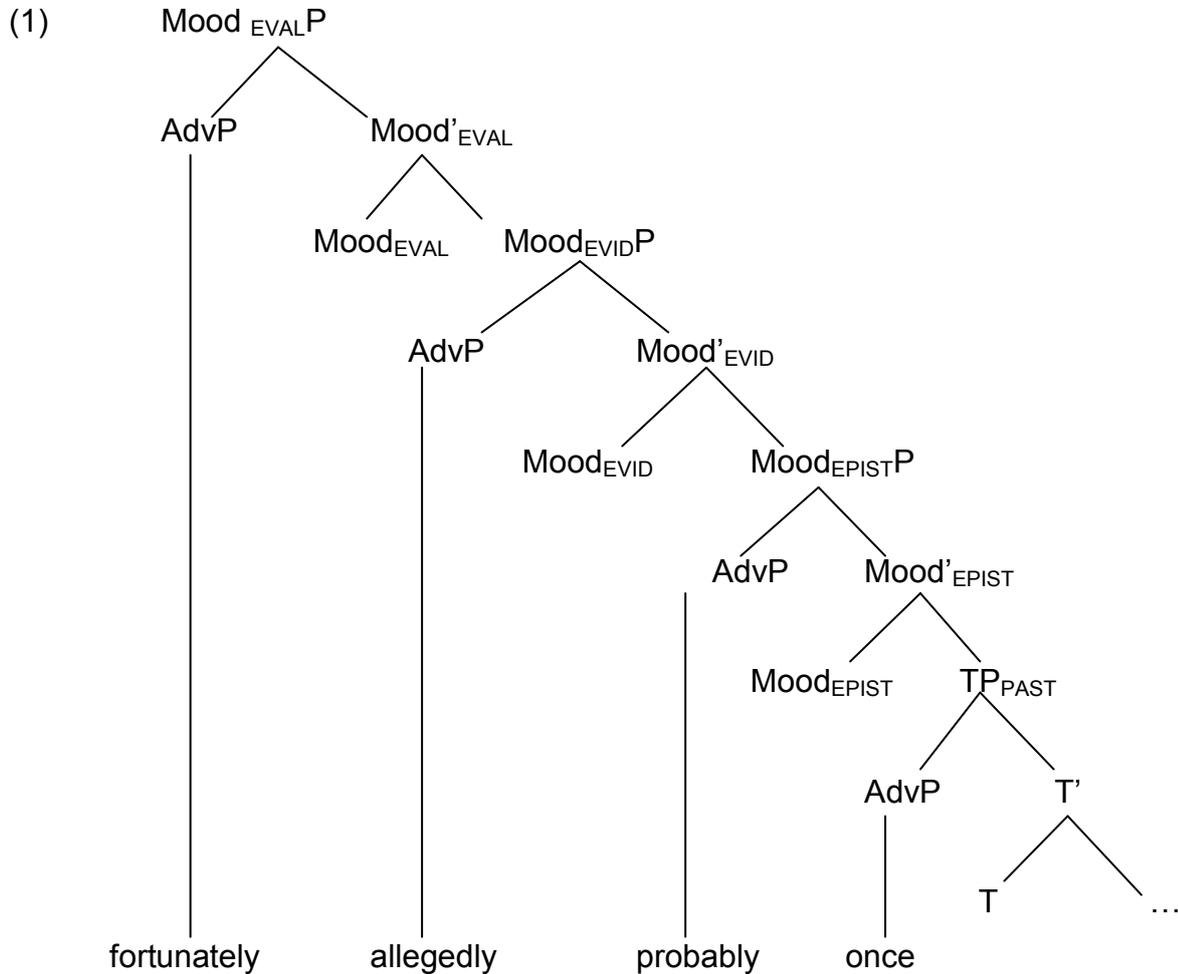
Cinque (2004:683) posits that adverbs should not be understood as “accessory appendices” to clausal structure, but should rather be seen as an integral part of the clause. He argues that similar to the manner in which inflectional morphology, functional particles, and auxiliaries are regarded as the outward evidence, in head format, of the functional portion of the clause, AdvPs can be understood as the visible evidence of the same functional distribution in specifier format.

Cinque (1999:v) regards adverbs as “the unique specifiers of distinct maximal projections, rather than as adjuncts”; this means that adverbs project into AdvPs, which “stand in a specifier/head relationship with the different functional heads of the clause”. The different classes of AdvPs moreover correspond to a hierarchy of functional heads (Cinque 1999:vi).

The functional approach therefore builds on the distinction between lexical phrases, such as NP and VP, which are built around lexical heads, and functional phrases, such as CP, which are built around functional heads, where the latter are not required to contain lexical material (Crystal 2003:193).

According to Ernst (2007:1010), the functional theory of adverbs “holds that each adverb phrase (AdvP) is in the specifier position of a functional head, licensed by that head, and

that every semantically distinct adverb class has its own separate licensing head ... The heads that define each position and its interpretation are rigidly ordered by universal grammar; therefore, the associated adverbs are rigidly ordered in the same way.” Ernst (2002:112) provides the following structure illustrating different types of adverbs and the various heads with which they are associated:



For Cinque (2004:683-4) the main evidence that adverbs belong to the functional structure of the clause is “the observation that cross-linguistically the number and type of the different classes of AdvPs and their relative order appears to exactly match the number, type and relative order of functional head morphemes.”

In the functional approach we therefore find a syntactically governed theory of adverb placement.

### 3.3 A semantically-based approach to adverbs

The major theoretical alternative to Cinque's functional category-based approach outlined above, is the Semantically Based Adjunction approach (SBA) put forward by Ernst (2007). In this approach semantics plays a key role in determining the order of adverbs. Importantly, adverbs are claimed to be adjoined to syntactic projections rather than being merged in the specifier position of specific functional heads.

The SBA explains ungrammatical/unacceptable linear orderings of adverbs as resulting from the interplay of compositional rules and the lexical properties of adverbs, including their selection requirements. Nothing "strictly syntactic" is therefore involved in accounting for the difference between, for example, (2a) and (2b) below, it is simply the case that the adverbs *luckily* and *cleverly* possess semantic qualities that are not compatible in the (2b) order (Ernst 2007:1009).<sup>1</sup>

- (2) a. *Luckily*, Gretchen had *cleverly* been reading up on local customs.  
 b. \**Cleverly*, Gretchen had *luckily* been reading up on local customs.

A limitation on the free association of adverbs in the SBA theory is therefore that semantic considerations rule out orders where some sort of "semantic anomaly" or ill-formedness results (Ernst 2007:1013).

### 3.4 Combined syntax-semantic approaches

A third approach to the analysis of adverbs which has been proposed in the literature is a combination of the syntactic and semantic approaches described in the previous two sections. The proposal of Tenny (2000:285-334) represents the more established approach, involving the idea of "semantic zones" which are linked to a series of functional projections; that of Holmer (2012:902-921) is a more recent attempt at a "unified theory" which tries to reconcile semantic and syntactic factors in the analysis of adverb placement.

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<sup>1</sup> Subject-oriented adverbs such as *cleverly* require events that the subject can control, whereas *luckily* combines with a proposition to form a proposition; however, this prevents *cleverly* from being able to combine with a controllable event (Ernst 2007:1012-13).

### 3.4.1 Tenny's "semantic zone" proposal

According to Ernst (2007:1013), Tenny's (2000) approach "adopts syntactic principles to establish broad zones for adverb distribution, but lets semantic mechanisms determine relative order within these zones ... it also usually assumes adjunction of adverbs rather than putting them in spec positions". In arguing for this approach, Tenny (2000:285-6) makes the following remarks:

there are a number of different distributional classes of adverbs, and it is a serious question whether these are to be treated as syntactic or semantic classes. I take this as evidence that adverbs are inextricably bound up with both syntax and semantics; and therefore must inform and be informed by any theory about the interface between them.

According to Tenny (2000:286), different semantic zones can be identified within clauses, with which different types of adverbs may be associated. These semantic zones are understood to link up to a series of functional projections in an extended event structure for the clause. This theory does not seem to have strong support in the relevant literature, however. A detailed assessment of its merit will not be attempted here and is left as a topic for further investigation.

### 3.4.2 Holmer's "unified theory" proposal

Holmer (2012:902) demonstrates that while the phenomenon of adverbial verbs in Formosan languages cannot be explained by means of an adjunction analysis, i.e. within an SBA approach, the ordering of adverbs still appears to be semantically, rather than structurally, determined.<sup>2</sup> Holmer therefore proposes that the issues of structure and ordering must be "teased apart". According to him (2012:902), "reconciling these two

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<sup>2</sup> Holmer (2012:903) states that Formosan languages generally display verb-initial order. One property which all Formosan languages share is the systematic realization of adverbial meaning of at least manner and frequency as verbs, hence the term "adverbial verbs". The following Seediq sentence contains an example of such an adverbial verb:

- (i) M<n>hmet-an=mu beebu ka quyu kiya.  
 <PST>at.will-LF=1sE beat NOM snake that  
 'I recklessly beat that snake.'

viewpoints implies a new view of syntactic structure which eliminates the clear distinction between adjunct and functional projections.”

Holmer argues that while the two approaches discussed above, i.e. the SBA and the functional approach, appear to be “monolithic”, each actually addresses two issues, namely (i) the structural location of adverbs (claimed to be the specifier position of a functional head on Cinque’s approach, and an adjunction position according to Ernst), and (ii) the issue of adverb order (claimed to be derived from universal syntactic structure within Cinque’s framework, and semantically derived according to Ernst). Holmer (2012:903) states that “there does not seem to be any reason why these two issues are connected.” It is therefore not an “all-or-nothing” situation when it comes to these two issues: one approach can be correct with regard to one issue, but wrong on the other. Adverbs can therefore, according to Holmer, be located in functional categories above vP, but their ordering can still be semantically derived.

Holmer (2012:903) states that the semantically-based approach is more satisfactory in that it seems to be more economical in explaining adverb order; however, there is empirical evidence supporting the claim that adverbs are located in functional projections above the vP. According to him (2012:903), the empirical base of this claim is found in the Formosan languages, where certain types of adverbial meaning are regularly expressed by elements which are morphologically and syntactically identifiable as verbs.

