

Selected Issues in the Theory of Comparison: Phrasal Comparison in Turkish and a Cross-Linguistic Perspective on Intensifiers, Negative Island Effects and the Distribution of Measure Phrases

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1 INTRODUCTION

1.1 General Remarks

Along with effects of (in-)definiteness as well as all kinds of issues related to various aspects of quantification, the domain of gradability has undoubtedly constituted one of the central areas of research in formal semantics for at least four entire decades now. In the aftermath of seminal work in particular from the 1970s and the first half of the 1980s, such as Bresnan (1973), Seuren (1973), Klein (1980), von Stechow (1984a) or Heim (1985), among others, an impressive bulk of research has been carried out so that at least within the field of semantics, gradability and comparison probably represents one of the best documented areas of grammar today. Therefore, it seems neither necessary nor even possible to rewrite the whole history of research within this specific domain – not necessary in that a vast number of matters have already been successfully dealt with and not possible by virtue of the fact that within this field of study, the issues addressed have become more and more diverse in the course of such a long period of time, both, from a theoretical as well as from an empirical perspective: In this linguistic subfield, several separate theoretical strands have emerged since (consider for instance degree-based as opposed to degreeless, vague approaches to comparison; cf. section 1.2 below) and more and more different types of comparison constructions from an increasing number of languages have been taken into consideration, the latter especially within the last couple of years with the rise of what Gennaro Chierchia once so adequately called “a new, cross-linguistic era of investigation” (personal communication).

The main aim I am pursuing here thus clearly cannot be to start things entirely anew, but rather to fill some of the specific gaps still existing within the study of gradability. Doing so, I shall take a close look at three particular subareas, comparison in Turkish, the (non)-occurrence of Negative Island Effects in comparatives and the distribution of overt measure phrase constructions across languages, always with the intention of adding novel material to the overall empirical picture and closely examining the theoretical consequences of this new material at the same time. Ideally, the present dissertation therefore directly combines new empirical insights with a high-standard analysis of these in all the three domains under investigation alike: It first of all provides an overview of the various comparison constructions Turkish disposes of, a language in which, to the best of my knowledge, comparison has never been investigated in formal semantics in a systematic fashion so far. Discussing these empirical findings, it will immediately turn out that they are largely incompatible with existing approaches to phrasal comparison as attested in this language, and a new analysis crucially

hinging on the idea of associating individuals with implicit degrees will be developed to remedy these shortcomings. At the same time, the newly gained empirical data can also clarify existing uncertainties with respect to the necessity of inserting a particular adverb (*daha*) in Turkish comparatives and the exact semantic contribution it makes, and once again, this has an immediate impact on theory in that a novel account of such expressions is required. In a similar fashion, this dissertation produces results from several corpus studies on the occurrence of Negative Island Effects in comparatives and in particular on their absence, thereby filling another empirical gap and once more, it will turn out that a new theoretical account of these facts is indispensable, which I shall provide in terms of an analysis establishing an essential distinction between what I shall refer to as ‘ordinary’ adjectives on the one hand and ‘propositional’ ones on the other, the diverse theoretical consequences of which will be discussed in detail. And likewise, the third main section of this dissertation introduces the results of a large-scale empirical study on the cross-linguistic (un-)availability of measure phrases, also constituting a phenomenon on which an extensive empirical investigation had never been carried out previously and where once again, the empirical findings will have immediate theoretical consequences to the effect that a new analysis of gradable adjectives and in particular of antonyms is called for, once more underlining my basic intention of joining new empirical insights and the consequences these directly produce for a theoretical analysis that aims at doing justice to these. In the next subsection, I shall expose the theoretical framework in which this dissertation is written, before I shall give a detailed overview of its contents in the ensuing subsection 1.3.

1.2 Theoretical Framework and Background Assumptions

As far as the general theoretical framework of this dissertation is concerned, I shall largely follow the theory developed in Heim/Kratzer (1998), where the output of a syntactic derivation is directly taken to serve as the input for semantic composition. In (1/1), (1/2) and (1/3) on the next page, I list the three main principles underlying this process of semantic composition, the first and third of which seem absolutely necessary to me, whereas the second one (predicate modification) could in principle be dispensed with in that in all cases where it applies, type-shifting of one of the two elements involved would arguably always permit to recast things in terms of the first interpretation principle (functional application), but for the sake of simplicity, I shall just stick to the mechanism of predicate modification as well:

- (1/1) **Functional Application:**
 If α is a branching node and $\{\beta, \gamma\}$ the set of its daughters, then, for any assignment a , if $[[\beta]]^a$ is a function whose domain contains $[[\gamma]]^a$, then $[[\alpha]]^a = [[\beta]]^a ([[\gamma]]^a)$. [Heim/Kratzer (1998), p. 95; their (13)]
- (1/2) **Predicate Modification:**
 If α is a branching node and $\{\beta, \gamma\}$ the set of its daughters, then, for any assignment a , if $[[\beta]]^a$ and $[[\gamma]]^a$ are both functions of type $\langle e, t \rangle$, then $[[\alpha]]^a = \lambda x \in D_{[e]}. [[\beta]]^a(x) = [[\gamma]]^a(x) = 1$. [ibid., p. 95; their (14)]
- (1/3) **Predicate Abstraction:**
 If α is a branching node whose daughters are β_i and γ , where β is a relative pronoun or “such”, and $i \in \mathbb{N}$, then for any variable assignment a , $[[\alpha]]^a = \lambda x \in D_{[e]}. [[\gamma]]^{a[x/i]}$. [ibid., p. 114; their (16)]

