Cross-categorial degree modification in Afrikaans: An analysis of the high-degree modifier *baie*

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Abstract

A central question within the study of gradability in natural language is whether different grammatical categories – adjectives, verbs, and nouns – are gradable in the same way. One means of addressing this question is by examining wide-distribution modifiers that combine with gradable predicates of all of these categories.

This thesis examines one such modifier: *baie* 'very/a lot' in Afrikaans. At first glance, *baie* appears to have a maximally wide distribution, as it can modify gradable predicates of all categories. However, it is shown that *baie* is in fact polysemous: two distinct instances of the modifier can be distinguished on the basis of semantic and syntactic tests. One modifies gradable adjectives, and the other modifies the remaining gradable categories. Semantic and syntactic analyses of these two instances of *baie* are provided. Additionally, competition between *baie* and the Afrikaans modifier *veel* 'a lot' in excessive and equative constructions is explained on the basis of the inherent evaluativity of the relevant instance of *baie*. The thesis also speculates as to how these two distinct versions of *baie* may have developed.

The thesis' key contribution is its questioning of whether modifiers with a maximally-wide distribution really exist, or whether other modifiers that, like *baie*, have previously been analysed as single items might in fact be polysemous; and portion out the modification of different grammatical categories between apparently identical but semantically and syntactically distinct items. The analysis presented here also makes fruitful use of a distinction between the gradability of gradable adjectives and gradable verbs, which are modified in terms of quality/intensity, and the gradability of other gradable categories, which are modified in terms of quantity/frequency. Finally, this study is also the first, to my knowledge, to focus on degree modification in Afrikaans.

Contents

1. Introduction

1.1 Gradability and degree modification

Gradable predicates, according to Kennedy (1999), are those predicates with a semantics such that their domains can be partially ordered with reference to a property that permits grading. An example of such a predicate is the adjective "tall", whose domain can be ordered on the basis of a measure of height. As shown below, the gradability of a predicate allows it (i) to occur in degree constructions, e.g. comparatives and equatives; and (ii) to be modified by degree modifiers such as "very", "mostly", and "somewhat".

(1) a. John is taller than Mary. (*Comparative*)
b. John is the tallest. (*Superlative*)
c. John is as tall as Peter. (*Equative*)
d. John is tall enough to change the lightbulb. (*Sufficiency construction*)
e. John is too tall to sleep on the couch. (*Excessive construction*)
f. John is very/somewhat tall. (*Degree modification*)

The gradable predicate *par excellence* is the gradable adjective[1], and accordingly, it is the semantics of gradability in the adjectival domain that has received the most theoretical attention. It has however long been observed (cf. Bolinger 1972; Abney 1987; Kennedy & McNally 2005) that gradability is a cross-categorial property. Nouns and certain types of verbs can also occur in constructions like (1). However, whilst "tall" in (1) permits grading according to degrees of height, and (2a) may permit grading according to the intensity of 'liking', the predicates in (2b-e) seem to be graded with reference to quantity or frequency.

(2) a. I like him very much. (*Gradable verb, degree modification*)
b. Alex goes to the cinema a lot. (*Eventive verb, degree modification*)
c. John has been sick more than Mary this year. (*Eventive adjective, comparative*)
d. I eat as much soup as I eat salad. (*Mass noun, equative*)
e. The rabbit ate the most carrots. (*Plural noun, superlative*)[2]

[1] There also exist non-gradable adjectives, such as "former" and "dead". The inability of these adjectives to occur in degree constructions is demonstrated below.

(3) a. ?? Carter is a fairly former president; Lincoln is an extremely former president. (Kennedy 1999: xiv)
b. ?? Einstein is deader/more dead than Elvis.

[2] Morzycki (2004, 2009; cf. also de Vries 2010) also highlights the ability of certain count nouns to appear with degree modifiers, where the latter elements serve to indicate the degree to which a property holds of an individual, as in (4):

(4) He is quite an idiot.

The relationship between the gradability in (1) and that in (2) is the subject of much debate. Some (e.g. Constantinescu 2011) argue that there are fundamental differences between the gradability of adjectives and that of other predicates. Others (e.g. Doetjes 1997; Nakanishi 2007; Piñón 2008; Wellwood, Hacquard & Pancheva 2012; Bochnak 2013b) point to similarities between gradability across domains, and aim to develop a unified account of gradability that can accommodate these parallels.

The study of degree modification is highly relevant to investigations of cross-categorial gradability: if the semantics of degree modifiers is understood, some aspects of the semantics of the gradable predicates they modify are likely deducible. Kennedy (1999: xvi) states further that understanding the semantic characteristics of gradable predicates will improve our understanding of how ordering relations are expressed in natural language.

However, the interaction between gradable predicates and degree modifiers is more complex than it initially appears to be. To begin with, a predicate being gradable is not a prerequisite for degree modification: degree modifiers themselves can 'coerce' gradable readings of seemingly non-gradable predicates.[3] This is shown below, with reference to the non-gradable predicates "Italian" and "pregnant":

(5) a. He is so Italian! (Constantinescu 2011: 7)

b. NE-YO and his very pregnant fiancée.[4]

A second complicating factor is that 'degree modifiers' cannot be treated as a homogeneous group. Aside from their differing semantic effects (e.g. "very" intensifies, whereas "somewhat" attenuates), there are restrictions on the gradable predicates with which individual degree modifiers can combine. For example, whilst "more" can modify gradable predicates of all categories, "very" combines almost exclusively with gradable adjectives.[5]

With reference to English, Dutch and French, Doetjes (2008) has arranged gradable predicates in a table so as to clarify how degree modifiers in these languages divide the modification of these predicates amongst themselves. Two key aspects of variation in degree modification are captured in this table. Firstly, some degree modifiers have restricted distributions, whereas others have wide distributions. The type of degree modifier with the most restricted distribution, of which "very" is an exemplar, combines only with gradable adjectives. Members of the type of degree modifier with the least restricted distribution, e.g. "more", combine with all the categories of gradable predicate that

[3] The syntax of this so-called "scalarity coercion" is discussed in Matushansky (2002b).

[4] Taken from http://www.dailymail.co.uk/tvshowbiz/article-3456689/NE-YO-weds-pregnant-fiancee-Crystal-Renay-California-seaside-resort.html.

[5] This sets aside non-canonical uses of "very" such as "I became the very person I hated in my youth" (Bylinina & Sudo 2015).

Doetjes considers. Secondly, the gradable predicates in this table are ordered in such a way that if a degree modifier combines with more than one gradable predicate, these gradable predicates are necessarily adjacent to one another.

Whilst descriptively useful, this organisation of predicates and modifiers has little explanatory power. The study to be presented takes this gap as its point of departure. With particular focus on the Afrikaans high-degree modifier *baie* 'very/a lot' as it is used in Standard Afrikaans,[6] I investigate (i) how this modifier fits into Doetjes' table, and (ii) how its distribution can be explained with reference to its own semantic and syntactic properties, and those of the gradable predicates with which it combines. This investigation is further informed by a consideration of the interaction between *baie* and the Afrikaans modifiers *veel* 'a lot', *verskriklik* 'terribly', and *erg* 'very'. The study aims to establish how *baie* functions in Afrikaans and, from a semantic and syntactic perspective, why it functions in this way. A secondary aim is to extrapolate from the Afrikaans findings in order to make broader claims about gradability and degree modification cross-linguistically.

The remainder of this chapter establishes the theoretical foundation upon which the argument to be developed is founded. In section 1.2, I present two dominant approaches to the semantics of gradability: the vague predicate approach (1.2.1), and the degree-based approach (1.2.2). Section 1.3 examines an account of degree modifiers that treats these items as operating on the contextual parameters that contribute to the interpretation of the modified expression. This account is contrasted with an analysis couched within the degree-based treatment of gradability outlined in 1.2.2. Section 1.4 summarises the chapter's discussion, and section 1.5 gives an overview of the argument to be presented in the remainder of the thesis.

1.2 The semantics of gradable predicates

As remarked above, gradable adjectives have received the most attention in the study of gradable predicates. Accordingly, this section uses gradable adjectives in its presentation of two prominent types of semantic analyses of gradable predicates. However, both types of analysis have been extended so as to be applicable to nouns and verbs as well (cf. Doetjes, Constantinescu & Součková 2011 for the vague predicate approach; and Doetjes 1997; Nakanishi 2007; Piñón 2008; Wellwood et al. 2012; and Bochnak 2013b, amongst others, for the degree-based approach).

The first type of analysis assigns gradable adjectives the same semantic type as other predicates: they denote functions from individuals to truth values. However, they are said to differ from non-gradable predicates in that their domains are subject to a particular kind of ordering. This approach

[6] Standard Afrikaans is distinguished here from the two regional varieties of Afrikaans – so-called "Orange River Afrikaans" and "Cape Afrikaans" – as well as from colloquial Afrikaans. However, this distinction is only of relevance in chapter 4, in relation to the discussion of *baie* in equative and excessive constructions. To my knowledge, there are no significant differences in the use of *baie* across varieties in all other respects.

will be referred to as the "vague predicate" approach. Analyses of the second type take gradable adjectives to be relations between objects and degrees, and will be referred to as "degree-based" accounts. Each type of account is discussed and critiqued in what follows. Particular attention is paid to each account's treatment of degree modifiers.

1.2.1 Gradable predicates as context-sensitive vague predicates

Klein (1980) (for related approaches, see McConnell-Ginet 1973; Kamp 1975; van Rooij 2011; and Constantinescu 2011; as well as the 'neo-Kleinian' approach of Doetjes et al. 2011) treats gradable predicates as context-sensitive vague predicates. Within this approach, the meaning of a gradable adjective like "tall" is a set of individuals. The members of this set are contextually determined based on a comparison class of individuals, which defines what it means to be 'tall' in the context. The comparison class need not be overtly specified, as is the case with the so-called "positive" or unmodified form of the adjective that occurs in a sentence such as "John is tall". Alternatively, as Morzycki (2013: 98) points out, the comparison class may be defined by means of a *for*-phrase: in the sentence "John is tall for a gymnast", John is defined as 'tall' in comparison to the other members of the class of gymnasts.

It is a requirement of the vague predicate account of gradable adjectives that the domain of individuals is ordered in terms of the dimension encoded in the adjective: in the case of "tall", this ordering is in terms of height. 'tall' is then a function from individuals to truth values, of type <*e,t*>, in a context *c*:

(6) $[\![\text{tall}]\!]^c = \lambda x.\ \text{tall}(x) \text{ in } c$

Importantly, the 'tall' function is not restricted to assigning either 'true' or 'false' to each of the relevant individuals; i.e., it is a partial rather than a total function. For borderline cases – those individuals who count neither as 'tall' nor 'not tall' in the context – it returns an 'undefined' truth value. These individuals constitute the "extension gap" of the predicate (Klein 1980: 10).

In the vague predicate approach, degree constructions and degree modifiers are taken to operate on the contextual parameter *c* that is part of the gradable adjective's meaning. For example, whilst the positive form 'tall', defined in (6), takes as a comparison class the relevant individuals in the context and returns either 'true', 'false', or 'undefined', 'very tall' takes as a comparison class the set of individuals already defined as 'tall' – i.e., those individuals who constitute what Klein terms the "positive extension" of the adjective. An individual *x* is then defined as 'very tall' in *c* iff *x* counts as 'tall' compared to those who count as 'tall' in *c* (Klein 1980: 24). "Very" and other degree modifiers therefore serve to introduce a new comparison class that is more restricted than the one in place before modification occurs.

In this approach, the inability of non-gradable predicates to occur in degree constructions or with degree modifiers can be explained by the facts that their domains are not ordered, and their

interpretation is not subject to influence from the contextual parameter *c*. Operations that act on *c* are thus undefined, and constructions such as those in (1-2) are infelicitous.

One primary shortcoming of the vague predicate approach, observed by von Stechow (1984), is its seeming inability to account compositionally for comparatives that make use of differential measure phrases. Klein (1980) assigns a comparative such as (7a) the form in (7b):

(7) a. Mary is taller than John.

b. $\exists c$ [tall(*m*) in *c* $\wedge \neg$ tall(*j*) in *c*]

(7a) is true iff there exists a context *c* in which Mary counts as 'tall' and John counts as 'not tall'. However, when a measure phrase is incorporated into (7a), such that it reads e.g. "Mary is two centimeters taller than John", compositional difficulties arise. According to Kennedy (1999), such a sentence does not directly compare the individuals 'Mary' and 'John'. Rather, an assertion pertaining to the difference between the heights of Mary and John is made. It is not immediately apparent how (7b) might be altered to reflect this meaning.[7]

As Rett (2008) points out, this shortcoming is even clearer in the case of so-called "indirect comparatives", such as "That dinner was more expensive than it was tasty". This sentence can intuitively be paraphrased as 'the extent to which the dinner was expensive exceeds the extent to which it was tasty'. It is unclear how this meaning can be derived from an operation on individuals.

The reader is referred to Kennedy (1999) for discussion of additional challenges to this account; e.g. the difficulty it has in explaining the anomalous status of comparatives such as #"My copy of *The Brothers Karamazov* is heavier than my copy of *The Idiot* is old" and #"Venus is brighter than Mars is dim".[8] These issues, in addition to its problems in accounting compositionally for differential

[7] Klein (1982) develops an account according to which sentences like "Mary is two centimeters taller than John" are interpreted using "much". The way in which this is supposed to work is complicated and falls outside of the scope of the present discussion. Indeed, given its complexity, the very criticism that Klein offers regarding the degree-based approach – that it introduces unnecessary complexity into the semantic representation (cf. section 1.2.2) – can be levelled against this analysis. Differential measure phrase comparatives are therefore still taken to pose a problem for the vague predicate account of gradable predicates.

[8] Bochnak (2013a: 38) claims that another shortcoming of this approach is that it fails to distinguish between relative-standard adjectives like "tall" and absolute-standard adjectives like "straight" or "wet". According to him, the latter are not vague as they do not give rise to the Sorites Paradox, which is used as a means of identifying indeterminacy regarding the application of a predicate (see van Rooij 2011). Nonetheless, he continues, to say that they have no contextual parameter *c* would render them semantically identical to non-gradable predicates, which would not be a desirable result, as they can still occur in e.g. comparatives (cf. "These two rulers are both bent, but the red one is straighter than the green one"). However, Burnett (2012) argues that absolute-standard adjectives are what she terms "potentially vague", where "potential vagueness" is defined as follows: "An adjective *P* is potentially vague iff there is some context *c* such that *P* gives rise to the Sorites Paradox in *c*". She gives examples using "straight" and "empty". Under her analysis, the difference between relative- and absolute-standard adjectives is that the former are 'universally context-sensitive', and the latter are 'existentially context-sensitive'. The reader is referred to Burnett (in press) for further detail.

measure phrase comparatives, have made the vague predicate approach less prominent than accounts that incorporate degrees into the semantic representation. The following section discusses a standard version of these degree-based approaches.

1.2.2 Gradable predicates as relations between degrees and individuals

The degree-based analysis of gradable adjectives to be discussed here takes these predicates to denote relations between degrees and individuals, of type $<d, <e,t>>$.[9] In this approach, degrees are of type *d*, and serve as a means of directly representing measurement on a scale (Kennedy 1999: 42). An adjective like "tall" thus takes a degree of type *d* and an individual *x* and returns 'true' if *x*'s height is at least as great as *d*.

This approach incorporates scales into the ontology. These are conceived of as triples including a set of degrees, an ordering relation such that each degree is ordered with respect to every other degree,[10] and a dimension of measurement (e.g. length, weight, or temperature) (Kennedy 1999: 14).

The degree-based approach can be illustrated with reference to its treatment of the comparative. Comparatives refer to some degree according to which the comparison is made.[11] In some accounts, this is a standard d_c introduced by the *than*-clause (cf. Beck 2010, 2012). Alternatively, the *than*-clause has been argued to introduce a set of degrees. In such an account, the comparative asserts that the maximum degree in that set is exceeded (cf. Beck 2011).

Assuming that the *than*-clause in "*x* is more *G* than *y*" introduces a standard d_c that specifies the degree to which the property *G* holds of *y*, the comparative asserts that the degree to which *x* is *G* exceeds d_c (Kennedy 1999: 46). Thus, (8a) is represented as in (8b):

(8) a. *x is more G than* d_c

b. $\exists d\,[\, d > d_c \wedge G(d)(x)\,]$

The degree argument slot of the gradable predicate does introduce some complications in the case of the positive form, as this argument must be discharged before the predicate can combine with its

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[9] Another kind of degree-based approach, along the lines of Kennedy (1999), analyses gradable predicates as measure functions of type $<e,d>$.

[10] There are numerous possibilities for the form this ordering may take (see van Rooij 2011). One possibility is a pre-order. A set M is pre-ordered if a binary relation $\leq$ that is reflexive and transitive applies to it; that is, if a, b, and c are members of M, $a \leq a$ (reflexivity), and if $a \leq b$ and $b \leq c$, then $a \leq c$ (transitivity) (Schröder 2003: 114–115). An additional feature of scales is that they can, but do not necessarily, have maximum and/or minimum values. This is a means of accounting for the differences in behaviour between relative- and absolute-standard adjectives (Kennedy & McNally 2005: 354).