Holmer’s proposal therefore represents a possible bridging of the divide between the SBA and functional approaches to the syntax of adverbs.

### **3.5 Summary**

As stated in Chapter 1, this study focuses on whether Cinque’s (1999) proposals about the syntax of adverbs provide an adequate framework for describing the relevant facts of Afrikaans. Since only the approach taking an adverb as the specifier of a functional head is relevant to Cinque’s theory, the merit of the two alternative approaches described above will not be addressed below.

## Chapter 4

### CINQUE'S RESEARCH PROCEDURE

#### 4.1 Introduction

In developing his theory of adverb syntax, Cinque (1999) follows a research procedure consisting of four parts: (i) establishing a hierarchy of adverb classes; (ii) justifying the claim that adverbs are generated in the specifier position associated with distinct functional heads; (iii) establishing the order of the relevant functional heads; and (iv) demonstrating that the hierarchy of adverb classes matches the order of clausal functional heads. The present chapter gives an outline description of these parts.

#### 4.2 Establishing the relative order of adverb types

Cinque (1999:3) first attempts to establish the relative order of the main classes of AdvPs in Italian and French, claiming that this order holds for Romance languages in general.

Cinque proceeds by comparing the grammaticality of sentences which contain two adverbs of different classes and with alternating adverb order. The sentence containing the grammatical adverb order is then regarded as a subpart of the full adverb order spectrum. For example, as shown in (1), the Italian habitual adverb *solitamente* ("usually") precedes the negative adverb *mica* ("not"), which indicates that the class of habitual adverbs precedes that of negative adverbs (Cinque 1999:4,8).

- (1) a. Alle due, Gianni non ha *solitamente mica* mangiato, ancora.  
 "At two, G. has usually not eaten yet."  
 b. \*Alle due, Gianni non ha *mica solitamente* mangiato, ancora.  
 "At two, G. has not usually eaten yet." (Cinque 1999:4)

The fact that one adverb type occurs before another, however, does not necessarily mean that these types will be contiguous in the hierarchy, but merely that one precedes the other. As the scale of the test procedure is extended, other adverb classes might prove to belong in positions between the initial two adverb classes, thus refining the hierarchy.

The argument that AdvPs enter into a fixed order which is invariant across languages necessitates explaining those cases where they seem to display more than one order in the same language<sup>1</sup>, and variant orders in other languages (Cinque 1999:3). Cinque (1999:4) argues that such cases are only apparent counter-examples for the existence of a unique, fixed order of AdvPs.

#### **4.2.1 Cross-linguistic evidence in support of a fixed order of adverbs**

Cinque (1999:32) considers various other language families<sup>2</sup> to establish whether the conclusions on the order of AdvPs reached on the basis of Romance languages have more general validity. On the basis of this inquiry he claims a “striking consistency” in the languages reviewed. This consistency reinforces his claim that a universal order or hierarchy of AdvPs does exist, despite secondary issues which still have to be clarified (Cinque 1999:33).

#### **4.3 A case for adverb phrases in specifier position**

Cinque (1999:44) states that there seem to be empirical and conceptual reasons for locating AdvPs in the specifier positions associated with distinct functional heads.

Empirical reasoning in this regard builds on the fixed relative order of AdvPs already established, in interaction with facts from Italian regarding the distribution of (active) past participles<sup>3</sup> and finite auxiliary verbs<sup>4</sup> in relation to AdvPs (Cinque 1999:45). In both cases the distributional facts suggest the presence of distinct head positions between AdvPs, thus providing an empirical argument for locating AdvPs in specifier position. The fact that AdvPs occur in the initial position in specific structures also fits into the theory that AdvPs are located in specifier position, as such phrases are understood to fill the leftmost position under a given maximal projection (Cinque 1999:45).

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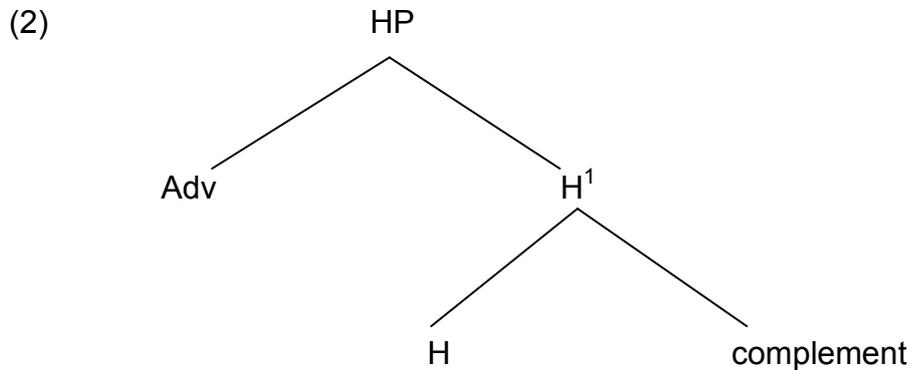
<sup>1</sup> Cf. Cinque (1999:3- 4).

<sup>2</sup> Germanic, Slavic, Semitic, etc.; cf. Cinque (1999:33) for more details.

<sup>3</sup> In the lower pre-VP section of the clause.

<sup>4</sup> In the higher part of the clause, i.e. in relation to sentential adverbs.

In summary, the transparent relationship between each adverb class and the head morpheme directly to its right suggests that the AdvP is the specifier of the functional phrase projected by the corresponding head, as illustrated below.



#### 4.4 The order of clausal functional heads

##### 4.4.1 Introduction

According to Cinque (1999:51), the assumption that AdvPs are merged in a specifier position of distinct maximal projections raises the question of what the heads of these projections are. He claims that the heads in question are the functional heads that are conventionally associated with the clause. In other words, no new class of functional heads is required. In order to justify this assertion, the order of clausal functional heads needs to be established on independent grounds (Cinque 1999:51). If they match the order of the already established adverb type hierarchy, it would constitute evidence in support of the claim that the specifier positions of these functional heads represent the structural positions of AdvPs.

##### 4.4.2 Types of evidence for a specific functional head order

Cinque (1999:52) examines various types of phenomena which could provide evidence for a specific hierarchical order of clausal functional heads. These phenomena concern the order of agglutinating suffixes, inflectional suffixes, auxiliaries, functional particles, and the order of various combinations of these elements in mixed cases. In this regard Cinque (1999:52) claims that if the “partial orders” – that is, small sections of the full spectrum of the universal hierarchy – found overtly in different languages are consolidated, they provide evidence of one universal sequence of functional heads, present in all languages.

#### 4.4.2.1 Evidence from the order of agglutinating suffixes

The order of suffixes in languages with rich agglutinating morphology, such as Korean and Turkish, must be *correct* in terms of Cinque's hierarchy of adverb types rather than *complete* (in the sense of reflecting each and every type). The reason for this is that other suffixes can sometimes be inserted between those already identified without violating the proposed order of adverb types. In the Korean example (3), a number of suffixes, which each reflect a functional head, are present. However, another class of suffixes, namely evaluatives, may intervene between evidential and speech act mood (interrogative in (3), declarative (4), as seen in (4) and (5)).

- (3) Ka pwun-i caphi-si-ess-ess-keyss-sup-ti-kka?  
 the person-NOM catch-PASS-AGR-ANT-PAST-EPISTEM-AGR-EVID-Q  
 "Did you feel that he had been caught?" (Cinque 1999:53)
- (4) Ku say-ka cwuk-ess-keyss-kwun-a!  
 that bird-NOM die-ANT-EPISTEM-EVALUAT-DECL  
 "That bird must have died!" (Cinque 1999:53)
- (5) Minca-nun ttena-ss-te-kwun-yo!  
 M.-TOP leave-PAST-EVID-EVALUAT-POLITE  
 "I noticed that M. had left!" (Cinque 1999:54)

Thus the order of functional heads reflected in the examples (3), (4) and (5) is, under the Mirror Principle<sup>5</sup>, that of (6).

- (6) Mood<sub>speech act</sub> > Mood<sub>evaluative</sub> > Mood<sub>evidential</sub> > Modality > T(Past) > T(Anterior) > Voice (> V) (Cinque 1999:54)

Cinque (1999:55) points out that great care has to be taken regarding *apparent* order contradictions. For example, the Turkish modality marker is below Tense whereas the Korean one is above Tense. This contrast is only apparent, however, as two different

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<sup>5</sup> That is, the reverse order, since Korean is a head-last language (Cinque1999:58). See Baker (1985) regarding the Mirror Principle.

types of modals are involved, an epistemic modal in the case of Korean and a root modal in the case of Turkish.<sup>6</sup>

#### 4.4.2.2 Evidence from the order of inflectional suffixes and auxiliaries

Suffixes characteristically close off the word in inflectional languages.<sup>7</sup> As a result, when there is more than one suffix in a sentence, they require more verbs to attach to, typically one verb for each functional suffix (Cinque 1999:57). Cinque bases his argumentation in this regard on two head-first languages, namely English and Spanish. In these languages, no successive leftward movement of lower portions of the clause is likely to take place, so that sequences of [V + (functional) suffix] combinations provide evidence of the relative order of the matching functional heads. For example, the semantically equivalent English and Spanish sentences in (7a,b), respectively, provide evidence for the order of functional heads in (8):

- (7) a. These books *have been read* all year.  
 b. Esos libros *han estado siendo leídos* todo el año. (Cinque 1999:57)

- (8) Tense > Aspect<sub>perfect</sub> > Aspect<sub>progressive</sub> > Voice (> V) (Cinque 1999:57)

Cinque (1999:57) points out that various types of syntactically configured languages<sup>8</sup> adhere to the order of functional heads already established, albeit in “mirror-image” (i.e. reverse order) sequences in some cases.

#### 4.4.2.3 Evidence from the order of free functional morphemes

Cinque (1999:58) states that, in head-first languages, free functional morphemes or particles allow the order of functional heads to be directly observed, the reason being that a free functional morpheme bars adjunction of the immediate lower head and also

<sup>6</sup> Cf. Cinque (1999:55). We return to this issue in Chapter 5.