In addition to these basic composition principles, three more specifications are required, one for lexical elements (cf. (1/4) below), one for elements of a syntactic tree that do not branch (1/5) and finally one that allows the interpretation of traces and pronouns (1/6):

- (1/4) **Lexical Terminals:**
 If α is a terminal node occupied by a lexical item, then $[[\alpha]]$ is specified in the lexicon. [Heim/Kratzer (1998), p. 95; their (11)]
- (1/5) **Non-Branching Nodes:**
 If α is a non-branching node and β its daughter, then, for any assignment a , $[[\alpha]]^a = [[\beta]]^a$. [ibid., p. 95; their (12)]
- (1/6) **Traces and Pronouns Rule:**
 If α is a pronoun or a trace, a is a variable assignment, and $i \in \text{dom}(a)$, then $[[\alpha_i]]^a = a(i)$. [ibid., p. 111; their (9)]

Moreover, I shall confine myself to a set of semantic types including $\langle t \rangle$ for truth values, $\langle e \rangle$ for individuals, $\langle d \rangle$ for degrees and $\langle s \rangle$ for possible worlds and various combinations thereof such as for instance $\langle e, t \rangle$ for properties or $\langle s, t \rangle$ for propositions. The domains of these four basic types are specified in (1/7) below (I postpone a precise definition of how I conceive of degrees to the next paragraph):

- (1/7) a. $D_t =$ the set of truth values ($\{0, 1\}$)
 b. $D_e =$ the set of individuals
 c. $D_d =$ the set of degrees
 d. $D_s =$ the set of possible worlds

Having this general background in place, let me next proceed to the specific assumptions I shall make in this dissertation with respect to degree semantics. First of all, approaches to gradability fall into a basic dichotomy in that some of them are degree-based

(Heim (1985, 2001, 2006a, b), Kennedy (1997, 2007, 2009) or von Stechow (1984a), to name but a few), whereas others do without degrees (van Benthem (1983), Kamp (1975), Klein (1980, 1982), Larson (1988), McConnell-Ginet (1973) or Sánchez-Valencia (1994), among others). As can already be seen from the inclusion of a semantic type $\langle d \rangle$ for degrees in (1/7) above, I clearly locate my own work among the former group of approaches, without expressly justifying this decision here; for a detailed criticism of the various shortcomings of degreeless accounts of comparison, I refer the interested reader to the discussion in von Stechow (1984a, pp. 47-51) and Kennedy (1999) as well as the references cited therein. What is more, the question of what exactly a degree corresponds to represents a highly controversial issue. Here, I shall simply follow one common option that consists in conceiving of degrees as being identical to the set of real numbers \mathbb{R} (cf. Bartsch/Venneman (1972), Fox (2007), Fox/Hackl (2006), Kennedy (1999, 2001), Kennedy/McNally (2005), Nouwen (2008), Sassoon (2009, 2010a) or Winter (2005), among many others)¹ and in assuming that gradable expressions such as an adjective like *tall* are associated with appropriate scales (one of height in the case of *tall*; for a detailed account of how precisely to get from a gradable adjective to such a scale, cf. Cresswell (1976)) that in turn correspond to linearly ordered, dense sets of such degrees.² Once again, I shall just take these assumptions for granted, here and shall not even make an attempt at justifying them, given that a comprehensive review of the diverging proposals on the exact nature and conception of degrees can already be found in Klein (1991). As far as the comparative semantics I shall assume throughout this dissertation is concerned, I shall mainly follow the semantics proposed in von Stechow (1984a) (in the version adopted in Heim (2001)) and to offer my reader an initial idea of the precise workings of this semantics, I shall quickly go through the derivation of the simple example of the canonical comparative included in (1/8) below:

(1/8) *Mary is older than Peter.*

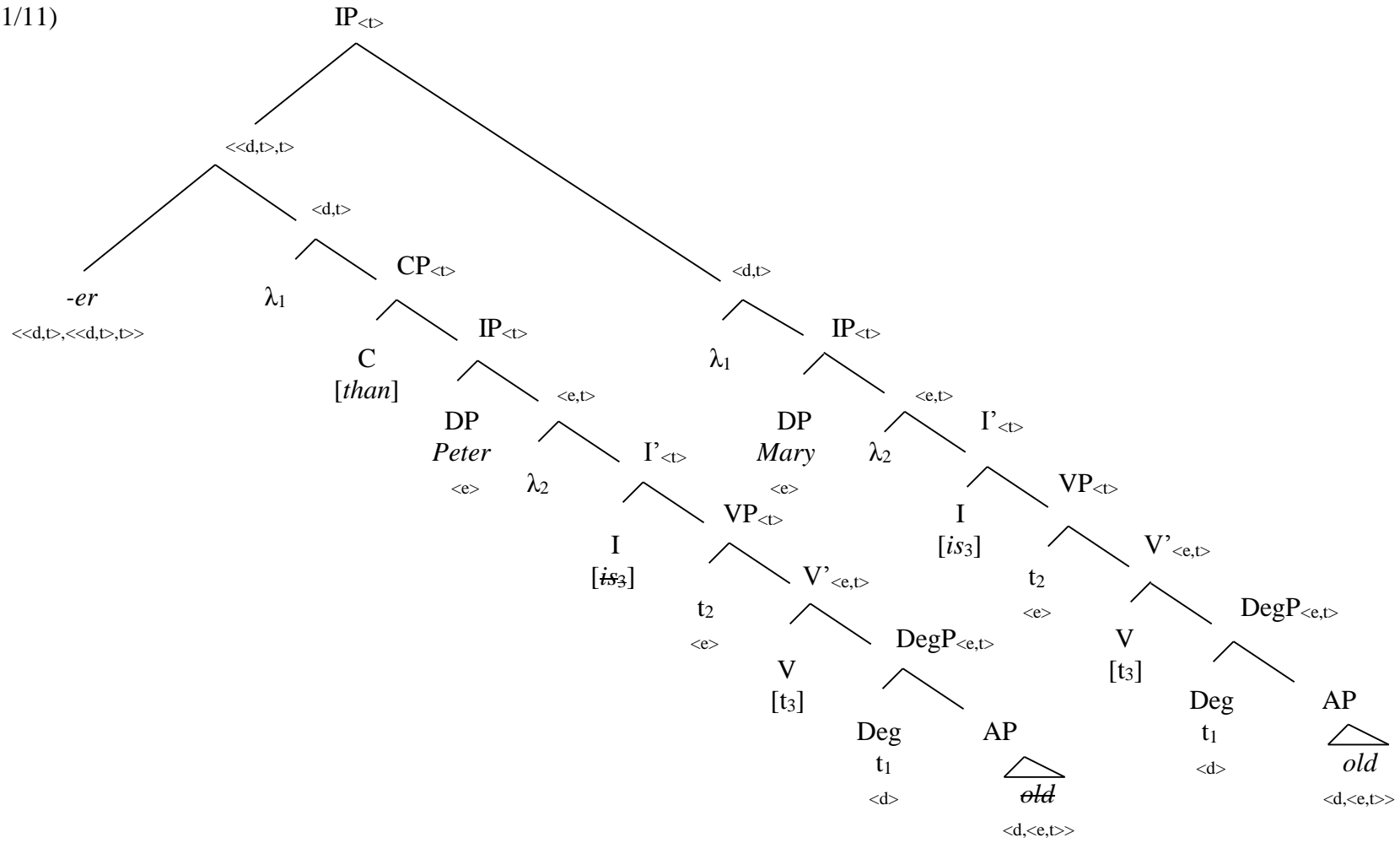
Under this approach, gradable adjectives and adverbs are taken to denote (monotonic) relations between individuals and degrees, as the lexical entry for *old* provided in (1/9) below shows:

(1/9) $[[old]] = \lambda d \in D_d. \lambda x \in D_e. age(x) \geq d$

¹ An alternative common way of conceiving of degrees consists in viewing these as equivalence classes, a practice which I shall however not adopt in this dissertation (cf. Cresswell (1976) and others in his direct aftermath).

² As will be shown in subsection 3.3.1.2.2 below, this assumption of density will play a crucial role for the work presented there.

(1/11)



(1/12) $[[\text{(1/8)}]] = 1$ iff $\max(\lambda d. \text{age}(\text{Mary}) \geq d) > \max(\lambda d. \text{age}(\text{Peter}) \geq d)$

Having thus established the general theoretic foundations of this dissertation as well as the particular type of degree semantics it relies on, let me next proceed to a detailed survey of what to expect from this treatise for the orientation of the reader.

1.3 Outline of the Dissertation

This dissertation is structured as follows: Section 2 is dedicated to comparison in Turkish, and after a couple of preliminary remarks on the organisation of an empirical study conducted in this language (subsection 2.1.1), it presents an overview of the most common comparison constructions attested in this language (2.1.2). Next, the special role the adverb *daha* plays in Turkish comparatives will be discussed, first in terms of the question of when its presence is truly obligatory and in which configurations it constitutes a completely optional element (section 2.2.1) and second in terms of the precise semantic contribution it makes whenever it does indeed occur in a Turkish comparative (2.2.2). After showing that an analysis offered in König (1977) cannot be transferred to *daha* (and also makes wrong predictions in German, for which it had originally been intended, already) (subsection 2.2.3.1), a new proposal to capture the meaning of this special adverb based on evaluativity will be developed (2.2.3.2), before it will be shown from a synchronic as well as from a diachronic point of view that such elements are typically polysemous across languages in that they also come with a temporal meaning (sections 2.2.4.1 and 2.2.4.2). A consideration of aspects relating these meaning components (as well as a spatial and an additive one; 2.2.4.3) and a couple of general observations on the frequent use of temporal and spatial concepts in the domain of gradability and comparison (2.2.4.4) complete this subsection, the main results of which are summarised in section 2.2.4.5. In what follows, I shall then tackle the derivation of an empirically adequate account of phrasal comparison in Turkish. Doing so, I shall start out with a general characterisation of clausal as opposed to phrasal comparison, clearly locating Turkish on the latter side (section 2.3.1) and design a revised analysis for phrasal comparison by merging the respective benefits of two previous accounts (2.3.2). However, it will then be shown that even this revised analysis cannot successfully handle the data and systematically fails with comparatives featuring non-agentive or adjunct-like standard terms (2.3.3.1), nominalisations (2.3.3.2) as well as with comparatives combining both, an overt modal as well as an *exactly*-differential (section 2.3.3.3), subsection 2.3.3.4 offering a generalisation of these various problem cases arguing in addition that these are not limited to comparatives that are qualitative

in nature, but that these reappear with quantitative ones as well. In view of these difficulties identified for the revised phrasal analysis, I shall then proceed to suggest a new proposal for phrasal comparison making use of the association of individuals with implicit degrees (2.3.4.2) and I shall directly apply it to these problematic cases (subsection 2.3.4.3). Subsequently, I shall address the question of whether the fairly ‘loose’ notion of association with implicit degrees should be restricted in any systematic fashion (subsection 2.3.4.4), before examining the consequences of this analysis for quantificational comparatives, first in Turkish (2.3.4.5.1) and then for the potential transfer to a language like English (section 2.3.4.5.2). Finally, I shall turn to the issue of whether there is any evidence for the postulation of phrasal comparison in languages like English and German, too (2.3.5) and sum matters up (section 2.4).