[11] Doetjes et al. (2011) prefer an analysis of the comparative that relies on the ordering of degree functions to derive gradability. The reader is referred to the relevant paper for an account of their proposed "neo-Kleinian" analysis. It should also be noted that not all languages seem to make use of degrees to set up comparative constructions: see Beck et al. (2009) and Bochnak (2013a, 2015) for an overview in this regard.

subject. In most degree-based approaches, this is achieved by means of the phonologically null degree morpheme POS, which binds the degree argument and returns a predicate of type <e,*t*> (see Cresswell 1976; Kennedy 1999). When POS binds the degree argument, it values it based on a contextual standard of comparison. This is represented below, where *G* is a gradable predicate, and s_G is the standard of comparison. In (9b), POS is applied to "tall"; in (9c), (9b) is applied to the individual "John".

(9) a. $[\![\text{POS}]\!] = \lambda G \lambda x . \exists d [d > s_G \wedge G(d)(x)]$

b. $[\![\text{POS}]\!]([\![\text{tall}]\!]) = \lambda x . \exists d [d > s_{tall} \wedge \text{tall}(d)(x)]$

c. $[\![\text{POS}]\!]([\![\text{tall}]\!])([\![\text{John}]\!]) = \exists d [d > s_{tall} \wedge \text{tall}(d)(\text{John})]$

The vagueness in a sentence like "Nick is tall" is then due to the standard that is introduced by POS; which varies across contexts, and allows for Nick to count as 'tall' in a line-up of jockeys, but as 'not tall' in a line-up of basketball players.

Within degree-based approaches, degree modifiers can be abstractly defined as follows, where 'R' is a restriction of the degree argument of the gradable predicate *G* (taken from Kennedy & McNally 2005: 367):

(10) $[\![\text{Deg}]\!] = \lambda G \lambda x . \exists d [R(d) \wedge G(d)(x)]$

By way of example: in the case of "very", R is instantiated as a restriction that ensures that the contextual standard is exceeded by an amount that counts as large in the context (represented by '$>>_c$'). This definition of "very" has the following structure (taken from Morzycki 2013: 115):

(11) $[\![\text{very}]\!]^c = \lambda G \lambda x . \exists d [d >>_c s_G \wedge G(d)(x)]$

As hinted at above, one shortcoming of the degree-based approach is a point often mentioned in support of the vague predicate approach: the former overly complicates the semantics of the positive form of the gradable predicate. POS has been accused of being nothing more than "a device for fixing up the semantics" (Klein 1980: 3).[12]

As an additional criticism, Doetjes et al. (2011) point out that, given the cross-categorial nature of gradability shown in (2), adopting a degree-based approach to deal with all instantiations of this phenomenon necessitates the assumption that it is not only 'typical' gradable predicates like gradable adjectives that have degree arguments in their semantics, but also nouns and verbs. Consequently,

[12] It has been argued that POS is phonologically realised in at least one language, namely Mandarin Chinese, where it has the form *hen* (see Sybesma 1999; Kennedy 1999; and Liu 2010). A similar argument has been made for Navajo (Bogal-Allbritten 2008). At least in the case of Mandarin, it is not clear to what extent the argument for an overt POS holds up.

noun phrases (NPs) and verb phrases (VPs) would have to be analysed as incorporating a degree argument slot, and POS would have to be assumed to occur with unmodified nouns and verbs.

However, assuming the presence of a degree argument slot in the semantics of all gradable predicates can only be deemed undesirable if it can be shown that this assumption is unnecessary. Arguably, this has not been shown thus far; and so, in the remainder of this thesis, this criticism is set aside. I also consider the necessity of POS to be only a minor shortcoming, in comparison to the challenges faced by the vague predicate approach. A degree-based approach is therefore adopted going forward.

1.3. Degree-less vs. degree-based analyses of degree modifiers

In the preceding discussion, it has been established that degree modifiers can combine with adjectives, verbs, and mass and plural nouns. Recently (cf. McNabb 2012; Beltrama & Bochnak 2015), attention has been drawn to seemingly exceptional cases involving apparent degree modification of non-gradable expressions, including non-gradable adjectives, numerals, and quantifiers. Members of these categories are not gradable in the sense discussed thus far, as they cannot occur in comparative, equative, and excessive constructions such as those in (1) and (2).

However, in languages that show this phenomenon – Hebrew, and Italian and Washo are discussed by McNabb (2012) and Beltrama & Bochnak (2015), respectively – the modifier that combines with these non-gradable items also combines with prototypically gradable predicates like gradable adjectives. This has led to the proposal that these modifiers do not operate on degrees. Rather, they are analysed as operating on contextual parameters that affect a predicate's interpretation.

An analysis of this sort makes positing degree argument slots in the semantics of all the relevant category members unnecessary, and thus may seem appealing as an analysis of modifiers with very wide distributions. Because *baie*, the Afrikaans modifier that forms the focus of this thesis, is a wide-distribution modifier, the degree-less analysis of Beltrama & Bochnak (2015) is reviewed in section 1.3.1 below. In section 1.3.2, the predictions made by this analysis regarding the behaviour of degree modifiers are contrasted with those made by the degree-based account reviewed in section 1.2.2 above. In chapter 2, the behaviour of *baie* is examined in light of these predictions. In so doing, it is determined whether a degree-based or a degree-less analysis of this item is most suitable.

1.3.1 The degree-less analysis of degree modifiers

Beltrama & Bochnak (2015) develop their argument for a degree-less analysis of certain modifiers with reference to the Italian suffixal modifier *–issimo* and the Washo modifier *šému*. Aspects of these modifiers' behaviour that are taken to provide evidence against a degree-based analysis are (i) their ability to combine with a wide variety of predicates, both those that are typically analysed as gradable and others thought to be non-gradable; and (ii) the fact that their semantic effect varies across contexts, which would not be expected if these modifiers each had a fixed semantic denotation of the form in (10). The wide distribution of these modifiers is illustrated below. In addition, the

translations make clear that these modifiers can have intensification effects (12), precisification effects (15c), and confirmatory uses (13b; 16), amongst others.

Gradable adjectives

(12) a. *La torre è alt-issima.* (*Italian*)
the tower is tall-ISSIMO
"The tower is very/extremely tall."

b. *t'é:liwhu ʔil-téteb-iʔ šému-yi.* (*Washo*)
man ATTR-fat-ATTR ŠÉMU-IPFV[13]
"The man is very fat."

Non-gradable expressions

(13) a. *Serve un governo subit-issimo.* (*Italian*)
is.needed a government immediately-ISSIMO
"We need a government right now."

b. *lí: de-yúli-yiʔ šému k'-éʔ-l.* (*Washo*)
PRT NMLZ-dead-ATTR ŠÉMU 3-COP-IPFV
"It's really dead!"

Nouns

(14) a. *Michael Jordan è un campion-issimo.* (*Italian*)
Michael Jordan is a champion-ISSIMO
"Michael Jordan is a big/real champion/the champion of champions."

b. *t'é:liwhu dókto šému k'-éʔ-l.* (*Washo*)
man doctor ŠÉMU 3-COP-IPFV
"The man is a real doctor."
Speaker comment: "It means he's not a quack!"

Quantifiers, ordinals, and numerals

(15) a. *Non c'è nessun-issima possibilià di vincere.* (*Italian*)
not there.is any-ISSIMA chance of winning
"There is no chance at all to win."

[13] The morphological glosses used are as follows: ATTR=attributive; COP=copula; IPFV =imperfective; PRT=particle; NMLZ=nominalizer; and Q=question.

b. *Per* *la* *prim-issima* *volta,* *ho* *vinta* *una* *scomessa.* (*Italian*)
for the first-ISSIMO time, I.have won a bet
"For the very first time I won a bet."

c. *dubáldiʔ* ***šému*** *hé:š* *ʔíʔw-I.* (*Washo*)
five ŠÉMU Q 3.eat-IPFV
"Did he eat exactly five (apples)?"[14]

Conversational uses of *šému* and *–issimo* in which they seem to have confirmatory uses are also attested. (13b) above is such an example from Washo, where the given context has the speaker assuring an interlocutor that a rabbit they have encountered is indeed dead. An Italian example of this type is given in (16) below.

(16) A: *7* *è* *un* *numero* *primo?* (*Italian*)
7 is a number prime
"Is seven a prime number?"

B: *Prim-issimo!*
prime-ISSIMO
"Absolutely prime!"

Beltrama & Bochnak (2015) explore and reject several possible analyses of *šému* and *–issimo*. These include a degree-based analysis as in (11) above (made plausible by the modifiers' intensifying use in (12)), and an analysis of these items as operators over scales of prototypicality (suggested by their functions in combination with nouns in (14)). The reader is referred to their paper for the relevant arguments and refutations.

Relevant to the matter at hand is the analysis that these authors ultimately put forward: *–issimo* and *šému* are said to target the settings of the contextual parameters that affect the modified predicate's interpretation. More specifically, these modifiers are taken to be universal quantifiers over these contextual parameters.

The predicates with which *–issimo* and *šému* combine are context-sensitive in various ways: in the case of relative-standard adjectives like "tall", the relevant parameter is the one that determines the comparison class. In the case of "precise predicates", such as "immediately" in (13a), the parameter concerned regulates the amount of "pragmatic slack" allowed in the context, in the sense of Lasersohn (1999). That is to say, the parameter determines whether use of the predicate requires it to be strictly true in the context, or whether some deviation from the truth is allowed, as long as the utterance "comes close enough to the truth for practical purposes" (Lasersohn 1999: 522).

[14] This use is not possible for Italian *–issimo*. Italian uses a lexical item equivalent to English "exactly", namely *esattamente* (Beltrama & Bochnak 2015: 853).

The context-sensitivity of these predicates is captured in their representation as P_c, where *c* is a free variable whose value is contextually determined (Beltrama & Bochnak 2015: 861). *–issimo* and *ššmu* then act as universal quantifiers over potential values of *c*, and ensure that P_c holds under all possible values of the contextual parameters. This has the result of meaning that an individual must count as P_c even in the most restrictive of contexts: i.e., even in contexts where the contextual standard is set at its maximum, or where a minimum of pragmatic slack is allowed (Beltrama & Bochnak 2015: 861).

The relation between *c* and the other relevant contexts in which P_c must hold is represented as *R*. *R* holds between *c* and *c'* iff *c'* is identical to *c*, bar possible differences in the values assigned to the contextual parameters that affect P_c's interpretation (Beltrama & Bochnak 2015: 861).

The semantics common to *–issimo* and *ššmu* is ultimately formalised as in (17) (modified from Beltrama & Bochnak 2015: 861).

(17) $[\![\text{mod}]\!]^c = \lambda P_c \, \lambda x. \forall c' [\ cRc' \rightarrow P(x) \text{ in } c']$

What (17) states is that use of the modifier means that the modified predicate holds of an individual *x* in every relevant context related to the current context, where only the contextual parameters of *P* have been altered.

In a case like (14b), which involves modification of the noun *dókto* 'doctor', what is asserted is that the individual in question would count as 'being a doctor' according to every value of the relevant contextual parameter; i.e., in every possible context. The modified predicate would thus be applicable to a medical doctor, but not to e.g. an individual with a PhD in history, who would not count as being a doctor in a medical emergency (Beltrama & Bochnak 2015: 866). *Šmu* and *–issimo* applied to a noun *x* therefore serve to pick out the set of 'real' *x*'s, and exclude the marginal cases (Beltrama & Bochnak 2015: 867).

With respect to utterances such as (16), where the predicate modified (*primo* 'prime') is not context-sensitive, Beltrama & Bochnak argue that the uncertainty of the discourse context gives rise to a contextual parameter, and thereby makes the predicate context-sensitive. This allows *–issimo* to fix that contextual parameter, and assert definite membership – i.e. uncontroversial membership across contexts – of the relevant category (Beltrama & Bochnak 2015: 868).

In the case of the non-gradable expressions in (13a) and (15), a 'slack-regulating' use of these modifiers is seen, where they serve to specify that the modified predicates are strictly rather than 'approximately' true. Finally, in (12), the comparison class of the predicate is restricted, so that the modified predicate is true even when the standards according to which 'tallness' and 'fatness' are evaluated are maximally high.

1.3.2 Predictions regarding the behaviour and distribution of degree modifiers

The degree-based approach predicts that degree modifiers should only combine with predicates that can plausibly be argued to have a degree argument slot in their semantics. This prediction entails that degree modifiers should show a limited distribution; i.e., they should not occur with predicates that themselves cannot partake in comparative, equative, and/or excessive constructions.

An additional prediction, assuming that degree modifiers have a single denotation (e.g. as in (11) for "very"), is that they should have a consistent semantic effect across all contexts in which they occur. In the case of "very", a so-called "intensifier", this effect is of raising the amount by which the contextual standard must be exceeded in order for the modified predicate to be applicable.

The quantification-over-contexts analysis of modifiers like *sému* and *–issimo* makes the following predictions. Firstly, these items should be able to occur with all context-sensitive predicates, and they should therefore have a free distribution; combining with predicates that cannot themselves occur in degree constructions. They should also be able to be used confirmatively in contexts involving uncertainty, in which typically context-insensitive predicates are said to become context-sensitive. Their ability to target various contextual parameters of predicates of various types results in the flexibility of their semantic effect.

It has been argued (cf. Morzycki 2012) that so-called "extreme adjectives" (e.g. "gigantic") cannot combine with "very" or other "non-extreme" intensifiers (cf. ??"The very gigantic car"). Under a degree-based approach, extreme adjectives are said to make salient a specific portion near the top of the relevant scale – say, the scale of "bigness" for the adjective "gigantic" – and to require that the property of "bigness" be instantiated to a degree that both exceeds the contextual standard, and is larger than all salient degrees in the context.

Accordingly, extreme adjectives can only be modified by supposed "extreme degree modifiers" (e.g. "downright"), which are said to expand the contextual domain and result in the scale's incorporation of higher degrees. "Very" and its equivalents are incompatible with these adjectives because they only operate on a lower part of the scale that falls outside of the domain of degrees made salient by the extreme adjective.

With reference to the degree-less analysis, it is expected that modifiers such as *sému* and *–issimo* would be more compatible with extreme adjectives than "very" and its cross-linguistic equivalents. This is because the former items do not operate on degrees, but can serve the function of extreme degree modification by specifying that the modified predicate holds across all contexts, even where the contextual standard is set at its maximum.

As remarked above, these predictions will be returned to in chapter 2, when it is considered which account is most suitable for an analysis of *baie*.

1.4 Conclusion

This chapter introduced and contrasted the vague predicate and degree-based approaches to the semantics of gradable predicates and degree modifiers. It was concluded that the vague predicate analysis is less satisfactory than the degree-based analysis. An alternative analysis of degree modifiers, which treats these items as operators on the contextual parameters that contribute to a predicate's interpretation, was then discussed. The predictions made by this analysis regarding the behaviour of degree modifiers were contrasted with those made by the degree-based account.

The degree-based account of gradable predicates is adopted going forward. A decision regarding whether a degree-based or degree-less analysis of the Afrikaans modifier *baie* is most suitable is made in the following chapter, following an examination of this item's behaviour.

1.5 Outline of the remainder of the thesis

Now that the theoretical foundation of the thesis has been established, the following chapter turns to empirical matters. With reference to Doetjes' (2008) table of degree modifiers, which organises these items into types, this chapter focuses on a division between modifiers of gradable adjectives and gradable verbs, and modifiers of the remaining gradable categories. I argue, based on this division in the modifiers used as well as in the interpretation of modification across these two groups of predicates, that gradable predicates should be divided into two types. The terms "*g*-type predicate" for gradable adjectives and gradable verbs, and "*q*-type predicate" for the remaining predicates, are adopted. Modifiers that combine exclusively with *g*-type predicates, termed "*g*-type modifiers", are also distinguished from other modifiers, which are simply termed "non-*g*-type modifiers". I then examine the distribution of the Afrikaans modifier *baie*, and I posit a hypothesis regarding the type of degree modifier that *baie* instantiates.

Chapter 3 presents a detailed examination of *baie* in combination with *g*-type predicates and *q*-type predicates. I use a number of semantic and syntactic tests to show that whilst *baie* initially appears to be a single modifier with a wide distribution, it is in fact two modifiers that share a form. One is a so-called "type A" modifier, a syntactic head that combines exclusively with gradable adjectives; and the other is a "type D" modifier, an adjunct that combines with eventive adjectives, gradable and eventive verbs, the comparative morpheme, and mass and plural nouns.

Chapter 4 provides semantic and syntactic analyses of the two *baie*s. Particular attention is paid to what is shown to be the 'high-quantity' entailment of type D *baie*. This high-quantity entailment, which is argued to make type D *baie* a marked modifier in comparison with the modifier *veel* 'a lot', is used to explain why *baie* is barred from equative and excessive constructions in Standard Afrikaans. The chapter also briefly speculates as to a developmental trajectory along which type D and type A *baie* may have developed.

Chapter 5 summarises the argument presented and addresses the research objectives outlined at the beginning of this chapter. The thesis concludes with suggestions for further research.

2. Types of gradability and types of degree modifiers

The examples at the beginning of the previous chapter have made it clear that gradability is not only a property of adjectives: nouns and verbs can be gradable too. However, gradability can, and sometimes must, be expressed differently across lexical categories – it is not the case that all degree modifiers can combine with all types of gradable predicates.

The ways in which combinations of gradable predicates and degree modifiers are organised constitute the theme of this chapter. In section 2.1, the relevant categories of gradable predicates that have not yet been introduced are defined. Doetjes' (2008) tabular arrangement of degree modifiers, which organises these items according to their distributions, is presented in section 2.2; and I illustrate what appears to be a difference in the semantic effects of modification of gradable adjectives and gradable verbs, and modification of the remaining gradable categories. This argument is carried forward in section 2.3, where it is proposed that a distinction should be made between different types of degree argument slots. Here, I distinguish between "*g*-type predicates", which are modifiable in terms of quality/intensity; and "*q*-type predicates", which are modifiable in terms of quantity/frequency.