<sup>7</sup> Or require a word marker to close off the word, as in Romance languages (Cinque 1999:57).

<sup>8</sup> Specifically, head-last languages with different syntactic characteristics, e.g. Hindi and standard German; cf. Cinque (1999:57-8).

prevents the latter from raising past it.<sup>9</sup> He (1999:59) provides the Guyanese Creole examples in (9) and (10) in this regard; together, these examples yield the partial order of functional heads in (11).

(9) Shi a aalweez/neva de a sing.  
 she HAB always/never DUR PROG sing  
 “She usually always/never keeps singing”

(10) Da tiam dem don de somwee a big maarkit.  
 that time they ANT DUR somewhere PROG big market<sup>10</sup>  
 “By that time, they are already somewhere in Big market”

(11) ... Aspect<sub>habitual</sub> / T(Anterior) > Aspect<sub>durative</sub> > Aspect<sub>progressive</sub> > V

Cinque concludes that, with few exceptions, he has come across no real case in which suffixes or particles involving functional heads such as mood, modality, tense, aspect and voice can vary their relative order.<sup>11</sup> Certain suffixes may seem to have variable order relative to other suffixes, but turn out to differ in meaning according to their respective positions (Cinque 1999:71).

#### 4.4.2.4 Evidence from mixed cases

By “mixed cases” is meant a combination of any of the preceding types of evidence, i.e. agglutinating suffixes, inflectional suffixes and auxiliaries, and functional particles (free functional morphemes). In these cases, according to Cinque (1999:66), the order of the

<sup>9</sup> For a discussion of why this phenomenon is specifically found in head-first languages, cf. Cinque (1999:58). Cinque notes that Creole languages, which characteristically display all their functional particles before the verb, are ideally suited to be examined in this regard.

<sup>10</sup> Cinque (1999:59) does not provide this gloss. He notes that Guyanese Creole has four distinct aspectual particles: *a* for progressive aspect, *de* for durative aspect, *a* for habitual aspect, and *don* for anterior tense. According to Cinque (1999:59) the two *a* particles must be kept distinct. They can co-occur, separated by the durative aspect particle *de*, and by adverbs such as *alweez* (“always”). The particle *don* precedes the particle *de*, though its order with respect to the habitual particle *a* is not addressed in the source that he consulted.

<sup>11</sup> Among the exceptions mentioned by Cinque (1999:71) are certain interchanges which are possible in the order of argumental suffixes (reflexive/reciprocal, distributive, associative, etc.), and with suffixes expressing negation.

elements at hand might also shed light on the order of clausal functional heads. If a fixed hierarchy of functional heads exists, only certain combinations of free and bound morphemes are to be expected. Welsh, amongst other languages, provides support for this claim since it contains combinations of inflected auxiliaries and aspectual particles preceding the main verb, as illustrated in (12), which gives evidence for the order of heads in (13):

- (12) Oedd y bachgen wedi bod yn ymlad.  
 be-PAST the boy PERF be PROG fight  
 “The boy had been fighting” (Cinque 1999:67)

- (13) T/Mood > Asp<sub>perfect</sub> > Asp<sub>progressive</sub> > V

Clearly, such evidence for a general fixed hierarchy of functional heads would also provide support for the AdvP hierarchy order (Cinque 1999:67).

#### 4.4.3 Conclusion

By consolidating all the pairwise<sup>12</sup> relative orders that can be inferred from the different types of evidence relating to the order of functional heads, Cinque (1999:76) identifies a general order, admittedly with some “indeterminacies and arbitrary choices”.<sup>13</sup>

#### 4.5 Matching the hierarchies of AdvPs and functional heads

Cinque (1999:77) asserts that if the independently established hierarchies of AdvPs and functional heads, respectively, are matched from left to right, “striking correspondences” are to be observed (cf. also section 4.2.1). He goes on to state that in many cases a

<sup>12</sup> The pairwise orders in question include, for example, (i) mood speech act/mood evaluative and (ii) mood evaluative/mood evidential.

<sup>13</sup> Cf. Cinque (1999:76) for more detail regarding a portion of the order of aspectual heads that remains undetermined, and a tentative ordering of durative aspect. The general order identified is as follows:

Mood<sub>speech act</sub> > Mood<sub>evaluative</sub> > Mood<sub>evidential</sub> > Mod<sub>epistemic</sub> > T(Past) >  
 T(Future) > Mood<sub>irrealis</sub> > Asp<sub>habitual</sub> > T(Anterior) > Asp<sub>perfect</sub> >  
 Asp<sub>retrospective</sub> > Asp<sub>durative</sub> > Asp<sub>progressive</sub> > Asp<sub>prospective</sub> /Mod<sub>root</sub> > Voice  
 Asp<sub>celerative</sub> > Asp<sub>completive</sub> > Asp<sub>(semel)repetitive</sub> > Asp<sub>iterative</sub>

transparent specifier/head relationship between a specific adverb type and a contiguous functional head to the right is obvious. For Cinque (1999:77) it is therefore plausible that similar specifier/head relationships should apply “across the board”, even where a functional head does not seem to relate to an adverb class to its left, or where an adverb class does not seem to have a corresponding functional head to its right. In this regard, Cinque (1999:77) remarks that:

In such cases we should not be too discouraged. It could simply be that we have failed to recognise the existence of the relevant adverb class, or of the relevant functional head (and projection) [or that – JS] other adverb classes and functional heads will have gone unnoticed.

In view of the above remarks, Cinque attempts to refine the hierarchy further. After an analysis of mood, modality, tense and aspect that he (1999:77-8) regards as “most promising” in terms of refining the matching process, Cinque (1999:106) arrives at what he calls an “outrageously rich” hierarchy of clausal functional projections.<sup>14</sup>

According to Cinque (1999:106), if each adverb class corresponds to a different functional head, this would constitute evidence that the complete array of functional heads and projections is available, even where there is no overt morphology corresponding to (each of) the various heads, as the respective specifiers are available.

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<sup>14</sup> By “outrageously rich” Cinque (1999:106) seems to mean a highly elaborated and complex level of differentiation in the type and number of functional heads, as shown below:

[*frankly* Mood<sub>speech act</sub>] [*fortunately* Mood<sub>evaluative</sub>] [*allegedly* Mood<sub>evidential</sub>]  
 [*probably* Mod<sub>epistemic</sub>] [*once* T(Past)] [*then* Tense(Future)] [*perhaps* Mood<sub>irrealis</sub>]  
 [*necessarily* Mod<sub>necessity</sub>] [*possibly* Mod<sub>possibility</sub>] [*usually* Asp<sub>habitual</sub>]  
 [*again* Asp<sub>repetitive(I)</sub>] [*often* Asp<sub>frequentative(I)</sub>] [*intentionally* Mod<sub>volitional</sub>]  
 [*quickly* Asp<sub>celerative(I)</sub>] [*already* T(Anterior)] [*no longer* Asp<sub>terminative</sub>] [*still* Asp<sub>continuative</sub>]  
 [*always* Asp<sub>perfect(?)</sub>] [*just* Asp<sub>retrospective</sub>] [*soon* Asp<sub>proximate</sub>]  
 [*briefly* Asp<sub>durative</sub>] [*characteristically(?)* Asp<sub>generic/progressive</sub>] [*almost* Asp<sub>prospective</sub>]  
 [*completely* Asp<sub>SgCompletive(I)</sub>] [*tutto* Asp<sub>PlCompletive</sub>] [*well* Voice] [*fast/early* Asp<sub>celerative(II)</sub>]  
 [*again* Asp<sub>repetitive(II)</sub>] [*often* Asp<sub>frequentative(II)</sub>] [*completely* Asp<sub>SgCompletive(II)</sub>]

## 4.6 Summary

This chapter provided a brief overview of the research procedure followed by Cinque (1999) in his investigation of the syntax of adverbs. Firstly, Cinque's proposed hierarchy of adverb classes was described. Secondly, attention was given to his claim that adverbs are generated in the specifier position associated with distinct functional heads. Thirdly, we addressed the issue of the order of the functional heads in question. And finally, we considered Cinque's claim that the hierarchy of adverb classes matches the general order of clausal functional heads. Cinque (1999:52) states the outcome of his investigation as follows:

... the partial relative order of functional heads for which there is overt evidence (of one of the ... four kinds) in different languages appear to be compatible with a single overall order ... I suggest that this is so because the partial orders found overtly in different languages are subsequences of a single universal sequence of functional heads present in all languages.

Cinque's proposals about the relative order of functional heads therefore seem to correlate with the order of AdvPs already established by him. In the next chapter, we will examine whether these proposals about the syntax of adverbs also hold for Afrikaans.

## Chapter 5

### CINQUE'S THEORY AND THE SYNTAX OF ADVERBS IN AFRIKAANS

#### 5.1 Introduction

The essence of Cinque's (1999) theory of the syntax of adverbs can be summarised in the form of two general claims:

- (1) a. Adverb classes demonstrate a specific universal linear order.
- b. The linear order of the adverb classes is a consequence of the order of the different functional heads associated with the various adverb classes.

In this chapter the validity of these claims as alleged *universal* properties of adverb classes will be examined with reference to Afrikaans data. The discussion is organised around four main issues. Firstly, in section 5.2, taking the various classes (or types) of adverbs identified by Cinque as point of departure, we examine whether the proposed linear ordering of these types holds for Afrikaans. Secondly, in section 5.3 brief attention is given to the hypothesis that adverbs are merged into the specifier position of particular functional heads. Section 5.4 focuses on two hypotheses: (i) the functional heads on a clause display a rigid universal linear order, and (ii) this order matches the order that is displayed by the various adverb classes. Cinque (1999:32,71) explicitly presents the hierarchies of adverb classes and functional heads as being "universal". The question throughout will therefore be whether these hierarchies can indeed be extended to Afrikaans. A brief summary of the findings is given in section 5.5.