The whole of section 3 is then concerned with Negative Island Effects in comparatives, where, following a brief introduction (3.1), results gained from corpus studies on their (non-) occurrence in the four languages English, German, French and Spanish are presented (section 3.2). In a next step, I shall account for the attested empirical pattern: First, I shall have a look at cases that do indeed give rise to Negative Island Effects and ultimately explain these on the basis of considerations of maximal informativity and the density of scales (subsection 3.3.1.2.2), after giving an initial informal account of the state of affairs (3.3.1.1) and rejecting an approach merely based on the problem of undefined maxima as insufficient (section 3.3.1.2.1), beforehand. Second, I shall discuss the question of why in certain circumstances, no Negative Island Effects arise and give a principled account of this phenomenon that crucially hinges on a fundamental distinction between what I shall call ‘ordinary’ adjectives on the one hand and ‘propositional’ ones on the other (3.3.2.2). In section 3.3.2.3, I shall then enter the details of various refinements of this proposal, when I shall have a closer look at what precisely we compare to in the case of comparative, superlative and positive constructions, respectively (3.3.2.3.1) and introduce personal and impersonal uses of such propositional adjectives (subsection 3.3.2.3.2). Furthermore, I shall elaborate on the choice of complementiser with these propositional adjectives and on the role factivity plays in this choice, offering a new account of these propositional adjectives that is essentially presuppositional in nature, and the various predictions of which will be examined in detail (section 3.3.2.3.3.2). Finally, the contrast between phrasal and clausal comparison will be reconsidered in the context of the new data on Negative Island Effects (subsection 3.3.3), before a summary concludes this section (3.4).

The last part of the body of this dissertation, section 4, will then deal with the distribution of overt measure phrase constructions from a cross-linguistic perspective. After a

short introductory passage (4.1), an extensive empirical study on the (un-)availability of this particular type of construction in the three languages English, German and French will be presented (section 4.2), revealing six different sources of linguistic variation attested in the context of the (non-)occurrence of measure phrases, which will in turn be described in the ensuing subsection 4.3. Next, I shall take these new empirical findings as a basis for re-evaluating the most prominent approaches to the distribution of measure phrase constructions that have been defended in the literature so far (subsection 4.4), before developing a new account in section 4.5, which is partly inspired by insights from Schwarzschild (2005). There, I shall first present the model as such and explore how it can adequately capture variation across languages (section 4.5.1), and I shall then go on to propose four different generalisations on the (in-)compatibility of a given adjective with a direct measure phrase (4.5.2), in the course of which I shall in particular suggest an entirely new analysis of antonymous measure phrase constructions. In the end, I shall come up with a completely novel and fairly sophisticated classification of gradable adjectives, several predictions of which will be examined at length, especially those related to the potential decomposition of antonyms and to various aspects of evaluativity, where I shall ultimately introduce two different notions of evaluativity, namely ‘strong’ versus ‘weak’ evaluativity, as distinct subtypes of this phenomenon (section 4.5.2.4.4). Subsection 4.6 finally provides a summary of the essential results I obtained from my work on measure phrases. Apart from presenting the main conclusions of this dissertation as well as offering a brief outlook (5.1), section 5 also stresses the indispensability of carrying out empirical fieldwork in the linguistic domain of formal semantics, showing that vital parts of the insights arrived at here could not have been achieved without doing such practical fieldwork (subsection 5.2).

2 PHRASAL COMPARISON IN THE TURKISH LANGUAGE

2.1 Comparison Constructions in Turkish: Some Basic Data

2.1.1 An Empirical Study

Section 2.1 of this dissertation is primarily designed to present the main results gained from a large-scale empirical study on various comparison constructions in Turkish and before doing that (cf. 2.1.2 below), this subsection is intended to give the reader a basic idea of how exactly I went about this empirical study, in the course of which I investigated a vast variety of possibilities of expressing a comparison in Turkish as well as the particular shape these take in this language. In total, I interviewed a substantial number of Turkish native speakers on a sample of more than 250 sentences each in order to obtain a thorough amount of positive and negative evidence alike, the exact number of native speaker consultants ultimately depending on the degree of controversy a given construction was subject to: With unanimous judgments, I usually restricted myself to asking five informants, whereas with cases where opinions varied, I often consulted considerably more. In practice, I proceeded in the following fashion: I first met a primary informant to establish the basic Turkish constructions as such, and I then asked at least five additional secondary informants to judge the acceptability of a given sentence in a particular context (an example of which is given in (2/88) and (2/89) in section 2.3.2 below), and both of these steps had to be repeated several times as new and different types of constructions appeared during the elicitation process. When interviewing the secondary informants, I made use of an acceptability scale ranging from “1” down to “4”, the former number corresponding to sentences perfectly acceptable in the given context and the latter reserved for ones considered to be totally inadequate for describing the context at hand, the two numbers in between leaving some room for intermediate cases if a speaker was for instance reluctant to fully accept a given sentence and yet sure that other native speakers would indeed use that sentence in precisely that context.⁴ In the following subsection, I shall now present the major insights obtained from this study on the (un-)availability of particular types of comparison constructions in the Turkish language and the exact form under which these appear, there (if attested at all), before introducing additional empirical data (also taken from this study) that are directly related to the adverb *daha* sometimes occurring in Turkish comparatives in section 2.2 below.

⁴ For a much more detailed description of this elicitation process, I refer the interested reader to Beck et al. (2009, pp. 3-17) as well as to Hohaus/Howell (in preparation) and for the set of data taken into consideration, cf. Beck et al. (2009, pp. 31-33).