In section 2.4, I situate the Afrikaans modifier *baie* in relation to Doetjes' (2008) degree modifier table. I hypothesise that *baie* can be categorised as a so-called "type C" modifier. I also show that a degree-based analysis of this modifier is more suitable than a degree-less one. Section 2.5 summarises the chapter's discussion.

2.1 Types of gradable predicates

In the preceding section, three categories of gradable predicate that have not yet been clearly defined have been referred to: eventive adjectives, eventive verbs, and gradable verbs. This section briefly defines each of these categories.[15]

Eventive adjectives and eventive verbs are stage-level predicates. In the discussion to follow, they are identified by their ability to occur with an event modifier such as "every Tuesday" or "lately". Individual-level predicates are incompatible with such modifiers.[16] The contrast is illustrated in (18) below..

[15] Doetjes (2008) also includes gradable nominal predicates such as "hunger" in her discussion, but because degree constructions involving these predicates are marginal or at least very infrequent in Afrikaans, I do not take them into consideration.

[16] Doetjes (1997) discusses two theoretical accounts of why this is the case. There is Kratzer's (1995) account, which argues that stage-level predicates have an event argument in their semantics, and individual-level predicates do not. The presence of an event argument is said to be a necessary condition for event modification. De Swart (1991), on the other hand, argues that all verbs have an event argument position, but individual-level predicates incorporate a "uniqueness presupposition" that makes them function as "once-only" expressions. The specifics of these analyses are not relevant to the discussion in this thesis.

(18) a. John washed his car every Tuesday. (*Eventive verb*)

b. *John knew French every Tuesday. (*Non-eventive verb*)

c. John has been sick lately. (*Eventive adjective*)

d. *John has been tall lately. (*Non-eventive adjective*)

Gradable verbs (what Bolinger 1972 calls "degree verbs") are argued by Tsujimura (2001) to include psych verbs (e.g. "love"; "appreciate", and "admire") and inchoative change of state verbs (e.g. "age").

Different categories of gradable predicates are modified by different degree modifiers. The following section presents Doetjes' (2008) description of how combinations of degree modifiers and gradable predicates are structured in a small sample of languages.

2.2 The degree expression table

Doetjes (2008) considers the distributions of a selection of degree modifiers in English, French and Dutch; and sorts these modifiers into types based on how restricted their distributions are. Importantly, it is argued that this variation in distribution is not unstructured: as mentioned in the previous chapter, categories of gradable predicates are supposedly able to be organised in such a way that, if a degree modifier is compatible with multiple categories, these categories are necessarily adjacent to one another in the table. Focusing on high-degree expressions, Table 1 below presents this ordering (note that Portuguese has been added to the original table, on the basis of the discussion in Doetjes 2008). The superscripts "E", "D", "P" and "F" denote "English", "Dutch", "Portuguese", and "French", respectively.

Table 1: Organisation of gradable predicates and degree modifiers in English, Dutch, French, and Portuguese; adapted from Doetjes (2008)

	FRENCH	DUTCH	PORTUGUESE		
Gradable adjectives	type A *très*[F]	type B *erg*[D]	type C *muito*[P]		
Gradable verbs	type D *beaucoup*[F]				type 0 -
Eventive verbs		type E *veel*[D]			
Eventive adjectives					
Comparative morpheme					
Mass nouns				type F a mountain[E]	type 0 -
Plural nouns					type G many[E]

Given the proposed condition on adjacency, a modifier like type 0 in Table 1, which modifies the non-adjacent categories of gradable verbs and mass nouns, is predicted not to occur.

Table 1 shows that type C modifiers such as Portuguese *muito* 'very/a lot' modify the entire range of gradable predicates. The table shows two additional ways of dividing up the range of predicates: French has the type A modifier *très* 'very', which only modifies gradable adjectives, and the type D modifier *beaucoup* 'a lot', which combines with the remaining gradable categories. Dutch, on the other hand, has the type B modifier *erg* 'very', which combines with gradable adjectives and gradable verbs, and the type E modifier *veel* 'a lot', which modifies eventive verbs, eventive adjectives, the comparative morpheme, and mass and plural nouns.

In addition to the differences in the modifiers with which they combine, there also seems to be a distinction between the semantic effect of the modification of gradable adjectives and gradable verbs, which seems to be a modification of quality/intensity; and the modification of the remaining gradable categories, which seems to be a modification of quantity/frequency.

This distinction in meaning is most clearly shown by an examination of type B and E modifiers. The Dutch type B modifier *erg* 'very' seems to modify the quality/intensity of a predicate. Dutch *veel* 'a

lot', a type E modifier, seems to modify quantity/frequency. Examples (from online search results) showing the distribution and interpretations of these items are provided below. Note that *erg* 'very' in (19d) can modify *ziek* 'sick', but the latter is then interpreted as a gradable rather than eventive adjective.

(19) a. *Hij is erg/*veel gelukkig.* (*Gradable adjective, quality modified*)
He is very/much happy
"He is very happy."

b. *We gaan jou erg/*veel missen.* (*Gradable verb, quality modified*)
we go you very/much miss
"We are going to miss you very much."

c. *Hij wandelt *erg/veel.* (*Eventive verb, quantity modified*)
he walks very/much
"He walks a lot."

d. *Wat gebeurt er als ik #erg/veel ziek ben?* (*Eventive adjective, quantity modified*)
what happens ER if I very/much sick is
"What happens if I'm sick a lot?"

e. *Trump is *erg/veel groter gevaar dan Brexit.* (*Comparative, quantity modified*)
Trump is very/much bigger danger than Brexit
"Trump is much bigger danger than Brexit."

f. * *Erg/veel wijn voor weinig.* (*Mass noun, quantity modified*)
very/much wine for little
"Much wine for little."

g. *Het weer lokt *erg/veel mensen naar het strand.* (*Plural noun, quantity modified*)
the weather attracts very/much people to the beach
"The weather attracts many people to the beach."

An examination of the split between both the distribution and the semantic effects of type B and E modifiers raises the question of whether the groups of predicates these items modify are gradable in different ways. That is to say, is there something that sets gradable adjectives and gradable verbs apart from other gradable predicates? The following section argues that this is indeed the case.

2.3 Introducing *g*-type predicates and *q*-type predicates

The version of the degree-based analysis presented in section 1.2.2 requires the assumption that degree argument slots are incorporated into the semantics of gradable predicates. However, nothing is said about whether these degree argument slots should be uniform across categories. The split between groups of predicates observed in (19) above, both in meaning and in the types of modifiers

with which they combine, raises the question of whether different gradable predicates incorporate different kinds of degree arguments.

This section argues that a distinction between kinds of degree arguments, and thus kinds of gradable predicates, should be made. Section 2.3.1 defines the different kinds of degree arguments that are distinguished – *g*- and *q*-positions – and shows how certain verbs and adjectives can have both *g*- and *q*-positions. This is followed by a classification of degree modifiers in relation to the *g*-/*q*-type distinction in section 2.3.2. Here, only modifiers that exclusively modify *g*-type predicates are said to be sensitive to the *g*-/*q*-distinction. Finally, section 2.3.3 summarises.

2.3.1 *G*-positions and *q*-positions

A distinction is to be made here between gradable adjectives and gradable verbs, whose degree argument will be termed a "*g*-position", and the remaining gradable categories, whose degree argument is termed a "*q*-position".

The term "*g*-position" is drawn from Zwarts (1992) and Doetjes (1997). When a modifier targets a *g*-position, the gradable predicate will be interpreted as being modified in terms of quality/intensity. The term "*q*-position", where "*q*" stands for quantity, is taken from Doetjes (1997) (see also Morzycki 2009; Matushansky 2002a; Matushansky & Spector 2005; and for a related argument about nominal 'object' and 'kind' units, Krifka 1995). The *q*-position is to quantifiable predicates what a *g*-position is to intensifiable predicates.

In the nominal domain, the *q*-position is said to form part of the noun's 'thematic grid', which encodes its 'reference properties' and thereby determines what sorts of entities it is able to denote. Quantifying expressions such as "many" and *beaucoup* 'a lot' serve to saturate the *q*-positions of the nouns with which they combine, in the same way that degree modifiers saturate the *g*-positions of gradable adjectives (Doetjes 1997: 19). When a *q*-position is targeted by a modifier, the predicate of which it forms part is interpreted as being modified in terms of quantity/frequency.

The inability of singular count nouns to occur with quantifying expressions such as "much" and "many" is explained on the basis of the type of *q*-position they possess. Singular count nouns are said to have a 'non-scalar' *q*-position, whereas mass and plural nouns have a 'scalar' *q*-position. The latter are distinguished from the former by virtue of their having "cumulative reference".

A predicate is described as having cumulative reference iff for every *x* and *y* with the property *P*, the join of *x* and *y* also has the property *P* (Doetjes 1997: 40). For mass nouns, the applicability of this definition can be shown as follows: if there are two measures of coffee, then the combination of those measures will still be coffee. Similarly for plural count nouns: if there are (an unspecified plurality of) ostriches in two separate fields, all the birds placed in one field can still be referred to as "ostriches". However, with reference to singular nouns: if two individual cats are placed next to each other, the pair cannot be referred to as "(a) cat".

Singular count nouns therefore do not have cumulative reference, which makes their *q*-position non-scalar.[17] Mass and plural nouns, on the other hand, have scalar *q*-positions, and are thus able to combine with quantifying expressions like "a lot".

Doetjes (1997) observes that cumulative reference is also relevant in the verbal domain: eventive (or "activity") verbs and gradable (or "stative") verbs show the same cumulative reference property that plural and mass nouns do, and therefore pattern with these items in their accessibility to degree modification. Accomplishment verbs and achievement verbs do not have cumulative reference, and therefore pattern with singular nouns in being non-gradable.[18] The compatibility of eventive and gradable verbs with degree modifiers is shown in (20) below.

(20) a. John ran a lot. (*Eventive verb/activity*)

b. John hated more than he loved. (*Gradable verb/state*)

c. * John wrote a book a lot/more. (*Non-gradable verb: accomplishment*)

d. * John identified the suspect a lot/more. (*Non-gradable verb: achievement*)

As has already been shown, however, modification of gradable verbs and modification of eventive verbs differs, in that different modifiers are used in each case, and a distinction in meaning seems to arise. According to the patterns that have been observed, gradable verbs have been identified as having a *g*-position, and eventive verbs are taken to have a *q*-position.

There are some verbs and adjectives that can be modified both in terms of quality/intensity and quantity/frequency. This is illustrated in (21) with reference to the Dutch verb *hoesten* 'cough', which is modified in terms of quantity/frequency by *veel* 'a lot', and in terms of quality/intensity by *erg* 'very'; and in (22) with reference to English "sick", which achieves the same meaning distinction using "a lot" and "very", respectively.

(21) a. *Jan hoest veel.* (*Quantity/frequency modification)*
Jan coughs a.lot
"Jan coughs a lot."

b. *Jan hoest erg.* *(Quality/intensity modification)*
Jan coughs very
"Jan coughs badly."

(22) a. John is sick a lot. (*Quantity/frequency modification*)

b. John is very sick. (*Quality/intensity modification*)

[17] The *q*-position in their semantics is still necessary, because it is this position that the plural morpheme targets. According to Doetjes (1997: 43), the addition of a plural morpheme modifies the properties of the *q*-position: it makes a non-scalar *q*-position scalar.

[18] See Vendler (1957) for details of these distinctions between verb classes.

Thus, in what follows, although it is recognised that some gradable adjectives (e.g. "sick") are not exclusively *g*-type predicates, and some eventive verbs (e.g. Dutch *hoesten* 'cough') are not exclusively *q*-type predicates, the use of the term "*g*-" or "*q*-type" predicate indicates which degree argument slot of the adjective/verb is under discussion. That is to say, the *hoesten* in (21a) and the "sick" in (22a) would be referred to as "eventive verbs" and therefore as "*q*-type predicates", and the *hoesten* in (21b) and the "sick" in (22b) as "gradable verbs" and therefore "*g*-type predicates".

The types of gradable predicates discussed thus far are categorised with reference to the *g*-type/*q*-type distinction in Table 2 below. Note that comparative morphemes, because they pattern with nouns in terms of the degree modifiers with which they can combine, are also analysed as containing a *q*-position.

Table 2: Kinds of gradability across categories

Category of predicate	*g*-type predicate	*q*-type predicate
Gradable adjective	✓	
Gradable verb	✓	
Eventive verb		✓
Eventive adjective		✓
Comparative		✓
Mass noun		✓
Plural noun		✓

2.3.2 *G*-type modifiers and non-*g*-type modifiers

In terms of modifiers, types A and B, because they modify only *g*-type predicates, will be referred to as "*g*-type modifiers". The remaining types, because they either modify *q*-type predicates (types E-G) or both *g*- and *q*-type predicates (types C and D), are simply referred to as "non-*g*-type modifiers". The reason for this classification is explained in what follows (and will also be shown to be relevant in chapter 3).

A significant shortcoming of the classification in Table 2 is that it does not help in defining which modifiers combine with which categories. If the only constraint on the distribution of type F and G modifiers were that they can only modify non-*g*-type predicates, then they would be predicted to combine not only with nouns, but also with eventive verbs, eventive adjectives, and the comparative morpheme. A similar situation holds for type A modifiers, which can only combine with gradable adjectives, even though gradable verbs are also *g*-type predicates. The conclusion to be drawn from this is that a binary degree-based approach, which distinguishes between two different kinds of

gradability, does not on its own correctly predict which modifiers will combine with which categories. It thus seems that the distribution of degree modifiers is not determined on the basis of whether a gradable predicate is of the *g*-type or the *q*-type.

Doetjes (1997) assumes that this is the case. Indeed, she takes what have here been termed "non-*g*-type modifiers" (i.e., types C-G modifiers) to be insensitive to the *g*-/*q*-type distinction. She proposes a partial solution to the fact that not all of these modifiers can modify predicates of all categories based on an "Elsewhere Effect" (cf. Kiparsky 1973). The idea is that whilst in principle non-*g*-type modifiers can combine with any gradable predicate, the existence of a more specific form blocks the use of a less specific form that conveys the same meaning.

This can again be illustrated with reference to the Dutch modifiers *veel* 'a lot' and *erg* 'very' (cf. (19)). These items both convey "neutral high degree" meanings, but have different distributions: *veel*, as a non-*g*-type modifier, is argued by Doetjes (1997) to be compatible with both *g*- and *q*-type predicates, whereas *erg* is only compatible with *g*-type predicates. The Elsewhere Condition, as it applies here, states that "in case one can choose between two forms, the more specific form wins" (Doetjes 2008: 131). *Erg*, by virtue of its more restricted distribution, is more specific than *veel*. Thus, when it comes to gradable verbs, which are *g*-type predicates, the availability of the more specific form *erg* blocks the use of *veel*. Consequently, *erg* rather than *veel* is used in combination with the gradable verb *missen* 'miss' in (19b) above.

Assuming that such an account is correct, and the distribution of non-*g*-type modifiers is affected by competition with similar modifiers, the limitations on distribution that have been observed for *g*-type modifiers – e.g. the fact that "very", a *g*-type modifier, is compatible with gradable verbs because the latter are *g*-type predicates, but cannot modify these items – might be attributed to syntactic incompatibility. "Very" has been analysed as a head that selects for an adjectival phrase (AP) complement (Neeleman, van de Koot & Doetjes 2004), which would explain why it cannot combine with predicates of other categories.[19]

2.3.3 Summary

This section has argued for a distinction to be made between *g*-type predicates, which are modifiable in terms of quality/intensity, and *q*-type predicates, which are modifiable in terms of quantity/frequency. It has also identified *g*-type modifiers – type A and B modifiers in Table 1 – and non-*g*-type modifiers, which are types C-G. The latter group have been argued to be insensitive to

[19] However, the distribution of "very" is widened when it combines with "much", because "much", as a type C modifier, is able to combine with all the types of gradable predicates under discussion. "Much" itself is presumed to have a degree argument slot that can be targeted by "very". Thus, we have for example "very *(much) appreciate" and "very *(much) sand" (see Corver 1997 for more on this so-called "much support").

the *g*-/*q*-type distinction. What constrains their distribution is competition with similar modifiers. The distribution of *g*-type modifiers has been suggested to be influenced by syntactic factors.

All in all, what this section has shown is that explaining the distribution of degree modifiers is not a straightforward matter. Evidently, it requires investigation at the level of individual modifiers, so that both semantic and syntactic constraints, as well as possible competition with other modifiers, can be taken into account. The following section introduces *baie*, the modifier that constitutes the primary focus of the remainder of this thesis.

2.4 The Afrikaans modifier *baie*

Baie 'very/a lot' stems from the Malay word *banyak*, meaning 'an abundance', 'many', 'numerous', or 'plenty' (Raidt 1982; cf. also Davids 1990 and Bauermeester 2007). *Baie* is shown below to combine with both *g*-type and *q*-type predicates. Note that I gloss *baie* throughout as HIGH-DEG. This gloss is in accordance with the item's function as a high-degree modifier, and allows for premature commitment to an analysis of the item to be avoided.