#### 5.2 Hierarchy of adverb types

##### 5.2.1 Introduction

Cinque (1999:33-4) distinguishes between two broad types of adverb, namely "higher" and "lower" adverbs.<sup>1</sup> He furthermore asserts that the linear order of these adverbs as reflected in English is the same as that found in the Romance languages. In the discussion below of

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<sup>1</sup> Cf. Cinque (1999:4,11,33); "higher" adverbs are adverbs that are higher than the VP in the sentence structure; "lower" adverbs are below the VP. Cf. also section 2.4.4.

the proposed universal hierarchy of adverb types, the Afrikaans examples that are used for the purpose of comparison are mostly counterparts of the idiomatic English glosses which Cinque provides for his Romance data.

### 5.2.2 The order of higher adverbs

Cinque (1999:33) states that English higher adverbs are ordered as in Romance languages, with speech act adverbs, for example, preceding evaluative adverbs, as illustrated in (2).

- (2) a. *Honestly* I am *unfortunately* unable to help you.  
 b. \**Unfortunately* I am *honestly* unable to help you.

The pattern in (2a) also holds for Afrikaans, as shown by the difference in grammaticality between the (a) and (b) sentences in (3).<sup>2</sup>

- (3) a. *Eerlikwaar*, ek is *ongelukkig* nie in staat om jou te help nie.  
 honestly I am unfortunately not in state COMP you to help not  
 “Honestly, I am unfortunately unable to help you”  
 b. \**Ongelukkig*, ek is *eerlikwaar* nie in staat om jou te help nie.<sup>3</sup>  
 unfortunately I am honestly not in state COMP you to help not

The order between the two higher sentence adverbs illustrated in (3a) can be represented linearly as follows:

- (4) *eerlikwaar* (= speech act) > *ongelukkig* (= evaluative)

<sup>2</sup> The speech act adverb *eerlikwaar* (“honestly”) in (3a) takes scope over the evaluative adverb *ongelukkig* (“unfortunately”), with the former conveying the idea that the speaker is being honest in expressing the sentiment that he/she finds it unfortunate not being able to help. In the ungrammatical sentence in (3b), by contrast, the evaluative adverb creates an element of ambiguity when it takes scope over the speech-act adverb. On the one hand, it creates a sense that the speaker is unhappy about what he/she has to be honest about; on the other, that he/she is unhappy about not being able to help.

<sup>3</sup> A more natural reading of this sentence, despite its incorrectness, would be: *Ongelukkig* is ek *eerlikwaar* nie in staat om jou te help nie. *Ongelukkig* does not take as kindly to sentence fronting as *eerlikwaar* (“honestly”). This possibly has to do with the potential “exclamatory” reading of *eerlikwaar*, in contrast to *ongelukkig* which lacks it.

In Cinque's hierarchy, evaluative adverbs precede evidential adverbs as shown by the English examples in (5). As illustrated by the sentence pair in (6), this order is also found in Afrikaans.

- (5) a. *Fortunately*, he had *evidently* had his own opinion of the matter.  
 b. \**Evidently* he had *fortunately* had his own opinion of the matter.  
 (Cinque 1999:33)
- (6) a. *Gelukkig* het hy *oënskynlik* sy eie opinie van die saak gehad.  
 fortunately did he evidently his own opinion of the matter have  
 "Fortunately he had his own opinion on the matter"  
 b. \**Oënskynlik* het hy *gelukkig* sy eie opinie van die saak gehad.

Combining the order in (6a) with the one illustrated in (4) yields the extended order in (7).

- (7) *eerlikwaar* (= speech act) > *ongelukkig* (= evaluative) > *oënskynlik* (= evidential)

The next distinction in Cinque's hierarchy is the one between evidential adverbs and epistemic adverbs, with the former preceding the latter. This order holds for English as well as Afrikaans, as illustrated by the examples in (8a) and (9a) respectively.

- (8) a. *Clearly* John *probably* will quickly learn French perfectly.  
 b. \**Probably* John *clearly* will quickly learn French perfectly. (Cinque 1999:33)
- (9) a. *Oënskynlik* sal John *seker/waarskynlik* vinnig Frans perfek leer.  
 clearly will John probably quickly learn French perfectly  
 "Clearly John will probably quickly learn French perfectly"  
 b. \**Seker/waarskynlik* sal John *oënskynlik* vinnig Frans perfek leer.<sup>4</sup>

The linear order illustrated in (9a) can be represented as in (10).

- (10) *oënskynlik* (= evidential) > *seker/waarskynlik* (= epistemic)

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<sup>4</sup> The element of personal judgement inherent in the evidential adverb needs to have scope over the level of certainty/knowledge for the sentence to be meaningful. As shown by the ungrammaticality of the (b) sentence, the semantic force of the evidential adverb will be undermined by that of the epistemic adverb.

In view of the facts represented in (7) and (10), the linear order of adverb types so far can be collated as in (11).

- (11) *eerlikwaar* (= speech act) > *ongelukkig* (= evaluative) > *oënskynlik* (= evidential) > *seker/waarskynlik* (= epistemic)

In Cinque's framework epistemic adverbs precede past tense adverbs, as shown in the English sentence in (12a). However, Cinque (1999:33) remarks that the order of these two types of adverb can also be reversed, as in (12b).<sup>5</sup> The orders illustrated in (12a,b) are also found in Afrikaans, as shown in (13a,b).

- (12) a. *Probably* he *once* had a better opinion of us.  
 b. *Once* he *probably* had a better opinion of us.
- (13) a. *Waarskynlik* het hy *eens/voorheen/toe* 'n beter opinie van ons gehad.  
 probably did he once a better opinion of us have  
 "Probably he once had a better opinion of us"  
 b. *Eens/voorheen/toe* het hy *waarskynlik* 'n beter opinie van ons gehad.

These facts about the order of epistemic and past tense adverbs can be incorporated as follows into the linear order given in (11) above.

- (14) { epistemic > past tense }  
 { past tense > epistemic }

The next class of higher order adverbs that is dealt with by Cinque (1999) includes expressions such as *perhaps/(almost) certainly*,<sup>6</sup> which he (1999:77) categorises as mood (irrealis). These adverbs follow past tense adverbs as shown by the English examples in (15) as well as the Afrikaans examples in (16).

- (15) a. He was *then almost certainly/perhaps* at home.  
 b. \*He was *almost certainly/perhaps then* at home. (Cinque 1999:33)

<sup>5</sup> Cinque (1999:33) remarks that the reverse order, as in (12b), is the case when past tense adverbs "are generated in a higher 'scene setting' position", but does not explain what he means by this.

<sup>6</sup> Cinque (1999:77) later categorises *perhaps* as "mood irrealis".

- (16) a. Hy was *toe amper seker/moontlik* tuis.  
 he was *then almost certainly/perhaps* home  
 “He was almost certainly/probably home then”  
 b. ?\*Hy was *amper seker/moontlik toe* tuis.

While the English sentence (15b) is judged to be ungrammatical by Cinque (1999:33), the unacceptability of the Afrikaans equivalent in (16b) is not as clearcut, with some speakers finding such sentences marginally acceptable. However, despite this uncertainty, Afrikaans does comply with Cinque’s established order; thus we have:

- (17) *eens/voorheen/toe* (= past tense) > *amper/seker/moontlik* (mood irrealis)

The final class of higher adverbs identified by Cinque is that of subject-oriented adverbs. These adverbs follow the class of mood (irrealis) adverbs as shown by the English examples in (18). The same order is found in Afrikaans (19).

- (18) a. John will *perhaps wisely* withdraw.  
 b. \*John will *wisely perhaps* withdraw.<sup>7</sup> (Cinque 1999:33)

- (19) a. John sal *moontlik verstandiglik/wyslik* onttrek.  
 John will possibly wisely withdraw  
 “John will possibly wisely withdraw”  
 b. \*John sal *verstandiglik/wyslik moontlik* onttrek.

To summarise, the seven types of higher adverbs identified by Cinque (1999) occur in the generalised order in (20). Cinque (1999:32,106) claims that this order represents a linguistic universal, holding for all languages. As illustrated above, the Afrikaans data bear out this claim.

- (20) *eerlikwaar* (= speech act) > *ongelukkig* (= evaluative) > *oënskynlik* (= evidential) >  
 { *seker/waarskynlik* (= epistemic) > *eens/voorheen/toe* (= past tense)  
*eens/voorheen/toe* (= past tense) > *seker/waarskynlik* (= epistemic) } > *amper seker/moontlik* (= mood (irrealis)) > *verstandiglik/wyslik* (= subject-oriented)

<sup>7</sup> Cinque (1999:33) indicates an element of doubt regarding the unacceptability of (18b). Note that (18b) would be acceptable when *wisely* does not form part of the clausal structure but takes scope only over *perhaps*, as in *John will wisely, perhaps, withdraw*.

### 5.2.3 The order of lower adverbs

Cinque (1999:34) asserts that the order of lower adverbs in English “does appear comparable” to that of Romance languages; he does not provide example sentences in this regard, however. According to Cinque (1999:34), habitual adverbs precede tense (anterior) adverbs such as *already*, as is shown by the difference in grammaticality between the (a) and (b) sentences in (21).<sup>8</sup> In Afrikaans, too, a habitual adverb like *gewoonlik* (“usually”) must precede a tense (anterior) adverb like *reeds* (or *alreeds*, “already”); however, with the adverb *al* (which is also translated as “already”) the reverse order is also possible, as shown in (22c).<sup>9</sup>

- (21) a. Jaco has *usually already* eaten (by this time).  
 b. ?\*Jaco has *already usually* eaten (by this time).
- (22) a. Jaco het *gewoonlik reeds/alreeds/al* geeët teen hierdie tyd.  
 Jaco has usually            already            eaten by this time  
 “Jaco has usually already eaten (by this time)”  
 b. \*Jaco het *reeds/alreeds gewoonlik* geeët teen hierdie tyd.  
 Jaco has *already usually* eaten by this time  
 c. Jaco het *al gewoonlik* geeët teen hierdie tyd.

In view of the facts in (21) and (22a,b) the order of habitual and tense (anterior) adverbs can be represented as in (23). For Afrikaans *al*, however, due to the fact that it can occur either before or after the habitual adverb as shown in (22c), the two elements in (23) would have to be included in braces (as in (24) below).