2.1.2 Overview of the Most Common Turkish Comparison Constructions

Let me begin this survey of Turkish comparison constructions by first having a look at the two examples of a canonical comparative from this language given in (2/1) and (2/2):⁵

(2/1) *Maria Hans'tan uzun.*
Mary Hans.ablative tall
'Mary is taller than Hans.'

(2/2) *Maria Hans'tan zengin.*
Mary Hans.ablative rich
'Mary is richer than Hans.'

These typically consist of two items of comparison (*Maria* and *Hans('tan)*), to which I shall henceforth refer as the comparee term and the standard term of the comparison, respectively, following the terminology proposed in Stassen (1985, p. 26). As will be shown in section 2.2.1 below, the standard term can be omitted under certain circumstances to be specified there, but whenever it is overtly expressed in a Turkish comparative, it is always marked for the ablative as is the case with *Hans* in (2/1) and (2/2) and interestingly enough, not only all sorts of arguments (subjects, direct objects as well as indirect objects) can serve as such a standard term in Turkish, but also all kinds of adverbials, (2/3) below featuring for example a temporal adverbial, (2/4) a spatial one and (2/5) even an adverbial of manner in this position:⁶

(2/3) *Maria geçen hafta.dan ağır çalış.ti.*
Mary last week.ablative hard work.past_tense
'Mary worked harder than the week before.'

(2/4) *Ankara'da İzmir'den sıcak.*
Ankara.locative İzmir.ablative hot
'In Ankara, it is hotter than in İzmir.'

⁵ In the present tense, overt realisation of a copular verb is not obligatory in Turkish and with examples like (2/1) and (2/2), my native speaker informants reported that these even sound considerably better without the corresponding copulas *dur/dir*. Furthermore, with examples like these, native speakers of Turkish might miss the adverb *daha*. In view of the fact that its syntactic status as well as the semantic contribution this element makes is however quite intricate and also highly controversial, I decided to omit its discussion for the time being. Section 2.2 below will then be entirely dedicated to syntactic and semantic aspects of the role this special element plays in Turkish comparatives. For the moment just note that all examples introduced without this adverb in this subsection are absolutely well-formed and not deviant at all.

⁶ As already noted in the previous footnote, the copula is usually not overtly realised in the present tense in Turkish. In contrast to examples (2/1) and (2/2) discussed there, the situation with (2/5) is however slightly different in that the former feature a subject in the third person, whereas with the latter, it appears in the second, and while there exists a corresponding form of *to be* for the third person (which is hardly used though), there is no counterpart for the second person at all, this verb being highly defective in Turkish. In such a case, the verb ending marking person, number, tense and/or aspect simply attaches to a sentence's predicate, irrespective of what shape it takes, be it a verb, an adjective (as with (2/5)) or even an adverb.

(2/5)	<i>Araba.yla</i>	<i>bisiklet.ten</i>	<i>hızlı.sın.</i>
	car.with	bicycle.ablative	fast.2singular
	‘You are faster by car than by bike.’		

This great variety of elements that can perform the function of a comparative’s standard term in Turkish puts this language on a par with the *-se*-suffix construction attested in Hindi-Urdu, for which Bhatt/Takahashi (to appear) also observe that the standard term can take on “any grammatical function” (ibid., section 3.2), yet at the same time, this clearly sets Turkish apart from other languages such as for instance Russian: The latter also displays a phrasal comparative (where the standard term however normally occurs in the genitive case) in addition to a clausal one, but in this language, only a very limited number of adverbials such as for instance the equivalent of *yesterday* can appear in a comparative’s standard term, whereas most other temporal adverbials are unattested in this position and so are adverbials of place, generally (cf. Pancheva (2006), section 4.2).⁷

Having introduced the basic shape an ordinary comparative takes in Turkish, I next list various kinds of subtypes of comparatives: (2/6) features a noun phrase internal comparative, (2/7) provides an illustration of a comparative based on an antonymous adjective, (2/8) shows two instantiations of an adverbial comparative,⁸ (2/9) gives an example of a comparative with an overt differential, (2/10) exemplifies direct comparison with a degree, (2/11) presents two different kinds of intensional comparatives, an *enough* and a *too* comparative⁹ and (2/12) finally introduces a Turkish comparative where the adverb *çok* (*much*) performs the function of a degree intensifier:

⁷ In Pancheva (2006), no explanation for these at first sight rather puzzling empirical facts about Russian is provided, where it is stated that “more work is needed” in this respect (ibid., section 4.2), but if I was to make a guess at the present stage, I should offer the following hypothesis: It might be the case that *yesterday* can function as an ordinary noun phrase just like *Monday* or the German *der gestrige Tag* (an alternative way of expressing *yesterday* in this language), which would render case assignment to this element unproblematic, whereas we are dealing with adverbial postpositional phrases in examples like (2/4) and (2/5) above, where putting these expressions into a comparative’s standard term requires assigning a special case marking for this particular function to these expressions as a whole, which is often problematic with entire prepositional or postpositional phrases and might thus block the occurrence of such adverbials in Russian phrasal comparatives. Crucially observe, in this context, that in the Turkish examples (2/3) to (2/5), the corresponding postpositions from the comparee terms are not repeated in the standard term, where just a simple noun phrase appears, to which adding a case ending is unproblematic. Also note that this special configuration is the only option available in Turkish (as will be argued for at length in section 2.3.1 below), while Russian disposes of an alternative clausal strategy, where inserting the whole prepositional phrase is of course possible and where no special case morphology is required in that the comparative’s standard term simply consists in an ordinary clause in that case, to the effect that in this language, there is thus no pressure to go for a phrasal variant, in contrast to what happens in Turkish.