(23) a. *Jan is baie snaaks.* (*Gradable adjective*)
Jan is HIGH-DEG funny
"Jan is very funny."

b. *Ek waardeur hom baie.* (*Gradable verb*)
I appreciate him HIGH-DEG
"I appreciate him a lot."

c. *Sy reis baie.* (*Eventive verb*)
she travels HIGH-DEG
"She travels a lot."

d. *Gys is baie slimmer as Piet.* (*Comparative*)
Gys is HIGH-DEG smarter than Piet
"Gys is much smarter than Piet."

e. *Jan is baie op Dinsdae siek.*[20] (*Eventive adjective*)
Jan is HIGH-DEG on Tuesdays sick
"Jan is sick on Tuesdays a lot/often."

[20] It should be noted here that the eventive reading is also possible with sentences of the form *Jan is baie siek op Dinsdae* 'Jan is very/often sick on Tuesdays', but such constructions, as the translation indicates, are ambiguous, and can be understood as involving modification in terms of either intensity or frequency, depending on context. See section 3.2 for further discussion of the influence of this syntactic variation on the modifier's interpretation.

f. *Sol Kerzner het baie geld.* (*Mass noun*)
Sol Kerzner have HIGH-DEG money
"Sol Kerzner has a lot of money."

g. *Ek het baie Afrikaanse vriende.* (*Plural noun*)
I have HIGH-DEG Afrikaans friends
"I have many Afrikaans friends."

Evidently, *baie* is able to modify both *g*-type and *q*-type predicates. The distribution shown in (23) makes *baie* a type C modifier. The presence of such a modifier in Afrikaans, which is a Germanic language, is somewhat surprising. This is because, as Doetjes (2008: 144) points out, Germanic languages typically lexicalise separate type A and/or type B high-degree expressions. Type C expressions in these languages seem primarily to be used in comparative constructions (e.g. "more", "less" and "enough" in English; and *meer* 'more' and *minder* 'less' in Dutch). English has the type A modifier "very". Dutch has *erg* and *zeer*, both meaning 'very'; and German has *sehr* 'very'. The latter two expressions, like *erg*, also seem to be type B modifiers. Type C modifiers similar to *baie* are characteristic of Romance languages: Portuguese and Italian, for example, have items like these (*muito* 'very/a lot' and *molto* 'very/a lot', respectively).

Initially, the wide distribution of *baie* may prompt the exploration of a degree-less analysis for this modifier, in line with that proposed by Beltrama & Bochnak (2015) for *–issimo* and *ší́mu*. However, a closer examination reveals that the behaviour of *baie* is better accounted for by a degree-based analysis.

Baie's wide distribution is limited to those categories found in Table 2: as shown below, it does not combine with non-gradable expressions, numerals, ordinals, or quantifiers; and it does not serve precisification or confirmatory functions.

Non-gradable expressions

(24) a. * *'n baie voormalige president*
a HIGH-DEG former president
"a very former president"

b. * *'n baie parlementêre debat*
a HIGH-DEG parliamentary debate
"a very parliamentary debate"

c. * *Ek het dit baie onmiddelik gedoen.*
I have it HIGH-DEG immediately done
"I did it very immediately."

d. * *Hierdie figuur is baie seskantig.*
this figure is HIGH-DEG hexagonal
"This figure is very hexagonal."

Nouns

(25) a. * *Hy is 'n baie dokter./ Hy is 'n regte dokter.*
he is a HIGH-DEG doctor/ he is a real doctor
"He is a very doctor."/"He is a real doctor."

b. * *Dit is baie nag./ Dit is regtig nag.*
it is HIGH-DEG night/ it is really night
"It is very night."/"It is really night." (Meaning: "It is definitely night."/"It is really dark." OR "It is a real nightmare.")

c. * *Hulle het 'n baie tuiste gemaak./ Hulle het 'n regte tuiste gemaak.*
they have a HIGH-DEG home made/ they have a real home made
"Together they made a very home."/"Together they made a real home."

d. * *Ernie Els is 'n baie kampioen./ Ernie Els is 'n regte kampioen.*
Ernie Els is a HIGH-DEG champion/ Ernie Els is a real champion
"Ernie Els is a very champion."/"Ernie Els is a real champion."

Ordinals and numerals

(26) a. *Vir die *baie/ heel eerste keer het ek gewen.*
for the HIGH-DEG/very first time have I won
"For the very first time, I won."

b. *Dit was die *baie/ heel laaste keer wat ek hom gesien het.*
it was the HIGH-DEG/very last time what I him seen have
"It was the very last time I saw him."

c. *Volgens sy dieet moet hy *baie/ presies vyf appels per dag eet.*
according.to his diet must he HIGH-DEG/precisely five apples per day eat
"According to his diet, he must eat exactly five apples per day."

Context-licensed usages

(27) a. A: *Is sewe 'n priemgetal?*
is seven a prime.number
"Is seven a prime number?"

B: * **Ja, baie (priem)!*
yes HIGH-DEG prime
"Yes, very (prime)!"

b. A: *Sewe is nie 'n priemgetal nie.*
seven is NEG a prime.number NEG
"Seven is not a prime number."

B: * *Wat praat jy, dit is baie priem!*
what talk you it is HIGH-DEG prime
"What are you saying, it is very prime!"

Baie also does not combine with extreme adjectives, as shown below.

Extreme adjectives

(28) a. *Die taak was *?baie/ absoluut giganties.*
the task was HIGH-DEG/absolutely gigantic
"The task was *?very/absolutely gigantic."

b. *Die monster was *?baie/ absoluut enorm.*
the monster was HIGH-DEG/absolutely enormous
"The monster was *?very/absolutely enormous."

c. *Die man was *?baie/ absoluut verpletterd.*
the man was HIGH-DEG/absolutely devastated
"The man was *?very/absolutely devastated."

d. *Die vegter is *?baie/ absoluut legendaries.*
the fighter is HIGH-DEG/absolutely legendary
"The warrior is *?very/absolutely legendary."

In summation: given the wide distribution of *baie*, it might be hypothesised that an analysis of this item as a modifier that operates on contextual parameters, in line with the account proposed by Beltrama & Bochnak (2015) for *–issimo* and *sému*, is suitable. However, if *baie* operates on contextual parameters rather than on degrees, it would be expected to be felicitous in at least some of the sentences provided in (24-28), which are sentences in which quantifiers-over-contexts such as *–issimo* and *sému* are predicted to be felicitous. Because *baie* is not able to be used in any of these examples, it is concluded that a degree-less analysis of this item is not suitable. A degree-based analysis of *baie* is therefore adopted going forward.

2.5 Conclusion

This chapter introduced the kinds of gradable predicates to be dealt with in this thesis. With reference to Doetjes' (2008) organisation of degree modifiers and the gradable predicates with which they combine, I focused on the pattern in which one modifier is used to modify gradable adjectives and gradable verbs, and another is used to modify the remaining categories. In accordance with this division, and the observed meaning distinction between the grading of quality/intensity and the grading of quantity/frequency, I partitioned gradable predicates into two classes: *g*-type predicates

(gradable adjectives and gradable verbs), and *q*-type predicates (eventive verbs, eventive adjectives, the comparative morpheme, and mass and plural nouns). Modifiers of *g*-type predicates (types A and B) have been christened "*g*-type modifiers"; and the remaining modifiers in Table 1 (types C-G) are referred to as "non-*g*-type modifiers". It was argued that the latter group are insensitive to the *g*-type/*q*-type predicate distinction, and that the distribution of these items is determined on the basis of competition with related modifiers.

I then introduced the Afrikaans modifier *baie*, and showed that, according to its distribution, it seems able to be classified as a type C modifier. Because of its broad distribution, a degree-less analysis of this modifier was entertained; but it was shown that *baie* does not conform to the predictions of this analysis. It was therefore concluded that *baie* operates on degrees.

However, further investigation reveals that a classification of *baie* as a single type C modifier fails to account for a number of puzzling aspects of its behaviour. Unexpectedly, *baie* in combination with gradable adjectives occasionally shows behaviour opposite to that of *baie* in combination with other gradable predicates.

In chapter 3, I provide evidence that *baie* is not a single, wide-distribution type C modifier: there are in fact two instances of *baie*, each with its own semantics and syntax. I explain why these two *baies* show the distributions that they do, with reference to syntactic factors and some other, more general principles; namely the Elsewhere Effect and an ambiguity-avoidance mechanism. Subsequently, chapter 4 provides semantic and syntactic analyses of each instance of *baie*.

3. A closer examination of *baie*

The previous chapter has shown that the wide-distribution modifier *baie* is able to combine with all of the gradable categories presented in Tables 1 and 2. On the basis of this observation, it was hypothesised that *baie* is a type C modifier.

The current chapter tests this hypothesis. Evidence is presented that shows that *baie* is in fact two modifiers. One is a type A modifier, a quality/intensity-modifying item that combines with gradable adjectives. The other is a type D modifier, which occurs with gradable and eventive verbs, eventive adjectives, the comparative morpheme, and mass and plural nouns. Syntactically, the type A *baie* is analysed as a head, and the type D *baie* is analysed as an adjunct.

The chapter proceeds as follows: in section 3.1, a first distinction between two instances of *baie* is made. I distinguish the *baie* that modifies gradable adjectives from the *baie* that modifies the remaining gradable categories on the basis of the former's inability to be further modified by the Afrikaans type B modifier *verskriklik* 'terribly'.[21] This contrasts with the ability of *baie* in combination with other gradable predicates to undergo this kind of modification. Section 3.2 uses a number of syntactic tests, drawn from Neeleman et. al (2004), that show that the type A *baie* that combines with gradable adjectives is a head, whereas the type D *baie* that modifies other gradable categories is an adjunct.

Section 3.3 takes a closer look at the category of gradable verbs, which have been analysed as *g*-type predicates (see Table 2). I explain why gradable verbs are modified by type D *baie* rather than by type A *baie*, which, because it is a modifier of *g*-type predicates, is semantically compatible with gradable verbs. In this section, I also discuss further the claim that the distribution of type D *baie* cannot be explained on the basis of the *g*- vs. *q*-type distinction. I argue that this item, although insensitive to the *g*-/*q*-distinction, is prevented from combining with gradable adjectives because of an Elsewhere Effect: with gradable adjectives, use of the more specific form (i.e. the form with the more restricted distribution), which is type A *baie*, is preferred. Finally, section 3.4 summarises the chapter's findings, and anticipates the analysis to be pursued in the following chapter.

[21] Note also that I do not use data to show that *verskriklik* is a type B modifier, because the type of modifier that is used here is not crucial to the point that is made. However, both *verskriklik* and *erg* can be shown to be type B modifiers, as they pattern with Dutch *erg* in (19).

3.1 Distinguishing two instances of *baie* on semantic grounds

This section argues that two instances of *baie* can be distinguished on the basis of their accessibility to further degree modification. To show this, I examine constructions in which *baie* and the gradable predicate it modifies are further modified by the Afrikaans type B modifier *verskriklik* 'terribly'.[22]

The section proceeds as follows: first, I show that *verskriklik* 'terribly' can modify '*baie* + gradable predicate' only if the predicate in question is not a gradable adjective. This state of affairs is taken to suggest that a distinction can be made between a *baie* that modifies gradable adjectives, and a *baie* that modifies the remaining gradable categories.

With reference to Table 1, it is observed that this same split between modifiers is found with type A modifiers, which only modify gradable adjectives, and type D modifiers, which modify the remaining gradable categories. Hypothesising that we might therefore be dealing with a type A *baie* and a type D *baie*, I test whether *baie* in constructions of the form *'verskriklik* + degree modifier + gradable predicate' can be replaced with another type A and type D modifier without causing a change in grammaticality. This is indeed shown to be the case, and I therefore conclude that there is a *baie* that modifies gradable adjectives, which is termed "type A *baie*", and a *baie* that modifies the remaining gradable categories, which is referred to as "type D *baie*".

It has been shown in (23) that *baie* can modify all of the gradable categories in Tables 1 and 2. Below, I illustrate that *verskriklik* can only modify *baie* + gradable predicate when the gradable predicate is not a gradable adjective. It should be noted that constructions of the sort in (29a-b) also fail to improve when the '*verskriklik* + *baie* + gradable predicate' constituent is moved to an attributive position.

(29) a. * *Hierdie afkondiging is verskriklik baie belangrik.* (*Gradable adjective*)
this announcement is terribly HIGH-DEG important
"This announcement is terribly very important."

b. * *Hierdie woonstel is verskriklik baie netjies.* (*Gradable adjective*)
this apartment is terribly HIGH-DEG neat
"This apartment is terribly very neat."

c. *Enige hulp sal verskriklik baie waardeur word.* (*Gradable verb*)
any help will terribly HIGH-DEG appreciated be
"Any help will be terribly much appreciated."

[22] Although *verskriklik* 'terribly' and *erg* 'very' are syntactically equivalent and do not differ in terms of the predicates they modify, I use the former instead of the latter because *erg* is more formal in tone (cf. Odendal & Gouws 2005: 222), and therefore its use is contextually more restricted.

d. *Ons verlang verskriklik baie na julle.* (*Gradable verb*)
we miss terribly HIGH-DEG to you.PL
"We miss you terribly much."

e. *Hy was verskriklik baie siek in daardie tyd.* (*Eventive adjective*)
he was terribly HIGH-DEG sick in that time
"He was sick terribly often in that time."/"He was terribly sick in that time."

f. *want hulle het nog nie verskriklik baie gespeel nie.* (*Eventive verb*)
because they have yet NEG terribly HIGH-DEG played NEG
"Because they have not yet played terribly much."

g. *Jan het verskriklik baie meer as Piet gedrink.* (*Comparative*)
Jan have terribly HIGH-DEG more than Piet drank
"Jan drank terribly much more than Piet."

h. *en verskriklik baie onkruid tussen die suiwer koring sien.* (*Mass noun*)
and terribly HIGH-DEG weeds between the pure corn see
"And see terribly many weeds amongst the pure corn."

i. *Verskriklik baie aktiwiteite het plaasgevind.* (*Plural noun*)
terribly HIGH-DEG activities have place.taken
"Terribly many activities have taken place."

j. *Julle, hier is nou vir jou verskriklik baie Lego-blokkies.* (*Plural noun*)
you.PL, here is now for you terribly HIGH-DEG Lego-blocks
"You guys, here are now terribly many Lego blocks for you."

The ungrammaticality of (29a-b) that contrasts with the grammaticality of (29c-j) suggests that a distinction can be made between *baie* in combination with gradable adjectives, and *baie* in combination with the remaining gradable predicates. It is significant that the split here between grammatical and ungrammatical constructions mirrors the split in distribution between type A and type D modifiers (see Table 1). This leads to the hypothesis that in Afrikaans, the combination 'type A modifier + gradable adjective' cannot be further modified; whereas the combination of a type D modifier and one of the remaining gradable categories can.

It might then be hypothesised that the *baie* in (29a-b) is a type A modifier, and the *baie* in (29c-j) is a type D modifier. If this were the case, then these items would be predicted to be able to be replaced by another type A and type D modifier, respectively, without a resulting change in grammaticality.

This prediction is borne out. It can be shown that, in constructions of the form '*verskriklik* + type A modifier + gradable predicate', the examples in (29a-b) pattern with identical constructions using the type A modifier *heel* 'very/entirely'. Additionally, in constructions of the form '*verskriklik* + type D

modifier + gradable predicate', *baie* in (29c-j) can be shown to be interchangeable with the type D modifier *veel* 'a lot'.

Before this is shown, it must first be shown that *heel* is indeed a type A modifier, and *veel* is a type D modifier. This is illustrated by means of the examples below. (30) shows the distribution of *heel*, and (31) shows that of *veel*. It should be noted that in (30e), the adjective *siek* 'sick' can only be understood as a gradable adjective. This indicates that the item's *g*-position rather than its *q*-position is targeted, and it is being modified in terms of quality/intensity rather than quantity/frequency. Furthermore, the examples in (31) have been changed into negative sentences, to control for the occasional infelicity of unmodified *veel* in positive sentences (see chapter 4 for more on this).

'Heel' is a type A modifier

(30) a. *Hierdie afkondiging is heel belangrik.* (*Gradable adjective*)
this announcement is very important
"This announcement is very important."

b. *Hierdie woonstel is heel netjies.* (*Gradable adjective*)
this apartment is very neat
"This apartment is very neat."

c. * *Enige hulp sal heel waardeur word.* (*Gradable verb*)
any help will very appreciated be
"Any help will be very appreciated."

d. * *Ons verlang heel na julle.* (*Gradable verb*)
we miss very to you.PL
"We miss you very."

e. # *Hy was heel siek in daardie tyd.* (*Only gradable adjective reading*)
he was very sick in that time
"He was very sick in that time."

f. * *want hulle het nog nie heel gespeel nie.* (*Eventive verb*)
because they have yet NEG very played NEG
"Because they have not yet played very."

g. * *Jan het heel meer as Piet gedrink.* (*Comparative*)
Jan have very more than Piet drank
"Jan drank very more than Piet."

h. * *en heel onkruid tussen die suiwer koring sien.* (*Mass noun*)
and very weeds between the pure corn see
"And see very weeds amongst the pure corn."

i. * *Heel aktiwiteite het plaasgevind.* (*Plural noun*)
very activities have place.taken
"Very activities have taken place."

j. * *Julle, hier is nou vir jou heel Lego-blokkies.* (*Plural noun*)
you.PL, here is now for you very Lego-blocks
"You guys, here are now very Lego blocks for you."