(23) *gewoonlik* (= habitual) > *alreeds/reeds/al* (= tense (anterior))

(24) { habitual > tense (anterior) }  
 { tense (anterior) > habitual }

<sup>8</sup> Cinque (1999:77) later categorises *already* as “tense (anterior)”.

<sup>9</sup> It is however possible that *al* in the position in (22c), i.e. before the habitual adverb *gewoonlik*, is semantically “diluted” or “bleached” in comparison to its (22a) usage, namely after the habitual adverb.

According to Cinque (1999:34), a tense (anterior) adverb like *already* also occurs before aspectual (perfect) adverbs such as *no longer / (not) any longer* in English, as shown in (25).<sup>10</sup> This order, which is schematically given in (27), is found in Afrikaans as well (26).

- (25) a. Glen *already no longer* goes to gym.  
 b. \*Glen *no longer already* goes to gym.

- (26) a. Glen gaan *alreeds/reeds/al klaar nie meer* gym toe nie.  
 Glen goes *already no longer* gym to not  
 “Glen already no longer goes to the gym”  
 b. \*Glen gaan *nie meer al klaar* gym toe nie.

- (27) { *gewoonlik* (= habitual) > *alreeds/reeds/al* (= tense (anterior)) }  
 { *alreeds/reeds/al* (= tense (anterior)) > *gewoonlik* (= habitual) } > *nie meer*  
 (= aspectual (perfect))

Cinque (1999:33) next focuses on the adverb *always*. Although *always* could at first glance appear to be a habitual adverb like *usually*, this is not the case, however: as Cinque (1999:34) points out, *no longer / (not) any longer* precedes *always* in English, as shown in (28). Cinque (1999:96) therefore categorises *always* as an aspectual (perfect/imperfect?) adverb.<sup>11</sup> Clearly, *no longer* must take scope over *always*, which means that the former must occupy a position higher up in the structure. These facts hold for Afrikaans as well, as illustrated in (29), thus giving the order in (30).

- (28) a. Patrick is *no longer always* late for work.  
 b. \*Patrick is *always no longer* late for work.

- (29) a. Patrick is *nie meer altyd* laat vir werk nie.  
 Patrick is *not longer always* late for work not  
 “Patrick is no longer always late for work.”  
 b. \*Patrick is *altyd nie meer* laat vir werk nie.

<sup>10</sup> Cinque (1999:77) later on refers to *already* as “aspectual (perfect)”.

<sup>11</sup> Cinque (1999:96) expresses reservations about this categorisation. He notes that “whether it should be related to Asp perfect/imperfect remains unclear. For concreteness, I will tentatively assume it to relate to the imperfect value of this head, although the whole matter needs to be understood. Another possibility is that it relates to what is sometimes called ‘continuous’ aspect (or tense)”.

(30) *nie meer* (= aspectual (perfect)) > *altyd* (= aspectual (perfect/imperfect?))

A further order involving the aspectual (perfect/imperfect?) adverb *always* is illustrated by the English examples in (31), where it precedes the aspectual (completive) adverb *completely* (Cinque 1999:34).<sup>12</sup> As shown in (32), the corresponding adverbs in Afrikaans, *altyd* and *heeltemal*, respectively, show the same linear ordering. Combining the order illustrated in (30) with that in (32) yields the order in (33).

(31) a. Samantha is *always completely* at home in nature.  
 b. \*Samantha is *completely always* at home in nature.

(32) a. Samantha is *altyd heeltemal* tuis in die natuur.  
 Samantha is *always completely* home in the nature  
 “Samantha is always completely at home in nature.”  
 b. \*Samantha is *heeltemal altyd* tuis in die natuur.

(33) *nie meer* (= aspectual (perfect)) > *altyd* (= aspectual (perfect/imperfect?)) >  
*heeltemal* (= aspectual (completive))

In terms of the extended order in (33), an aspectual (perfect) adverb such as *nie meer* should occur to the left of *heeltemal*; this prediction is correct, as shown by the Afrikaans example in (34). It should be noted that the reverse order is also possible in Afrikaans, as in (35); in such a case, however, *heeltemal* does not express a quantifying meaning, but rather serves as an intensifying element, adding emphasis to the sentence.

(34) Pieter is *nie meer heeltemal* verlief op Karen nie.  
 Pieter is *no more completely* in love with Karen not  
 “Pieter is no longer completely in love with Karen”

(35) Pieter is *heeltemal nie meer* verlief op Karen nie.  
 Pieter is *completely no more* in love with Karen not  
 “Pieter is completely no longer in love with Karen”

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<sup>12</sup> Cinque (1999:97) later refers to *completely* as an “aspectual (completive)”.

According to Cinque (1999:34), *completely* in turn precedes manner adverbs such as *well* in English, as in (36). This is also the case in Afrikaans, as shown in (37). Adding this order to the one in (33) results in the order in (38), which when integrated into the extended lower adverb order yields (39).

(36) a. Vuyo behaved *completely well* in class.

(37) a. Vuyo het hom *heeltemal goed* gedra in die klas.  
 Vuyo has him *completely well* behaved in the class  
 “Vuyo behaved completely well in class”  
 b. \*Vuyo het hom *goed heeltemal* gedra in die klas.

(38) *altyd* (= aspectual (perfect/imperfect?)) > *heeltemal* (aspectual (completive)) > *goed* (and other manner adverbs)

(39) { *gewoonlik* (= habitual) > *alreeds/reeds/al* (= tense (anterior)) } > *nie meer*  
 (= aspectual (perfect)) > *altyd* (= aspectual (perfect/imperfect?)) > *heeltemal*  
 (aspectual (completive)) > *goed* (and other manner adverbs)

#### 5.2.4 Conclusion

It was illustrated in the preceding sections that the relative linear orders which Cinque (1999) claims to obtain between the various higher and lower adverbs in English, generally also hold for Afrikaans. Only three exceptions to the proposed ordering were found in Afrikaans, namely (i) mood (irrealis), e.g. *moontlik* > past tense, e.g. *toe*; (ii) tense (anterior), e.g. *al* > habitual, e.g. *gewoonlik*; and (iii) aspectual (completive), e.g. *heeltemal* > aspectual (perfect), e.g. *nie meer*. In two of the three cases it was found that the reverse order seems to correlate with a difference in meaning.

Cinque (1999:34) concludes that “the order of the various classes of AdvPs in English corresponds to that found in Romance and includes the following:

... frankly > fortunately > allegedly > probably > once/then > perhaps > wisely > usually > already > no longer > always > completely > well”

This conclusion holds for Afrikaans as well, and may be expressed in the form of the following hierarchy:

- (40) *eerlikwaar* (= speech act) > *ongelukkig* (= evaluative) > *oënskynlik* (= evidential) >  $\left\{ \begin{array}{l} \textit{seker/waarskynlik} \textit{ (= epistemic) > eens/voorheen/toe} \textit{ (= past tense)} \\ \textit{eens/voorheen/toe} \textit{ (= past tense) > seker/waarskynlik} \textit{ (= epistemic)} \end{array} \right\} > \textit{amper/sekerlik/moontlik}$  (= mood (irrealis)) > *verstandiglik/wyslik* (= subject-oriented) >  $\left\{ \begin{array}{l} \textit{gewoonlik} \textit{ (= habitual) > alreeds/reeds/al} \textit{ (= tense (anterior))} \\ \textit{alreeds/reeds/al} \textit{ (= tense (anterior)) > gewoonlik} \textit{ (= habitual)} \end{array} \right\} > \textit{nie meer}$  (= aspectual (perfect)) > *altyd* (= aspectual (perfect/imperfect?)) > *heeltemal* (aspectual (completive)) > *goed* (and other manner adverbs)

### 5.3 Adverbs in specifier position in Afrikaans

As mentioned in section 5.1, the second claim of Cinque's (1999) theory of the syntax of adverbs is that the linear order of the different classes of adverbs is a consequence of the order of the different functional heads associated with these classes. This claim is based on the premise that AdvPs are located in the specifier position of distinct functional heads.

In Afrikaans, unlike the Romance languages such as Italian, functional heads are not realised in the form of distinct affixes which attach to the adverb, verb or any other category.<sup>13</sup> In line with the premise of section 5.3, it is accordingly assumed here that an AdvP is not merged into a specific verbal projection as an adjunct, but is rather merged in the specifier position of a phonetically empty functional head. It is furthermore assumed that this merger is triggered by a specific grammatical feature of the particular head, which must be matched by the same feature on the adverb in question. Schematically, then, the merger operation involving a head H and an adverb ADV would take the form provided in (1) in section 4.3.

The assumption that AdvPs occupy the specifier position of different maximal projections begs the question: "of what heads are these maximal projections?" (Cinque

<sup>13</sup> For example, Donaldson (1993:191) states that "Generally speaking Afrikaans makes no morphological distinction between the adjective and the adverb" as in (i) and (ii) respectively: (i) *Jy is baie vinnig* ("You are very quick"), and (ii) *Jy stap baie vinnig* ("You are walking very quickly").

1999:51). If the order of the functional heads associated with clausal structure is the same as the hierarchy of adverb types, this would constitute evidence that the various adverbs are merged in the specifier positions associated with the various functional heads of the clause (Cinque 1999:51).

## 5.4 The order of functional heads in Afrikaans

### 5.4.1 Introduction

This section examines whether Cinque's claims regarding the order of functional heads in English and the Romance languages also hold for Afrikaans. Cinque (1999:52) bases his claims on considerations relating to functional aspects of the sentence, namely the order of, respectively, agglutinating suffixes, inflectional suffixes and auxiliaries, and functional particles, as well as the order of different combinations of these components in "mixed cases".<sup>14</sup> The question, then, is whether the head order hierarchy which Cinque establishes on the basis of these considerations can be extended to Afrikaans as well.

### 5.4.2 Evidence for the order of functional heads from the order of agglutinating suffixes

As a general rule, Afrikaans does not utilise agglutinating suffixes; in other words, it does not display "suffix stacking".<sup>15</sup> Still, there are limited instances of more than one functional suffix at the end of a stem, which could give some indication of functional head order.