⁸ I intend the term ‘adverbial comparative’ merely as a description of the syntactic function that the elements *hızlı* (*fast*) and *sesli* (*loud*) perform in these sentences, given that in the Turkish language, adjectives and the corresponding adverbs often do not overtly differ in their morphological form, anyway.

⁹ Note that with the latter, no element corresponding to English *too* is overtly realised in Turkish (2/11b), whereas omission of *yeterince* (*sufficient*) in (2/11a) is not possible. I therefore conclude that an expression of the form “adjective + in order to + verb phrase” is not ambiguous between a *too* and an *enough* reading in Turkish, but that it only gives rise to the first one. This might be taken to indicate that exceeding a maximal limit is more salient

- (2/6) *Maria'nın Hans'ın araba.sın.dan hızlı*
 Mary.genitive Hans.genitive car.possessive.ablative fast
bir araba.sı var.
 one/a car.possessive there_is
 'Mary has got a faster car than Hans.'
- (2/7) *Maria Hans'tan kısa.*
 Mary Hans.ablative short
 'Mary is shorter than Hans.'
- (2/8) a. *Maria Hans'tan hızlı koş.tu.*
 Mary Hans.ablative fast run.past_tense
 'Mary ran faster than Hans.'
- b. *Maria Hans'tan sesli şarkı söyle.di.*
 Mary Hans.ablative loud sing.past_tense
 'Mary sang louder than Hans.'
- (2/9) *Maria Hans'tan iki santim uzun.*
 Mary Hans.ablative two centimetre tall
 'Mary is two centimetres taller than Hans.'
- (2/10) *Maria bir metre yetmiş santim.den uzun.*
 Mary one/a metre seventy centimetre.ablative tall
 'Mary is taller than 1.70m.'
- (2/11) a. *Maria resmi as.mak için yeterince*
 Mary drawing hang.infinitive for/in_order_to sufficient
uzun.
 tall
 'Mary is tall enough to hang up the drawing.'
- b. *Maria kanepede uyu.mak için uzun.*
 Mary sofa.locative sleep.infinitive for/in_order_to tall
 'Mary is too tall to sleep on the sofa.'
- (2/12) *Maria Hans'tan çok uzun.*
 Mary Hans.ablative much tall
 'Mary is much taller than Hans.'

What is not licit in Turkish, however, is the use of an entire clause as a comparative's standard term, as illustrated by the negative evidence in (2/13), which is always totally ungrammatical no matter what word order one chooses, and English standard terms that are clausal in nature most typically translate as nominalisations into Turkish (cf. (2/14) on the next page):

- (2/13) a. **Maria (hızlı) koş.tu Peter'den hızlı koş.tu.*
 Mary (fast) run.past_tense Peter.ablative fast run.past_tense

than surpassing a minimal one, an issue to which I shall return in sections 3.3.1.2.1 and 4.5.2.4.4. Alternatively, it also seems conceivable to analyse example (2/11b) as a basic positive construction involving a kind of covert modal along the lines of *can* or *to be able to*.

- b. **Maria Peter'den (hızlı) koştu* *hızlı koştu.*
 Mary Peter.ablative (fast) run.past_tense fast run.past_tense
 intended as: 'Mary ran faster than Peter ran.'

- (2/14) *Maria benim düşün.düğü.m.den* *zengin.*
 Mary my think.participle.1singular.ablative rich
 'Mary is richer than I thought.'

With example sentence (2/14), the possessive element *benim* (*my*) as well as the ablative case ending (*-den*) clearly underline the nominal status of this standard term, even if it is deverbal in nature in that it derives from a verbal stem. I shall postpone detailed discussion of such examples to subsection 2.3.4.3 below and limit myself here to the observation that the fact that Turkish does not permit clausal standard terms matches the overall organisation of this language which generally allows there to be one predicate per sentence only (cf. also section 2.3.1 below). This strict 'one predicate per sentence only'-pattern also immediately accounts for the absence of another comparison construction from this language, and that is the subcomparative. As illustrated in (2/15a, b) and (2/16a, b) below (where variation in the ablative case ending in the respective standard terms (*-dan* versus *-den*) is due to a strict vowel harmony operative in the Turkish language), it is not possible to have two different adjectives (and thus also two predicates) within one and the same sentence (independently of the precise word order one chooses), which however represents the characteristic feature of subcomparatives as such and having recourse to an alternative nominal strategy (cf. (2/15c) and (2/16c)) is therefore the only viable option:

- (2/15) a. **Masa kapı.dan* *geniş yüksek.*
 table door.ablative wide high
 b. **Masa geniş kapı.dan* *yüksek.*
 table wide door.ablative high
 intended as: 'The table is higher than the door is wide.'
 c. *Masa kapı.nın* *genişliğin.den* *yüksek.*
 table door.genitive width.possessive.ablative high
 'The table is higher than the width of the door.'; 'The table is higher than the door is wide.'
- (2/16) a. **Bıçak çekmece.den* *derin uzun.*
 knife drawer.ablative deep long
 b. **Bıçak derin çekmece.den* *uzun.*
 knife deep drawer.ablative long
 intended as: 'The knife is longer than the drawer is deep.'
 c. *Bıçak çekmece.nin* *derinliğin.den* *uzun.*
 knife drawer.genitive depth.possessive.ablative long
 'The knife is longer than the depth of the drawer.'; 'The knife is longer than the drawer is deep.'