'Veel' is a type **D** *modifier*

(31) a. * *Hierdie afkondiging is nie veel belangrik nie.* (*Gradable adjective*)
this announcement is NEG much important NEG
"This announcement is not much important."

b. * *Hierdie woonstel is nie veel netjies nie.* (*Gradable adjective*)
this apartment is NEG much neat NEG
"This apartment is not much neat."

c. *Enige hulp sal nie veel waardeur word nie.* (*Gradable verb*)
any help will NEG much appreciated be NEG
"Any help will not be much appreciated."

d. *Ons verlang nie veel na julle nie.* (*Gradable verb*)
we miss NEG much to you.PL NEG
"We don't miss you much."

e. *Hy was nie veel siek in daardie tyd nie.* (*Eventive adjective*)
he was NEG much sick in that time NEG
"He was not sick much in that time."

f. *want hulle het nog nie veel gespeel nie.* (*Eventive verb*)
because they have yet NEG much played NEG
"Because they have not yet played much."

g. *Jan het nie veel meer as Piet gedrink nie.* (*Comparative*)
Jan have NEG much more than Piet drank NEG
"Jan did not drink much more than Piet."

h. *en nie veel onkruid tussen die suiwer koring sien nie.* (*Mass noun*)
and NEG much weeds between the pure corn see NEG
"And see not many weeds amongst the pure corn."

i. *Nie veel aktiwiteite het plaasgevind nie.* (*Plural noun*)
NEG much activities have place.taken NEG
"Not many activities have taken place."

j. *Julle, hier is nou vir jou nie veel Lego-blokkies nie.* (*Plural noun*)
you.PL, here is now for you NEG much Lego-blocks NEG
"You guys, here are now not many Lego blocks for you."

(30) and (31) show that *heel* and *veel* have typical distributions of type A and type D modifiers, respectively (once the infelicity of unmodified *veel* in positive sentences has been controlled for).

Now that it has been established that *heel* is a type A (and therefore a *g*-type) modifier, and *veel* is a type D modifier, we can examine constructions of the form '*verskriklik* + *heel/veel* + gradable predicate', and compare the patterns observed to those observed for '*verskriklik* + *baie* + gradable predicate' in (29).

With respect to *heel*: it has been shown that this modifier can combine on its own with gradable adjectives. Thus, what makes (32a-b) below ungrammatical must be the further modification of *'heel* + gradable adjective' by *verskriklik.* What has been hypothesised to be type A *baie* therefore patterns identically to *heel*, in that both items, when modifying a gradable adjective, cannot be further modified. The ungrammaticality of *heel* in sentences equivalent to (30c-j), where *verskriklik* modifies *heel* in combination with a predicate other than a gradable adjective, results from the inability of *heel* to combine with these predicates. Thus, examples equivalent to (30c-j) are not provided below.

(32) a. * *Hierdie afkondiging is verskriklik heel/baie belangrik.* (*Gradable adjective*)
this announcement is terribly very/HIGH-DEG important
"This announcement is terribly very important."

b. * *Hierdie woonstel is verskriklik heel/baie netjies.* (*Gradable adjective*)
this apartment is terribly very/HIGH-DEG neat
"This apartment is terribly very neat."

Veel has been shown in (31) to be unable to combine with gradable adjectives. As expected, modification by *verskriklik* does not improve constructions of this sort, and examples of these constructions are therefore not provided below. However, (33a-h) are grammatical: in these constructions, *verskriklik* modifies *veel* in combination with a predicate other than a gradable adjective. Note that these examples are again positive sentences, as modified *veel* can be felicitously used in positive environments.

(33) a. *Enige hulp sal verskriklik veel/baie waardeur word.* (*Gradable verb*)
any help will terribly much/HIGH-DEG appreciated be
"Any help will be terribly much appreciated."

b. *Ons verlang verskriklik veel/baie na julle.* (*Gradable verb*)
we miss terribly much/HIGH-DEG to you.PL
"We miss you terribly much."

c. *Hy was verskriklik veel/baie siek in daardie tyd.* (*Eventive adjective*)
he was terribly much/HIGH-DEG sick in that time
"He was sick terribly often in that time."

d. *want hulle het nog nie verskriklik veel/baie gespeel nie.* (*Eventive verb*)
because they have yet NEG terribly much/HIGH-DEG played NEG
"Because they have not yet played terribly much."

e. *Jan het verskriklik veel/baie meer as Piet gedrink.* (*Comparative*)
Jan have terribly much/HIGH-DEG more than Piet drank
"Jan drank terribly much more than Piet."

f. *en verskriklik veel/baie onkruid tussen die suiwer koring sien.* (*Mass noun*)
and terribly much/HIGH-DEG weeds between the pure corn see
"And see terribly many weeds amongst the pure corn."

g. *Verskriklik veel/baie aktiwiteite het plaasgevind.* (*Plural noun*)
terribly much/HIGH-DEG activities have place.taken
"Terribly many activities have taken place."

h. *Julle, hier is nou vir jou verskriklik veel/baie Lego-blokkies.* (*Plural noun*)
you.PL, here is now for you terribly much/HIGH-DEG Lego-blocks
"You guys, here are now terribly many Lego blocks for you."

Note that the patterns in (32) and (33) are identical to those that make up (29). Both (29a-b) and (32a-b) are ungrammatical as a result of the addition of *verskriklik*. The remaining examples pattern with *veel*: (29c-j) and (33c-j) are all grammatical with the addition of *verskriklik*.

Drawing parallels between the *baie* that modifies gradable adjectives and *heel*, and the *baie* that modifies the remaining gradable categories and *veel*, it is thus concluded that the former *baie* is a type A (*g*-type) modifier, and the latter is a type D (non-*g*-type) modifier.

In terms of semantic function, it is hypothesised that type A *baie*, like *heel* 'very/entirely', serves to modify the quality/intensity of a gradable adjective. Type D *baie*, on the other hand, is assumed to be able to modify both quality/intensity and quantity/frequency.[23]

[23] In the case of plural count nouns, further evidence that *baie* performs a quantificational function is provided by the scope ambiguities that are observed when *baie* + NP occurs in a sentence with another quantified NP. This is illustrated below.

(34) *Baie dosente het met twee studente by die vergadering gepraat.*
HIGH-DEG lecturers have with two students by the meeting spoke
"Many lecturers spoke to two students at the meeting."

In summation: examining '*baie* + gradable predicate' in combination with a type B modifier like *verskriklik* allows for two instances of *baie* to be distinguished: a type A *baie* that modifies quality/intensity, and a type D *baie* that can modify both quality/intensity and quantity/frequency. Type A *baie* patterns with other type A modifiers like *heel* 'very/entirely', in that when it combines with a gradable adjective, the phrase cannot be further modified by a modifier such as *verskriklik* 'terribly'. Type D *baie* patterns with the Afrikaans modifier *veel* 'a lot', and when it combines with eventive verbs, eventive adjectives, the comparative morpheme, and mass and plural nouns, the resulting phrase can be further modified by *verskriklik* 'terribly'.

It is interesting that Afrikaans follows the French pattern, in that it lexicalises a type A and a type D modifier, rather than the Dutch pattern, where a type B and a type E modifier co-occur (cf. Table 1). In section 3.3, I explain why this is the case, with reference to syntactic factors. First, in section 2.2 I use syntactic tests to further differentiate the two *baie*s that have been distinguished thus far.

3.2 Distinguishing two instances of *baie* on syntactic grounds

In the footnote accompanying (23e) above, it was noted that in constructions with *baie*, an adjective with both a *g*- and a *q*-position, and an event modifier, *baie* can occur in two positions. It can precede the adjective, in which case *baie* can be interpreted as either modifying quality/intensity or quantity/frequency. Alternatively, the event modifier can occur between *baie* and the adjective, in which case *baie* can only be interpreted as a modifier of quantity/frequency.

In the examples below, this is illustrated with the use of the phrase *maar nie gereeld nie* 'but not often'.[24] In (35a), this addition is acceptable, because the intensity-modifying reading of *baie* is available. In (35b), however, this addition renders the sentence contradictory and thus semantically infelicitous, because *baie* in this sentence can only be interpreted as indicating that the event of being sick is a high-frequency event.

(35a) might require some contextual coercion to make sense. Suppose that it is uttered with reference to a colleague who is undergoing chemotherapy. If the chemotherapy sessions happen on a Tuesday, but only once every two months, she might be described as being very sick on Tuesdays (compared to other days of the week), but not often.

(35)	a.	*Sy*	*is*	*baie*	*siek*	*op*	*Dinsdae,*	*maar*	*nie*	*gereeld*	*nie.*
		she	is	HIGH-DEG	sick	on	Tuesdays	but	NEG	often	NEG
		"She is very sick on Tuesdays, but not often."									

In (34), *baie* can take either wide or narrow scope. The two available readings are (i) there are two students such that many lecturers spoke to them at the meeting (*baie* takes narrow scope), and (ii) there are many lecturers x such that x spoke to two students at the meeting (*baie* takes wide scope).

[24] Thanks to Rick Nouwen for suggesting this test.

b. # *Sy* *is* *baie* *op* *Dinsdae* *siek,* *maar* *nie* *gereeld* *nie.*
she is HIGH-DEG on Tuesdays sick but NEG often NEG
"She is often sick on Tuesdays, but not often."

The fact that type A *baie* has been shown to modify quality/intensity only, and that an intensity-modifying meaning is only available in (35a), where *baie* is adjacent to the gradable adjective, makes clear that type A *baie* cannot be separated from the gradable predicate it modifies. Type D *baie*, on the other hand, is more flexible in its positioning: it can be separated from the gradable predicate, as in (35b), but it can also occur directly before it. This is evinced by the fact that *baie* in sentences of the form *Sy is baie siek op Dinsdae* 'she is very/often sick on Tuesdays' is ambiguous between a quality/intensity-modifying reading, and a quantity/frequency modifying reading.

According to the argument developed in Neeleman et al. (2004), the constraints on type A *baie*'s positioning suggest that it is a syntactic head. Judging from the data presented in this chapter thus far, the category of type A *baie*'s complement would seem to be an adjectival phrase (AP). Type A *baie* is thus analysed as a head that selects an AP as its complement, and is therefore subject to the same analysis that Neeleman et al. (2004) put forward for modifiers such as "too", "as" and "so". Type D *baie*, on the other hand, is more flexible in terms of the categories with which it combines, and would thus appear to be an adjunct (cf. Doetjes 1997; Neeleman et al. 2004). This is in line with Doetjes' (1997) assertion that what have here been termed "non-*g*-type modifiers" are adjuncts.

Neeleman et al. (2004) use a number of tests to distinguish between modifiers that are heads, and those that are adjuncts. Some of these tests – e.g. the ability of the modifier to modify items of various categories, and the (non)obligatory positioning of the modifier directly before the gradable predicate it modifies – have already been covered in the course of the discussion thus far, and have provided initial support to the hypothesis that type A *baie* is a head and type D *baie* is an adjunct. The remainder of this section considers some of Neeleman et al.'s (2004) other tests in order to more clearly demonstrate the head status of type A *baie* and the adjunct status of type D *baie*.

The two tests to be considered are closely related to each other. They stem from Abney's (1987, cited in Neeleman et al. 2004: 12) generalisation that a head cannot be separated from its complement by movement. This means that, if the modifier in question is a head, it should be impossible both (i) for the modifier itself to be moved away from the gradable predicate it modifies by means of topicalisation or fronting; and (ii) for the gradable predicate to be topicalised or fronted.

(36a) shows that the gradable predicate – an NP – modified by type D *baie* can be topicalised, thus indicating that type D *baie* is not a head. (36b) shows that the gradable predicate – an AP – modified by type A *baie* cannot be topicalised on its own: the entire XP must be fronted. This makes it clear that type A *baie* cannot be separated from its complement, and thus fits Abney's (1987) definition of a head.

(36) a. *Ek moet [baie [$_{NP}$ vleis]] eet.*
I must HIGH-DEG meat eat
"I have to eat a lot of meat."

Van vleis$_i$, moet ek [baie [t_i]] eet.
of meat must I HIGH-DEG eat
"Of meat, I have to eat a lot."[25]

b. *Jy moet [baie [$_{AP}$ slank]] wees om deur die venster te kom.*
you must HIGH-DEG thin be INF through the window to come
"You must be very thin to get through the window."

* *Slank$_i$ moet jy [baie [t_i]] wees om deur die venster te kom.*
thin must you HIGH-DEG be INF through the window to come
"Thin must you very be to get through the window."

[Baie [$_{AP}$ slank]]$_i$ moet jy t_i wees om deur die venster te kom.
HIGH-DEG thin must you be INF through the window to come
"Very thin must you be to get through the window."

Considering next whether the modifier may be separated from the gradable predicate by being topicalised itself: (37a) shows that type D *baie* – in combination with a VP – can be fronted alone. (37b) shows that type A *baie* cannot be fronted alone – it must move together with the AP it modifies; again indicating that these two cannot be separated, and strongly suggesting that type A *baie* is a head.

(37) a. *Sy het die foto's [baie [$_{VP}$ geniet]].*
she have the photos HIGH-DEG enjoyed
"She enjoyed the photos a lot."

Kyk net hoe baie$_i$ het sy die foto's [t_i [$_{VP}$ geniet]]!
look just how HIGH-DEG have she the photos enjoy
"Just look how much she enjoyed the photos!"

b. *Sy is nou [baie [$_{AP}$ lank]].*
she is now HIGH-DEG tall
"She is now very tall."

[25] It is noted that the unavailability of a partitive construction with adjectives (cf. the impossibility of "Of tall is he very") may also be an explanation for the ungrammaticality of (36b). Unfortunately, (36a) is only possible as a partitive construction, and so this confound cannot be avoided. (37) may therefore be the more reliable of these two movement tests.

* *Kyk net hoe baie$_i$ is sy nou [t_i [$_{AP}$ lank]]!*
look just how HIGH-DEG is she now tall
"Just look how very is she now tall!"

Kyk net hoe [baie [$_{AP}$ lank]] is sy nou t_i !
look just how HIGH-DEG tall is she now
"Just look how very tall she is now!"

These tests all indicate that type D *baie* is an adjunct, whereas type A *baie* is a head. The narrow vs. wide distribution of type A vs. type D *baie* is also explained by the categorisation of type A *baie* as a head, and type D *baie* as an adjunct.

In the following section, these syntactic distinctions are used to explain why type D rather than type A *baie* modifies gradable verbs.

3.3 Why type A *baie* cannot modify gradable verbs

Gradable verbs have been analysed as *g*-type predicates. It is thus somewhat surprising that they are modified by type D *baie*, rather than by the *baie* that is a *g*-type modifier. Unexpectedly for a Germanic language that is closely related to Dutch, the fact that Afrikaans has type A and type D high-degree modifiers, instead of types B and E, means that it patterns with French.

The aim of this section is to use syntactic factors to explain why this is the case. Consider the examples below:

(38) a. *Enige hulp sal verskriklik / erg / *heel waardeur word.* (*Gradable verb*)
any help will terribly / very / very appreciated be
"Any help will be terribly/very much appreciated."

b. *Enige hulp sal verskriklik baie / veel waardeur word.* (*Gradable verb*)
any help will terribly much / much appreciated be
"Any help will be very much appreciated."

In (38a), the gradable verb *waardeur* 'appreciate' can be modified by the type B modifiers *verskriklik* 'terribly' and *erg* 'very', but not by the type A modifier *heel* 'very/entirely'. In (38b), *waardeur* 'appreciate' can be modified by the type D modifier *veel* 'a lot', and by type D *baie*. These modifiers can in turn be modified by *verskriklik* 'terribly'.

The *baie* in (38b) can be shown on two counts to be type D *baie*. Firstly, as has been argued above, only type D *baie* can be further modified by type B modifiers like *verskriklik*. Secondly, it can be shown that the *baie* that combines with gradable verbs can be fronted without the gradable verb, which is characteristic of the adjunct type D *baie*. That is illustrated in (37a) above, with respect to the gradable verb *geniet* 'enjoy'.

The fact that type A modifiers, e.g. type A *baie* and *heel* 'very/entirely', do not combine with gradable verbs can be explained on syntactic grounds. *Erg* 'very' and *verskriklik* 'terribly', in line with Doetjes' (1997) analysis of type B modifiers, are taken to be adjuncts. Type A *baie*, however, has been shown to be a head. In accordance with the generally-assumed structure of VP (see e.g. Koopman & Sportiche 1991 and McCloskey 1997), it is reasonable to believe that only adjunct modifiers can modify verbs. Thus, *erg* and *verskriklik* would be expected to be compatible with verbs, and can therefore modify these items. Type A *baie*, however, would be unable to modify verbs for purely syntactic reasons. Because type D *baie* is an adjunct that is not sensitive to the *g*- vs. *q*-type predicate distinction, it can modify gradable verbs.

It might be asked at this point why type D *baie* is unable to modify gradable adjectives, given its adjunct status and insensitivity to the *g*-/*q*-distinction. I propose that what prevents type D *baie* from combining with gradable adjectives is the fact that a more specific form exists – i.e., type A *baie*, which is more specific by virtue of its more restricted distribution. An Elsewhere Effect is assumed to block type D *baie* from occurring where type A *baie* is compatible.

The account outlined thus far is also able to explain why *baie* in combination with eventive verbs is only able to receive a quantity-modifying interpretation. Consider the Afrikaans examples below (note that *hoes* is the Afrikaans equivalent of Dutch *hoesten* 'cough'):

(39) a. *Hy hoes baie / veel.* (*Quantity/frequency modified*)
he coughs HIGH-DEG / much
"He coughs a lot."

b. *Hy hoes erg.* (*Quality/intensity modified*)
he coughs very
"He coughs intensely."

Baie in combination with the verb *hoes* 'cough' cannot yield the meaning found in (39b); i.e., 'he coughs intensely'. Evidently, eventive verbs can be modified either in terms of intensity by the type B modifiers *erg* 'very' and *verskriklik* 'terribly', or in terms of frequency by type D *baie* or *veel* 'a lot'.