Suffixes are conventionally divided into two general types, namely derivational suffixes and inflectional suffixes.<sup>16</sup> Only the latter are of interest here because they carry functional information such as tense, number, gender and person. The Afrikaans noun *spelendes* ("playing ones"), for example, morphologically consists of the following components:

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<sup>14</sup> The mixed cases are those where particles or auxiliaries occur with bound functional morphemes (Cinque 1999:66); cf. section 4.4.2.4 above.

<sup>15</sup> This also holds for prefixation in Afrikaans; cf. e.g. Combrink (1990:31).

<sup>16</sup> Cf. Combrink (1990:31); interestingly, Combrink argues against the plausibility of this traditional distinction for Afrikaans.

- (42) STEM SUFFIXES
- |         |                |                  |
|---------|----------------|------------------|
| spe(e)l | ende           | s                |
|         | PROG           | PL <sup>17</sup> |
| play    | (-ing) one     | (-s)             |
|         | “playing ones” |                  |

The order of the two suffixes is therefore:

- (43) PROG > PL

One does, however, need a sequence of at least three functional heads in order to make a meaningful comparison with Cinque’s hierarchy. Only two functional heads, in whatever order, will fit into the Cinque order, explained either as head-first or head-last, and by virtue of their limited order, i.e. either x, y or y, x. Clearly such limited data could lead to incorrect predictions. The co-occurrence of at least three suffixes is therefore required.

#### 5.4.3 Evidence for the order of functional heads from the order of inflectional suffixes

According to Cinque (1999: 57-58), the sequence of the various verb and functional suffix combinations (including suffixes with “auxiliary verb” readings) in head-first languages – such as English and the Romance languages – provides evidence for the relative order of the functional heads corresponding to each of the relevant suffixes (see also section 4.4.2.2). Cinque moreover claims that the reverse order (“mirror-image situation”) can be expected to be found in head-final languages. Based on surface patterns, Afrikaans, like e.g. Dutch and German, is conventionally viewed as a head-final language.<sup>18</sup> However, as pointed out above, Afrikaans makes very limited use of verb suffixation. Arguments in favour of a particular functional head hierarchy based on the order of the various verb stem + functional suffix combinations therefore cannot be extended to Afrikaans, as it is not a strong inflectional language.

<sup>17</sup> Where PROG stands for progressive aspect and PL for plural.

<sup>18</sup> Cf. Zwart (1997) for a discussion of this issue. In more recent generative studies, seemingly convincing arguments have been presented to the effect that West Germanic languages like Afrikaans, Dutch and German are actually underlying verb initial languages; cf. e.g. Biberauer (2003, 2009); Oosthuizen (2013); Zwart (2011) in this regard.

#### 5.4.4 Evidence for the order of clausal functional heads from the order of functional particles

According to Cinque (1999:58), free functional morphemes or particles are particularly suited as a source of evidence for the order of clausal functional heads.<sup>19</sup> In head-initial languages such particles allow us to observe the order of functional heads directly (Cinque 1999:58). In contrast, head-final languages containing functional particles generally display all such particles sentence finally, in an order which is the mirror-image of that found in comparable head-initial languages (Cinque 1999:65).

As noted in the previous section (see note 18) the head-initial or head-final status of Afrikaans is uncertain, which could raise doubts about the usefulness of the test at hand. Still, since Afrikaans can accommodate multiple auxiliaries before the main verb, this avenue of investigation could prove fruitful.

Although there are various types of free functional morphemes in Afrikaans<sup>20</sup> which might be relevant for the present discussion, the focus in this section will be on modal auxiliaries<sup>21</sup> as they typically express some aspect of “attitude” and thus share some properties with certain adverbials.<sup>22</sup> An attempt is therefore made below to establish the order of the Afrikaans modals *sal* (“will, shall”), *moet* (“must”), *kan* (“can”), *wil* (“want to”) and *mag* (“may”),<sup>23</sup> with reference to Cinque’s proposed functional head order.

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<sup>19</sup> Cf. Cinque (1999:58) and section 4.4.2.3 for reasons.

<sup>20</sup> E.g. aspectual auxiliaries, conjunctions, determiners, quantifiers, the negative particle *nie*, and the infinitive *te*.

<sup>21</sup> The distinction between “modals” and “mood” needs to be clarified since functional heads of both types are provided for in Cinque’s schema. According to Radford (2009:466), a modal auxiliary is one which expresses ideas such as possibility, futurity or necessity. English modal auxiliaries include “*will/would/can/could/shall/should may/might/must/ought*, and *need/dare* when followed by a ‘bare’ (*to*-less) infinitive complement” (Radford 2009:466). “Mood” (as opposed to modality) is defined by Radford (2009:467) as “a term describing inflectional properties of finite verbs, namely the indicative, subjunctive or imperative mood. A Mood Phrase/MP is therefore a phrase headed by an item which indicates the mood of the verb” (Radford 2009:467). On the distinction between modals and mood, Cinque (1999:78) remarks that a close link exists between the two, as the same category may be expressed by means of mood in one language, and with a modal in another. Cinque goes on to state that “mood” is traditionally restricted to modal categories which are expressed in the morphology of the verb, i.e. by means of verbal inflection. In contrast, modals are typically independent verbs, auxiliaries or particles.

<sup>22</sup> Cf. Cinque (1999:86).

<sup>23</sup> De Villiers (1971:88) lists the Afrikaans modals as *behoort*, *hoef*, *kan*, *mag*, *moet*, *sal*, *wil*. Ponelis (1991:286) lists the following modals: *durf*, *kan*, *mag*, *moet*, *sal*, *wil*, *behoort*, *hoef*, and the modal particle *te*. *Behoort* and *hoef* obligatorily occur with the modal particle *te*, and are therefore not “normal” modals, and *durf* in its modal capacity is

In addition to the distinction between mood and modals, a distinction also needs to be made between various types of modals. Cinque (1999:78) largely works with only a twofold distinction in this regard, namely between epistemic and root modals.<sup>24</sup> He asserts that this traditional interpretative distinction correlates with a structural distinction: epistemic modals are positioned higher in the structure of the clause than root modals. The latter are also not a monolithic class of elements, as they comprise different semantic subclasses, such as volition, obligation, ability and permission. Referring to essentially the same distinction, Quirk et al. (1985:219), for example, distinguish between intrinsic and extrinsic uses of modal auxiliaries:

One important observation about the modals is that each of them has both intrinsic and extrinsic uses: for example, *may* has the meaning of permission (intrinsic) and the meaning of possibility (extrinsic) ... However, there are areas of overlap and neutrality between the intrinsic and extrinsic senses of a modal ... Another point of significance is that the modals themselves tend to have overlapping meanings.

De Villiers (1971:82) also remarks that each of the Afrikaans modals has, to a greater or lesser extent, “double values”. He states that modals can have various shades of meaning, and that there is also meaning overlap between modals.

Based on the twofold distinction between epistemic and root modals, Cinque (1999:78) notes the following sequence:

(44)  $MOD_{epistemic} > MOD_{root}$

This sequence is also found in Afrikaans, as shown in the examples in (45). However, such sequences involving only two elements are clearly too limited for making strong predictions about the order of functional categories.

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rarely used/marginal. Ponellis (1979:246) distinguishes between four types of modal auxiliaries, all of which have been mentioned, and also *blyk* (“seem, appear”). See also Smith (1989:83-92) for an account of the difference between alethic, epistemic and deontic modals with reference to *must*.

<sup>24</sup> Similar distinctions that are found in the literature are, for example, extrinsic/intrinsic (Greenbaum et al. 1990:60, Quirk et al. 1985:219); *persoonlik* (personal)/*onpersoonlik* (impersonal) (De Villiers 1971:82), *temporeel* (temporal)/*hipoteties* (hypothetical), *epistemies* (epistemic)/*deonties* (deontic) (Ponellis 1979:246,248).

- (45) a. Jannie *mag kan* saamgaan.  
           MOD<sub>epistemic</sub> MOD<sub>root</sub>  
           “Jannie may be allowed to come with (us)”  
 b. \*Jannie *kan mag* saamgaan.

Cinque (1999:77) does however “refine” the hierarchy of functional heads, developing more finely grained distinctions in both the epistemic and root modal categories, thereby providing a more extended sequence of functional head categories to work with. He (1999:80-1) nevertheless admits that these refinements lack convincing empirical evidence and are more speculative than earlier more tightly argued proposals.

Instead of working with a single concept of epistemic modality, Cinque (1999:78) distinguishes between the narrower concepts of epistemic and alethic modality. According to him, “the former is concerned with the speaker’s deductions or opinions, the latter with *necessary truths*<sup>25</sup> and with possible truths.”<sup>26</sup> Cinque (1999:79) suggests the existence of a modal auxiliary expressing alethic possibility between the broad categories epistemic and root modals. He goes on to state that there is evidence for distinguishing between a head of alethic possibility and a head of alethic necessity, in the order <necessity, possibility>. In other words, the epistemic modal is divided into three smaller categories:

- (46) MOD<sub>epistemic</sub> .....> MOD<sub>necessity</sub> ... > MOD<sub>possibility</sub>

As regards root modals, Cinque (1999:79-80) states that they express volition, obligation, ability, and permission; moreover, modals expressing these concepts “appear to enter a fixed relative scope among each other.” He (1999:80) accordingly proposes a threefold distinction within the root modal category, yielding the following hierarchy of root modalities:

- (47) MOD<sub>volition</sub> > MOD<sub>objection</sub> > MOD<sub>ability/permission</sub><sup>27</sup>

<sup>25</sup> That is, “propositions that are true in all possible worlds” (Cinque 1999:78), e.g. *Sue may die soon*.

<sup>26</sup> That is, “propositions that are *not necessarily false*, being true in at least one possible world” (Cinque 1999:78), e.g. *Sue must be tired by now*.

<sup>27</sup> Cinque (1999:81) does express reservations about combining the ability and permission modalities under one head, noting that “eventually this might prove simplistic”.