In a similar fashion, measure phrase constructions (cf. (2/17) and (2/18) below) and degree questions (2/19) are not attested in this language, either, where nominalisation also happens to be indispensable, albeit for a quite different reason in that with these, no second predicate violating the ‘one predicate per sentence only’-strategy of Turkish would be necessary:

- (2/17) a. **Maria bir metre yetmiş uzun.*
 Mary one/a metre seventy tall
 intended as: ‘Mary is 1.70m tall.’
- b. *Maria'nın boy.u bir metre yetmiş*
 Mary.genitive size.possessive one/a metre seventy
uzunluğ.un.da.
 length.possessive.in
 ‘?Mary’s size is 1.70m in length.’; ‘Mary is 1.70m in length.’
- (2/18) a. **Ekmek bir buçuk kilo ağır.*
 bread one/a half kilo heavy
 intended as: ‘*The bread is 1.5 kilos heavy.’
- b. *Ekme.yin ağırlığı bir buçuk kilo.*
 bread.genitive weight.possessive one/a half kilo
 ‘The weight of the bread is 1.5 kilos.’
- (2/19) a. **Maria kaç uzun?*
 Mary how_many/much tall
 intended as: ‘How tall is Mary?’
- b. *Maria'nın boy.u kaç?*
 Mary.genitive size.possessive how_many/much
 ‘*How much is Mary’s size?’; ‘What is Mary’s size?’

For an explanation of these data in terms of a negative setting of the so-called “Degree Abstraction Parameter”, cf. Beck et al. (2009, pp. 22ff.) and an account of the non-occurrence of direct measure phrase constructions in Turkish will also be provided in sections 4.5.1 and 4.5.2.2. Yet another comparison construction largely absent from Turkish is constituted by *less* comparatives, for which the corresponding Turkish structure would have to look as in (2/20):

- (2/20) **Maria Hans'tan az uzun.*
 Mary Hans.ablative less tall
 intended as: ‘Mary is less tall than Hans.’

However, such examples were judged to be fairly bad by my Turkish native speakers, even though in terms of grammar, nothing seems to be wrong with them. I suspect that the problem with sentences like (2/20) stems from a lexical ambiguity the Turkish expression *az* gives rise to: For it can either indeed mean *less* or else, it can mean *a little*. In the former case, sentence (2/20) would thus constitute a *less* comparative, so that Mary would have to be shorter than Hans for this sentence to come out true, while in the latter, the element *az* would function as an

overt differential in an ordinary (larger than) comparative (where the comparison operator remains unexpressed; cf. section 2.2.1 below), requiring a situation in which Mary is (slightly) taller than Hans for this sentence to be considered true and therefore an exactly opposite state of affairs. The reactions my Turkish informants showed with sentences like (2/20) suggest that it is this potential confusion that is at the heart of their degraded status, because when I confronted them with a context stating that Mary is shorter than Hans (as required in the case of the *less* comparative such sentences were originally intended to instantiate), they typically produced reactions along the lines of “What is that supposed to mean? Is Mary taller or shorter than Hans after all?”, going on to clarify that the natural way of expressing such a situation would be the antonymous comparative given in (2/7) above.¹⁰

Let me finally conclude this little survey on comparison in the Turkish language by introducing in turn three more constructions that are usually considered as basic comparison constructions: the positive as illustrated in (2/21) and (2/22) for a positive adjective and an antonym, respectively, the equative, with regard to which Turkish offers two basic options (cf. (2/23) and (2/24)), the latter of which my native speakers reported to belong to a lower register and to be mostly confined to spoken or even colloquial language and ultimately the superlative, examples of which are given in (2/25) and (2/26) (the latter constituting a noun phrase internal superlative), featuring the special morpheme *en* that does not appear elsewhere in the Turkish language and is thus unique to the superlative construction as such:

(2/21) *Maria uzun.*
 Mary tall
 ‘Mary is tall.’

(2/22) *Maria kısa.*
 Mary short
 ‘Mary is short.’

(2/23) *Maria Hans kadar uzun.*
 Mary Hans as...as tall
 ‘Mary is as tall as Hans.’

¹⁰ I assume that this is a case of a truly disturbing ambiguity in that the two concepts expressed are not only contradictory, but even belong to one and the same cognitive frame (in the sense of Ungerer/Schmid (1996)). The basic situation is thus totally different from that of the lexical ambiguity a word like *bank* produces, for with the two sentences included in (ia) and (ib) below, for instance, in the first, the expression *bank* unequivocally refers to a financial institution, given that banks of rivers cannot be affected by bankruptcy, while in the second, it must precisely designate the bank of a river, by virtue of the fact that Bob Ross was a painter who exclusively focussed on scenes of nature:

(i) a. *That bank went bankrupt.*
 b. *Bob Ross painted a bank.*

We are therefore dealing with two entirely separate frames, here, whereas with sentence (2/20) in the main text, the two alternative readings are both, contradictory and set in the same cognitive frame.

- (2/24) *Maria Hans gibi uzun.*
 Mary Hans like tall
 ‘Mary is as tall as Hans.’
- (2/25) *Maria en uzun(u).*¹¹
 Mary most tall(possessive)
 ‘Mary is (the) tallest.’
- (2/26) *Maria en hızlı araba.yı kullan.dı/sür.dü.*
 Mary most fast car.accusative drive.past_tense
 ‘Mary drove the fastest car.’

For a much more comprehensive sample of data on Turkish comparison constructions, I should eventually like to refer the interested reader to the following link on the web: <http://www.uni-tuebingen.de/en/research/forschungsschwerpunkte/sonderforschungsbereiche/sfb-833/section-c-variation/c1-beck/data.html>.