Why type D *baie* cannot also modify *hoes* 'cough' in terms of intensity, when first considered, again seems able to be explained with reference to an Elsewhere Effect. *Erg* is more specific than type D *baie* by virtue of its more restricted distribution: it can only occur with *g*-type predicates. Thus, *erg* would be supposed to be preferred over type D *baie* as a quality/intensity-modifier of verbs that can also be modified in terms of quantity/frequency.[26] However, this account is challenged by the fact

[26] It should be noted that no Elsewhere Effect interferes with the distribution of *erg* and type A *baie* in combination with gradable adjectives, where both can be used, even though the distribution of type A *baie* is more restricted than that of *erg*. This is presumably the case because *erg* is an adjunct and type A *baie* is a head – these items are not structurally equivalent, and so do not enter into competition with each other (see section 4.1.2 for a related argument).

that both type D *baie* and *erg* can occur with gradable verbs. It seems implausible that an Elsewhere Effect would affect the distribution of type D *baie* and *erg* in the case of verbs with both *g*- and *q*-positions, but not in the case of gradable verbs, which only have *g*-positions.

An alternative approach is therefore proposed, in which ambiguity is a relevant factor. In the case of exclusively gradable verbs – i.e. those with only a *g*-position – no ambiguity is possible. These items are *g*-type predicates, and when they are modified, it is a modification of quality/intensity that takes place. Verbs with both *g*- and *q*-positions, on the other hand, can be modified both in terms of quality/intensity and quantity/frequency. If it were possible for type D *baie* to modify both the quality/intensity and the quantity/frequency of these verbs, hearers would be unable to distinguish whether intensity or quantity is being modified. Perhaps, then, it is an ambiguity-avoidance mechanism of some sort that favours *erg* as a modifier of the *g*-position of these verbs over type D *baie*.

Such an account might be developed within the framework of bidirectional optimality theory (see Blutner 2000). This framework takes into account the perspectives of the speaker (production) and the hearer (comprehension) within a particular context. In this view, a grammar is taken to have a so-called "Generator" as one of its components. The Generator produces a selection of candidate form/meaning pairs; and also specifies a set of constraints, hierarchically ordered, according to which these form/meaning pairs are evaluated (Klimek-Jankowska 2012: 18). Within a particular context, the strong version of this account defines an expression (which is represented as a form/meaning pair, <*f,m*>) as optimal iff:

(40) a. There is no <*f',m*> such that <*f', m*> >> <*f,m*> (production); and

b. There is no <*f, m'*> such that <*f, m'*> >> <*f, m*> (comprehension),

where ">>" should be read as "being more harmonic/economical" (Blutner 2000: 199).

Consider (40) with respect to *baie* in the context of verbs that can be modified in terms of both quality/intensity and quantity/frequency. The Generator would presumably provide both *erg* and *baie* as quality/intensity-modifying candidates in this context. It is also reasonable to believe that "avoid ambiguity" would be one of the constraints relative to which these candidates are evaluated. *Baie* is polysemous: it can be either a quality-/intensity-modifying or a quantity-/frequency-modifying expression. *Erg*, on the other hand, only modifies quality/intensity. It can thus be supposed that *erg* would be a more optimal form/meaning pair: at least in terms of comprehension, it is more easily interpreted.

This is of course a sketchy account, but further exploration of the matter falls outside of the scope of this thesis. The following section concludes the discussion in this chapter.

3.4 Conclusion

Following the discussion in this chapter, how the two *baie*s divide the degree modifier table (Table 1) between them can now be clearly defined. A modified version of this table is presented below.

Table 3: Type A baie and type D baie on the degree modifier table

Gradable adjectives	type A *baie*	
Gradable verbs		type D *baie*
Eventive verbs		
Eventive adjectives		
Comparatives		
Mass nouns		
Plural nouns		

The key finding of this chapter is that the Afrikaans modifier *baie*, which by virtue of its wide distribution was initially hypothesised to be a type C modifier, is in fact two modifiers that share a form. These two instances of *baie* have been distinguished with reference to their ability to be further modified by the type B modifier *verskriklik* 'terribly'. It has been shown that when *baie* combines with gradable adjectives, it cannot be further modified. When it combines with eventive and gradable verbs, eventive adjectives, the comparative morpheme, and mass and plural nouns, however, it can. A distinction is therefore drawn between type A *baie*, which combines with gradable adjectives, and type D *baie,* which combines with the remaining gradable categories. Type A *baie* acts as a modifier of quality/intensity and is best translated as 'very', and type D *baie* acts as a modifier of quantity/frequency, and is best translated as 'a lot'.

A number of characteristics of type A and type D *baie* have been determined. Type A *baie*, to begin with, is a syntactic head. This has been established by means of syntactic tests that show that type A *baie* cannot be separated from the gradable predicate it modifies by means of the topicalisation of either the modifier or the gradable predicate. This is in line with what Abney (1987) treats as an identifying characteristic of syntactic heads. Type D *baie*, on the other hand, has been shown to be an adjunct. This has been established by means of syntactic tests that show that this item can be separated from the gradable predicate it modifies. This is also in line with Doetjes' (1997) classification of non-*g*-type modifiers.

The distribution of type D *baie* has been shown to be independent of the *g*-/*q*-type distinction. This item is only barred from combining with gradable adjectives by an Elsewhere Effect that favours a

more specific form to express a quality/intensity-modifying meaning (in this case, type A *baie*). It was also hypothesised that type D *baie* is prevented from modifying verbs with both *g*- and *q*-positions in terms of quality/intensity on the basis of an ambiguity-avoidance mechanism, which favours the use of two different forms to express two different meanings. I briefly outlined how such an account might look within the framework of bidirectional optimality theory.

The following chapter addresses some issues that remain unaddressed alongside the matters that have been clarified in this chapter. Firstly, syntactic and semantic analyses of type A and type D *baie* are provided. Secondly, I speculate as to how the split between type A and type D *baie* may have arisen.

4. Analyses of type A and type D *baie*

The previous chapter has established the existence of two distinct versions of the Afrikaans modifier *baie*, which are referred to as "type A *baie*" and "type D *baie*". The aim of the present chapter is to provide a clear semantic and syntactic description of each modifier.

Section 4.1 focuses on type D *baie*. It is shown that the behaviour of this item is similar to that of typical gradable adjectives, and differs from that of so-called "quantificational determiners" such as "all". These observations are used to argue against an analysis of type D *baie* as a quantificational determiner (as has been argued for the similar items "much" and "many" within the framework of Generalized Quantifier Theory). Ultimately, an analysis similar to that of Solt (2015) is adopted, and type D *baie* is analysed as a so-called "quantity adjective".

Section 4.1.1 provides evidence that type D *baie* encodes a 'high-quantity' meaning in its semantics, rather than this meaning being introduced by POS. Section 4.1.2 addresses the question of why the type D modifier *veel* 'a lot' is preferred to *baie* in excessive and equative constructions in Standard Afrikaans. I argue that *te/ewe veel* 'too/as much' are the unmarked constructions in comparison to *te/ewe baie* 'too/as much': the latter are marked because they are [+evaluative], whereas *te/ewe veel* are [-evaluative]. Following Rett (2008), it is assumed that if two constructions are otherwise equivalent except for one feature, the unmarked construction will block use of the marked construction. Section 4.1.3 presents the final analysis that is adopted for type D *baie*.

An analysis of type A *baie* is provided in section 4.2. Subsequently, section 4.3 considers the question of how type A and type D *baie* may have developed. In line with proposals made in Doetjes (2008), Norde (2006) and Norde, de Clerck & Colleman (2014), it is proposed that type A and type D *baie* are both derived from a version of *baie* that began as a nominal modifier. Finally, section 4.4 concludes with a summary of the chapter.

4.1 Type D *baie*: semantics and syntax

Thus far, type D *baie* has been shown to be able to modify *q*-type predicates (eventive verbs, eventive adjectives, the comparative morpheme, and mass and plural nouns) and gradable verbs, which are *g*-type predicates. The distribution of this item has led to the conclusion that type D *baie* is not sensitive to the *g*-/*q*-distinction: it only requires the predicate it modifies to incorporate a degree argument.

In addition to this distribution, features of type D *baie* that must be captured in its semantic/syntactic analysis include (i) its ability to be further modified by modifiers such as *verskriklik* 'terribly'; and (ii) its apparent 'high-quantity' meaning. Each of these aspects is discussed in what follows. First, however, a classification of type D *baie* is in order.

Type D *baie* can be observed to pattern with what have been termed "quantity adjectives" ("q-adjectives" henceforth) by Solt (2009, 2015): items like "many", "much", "few", and "little". As

illustrated in the examples below, these items, like type D *baie*, can intervene between a determiner and a noun (41a); can be modified by *te* 'too' and *ewe* 'as' (41b); and can be used in predicative position (41c).[27] These are all characteristics shared with 'typical' gradable adjectives. These similarities suggest that the account that treats items such as "many" and "much" as quantificational determiners is not suitable for an analysis of type D *baie* (cf. Barwise & Cooper 1981). As shown in (41), other quantificational determiners, such as "all" (*alle* in Afrikaans), do not show the same behaviour.

(41) a. *Toe Jesus die baie / *alle mense sien….*
when Jesus the HIGH-DEG / all people see
"When Jesus saw the many people..."

b. *Ek het te baie / *alle boeke / Ons het ewe baie / *alle boeke.*
I have too HIGH-DEG / all books / we have as HIGH-DEG / all books
"I have too many books."/"We have equally many books."

c. *As 20 lede… ooit weer 'n polisie-uniform aantrek, sal dit baie / *alle wees.*
if 20 members ever again a police uniform on.pull will it HIGH-DEG / all be
"If 20 members ever put on a police uniform again, it will be a lot."

The above characteristics of q-adjectives illustrate their similarity to gradable adjectives. However, Solt (2015: 2) also observes the following aspects of these items' behaviour that set them apart from adjectives: (i) their ability to be used in differential phrases in comparative constructions (see (23d)); (ii) their ability to modify verbs (see (23c)); and (iii) in the case of English, their use in so-called "much-support constructions", such "John is friendly, but Tim is *too much so*" (cf. Corver 1997; Solt 2010).

A number of scholars (cf. also Klein 1982; Heim 2006; Schwarzschild 2006; and Rett 2006, 2008) propose to accommodate these adjectival and non-adjectival behaviours by analysing q-adjectives as "gradable predicates of sets of degrees" (Solt 2015: 3). Such an analysis allows for these items to occur in various contexts, as long as degrees are involved. This definition of q-adjectives can be represented as follows, where *d* is a degree, and *I* is an interval of degrees (Solt 2015: 13):

(42) $[[QAdj_{<d,\ <dt,t>>}]] = \lambda d \lambda I_{<d,t>}.I(d)$

[27] Another argument that is sometimes used in favour of analysing items such as "many" as q-adjectives is their ability to form comparatives and superlatives: in the case of "many", the comparative form would be "more", and the superlative form "most". Solt (2015) acknowledges that this argument can be questioned, seeing as "more" and "most" are not morphologically transparent. However, she follows Bresnan (1973) (cf. also Jespersen 1954), who proposes that English "more" is the spell-out of "many" + "-er" (the comparative morpheme). Whilst it might be similarly assumed that *meer* 'more' is the spell-out of *baie* + *-er*, I omit this argument from consideration in the present discussion.

Put simply, a high-degree q-adjective will be true for a degree *d* in a context *c* if *d* is greater than the relevant standard in *c*. An attenuating q-adjective will be true under the same circumstances if *d* is lower than the relevant standard in *c* (Solt 2015: 4).

Because they are analysed as *gradable* predicates of sets of degrees, q-adjectives themselves have a degree argument slot. In the case of type D *baie*, it has been shown (cf. (29)) that this degree argument slot can be saturated by another *g*-type modifier (i.e. type A or B modifier); e.g. *verskriklik* 'terribly'. Given that *g*-type modifiers can only modify *g*-type predicates, it is concluded that type D *baie* is a *g*-type item. Such a conclusion is supported by the fact that type D *baie* can be modified by other *g*-type modifiers like *heel* 'very/entirely' and *erg* 'very', as well as the *g*- and *q*-predicate modifying *bietjie* 'a bit' (43a-c).[28]

(43) a. *Metale het heel baie toepassings.* (*G-type modifiers modify type D baie*)
metals have very HIGH-DEG applications
"Metals have very many applications."

b. *Ek het erg baie wit verf wat ongebruik rond staan.*
I have very HIGH-DEG white paint what unused around stand
"I have very much white paint that is standing around unused."

c. *Bietjie baie tamatie, te min knoffel.*
bit HIGH-DEG tomato too little garlic.
"A bit much tomato, too little garlic."

When q-adjectives occur in their positive forms, their degree arguments are generally assumed to be saturated by POS. In these cases, Solt (2015: 12-13) describes POS as serving to introduce a "neutral range" of degrees on the scale in question, which would be considered neither large nor small with

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[28] Given that type D *baie* appears to be a *g*-type predicate itself, it would be assumed to able to be modified by type A *baie*. It is difficult to show this clearly, as the example in (44) could feature a modification of type D *baie* by type A *baie*, yielding the meaning 'very many'; or it could feature repetition of type D *baie*, yielding the (almost identical) meaning 'many many'.

(44) *Daar was $baie_A$ $baie_D$ mense by die partytjie.*
there was HIGH-DEG HIGH-DEG people at the party

"There were very many people at the party."

In theory, it should also be possible for *veel* 'a lot' to modify type D *baie*, since it has been shown to be insensitive to the *g*-/*q*-distinction. However, sentences of this form are ungrammatical, as shown below.

(45) * *Daar was veel baie mense by die partytjie.*
there was many HIGH-DEG people at the party
"There were many people at the party."

At present, I do not have a clear theory as to why this is the case. Plausibly, *veel* itself may be a q-adjective, and perhaps q-adjectives are unable to modify other q-adjectives.

respect to the context. However, it is shown in the following section that this is not the case with type D *baie*: indeed, type D *baie* will be argued to never combine with POS.

Ultimately, Solt's (2009, 2015) analysis of q-adjectives captures some aspects of type D *baie*'s behaviour. However, some other characteristics of type D *baie* – e.g. its apparent 'high-quantity' meaning, which is made evident in the following section – remain unexplained, and thus prompt modifications to the analysis. What follows looks more closely at type D *baie*'s 'high-quantity' meaning (4.1.1), and at its relationship with the Afrikaans type D modifier *veel* 'a lot' (4.1.2). These insights are used to propose a modification of (42) that accounts for all of the characteristics of type D *baie*.

4.1.1 The inherent 'high-quantity' meaning of type D *baie*

According to the analyses of Solt (2015) and Rett (2008), the standard with respect to which use of the q-adjective is evaluated is not encoded in the q-adjective itself. This position is supported by Rett's (2008: 44) observation that these items can occur in equative and excessive constructions without making reference to a standard. That is to say, a sentence such as "John ran as many kilometres as Bill" does not entail that the number of kilometres ran by either individual is high. It is thus assumed that, at least in the case of English and other languages that show similar behaviour, it is POS that introduces the standard by saturating the open degree argument of the q-adjective. In "John ran as many kilometres as Bill", "as" saturates the degree argument of "many". POS is thus no longer part of the compositional semantics, and no standard is introduced.

However, although this account seems to work for q-adjectives in English, it does not seem applicable to type D *baie*. The latter item can be shown to have a 'high-quantity' meaning even in combination with degree modifiers such as *te* 'too' and *ewe* 'as'. This is shown by the contrast between the examples in (46) and (47). (46a) can be used in a situation where, for example, the speaker is only allowed to bring along one book, but she has two. Although 'two books' would not generally count as 'many books', it is still 'too many' in this situation. (46b) does not entail that either John or Mary has many books.

In (47a), *te baie boeke* 'too many books' entails that the speaker has many books. Use of this sentence would therefore be infelicitous in the context sketched above, where the speaker has two books in a situation where only one is allowed (here, *te veel* 'too many' would be used instead). In (47b), *ewe baie vereistes* 'as many requirements' entails that there are many requirements.

The standard in these constructions cannot be introduced by POS, as *te* 'too' in (47a) and *ewe* 'as' in (47b) occupy the position that POS would occupy. It must therefore be introduced in another way.

(46) a. I have too many books ⇏ I have many books.
b. John has as many books as Mary ⇏ John/Mary has many books.

(47) a. *Ek het te baie boeke* ⇒ *Ek het baie boeke.*
I have too HIGH-DEG books I have HIGH-DEG books
"I have too many books." ⇒ "I have many books."

b. *Daar is ewe baie vereistes...* ⇒ *Daar is baie vereistes...*
there is as HIGH-DEG requirements there is HIGH-DEG requirements
"There are as many requirements (that must be met)." ⇒ "There are many requirements (that must be met)."

The high-quantity meaning of type D *baie* can be further illustrated by its infelicity in constructions that either ask for a specific quantity – without the implication that the quantity is high – or that make reference to a quantity that cannot be said to be high. The first of these circumstances is illustrated in (48-50), where *hoeveel* 'how much/many' must be used instead of *hoe baie* 'how much/many' to avoid a high-quantity entailment.

(48) a. *Hoeveel geld het ek nodig vir aftrede?* [*Financial help column*[29]]
how.much money have I necessary for retirement
"How much money do I need for retirement?"

b. # *Hoe baie geld het ek nodig vir aftrede?*
how HIGH-DEG money have I necessary for retirement
"What is the large amount of money that I need for retirement?"