Combining the epistemic/alethic domain of modals with the domain of root modals leads to the following array of modalities (Cinque 1999:81):

- (48)  $MOD_{epistemic} > MOD_{necessity} > MOD_{possibility} > MOD_{volition} > MOD_{obligation} > MOD_{ability/permission}$

In view of the multiple (or at least double) meaning of modals referred to earlier, the above sequence might be misleading, as the same modal will appear (at the very least) in two categories. Due to the complexity of modal meaning only the (basic) meaning of modals in their root modal usage will be examined here with reference to Cinque's hierarchy. Following Cinque's (1999:80-1) research procedure described in Chapter 4, the Afrikaans order of root modals is examined with the aid of the English glosses that he provides.

Starting with the root element of volition in (48), Cinque (1999:80) demonstrates that it (i) falls under the scope of the alethic modal of possibility (i.e. *would*) and (ii) takes scope over ability/permission, as illustrated by the English sentence in (49):

- (49) G. *would want to be allowed/be able to sing.*  
                     possibility volition            permission / ability

In Afrikaans, an alethic modal of possibility such as *sou* ("would") likewise takes scope over an element expressing volition (e.g. *wou*, the modal counterpart of the English main verb expression "wanted to"), and the latter in turn takes scope over permission/ability. This order is illustrated by the example in (50a) below. As shown by the ungrammaticality of the examples in (50b,c), the alethic modal of possibility cannot enter into any other order with heads expressing volition and permission/ability. Similarly, modals expressing permission/ability cannot precede volition, as shown in (50d).<sup>28</sup> These facts therefore provide support for Cinque's hierarchy in (51) regarding the relative order of "volition" and "permission/ability" modals.

<sup>28</sup> It should be noted that modals such as *mag* and *kon* can indeed precede an element expressing volition, as shown in (i) below. In such cases, however, *mag* and *kon* do not function as root modals expressing permission/ability, but rather as alethic modals of possibility:

- (i) a. Linda *mag wil* speel (na ete).  
           "Linda may want to play (after lunch)"  
       b. Linda *kon wou* gespeel het (na ete).  
           "Linda could have wanted to play (after lunch)"

- (50) a. Jan sou *wou mag / kon* sing.  
 possibility volition permission/ability  
 “Jan would want to be allowed to be able to sing”
- b. \*Jan *wou sou mag/kon* sing.  
 volition possibility
- c. \*Jan *mag/kon sou* sing.  
 permission/ability possibility
- d. \*Jan *mag/kon wou* sing  
 permission volition

(51)  $MOD_{volition} \dots > MOD_{permission/ability}$

Cinque (1999:80) furthermore asserts that volition takes scope over obligation, as shown by the English example in (52). This order is found in Afrikaans as well, as in (53a). However, as shown in (53b), the opposite order is also acceptable, although the item *moes* (translatable as “should” in this case) seems to convey a “more general” idea of obligation, one that is expressed by the speaker. On this interpretation, though, *moes* would not qualify as a root modal but rather as an alethic modal of necessity. In short, the difference in grammaticality (on the intended meaning) between (53a,b) provides support for the modal hierarchy in (54).

(52) Jan would *want to have to* take a decision.  
 volition obligation

- (53) a. Jan sou die besluit *wou moes* neem.  
 volition obligation  
 Jan would the decision want to have to take  
 “Jan would want to have to take the decision ”
- b. \*Jan sou die besluit *moes* *wou* neem. (where *moes* = obligation)  
 obligation volition  
 Jan would the decision have to want to take  
 “Jan would have to want to take the decision”

(54)  $MOD_{volition} > MOD_{obligation}$

Consider, finally, the relative order between obligation and permission/ability in the hierarchy in (48). For this, Cinque (1999:80) provides evidence from “special context”-type sentences in Guyanese. As regards the order obligation-ability, consider the Guyanese sentence in (55).

- (55) a. ?Non vorrei dover poter risolvere l’equazione in soli 3 minuti.<sup>29</sup>  
 “I would not like to have to be able to solve the equation in just three minutes”  
 b. \*Non vorrei poter dover risolvere l’equazione in soli 3 minuti.  
 “I would not like to be able to have to solve the equation in just three minutes”

The Afrikaans equivalent of the Guyanese sentence (and its English counterpart) in (55) is given in (56a); this sentence is grammatical, whereas (56b), which shows the reverse order, is not; the resulting order is accordingly as in (57).

- (56) a. Ek sou nie daarvan hou om daardie som in net drie minute *te moet kan* doen  
 nie. obligation ability  
 I would not it like to that sum in just three minutes to have to can do not  
 “I would not like to have to be able to do that sum in just three minutes”  
 b. \*Ek sou nie daarvan hou om daardie som in net drie minute *te kan moet*  
 doen nie.

- (57) MOD<sub>obligation</sub> > MOD<sub>ability</sub>

As regards evidence for the order obligation-permission, Cinque (1999:80) provides the following sentence from Guyanese Creole:

- (58) a. Ci vorremmo dover poter entrare anche noi in quel club.  
 “We would like to have to have the permission to enter that club”  
 b. \*Ci vorremmo poter dover entrare anche noi in quel club.  
 “We would like to have the permission to enter that club”

The obligation-permission order is also found in Afrikaans, whereas the converse order is unacceptable. This is shown by the difference in grammaticality between the following two sentences:

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<sup>29</sup> Cinque (1999:80) does not provide a morpheme-for-morpheme literal translation of the Guyanese examples.

(59) a. Ek sou dit haat om toestemming *te moet* hê om *te mag* deelneem.

obligation                      permission

I would it hate to permission must have to may participate

“I would hate it to have to have permission to participate”

b. \*Ek sou dit haat om toestemming *te mag* hê om *te moet* deelneem.

In short, then, the Afrikaans facts in (53), (56) and (58) provide independent support for the hierarchy for root modals proposed by Cinque (1999:80). This hierarchy can be represented as follows with reference to the Afrikaans modals in question:

(60) *wil* > *moet* > *kan/mag*

MOD<sub>volition</sub> > MOD<sub>obligation</sub> > MOD<sub>ability/permission</sub>

#### 5.4.5 Evidence for the order of clausal functional heads from “mixed cases”

In the preceding subsection we examined three general phenomena from which Cinque draws evidence in support of his proposals about the order of functional heads: agglutinating suffixes, inflectional suffixes and auxiliaries, and functional particles. A fourth source of possible evidence involves so-called “mixed cases”, that is, various combinations of the above three phenomena (cf. section 4.4.2.4). However, this avenue of investigation is unlikely to provide evidence concerning the order of functional heads in Afrikaans, since this language in effect employs only one of the above phenomena, namely functional particles (e.g. modal and aspectual auxiliaries). As far as could be ascertained, such mixed case combinations are not found in Afrikaans.<sup>30</sup>

#### 5.4.6 Summarising remarks

This apparent compliance of Afrikaans with Cinque’s root modal sequence needs to be tempered by the speculative nature of his suggestions in this regard. In addition, in

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<sup>30</sup> It could perhaps be argued that a sentence such as (i) below displays a mixed combination of the type in question. In this case, the modal *sal* (“will”) follows an adverb that contains the progressive aspectual suffix *-ende* (the counterpart of English “-ing”). In Cinque’s framework, however, adverbs are not used to argue for a specific functional head order, which raises doubts about the relevance of this type of sentence. Also, it is not clear whether the adverb is formed via an inflectional or a derivational process; in this regard, cf. Cinque (1999:70).

(i) (Ek weet dat) sy al klaende die werk sal doen. ((I know that) she will do the work while complaining/under duress).

selecting the Afrikaans modals for testing the validity of Cinque's proposed sequence of functional heads, attention was restricted to the most basic or root meaning of the relevant modals, abstracting away from finer shades of meaning that they may express in particular contexts. The use of such root modals in this investigation, to the exclusion of other types of functional particles, should also suggest caution in evaluating the apparent conformity of Afrikaans with Cinque's hierarchy. In fact, the actual sequence eventually tested was limited to only three very speculative functional heads, namely:

(61)  $MOD_{volition} > MOD_{obligation} > MOD_{ability/permission}$

## 5.5 Conclusion

The essence of Cinque's (1999) theory of the syntax of adverbs was summarised in section 2.1 in the form of two general claims: (i) the various adverb classes demonstrate a specific, universal linear order, and (ii) the linear order of the adverb classes is a consequence of the order of the different functional heads associated with the various adverb classes. The validity of these two claims was subsequently investigated in relation to Afrikaans. The focus of the investigation was on whether Afrikaans syntax complies with Cinque's theory with regard to adverb class order and functional head sequence. It was found with regard to both claims that the facts of Afrikaans are in apparent compliance with Cinque's proposals. The compliance of functional head order, however, should not be embraced uncritically, as the actual sequential range of Afrikaans functional heads that had been considered was very limited. Clearly, this limitation could compromise the significance of compliance at the level of adverb class order, as the latter is seen as a consequence of the order of functional heads in Cinque's theory.

## Chapter 6

### CONCLUSION

It was stated in Chapter 1 that adverbs represent a notoriously “difficult” category to account for. This difficulty of adverb analysis is largely due to the strikingly heterogeneous nature of adverbs in terms of function and syntactic distribution. The latter refers not only to the different positions that the various adverbs can occupy in the clause, but also to multiple possibilities of placement for the same adverb. This in turn raises semantic issues which complicate the process of adverb analysis, to the point that clear-cut conclusions regarding adverb class equivalency between languages (in this case between Afrikaans and other Germanic and Romance languages) is not always possible.

It is clear that much of the “adverb problem” lies at the level of the word class itself, and specifically its inclusive nature. The broadness of the adverb category remains a serious challenge for attempts to develop adequate taxonomies of adverbs.<sup>31</sup>

Cinque’s functional theory does provide a powerful tool for analysing adverbs within a minimalist generative framework. Although very elaborate (“outrageously rich”, in Cinque’s (1999:106) words) in its scope, the universal hierarchy of functional heads is structurally simple, and therefore minimalistic in spirit. The implication of Cinque’s functional head hierarchy that “even the simplest sentence of any one language can be taken to contain the entire array of functional projections (with default values)” is not contrary to MS values, as “inbuilt” structure with a binary selection system is functionally optimally economical. According to Cinque (1999:44), it is also conceptually desirable, from a minimalistic point of view, that AdvPs be located in the specifier positions of distinct maximal projections.<sup>32</sup>

Cinque claims that his theory applies to all languages. He proposes a “universal hierarchy” of functional heads, which determines the order of adverbs, where this hierarchy applies cross-linguistically without exception. Such a theory fits neatly with the basic assumptions

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<sup>31</sup> In this regard, Cinque (1999:141) states that agreement and negation, for example, do not fit naturally into existing attempts at adverb analysis.