(49) a. *Hoeveel renosters is oor?* [*News article*[30]]
how.many rhinoceroses is over
"How many rhinoceroses remain?"

b. # *Hoe baie renosters is oor?*
how HIGH-DEG rhinoceroses is over
"What is the large number of rhinoceroses that remain?"

(50) a. *Wil jy ook weet hoeveel koring in 'n kilogram koringsaad is?* [*Agriculture column*[31]]
want you also know how.much corn in a kilogram corn.seed is
"Do you also want to know how much corn there is in a kilogram of corn-seed?"

b. # *Wil jy ook weet hoe baie koring in 'n kilogram koringsaad is?*
want you also know how HIGH-DEG corn in a kilogram corn.seed is
"Do you also want to know what the large amount of corn is that is in a kilogram of corn-seed?"

Another contrast between these constructions that illuminates their semantics is the fact that type D *baie*'s 'high-quantity' meaning can be disputed. It is not possible to do this with *hoeveel* questions:

[29] Taken from http://www.netwerk24.com/Sake/Geldsake/Nico-van-Gijsen-Hoeveel-geld-het-ek-nodig-vir-aftrede-20150726.
[30] Taken from http://www.netwerk24.com/Nuus/Hoeveel-renosters-is-oor-20130517.
[31] Taken from http://www.grainsa.co.za/wil-jy-ook-weet-hoeveel-koring-in--n-kilogram-koringsaad-is.

this would be equivalent to responding to the question "How tall is that building?" with the strange and infelicitous "The building is not tall!"

Thus, the contrast in (51) shows that *hoeveel* makes no reference to a standard that is exceeded, whereas with *hoe baie*, reference to a standard is maintained.[32]

(51) a. A: *Hoe baie geld het ek nodig vir aftrede?*
how HIGH-DEG money have I necessary for retirement
"What is the large amount of money that I need for retirement?"

B: *Jy het nie baie geld vir aftrede nodig nie!*
you have NEG HIGH-DEG money for retirement necessary NEG
"You don't need a lot of money for retirement!"

b. A: *Hoeveel geld het ek nodig vir aftrede?*
how much money have I necessary for retirement
"How much money do I need for retirement?"

B: # *Jy het nie veel geld vir aftrede nodig nie!*
you have NEG much money for retirement necessary NEG
"You don't need a lot of money for retirement!"

(52) shows the second circumstance in which type D *baie* is infelicitous, where *soveel* must be used instead of *so baie*, because use of *so baie* in (52b) gives rise to the infelicitous, confusing assertion that the poorest 50% of the world's population had a lot of money.

(52) a. *In 2012 het 388 mense net soveel geld gehad as die armste 50%...*
in 2012 have 388 people just so.much money had as the poorest 50%
"In 2012, 388 people had just as much money as the poorest 50% (of the world's population) [who did not necessarily have a large amount of money]."

b. # *In 2012 het 388 mense net so baie geld gehad as die armste 50%...*
in 2012 have 388 people just so HIGH-DEG money had as the poorest 50%
"In 2012, 388 people had just as much money as the poorest 50% (of the world's population) [who had a large amount of money]."

(53a) shows an appropriate use of *so baie*, where the 'high-quantity' meaning is suitable because the speaker wishes to express that s/he greatly his/her long weekend. That the speaker enjoyed his/her long weekend is not part of the meaning of (53b).

[32] There are two possibilities for what happens in (51b): either *hoeveel* is an independent lexical item that has no 'high-quantity' meaning, or *hoe* occupies the position normally occupied by POS, and thus no standard is introduced.

(53) a. *Hoop julle het julle langnaweek net so baie soos ons geniet…*
hope you.PL have your long.weekend just so HIGH-DEG as us enjoy
"Hope you guys enjoyed your long weekend just as much as we did (which was very much)…"

b. # *Hoop julle het julle langnaweek net soveel soos ons geniet…*
hope you.PL have your long.weekend just so.much as us enjoy
"Hope you guys enjoyed your long weekend just as much as we did (which was not necessarily very much)…"

The ability of *hoeveel/soveel* to occur where *hoe baie/so baie* is infelicitous prompts the conclusion that *veel* itself does not incorporate a high-quantity meaning.

Based on the examples in (47-53), it is concluded that a 'high-quantity' meaning is part of the semantics of type D *baie*. The fact that this high-quantity meaning is maintained in equative and excessive constructions and degree questions indicates that it is not introduced by POS.

There are two ways in which the obligatory presence of the high-quantity meaning can be explained: (i) it can be specified in the semantics of type D *baie*; or (ii) it can be introduced by means of a null evaluative morpheme; something along the lines of Rett's (2008) "EVAL". The presence of EVAL in a degree construction renders the construction "evaluative", which means that it refers to a degree that is located above the standard determined by the context (Rett 2008: 74).

To account for the high-degree meaning of type D *baie*, I opt for the first explanation, and assume that type D *baie*'s high-quantity meaning is specified in its semantics. An account incorporating EVAL seems unnecessarily complex; seeing as type D *baie* apparently never occurs without EVAL. It therefore does not seem justifiable to separate the evaluative meaning from the semantics of type D *baie* itself.

Type D *baie* is thus assumed to be inherently evaluative (cf. Breakstone 2012). It is defined as follows, where the second conjunct requires that the degree defining the size of the interval exceeds the contextually-defined standard by an amount that counts as 'large' in the context (represented by '$>>_c$'):

(54) $[\![baie_{<d,<dt,t>>}]\!] = \lambda d \lambda I_{<dt>}. I(d) \wedge d >>_c standard_c$

Type D *baie* therefore only differs from the q-adjectives discussed by Solt (2015) and Afrikaans *veel* in that the latter items are not inherently evaluative.

Further modification of type D *baie* is achieved by the adjunction of modifiers with the type $<<d, <d,t>>, <d,t>>$ that can target *g*-type predicates. These degree modifiers take a set of degrees and return a subset of those degrees that exceed the standard introduced by the modifier. When in its positive form, it is assumed that type D *baie* does not combine with POS, but instead undergoes existential closure in order to saturate its open degree argument.

The following subsection takes a closer look at the 'high-quantity' meaning of type D *baie*, and demonstrates how this meaning influences its competition with *veel* and, consequently, its distribution.

4.1.2 Type D *baie*'s competition with *veel*

In excessive and equative constructions in Standard Afrikaans, *te veel* 'too much' is exclusively used instead of *te baie* 'too much', and *ewe veel* 'as/equally much' instead of *ewe baie* 'as/equally much'. This is not due to incompatibility of type D *baie* with *te*/*ewe*: the latter two items can modify *g*-type predicates (e.g. the gradable adjective *lank* 'tall', producing *te lank* 'too tall' and *ewe lank* 'as/equally tall'), and type D *baie* has been shown to be a *g*-type predicate itself, that can be targeted by *g*-type modifiers like *heel* 'very/entirely' and *verskriklik* 'terribly'. Thus, another account must be sought to explain this state of affairs. The account that is pursued here rests on the idea that there is competition between type D *baie* and *veel* 'a lot' in excessive and equative constructions.

In the same way that both type D *baie* and *erg* were proposed to be candidate modifiers of the *g*-position of verbs with both *g*- and *q*-positions in section 3.3, I propose that type D *baie* and *veel* are candidate modifiers to be used in excessive/equative constructions. Thus, there is assumed to be no intrinsic reason that prevents use of *te*/*ewe baie*: the absence of these constructions from Standard Afrikaans is determined by their relationship with *te*/*ewe veel*, not by their features alone. Specifically, I argue that the key difference that governs the relationship between *te*/*ewe baie* and *te*/*ewe veel* is the former's "evaluative" status, which contrasts with the unevaluative status of *te*/*ewe veel*.

As noted above, Rett (2008: 74) defines a degree construction as "evaluative" if it refers to a degree that is located above the standard determined by the context. Whether a construction is evaluative can be determined by examining whether the degree construction entails its positive form (this is Bierwisch's 1989 test for evaluativity). This test demonstrates that there is indeed a difference in evaluativity between *te*/*ewe veel* 'too/as much' and *te*/*ewe baie* 'too/as much': the former are not evaluative, and the latter are. This is illustrated below (examples modified from (47) above).

(55) a. *Ek het te veel boeke.* ⇏ *Ek het veel boeke.* (*Veel*, [-*evaluative*])
I have too many books ⇏ I have many books
"I have too many books." ⇏ "I have many books."

b. *Daar is ewe veel katte as honde.* ⇏ *Daar is veel katte en honde.*
there is as many cats as dogs ⇏ there is many cats and dogs
"There are as many cats as dogs." ⇏ "There are many cats and dogs."

(56) a. *Ek het te baie boeke.* ⇒ *Ek het baie boeke.* (*Type D baie*, [+*evaluative*])
I have too HIGH-DEG books ⇒ I have HIGH-DEG books
"I have too many books." ⇒ "I have many books."

b. *Daar is ewe baie katte as honde.* ⇒ *Daar is baie katte en honde.*
there is as HIGH-DEG cats as dogs ⇒ there is HIGH-DEG cats and dogs
"There are as many cats as dogs." ⇒ "There are many cats and dogs."

Their evaluativity would be expected to render *te baie* and *ewe baie* unsuitable in many contexts. However, in Standard Afrikaans, the ban on these formulations is not lifted in situations where the high-quantity entailment would be suitable – *te baie* and *ewe baie* are generally out, and *te veel*/*ewe veel* are used across all contexts.

This prompts the conclusion that *te*/*ewe veel* in fact block the use of *te*/*ewe baie* in Standard Afrikaans. The argument that I outline here takes its lead from Rett (2008). The pertinent quote is as follows:

> The relevant notion of semantic competition here is that when two sentences are synonymous then (and only then) is their relative markedness relevant. A theory of markedness suggests that when two forms differ only in *x*, then the form with the least marked value of *x* ([–*x*], say, rather than [+*x*]) is less marked overall. If these two meanings are synonymous, it seems reasonable to conclude that the marked meaning will be blocked by its unmarked counterpart.
>
> (Rett 2008: 97-98)

Te/ewe baie and *te/ewe veel* can justifiably be taken to be synonymous, as type D *baie* and *veel* are both adjunct type D modifiers, which modify the same gradable predicates, and are both best translated as 'a lot'. Thus, according to Rett (2008: 97), the relative markedness of these forms becomes relevant. These constructions have been shown to differ in the feature of evaluativity: *te/ewe baie* have been shown to be [+evaluative] according to Bierwisch's test, whereas *te/ewe veel* are [-evaluative]. Thus, following Rett and assuming that the [-] value of a feature is less marked than the [+] value, *te/ewe baie* are taken to be marked in comparison to *te/ewe veel*. Again, following the reasoning in the quote above and assuming that unmarked forms block marked forms, it would therefore be predicted that the unmarked *te/ewe veel* would block the marked *te/ewe baie*.

Before going any further with this analysis, an immediate objection might be "Why is type D *baie* not blocked by *veel* in positive constructions?" Arguably, this is the case because unmodified type D *baie* and unmodified *veel* differ in more than one aspect of their behaviour, and are therefore not synonymous. Indeed, when *veel* occurs in its positive form, there are additional factors at play – e.g., when unmodified, it is largely infelicitous outside of non-veridical contexts (e.g. negative sentences, questions, and conditionals). This characteristic of *veel* is discussed in a brief interlude below.

Donaldson (1993) claims that the use of *veel* requires the presence of a modifier, both in positive and negative contexts. Regarding positive contexts, this observation seems to be supported by corpus research: in the large Majliš (2011) corpus, *veel* does not occur unmodified in positive environments.

However, neither speaker judgments nor corpus research support Donaldson's claim that *veel* cannot occur unmodified in negative contexts: unmodified *nie veel* 'NEG + *veel*' occurs 4,766 times in the

Majliš (2011) corpus, and 32 times in the smaller Roux, Louw & Nielser (2004) corpus. The examples given in (57) below, taken from Roux et al. (2004), are perfectly acceptable according to the judgments of various native speakers who were consulted.

(57) a. *Die meeste mense met wie ek werk het nie veel geleerdheid nie.*
the most people with who I work have NEG much education NEG
"Most of the people that I work with don't have much education."

b. *Hier bestaan daar nie veel kommer oor die afskaling van Afrikaans.*
here exists there NEG much worry over the down.scaling of Afrikaans
"Here there isn't much worry about the scaling-down of Afrikaans."

The fact that unmodified *veel* is largely infelicitous when used in veridical contexts, but felicitous when similarly used in non-veridical contexts, makes it comparable to English "much". This behaviour of "much" has been investigated by Zwicky (2006a, 2006b) and Solt (2010)[33]. Solt (2010: 8) discusses the infelicity of examples such as the following:

(58) a. ?? I bought much rice.

b. ?? Much wine is left.

c. ?? John slept much.

d. ?? I much enjoyed the party.

Zwicky (2006a) notes that sentences like (58) become perfectly acceptable when "much" is modified. Thus, "I bought very much rice", "Very much wine is left", "John slept very much", and "I very much enjoyed the party" are all fine. With respect to *veel*, it is also the case that modification of this item renders its use in positive environments perfectly acceptable; a fact that is reflected in the large number of such sentences that occur in the corpora and online, for example (59) (taken from Roux et al. 2004):

(59) *…kan dit ontsaglik veel vir ons kontinent beteken.*
…can it immensely much for our continent mean
"It could mean an immense amount for our continent."

It seems reasonable to conclude that the observed restrictions on the distribution of unmodified *veel* render it sufficiently different from unmodified type D *baie* to prevent these two items from entering into competition with each other.

At this point, a second objection to the claim that *te/ewe veel* block use of *te/ewe baie* might be raised: Why, if only modified *veel* competes with modified type D *baie*, do *te veel and ewe veel* block

[33] Zwicky (2006b) and Solt (2010) entertain the idea that "much" might be a negative polarity item (NPI). However, in a later presentation on the topic, Solt (2012) concludes that this analysis cannot be correct. The reader is referred to her slides for further details.

te baie and *ewe baie* in Standard Afrikaans, but *hoeveel* 'how much/many' and *soveel* 'so much/many' do not block *hoe baie* 'how much/many' and *so baie* 'so much/many'?

To address this objection, I assume that structure influences whether items enter into competition with one another. More specifically, it is believed that if two items are not structurally equivalent, they do not compete. I take *hoeveel* and *soveel* to be individual lexical items; a conclusion that can be supported with reference to stress patterns in Afrikaans. Only *hoe* and *so* are stressed in *hoeveel* and *soveel* (cf. Odendal & Gouws 2005). In *hoe baie*, however, both *hoe* and *baie* can be independently stressed (and the same is true of *so baie*). I conclude that this indicates a structural difference between *hoeveel* and *soveel* and *hoe baie* and *so baie*, and so assume that no competition arises because of the structural differences between these pairs.

One final objection to the proposed blocking account might point to the lack of blocking effects between e.g. *verskriklik veel* 'terribly much/many' and *verskriklik baie* 'terribly much/many'. It would seem that this can be explained by the fact that both of these constructions are evaluative. This is illustrated by means of Bierwisch's test below:

(60) a. *Hulle weet verskriklik veel van hom af.* ⇒ *Hulle weet veel van hom af.*
they know terribly much about him off ⇒ they know much about him off
"They know terribly much about him." ⇒ "They know much about him."

b. *Hulle weet verskriklik baie van hom af.* ⇒ *Hulle weet baie van hom af.*
they know terribly HIGH-DEG about him off ⇒ they know HIGH-DEG about him off
"They know terribly much about him." ⇒ "They know much about him."

The lack of contrast between the entailment relations in (60a) and (60b) indicates that *verskriklik veel* and *verskriklik baie* do not differ in terms of evaluativity. Therefore, one is not more marked than the other, and no blocking would be expected to take place.

It is thus concluded that, because *te baie* and *ewe baie* are essentially synonymous with *te veel* and *ewe veel* except for the fact that the former constructions are [+evaluative] and the latter are [-evaluative], they enter into competition with each other. The [-evaluative] phrases, by virtue of their unmarked nature, block the [+evaluative] phrases, which are marked. Competition does not arise between *soveel* and *so baie* and *hoeveel* and *hoe baie* because of structural differences between the members of each pair. This formal difference precludes a relationship of competition. There is also no blocking effect in the case of modified phrases such as *verskriklik veel* and *verskriklik baie*, because these constructions do not differ in terms of evaluativity or any other feature. Finally, there is generally no blocking effect between unmodified type D *baie* and unmodified *veel* because the distribution of the latter item is affected by other factors; e.g. when unmodified, it is typically infelicitous outside of non-veridical environments. These items are therefore not equivalent in terms of the environments in which they can occur, and no competition between them can arise.

A question that remains is why *te baie* and *ewe baie* are acceptable in non-standard Afrikaans (and seemingly becoming increasingly so). I speculate that type D *baie* is in the process of supplanting *veel* in Afrikaans. As shown above, equative and excessive constructions using *baie* are marked in

comparison to the same constructions using *veel*. However, in what are presumably the most frequently-used constructions involving type D *baie*, namely constructions in which nouns are modified, it is *veel* rather than *baie* that is marked. Here, *veel* is marked because its distribution is more limited: as stated above, when unmodified, *veel* almost exclusively occurs in non-veridical environments.

The marked nature of *veel* is hinted at when examining the respective frequencies of *baie* and *veel* in the Majliš (2011) corpus: there are 25,992 occurrences of *veel*[34] and 208,765 occurrences of *baie*. Of course, the count of *baie* includes both type A and type D *baie*, and therefore cannot be directly compared with the frequency of *veel*. However, the overall difference in frequency is nonetheless striking: *baie* is eight times more frequent than *veel*.

A situation thus arises where *baie* is the unmarked variant in a more frequent construction because of its broader distribution, whereas *veel* is the unmarked variant in a less frequent construction, because of its status as [-evaluative]. In combination with nouns, where type D *baie* is presumably most frequent, its apparent evaluativity is likely to be analysed as a result of the presence of POS, rather than as part of the semantics of *baie* itself. Thus, it may be that the evaluative nature of *baie* is backgrounded for present-day speakers to such an extent that *baie* is beginning to be reanalysed as non-evaluative.

A likely outcome of this process is for *baie* to eventually replace *veel* in all constructions, including equative and excessive constructions. This would be an example of "markedness shift", which is defined as "a historical process whereby an originally marked item loses its marked character and ultimately makes room for a new marked form" (Bubenik 2001).

Further development of this hypothesis falls outside of the scope of this thesis. Thus, following the presentation of the final analysis of type D *baie*, I proceed to a discussion of type A *baie*.

4.1.3 Final analysis of type D *baie*

Type D *baie* is analysed as a q-adjective. It is taken to be the head of a q-adjective phrase (QAdjP). Its structure is as follows:

(61) $[_{\text{QAdjP}}\ [_{\text{QAdj}}\ \textit{baie}]]$

Its specifier position can be empty, but can also be filled by *g*-type adjunct modifiers such as ***verskriklik*** 'terribly'; or adjunct modifiers such as ***bietjie*** 'a bit', which are insensitive to the *g-/q-* distinction. This produces the structure in (62).

(62) $[_{\text{QAdjP}}\ [_{\text{DegP}}\ \textit{verskriklik}]\ [_{\text{QAdj}}\ \textit{baie}]]$

[34] This number is primarily made up of instances of *te veel* 'too much' (10,165 hits), and the 4,766 occurrences of *nie veel* 'not much' noted above.

Alternatively, *g*-type modifiers that are heads (e.g. *heel* 'very/entirely') may take the QAdjP as their complement. This structure is as follows:

(63) $[_{DegP}\ [_{Deg^{\circ}}\ \textit{heel}]\ [_{QAdjP}\ [_{QAdj}\ \textit{baie}]]]$

Type D *baie* is taken to be of type *<d, <dt,t>>,* in line with Solt's (2015) analysis of q-adjectives. The semantic denotation proposed for type D *baie* is as follows ((54) repeated):

(64) $[[\textit{baie}_{D<d,\ <dt,t>>}]] = \lambda d \lambda I_{<dt>}.I(d) \wedge d >>_c \textit{standard}_c$

Assuming this semantic denotation for type D *baie* has the consequence that this item can only combine with another item if a degree argument is involved. A discussion of the specifics of how a degree argument is incorporated into each of the categories with which type D *baie* combines will not be presented here. However, I assume that those predicates that do not incorporate a degree argument slot directly into their denotation have a degree argument introduced by means of a functional projection. This is in line with the account developed by Solt (2015), who assumes such a functional projection, which she terms "MeasP" (for 'measure phrase').[35] In her analysis, the head of MeasP takes the gradable predicate as its complement, and serves to relate the predicate to the degree argument it introduces (Solt 2015: 15). The reader is referred to her paper for further details.

This concludes the discussion of type D *baie*. The following section examines the semantics and syntax of type A *baie*.

4.2 Type A *baie*: semantics and syntax

In the previous chapter, it was argued that type A *baie* only combines with *g*-type predicates. Syntactically, type A *baie* has been argued to be a head. This argument is based on its limited distribution (it only combines with gradable adjectives), and the fact that it cannot be separated from the gradable predicate it modifies. Providing a semantic and syntactic analysis that accounts for these behaviours is relatively straightforward; thus, this section will not be a long one.

Semantically, type A *baie* is assumed to be similar to the English intensifier "very". The semantic denotation provided for this item is thus a modified version of the denotation Morzycki (2013) provides for the English intensifier. It is as follows:

(65) $[[\ \textit{baie}_A\ ]]^c = \lambda G \lambda x.\exists d\ [\ d >>_c s_G \wedge G(d)(x)\ ]$

Type A *baie* is therefore of type *<<d, <e,t>>, <e,t>>*.

[35] Such a proposal has been made by other authors in their analyses of the structure of the DP. MeasP goes by other names in these studies: e.g., Abney (1987) terms it "QP"; Zamparelli (1995) uses "PDP"; Cheng & Sybesma (1999) use "NumP"; Borer (2005) uses "#P"; and Svenonius (2008) uses "UnitP". Schwarzschild (2006) also posits a syntactic head that he terms "Mon" in this position. Mon "has the semantic function of introducing a dimension of measurement" (Solt 2015: 15).

Use of type A *baie* requires that the contextual standard is exceeded by an amount that is considered large (indicated by '>>') with respect to the context (indicated by the subscript *c* on the >>).

Syntactically, it is assumed that type A *baie* heads a DegP, and takes a gradable adjective (or QAdjP) as its complement. In accordance with the preceding discussion, gradable adjectives and q-adjectives are assumed to incorporate a degree argument slot into their semantics. The relevant structure is illustrated as follows with reference to *baie gelukkig* 'very happy':

(66) $[_{DegP}\ [_{Deg^{\circ}}$ *baie*$]\ [_{AP}\ [_{A}$ *gelukkig*$]]]$

4.3 Development of type A and type D *baie*

It is interesting that the pattern observed in Afrikaans – where there is a split between a high-degree modifier of gradable adjectives and a modifier that combines with the remaining categories in Tables 1 and 2 – is also found in other languages: for example French, which has the high-degree type A modifier *très* 'very' and the type D modifier *beaucoup* 'a lot'; as well as an older stage of Portuguese, which had the type A modifier *mui* 'very' and the type D modifier *muito* 'a lot' (Doetjes 2008: 143).

The case of *baie* is made especially interesting by the fact that the type A and type D modifier are clearly related; i.e., this is apparently a situation of polysemy. This section speculates as to how type A *baie* and type D *baie* might relate to each other.

Various evidence has been provided that *g*-type modifiers can be derived from non-*g*-type modifiers. Doetjes (2008) references measure constructions such as "a bit" in English. Given that "bit" is a noun, "a bit" and similar constructions are assumed to have begun as nominal quantifiers, but are now felicitously used with adjectives and verbs; for example, "He's a bit stupid"/"I like him a bit". Norde et al. (2014) discuss four similar cases in (colloquial) Dutch: *massa's* 'masses', *duizend* 'thousand', *een partij* 'a set, a batch, a lot', and *tig* 'umpteen'.[36] All of these items initially performed only quantificational functions before they began to be used as intensifiers of gradable adjectives.

Two alternative accounts of how the derivation of type A modifier from nominal modifier might proceed have been proposed. Doetjes (2008: 143) suggests a diachronic mechanism that enables a quantificational expression to be turned into a degree modifier (represented by 'Deg' in (67)). This operation happens by abstracting over the quantity predicate, represented in (67) by "much". Note that "R" represents the restriction that the degree modifier places on the degree argument of the adjective: in the case of e.g. Portuguese *mui* 'very', this would restrict the degree to being significantly above the contextual standard (Kennedy & McNally 2005: 367).

[36] Similar items exist in Swedish, where *massor* 'masses' and *tusen* 'thousands' correspond to Dutch *massa's* and *duizend*, respectively; and German, which has *tausend* 'thousand' and *zig* 'umpteen' corresponding to Dutch *duizend* and *tig*, respectively (Norde et al. 2014).

(67) [[*Deg*]]([[*much*]]) = $\lambda x.\exists d$ [R(d) Λ [[*much*]](d)(x)]
$\rightarrow \lambda G \lambda x.\exists d$ [R(d) $\wedge$ G(d)(x)]

Norde (2006), on the other hand, posits an explanation based on syntactic reanalysis. She considers the recently-developed Dutch high-degree modifier *tig*, which is derived from the Dutch numeral suffix *–tig* (as in *twintig* 'twenty'), and is typically used as an extremely high degree modifier of plural nouns; as in e.g. *tig boeken* 'very many books'. *Tig* is also frequently used to modify comparatives (e.g. *tig sneller* 'a whole lot faster'). More recently – and more marginally – it has begun to be used to modify gradable adjectives (e.g. *tig leuk* 'extremely nice').

Norde (2006) argues that an analogy was originally drawn between *veel* 'a lot' and *tig*, as both were high-degree modifiers of plural nouns. Then, because *veel* can also modify comparatives, *tig* was used in these environments as well; a hypothesis that is supported by its high frequency in comparative constructions (see Norde et al. 2014). Thus, *tig* would have originally been treated as interchangeable with *veel* in constructions such as *veel betere oplossingen* 'many better solutions'. Following the assumption that *tig*, like *veel*, can modify adjectives in the comparative form, this structure would have been subject to a process of reanalysis, in which *tig* would be taken to have scope over only the adjective, instead of over the entire NP. The relevant structures are provided below:

(68) a. [*veel* [$_{NP}$ *betere oplossingen*]] (*Veel* has scope over NP in comparative)
"many better solutions"

b. [*tig* [$_{NP}$ *betere oplossingen*]] (Analogy of *tig* and *veel* in comparative)
"many better solutions"

c. [$_{NP}$ [*tig betere*] *oplossingen*] (Reanalysis results in *tig* having scope over AP)
"much better solutions"

As Norde et al. (2014: 235) point out, in (68b), *tig* has scope over the entire NP; whereas in (68c), it only has scope over the adjective. Thus, because of the analogy between *tig* and *veel*, *tig* underwent "semantic extension and categorial reanalysis" (Norde et al. 2014: 235).

I will assume that this account and that of Doetjes (2008) are different ways of describing a similar process. For the remainder of this discussion, I focus on Norde's (2006) reanalysis account.

As noted in section 2.4, *baie* is descended from the Malay word *banyak*, meaning 'an abundance', 'many', 'numerous', or 'plenty' (Raidt 1982: 164). Given the definition of *banyak*, this item would presumably have initially combined with nouns, as a type F modifier (cf. Table 1).

Baie (or whatever interim form between *banyak* and *baie* was in use at the time) as a nominal modifier would initially have existed alongside the essentially synonymous Dutch *veel* 'a lot' in early

Afrikaans.[37] An analogy could then have been drawn between these two items, and a trajectory similar to that in (68) may have been followed (note that *oplossings* is the Afrikaans equivalent of *oplossingen* 'solutions'):

(69) a. [*veel* [$_{NP}$ *betere oplossings*]] (*Veel* has scope over NP in comparative)
"many better solutions"

b. [*baie* [$_{NP}$ *betere oplossings*]] (Analogy of *baie* and *veel* in comparative)
"many better solutions"

c. [$_{NP}$ [*baie betere*] *oplossings*] (Reanalysis results in *baie* having scope over AP)
"much better solutions"

An implication of this account is that what has now been referred to as "type D *baie*" must in fact have begun as a type F modifier: i.e., it only combined with nouns. Its distribution must have gradually broadened, until it ended up as a type D modifier. (In addition, Afrikaans *veel* must also have undergone a process of semantic extension to render it a type D modifier, seeing as Dutch *veel* is a type E modifier).

In summation, the highly speculative account here is that *baie* began as a nominal modifier, and widened its distribution as a result of an analogy drawn between it and *veel*. It began to be used in comparative constructions, and at some point, syntactic reanalysis took place. Consequently, a type A *baie* came into being. Based on its use in constructions such as (69c), it was presumably fully reanalysed, and accorded the same syntactic/semantic analysis as other type A modifiers that could be used in the same position with the same semantic effect. This type A *baie* continued to exist alongside the original *baie*, which itself underwent further semantic extension – beyond just modifying nouns and the comparative morpheme – until it had the distribution of a type D modifier.

Something that remains unexplained in this account is how the distinction in evaluativity between *baie* and *veel* might have arisen. Norde et al. (2014) note that expressions of very high quantity seem particularly disposed to becoming degree modifiers: *massa's* 'masses', *duizend* 'thousand', and *tig* are all extreme high-quantity expressions. These authors hypothesise that the "emphatic functions" of these items, which serve to "underscore that [a] quantity is exceptionally large in a given context", may facilitate the development from quantificational expression to intensifier (Norde et al. 2014: 234).

It might be hypothesised that initially, *baie* had a more extreme high-quantity meaning than it has now; i.e., it may have been more extreme than *veel*, and this may have facilitated its reanalysis as a type A modifier of quality/intensity. This hypothesis is tentatively supported by the fact that the

[37] I assume that none of the distributional complications noted in relation to present-day Afrikaans *veel* applied at this point in history, because the *veel* in question would have been Dutch *veel*; to which these complications do not apply now, and presumably did not apply then.

translations provided for *banyak* include 'an abundance' and 'plenty'. *Banyak* may thus have been an 'inherently evaluative' modifier, and *baie* may have kept this aspect as it developed. Assuming that *veel*, in its positive form, has its reference to a contextual standard contributed by POS, *baie* and *veel* would still have been near enough to synonyms for the reanalysis process to proceed as described in (69) above.

It is of course difficult to support this argument without extensive textual support from early Afrikaans. Such an investigation once again falls outside of the scope of this thesis, and is set aside for further research.

4.4 Conclusion

This chapter has provided semantic and syntactic analyses of type D and type A *baie*. The former has been analysed as a q-adjective in accordance with Solt (2015). Furthermore, it has been argued to possess the feature [+evaluative], because it incorporates a high-quantity meaning even when embedded in excessive and equative constructions, and degree questions. This observation was used to explain why the unmarked constructions *te/ewe veel* 'too/as much' are exclusively used instead of the marked *te/ewe baie* 'too/as much' in Standard Afrikaans.

An analysis identical to that proposed for English "very" by Morzycki (2013) was adopted for type A *baie*. The chapter concluded by speculating that both type A and type D *baie* developed from a *baie* that began as a nominal modifier; possibly by means of a process of reanalysis that began with an analogy being made between *baie* and *veel* 'a lot' in the nominal domain.

This chapter concludes the contentful matter of the thesis. The following chapter presents a summary of the thesis' findings, and concludes with suggestions for further research.

5. Summary of findings and suggestions for further research

This thesis began with the optimistic assertion that an examination of the distribution of degree modifiers might provide insight into both the semantics of gradable predicates and the semantics of degree modifiers themselves. Focusing on one wide-distribution, high-degree modifier in Afrikaans, namely *baie* 'very/a lot', I have investigated:

i. How *baie* as a modifier is positioned on the table of gradable predicates constructed by Doetjes (2008);
ii. The interaction between *baie* and other modifiers in Afrikaans, with particular attention paid to *veel* 'a lot'.

With respect to (i), it was discovered that, contrary to appearances, *baie* is not a type C modifier, which is the type assigned by Doetjes (2008) to wide-distribution modifiers. Rather, there exist two instances of *baie*: what has been termed "type A *baie*", which only combines with gradable adjectives; and "type D *baie*", which is a q-adjective that combines with the remaining gradable categories.

Regarding (ii), the comparison between *baie* and *veel* has shown that the former item is evaluative, whereas the latter is not. This distinction makes *baie* marked in comparison to *veel*. In equative and excessive constructions, where *baie* and *veel* are in competition, the markedness of *baie* becomes relevant. The standard assumption that unmarked forms are typically preferred to marked forms was used to explain why *te/ewe veel* 'too/as much' block the use of *te/ewe baie* 'too/as much' in Standard Afrikaans.

The explanation of the distribution of type D and type A *baie* has found the degree-based analysis of gradable predicates and degree modifiers (cf. Kennedy 1999) to be useful: given that *baie* is limited to occurring with gradable predicates, and cannot modify e.g. numerals or serve to mark category membership, it was concluded that Beltrama & Bochnak's (2015) degree-less analysis of degree modifiers is not applicable. Indeed, given the present findings, further work making use of this analysis might benefit from a reassessment of whether the wide distributions observed are really all instances of a single modifier. This same conclusion is arrived at by Bylinina & Sudo (2015) in their response to Beltrama & Bochnak (2015).

Returning to the issue of kinds of gradability across gradable predicates: this study has made use of a distinction between *g*-type and *q*-type predicates. Gradable adjectives are *g*-type predicates, and are modified by type A *baie*. Gradable verbs are the only other *g*-type predicates. However, due to a syntactic constraint that prevents modifiers that are heads from modifying verbs, these items are modified by type D *baie*. It is therefore evident that type D *baie* is able to modify both *q*- and *g*-predicates. It was argued that this item is prevented from modifying gradable adjectives by an

'Elsewhere Condition' that blocks use of a less specific form when a more specific form is available (cf. Kiparsky 1973; Doetjes 1997).

These findings, as hoped, have some relevance to the study of gradability and degree modification in general. Firstly, a number of cross-linguistic parallels have been observed. The split between *baie* as a modifier of gradable adjectives and *baie* as a modifier of other categories mirrors the split between *très* 'very' and *beaucoup* 'a lot' in French, as well the division between *mui* 'very' and *muito* 'a lot' in older stages of Portuguese. The pervasiveness of this pattern raises two questions that constitute my suggestions for further research: (i) is there, as some scholars suppose, something to differentiate the gradability of gradable adjectives from the gradability of other lexical categories; and (ii) might it be the case that other supposed "type C modifiers" – modifiers that combine with all categories of gradable predicate – are in fact syntactically and semantically distinct items that happen to share a form? Answering these questions would seem to be a promising means of deepening our understanding of gradability across categories.

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