<sup>32</sup> Cf. Cinque (1999:44) for detailed argumentation in this regard.

of UG. Cinque (1999:141) in fact suggests that “the hierarchy of functional projections may turn out to be a property of the computational component of UG.”

Even though Cinque’s theory involves a functional approach to the analysis of adverbs, he is in principle not insensitive to semantic considerations. In his conclusion Cinque (1991:141) remarks that “many (perhaps, most) of the relative orders among functional elements may ultimately reduce to scope relations among what we may take to be different semantic operators (over the predicate argument nucleus of the sentence)”.

In terms of the actual focus of this study, namely to assess whether Cinque’s functional theory provides an adequate framework for the analysis of adverbs in Afrikaans, the investigation did not reveal any obvious inadequacies in Cinque’s theoretical apparatus. The concepts and diagnostics he utilises with reference to Romance languages and languages of other families seem to work equally well for Afrikaans. It should be noted, however, that uncertainty about the head-first vs. head-last status of Afrikaans does compromise the clarity of outcomes to a certain extent.

The main question addressed in this study, namely whether Cinque’s hierarchies can be applied to Afrikaans, can be answered in the affirmative. Despite some grey areas of adverb class and functional head order, the general pattern was found to be clear: Afrikaans adverbs and functional head orders, albeit of very limited sequences, comply with Cinque’s proposed hierarchies.

Limitations in the scope of this study, which was little more than a preliminary probe, suggest where further research can be done. Clearly, a more extended investigation into Afrikaans adverb order, tested against the languages and examples provided by Cinque, should be undertaken. Similarly, other possible avenues of investigation which might yield insight into Afrikaans functional head order, such as aspectuals, could prove to be profitable topics for further study. However, it is a moot point whether any such further extended research on the topic of this study will deliver any important new insights regarding the stated aim of the investigation.

Cinque claims that his theory of the syntax of adverbs is applicable cross-linguistically, and to all languages. That the facts of Afrikaans adverbs seem to comply with his theory, thus confirming the apparent adequacy of the proposed framework, provides further credence to Cinque’s claim.

## References

- Alexiadou, A. 1997. *Adverb Placement: Case Study in Antisymmetric Syntax*. Amsterdam: John Benjamins Publishing Company.
- Baker, M. 1985. The Mirror Principle and Morphosyntactic Explanation. *Linguistic Inquiry* 12:309-315
- Bartsch, R. 1976. *The Grammar of Adverbials: a Study in the Semantics and Syntax of adverbial constructions*. Amsterdam: North Holland Publishing Co.
- Biberauer, T. 2003. *Verb Second (V2) in Afrikaans: A minimalist investigation of word-order variation*. PhD dissertation. University of Cambridge.
- Biberauer, T. 2009. How “well-behaved” is Afrikaans? V2 in Modern Spoken Afrikaans. In H. Den Besten, F. Hinskens & J. Koch (eds.). *Afrikaans. Ein Tryptichon*. Amsterdam: Voortgang.
- Bussman, H. 1998. *Routledge Dictionary of Language and Linguistics*. New York: Routledge.
- Chomsky, N. 1995. *The minimalist program*. Cambridge, Mass.: MIT Press.
- Chomsky, N. 2000. Minimalist inquiries: The framework. In R. Martin, D. Michaels & J. Uriagereka (eds.). *Step by step: Essays on minimalist syntax in honour of Howard Lasnik*. Cambridge, Mass.: MIT Press.
- Chomsky, N. 2001. Derivation by phase. In M. Kenstowicz. (ed.). *Ken Hale. A life in language*. Cambridge, Mass.: MIT Press.
- Chomsky, N. 2004. Beyond explanatory adequacy. In A. Belletti (ed.). *Structures and beyond. The cartography of syntactic structures (Vol. 3)*. Oxford: Oxford University Press.
- Chomsky, N. 2005. Three factors in language design. *Linguistic Inquiry*, 36:1-22.

- Cinque, G. 1999. *Adverbs and Functional Heads: A Cross-Linguistic Perspective*. New York: Oxford University Press.
- Cinque, G. 2004. Issues in adverbial syntax. *Lingua*, 114: 683-710.
- Combrink, J.G.H. 1989. Afrikaanse morfologie: 'n oorsig. In T.J.R. Botha (ed.-in-chief). 1989. *Inleiding tot die Afrikaanse Taalkunde*. Pretoria: Academia.
- Combrink, J.G.H. 1990. *Afrikaanse Morfologie*. Pretoria: Academia.
- Crystal, D. 1997. *A Dictionary of Linguistics and Phonetics*. 4<sup>th</sup> edition. Oxford: Blackwell Publishing.
- Crystal, D. 2003. *A Dictionary of Linguistics and Phonetics*. 5<sup>th</sup> edition. Oxford: Blackwell Publishing.
- De Villiers, M. 1971. *Die grammatika van tyd en modaliteit*. Improved 2<sup>nd</sup> edition. Kaapstad: A.A. Balkema.
- Delfitto, D. 2000. Adverbs and the Syntax/Semantics Interface. *Rivista di Linguistica*, 12.1: 13-53.
- Donaldson, B. 1993. *A grammar of Afrikaans*. Berlin & New York: Mouton de Gruyter.
- Ernst, T. 1997. *The Scopal Basis of Adverb Licensing*. Ms., Rutgers University.
- Ernst, T. 2002. *The Syntax of adjuncts*. Cambridge: Cambridge University Press.
- Ernst, T. 2007. On the role of semantics in a theory of adverb syntax. *Lingua*, 117:1008-1033.
- Evans, N. and Levinson, S.C. 2009. The myth of language universals: Language diversity and its importance for cognitive science. *Behavioral and Brain Sciences*, 32: 429-492.

- Finch, G. 2005. *Key concepts in language and linguistics*. Basingstoke: Palgrave Macmillan.
- Greenbaum, S. 1969. *Studies in English Adverbial Usage*. London: Longman.
- Greenbaum, S. and Quirk, R. 1990. *A Student's Grammar of the English Language*. London: Longman.
- Greenbaum, S. 2000. *The Oxford Reference Grammar*. Oxford: Oxford University Press.
- Haser, S. and Kortman, B. 2006. Adverbs. In K. Brown (ed.-in-chief). 2006. *Encyclopedia of Language and Linguistics*. 2<sup>nd</sup> edition. Vol.1. Oxford: Elsevier.
- Holmer, A. 2012. Evidence from Formosan for a unified theory of adverb ordering. *Lingua*, 122:902-921.
- Hornstein, N., Nunes, J., and Grohman, K.K. 2005. *Understanding Minimalism*. Cambridge: Cambridge University Press.
- Huddleston, R. and Pullum, G.K. 2002. *The Cambridge Grammar of the English Language*. Cambridge: Cambridge University Press.
- Ifantidou-Trouki, E. 1993. Sentential adverbs and relevance. *Lingua*, 90:69-90.
- Jackendoff, R.S. 1972. *Semantic Interpretation in Generative Grammar*. Cambridge, Mass.: M.I.T. Press.
- McGregor, W.B. 2009. *Linguistics: An Introduction*. London: Continuum International Publishing.
- Oosthuizen, J. 2013. Obligatory reflexivity in Afrikaans: A minimalist approach. PhD dissertation, Stellenbosch University.
- Oosthuizen, W.J. 1964. *Die wet van begripsoorte in bywoordreekse in Afrikaans*. M.A.-skripsie, Universiteit Stellenbosch.

- Palmer, F.R. 2001. *Mood and Modality*. 2<sup>nd</sup> edition. Cambridge: Cambridge University Press.
- Pinker, S. 1994. *The Language Instinct*. New York: Morrow.
- Ponelis, F.A. 1979. *Afrikaanse Sintaksis*. Johannesburg: Van Schaik.
- Ponelis, F.A. 1991. Sintaksis. In T.J.R. Botha (ed.-in-chief). 1991. *Inleiding tot die Afrikaanse Taalkunde*. 2<sup>nd</sup> revised edition. Pretoria: Academia.
- Quirk, R., Greenbaum, S., Leech, G., and Svartvik, J. 1972. *A Grammar of Contemporary English*. London: Longman.
- Quirk, R., Greenbaum, S., Leech, G., and Svartvik, J. 1985. *A Comprehensive Grammar of the English Language*. London: Longman.
- Radford, A. 1997. *Syntactic theory and the Structure of English: A Minimalist approach*. Cambridge: Cambridge University Press.
- Radford, A. 2009. *Analysing English Sentences: A Minimalist Approach*. Cambridge: Cambridge University Press.
- Ramat, P. and Ricca, D. 1994. Proto-typical adverbs: on the scalarity/radiality of the notion of adverb. *Rivista di Linguistica*, 6.2:289-326.
- Smith, N. 1994. *The Twitter Machine: Reflections on Language*. Oxford: Blackwell Publishers.
- Theron, A.S. 1964. *Aspekte van "die bywoord" in Afrikaans*. M.A.-skripsie, Universiteit Stellenbosch.
- Tenny, C.L. 2000. Core events and adverbial modification. In C. Tenny and J. Pustejovsky (eds). 2000. *Events as Grammatical Objects*. Stanford: CSLI Publications.

Van der Auwera, J. 1994. Adverbs and Adverbials. In R.E. Asher (ed.-in-chief). *The Encyclopedia of Language and Linguistics. Vol. 1*. Oxford: Pergamon Press.

Zwart, J.-W. 1997. *Morphosyntax of verb movement. A minimalist approach to the syntax of Dutch*. Dordrecht: Kluwer Academic Publishers.

Zwart, J.-W. 2011. *The Syntax of Dutch*. Cambridge: Cambridge University Press.