2.2 The Status and Semantic Contribution of the Adverb *daha* and beyond

In this section, I shall now focus entirely on the adverb *daha* in Turkish comparatives, given that the proper treatment of this particular expression certainly constitutes one of the most controversial issues in existing literature on comparison in Turkish altogether. More precisely, the following subsection 2.2.1 will deal with the question of whether the use of this adverb is always obligatory in Turkish comparatives or not, and it will state under which circumstances exactly *daha* can indeed be possibly omitted. In the ensuing part 2.2.2, I shall then elaborate on the specific semantic contribution this adverb makes within a Turkish comparison construction when present, before proceeding to propose a novel analysis of this element that can adequately handle its semantic contribution as well as its syntactic distribution. Next, section 2.2.4 argues that, apart from its use in comparatives, the adverb *daha* also comes with a basic temporal meaning and shows that such polysemies frequently arise in other languages as well and that from a diachronic point of view, this temporal meaning usually preceded the denotation this adverb takes on in comparatives. Finally, the cognitive relations linking these different meanings (as well as spatial and additive ones) to each other will be closely examined and a couple of ideas on the frequent occurrence of temporal and spatial elements within the area of gradability and comparison from a more general point of view will also be offered, subsection 2.2.4.5 ultimately summarising the main insights from the whole of section 2.2.

¹¹ The possessive ending on the adjective (*-u*) is purely optional and its inclusion or omission does not seem to produce any impact on the sentence’s overall meaning.

2.2.1 The Status of *daha* in Turkish Comparatives: Obligatory or Optional?

As a matter of fact, there is considerable disagreement in traditional grammar books on the status of the adverb *daha* in comparatives in the Turkish language: Whereas it is sometimes considered to be a totally obligatory element, indispensable to the felicitous formation of comparatives (cf. for instance Bozkurt (1987), p. 21 or van Schaaik (1996), p. 213), most grammarians actually stress its largely optional status (Cimilli/Liebe-Harkort (2019), p. 37, Ersen-Rasch (1980), p. 141, Godel (1945), p. 66, Göksel/Kerslake (2005), p. 199, Kissling (1960), p. 129, Kornfilt (1997), p. 417, Lewis (2000), p. 51 or Underhill (1976), p. 225), often, however, without specifying when precisely this adverb can be left out and when no such omission is possible, instead. In this respect, my empirical investigation offers perfectly clear-cut results: In the vast majority of cases, the use of the adverb *daha* is indeed not compulsory at all, irrespective of the particular subtype of comparative construction one is dealing with, as can be seen from the ordinary adjectival comparative in (2/27a), the adverbial comparative in (2/28), the noun phrase internal comparative in (2/29), the comparative featuring an antonym in (2/30), the differential comparative in (2/31a), the *X times* comparative in (2/32) or direct comparison with a degree in (2/33), all of which have been accepted unanimously with and without *daha* alike by my Turkish informants:

- (2/27) a. *Maria Peter'den (daha) uzun.*
 Mary Peter.ablative (DAHA) tall¹²
 'Mary is taller than Peter.'
- (2/28) *Maria Peter'den (daha) sesli şarkı söyle.di.*
 Mary Peter.ablative (DAHA) loud sing.past_tense
 'Mary sang louder than Peter.'
- (2/29) *Maria'nın Peter'den (daha) hızlı bir araba.sı var.*
 Mary.genitive Peter.ablative (DAHA) fast one/a
 car.possessive there_is
 'Mary has got a faster car than Peter.'
- (2/30) *Maria Peter'den (daha) kısa.*
 Mary Peter.ablative (DAHA) short
 'Mary is shorter than Peter.'

¹² For the time being, I shall abstain from assigning a proper English gloss to *daha* and simply leave it at that, instead, because the exact meaning this expression conveys with comparatives also happens to be quite controversial and will be the focus of the next subsection, at the end of which I shall eventually also suggest an adequate gloss for it.

- (2/31) a. *Maria Peter'den iki santim (daha) uzun.*
 Mary Peter.ablative two centimetre (DAHA) tall
 'Mary is two centimetres taller than Peter.'
- (2/32) *Maria'nın kitab.ı Peter'in*
 Mary.genitive book.possessive Peter.genitive
kitab.in.dan beş kat (daha) uzun.
 book.possessive.ablative five time (DAHA) long
 'Mary's book is five times as long as Peter's book.'¹³
- (2/33) *Maria bir metre yetmiş santim.den (daha) uzun.*
 Mary one/a metre seventy centimetre.ablative (DAHA) tall
 'Mary is taller than 1.70m.'

The only case where insertion of *daha* is really obligatory is constituted by comparatives that lack a standard term in the ablative case such as (2/34a), where omission of this adverb does not render the corresponding sentence ungrammatical (cf. (2/34b)), though, but where the overt comparative meaning is lost altogether: Whereas (2/34a) clearly expresses an explicit comparison, (2/34b) represents a positive construction only involving an implicit comparison to the comparison class at hand:

- (2/34) a. (*Maria'nın boy.u bir metre yetmiş uzunluğ.un.da.*
 Mary.genitive size.possessive one/a metre seventy length.possessive.in
 'Mary is 1.70m.') [cf. (2/17b) in subsection 2.1.2 above]
Peter daha uzun.
 Peter DAHA tall
 'Peter is taller.'
- b. *Peter uzun.*
 Peter tall
 'Peter is tall.'

This is not particularly surprising given that Turkish is characterised by the absence of an overt comparative operator per se, in contrast to languages like English or German that feature such an overt operator (*-er* or *more* and *-er*, respectively). What this basic configuration in Turkish boils down to in the end is that in examples like (2/34), where the standard term is not explicitly realised, omission of *daha* robs the basic sentence of any indication of the presence of a genuine comparative and the resulting structure is thus interpreted as a positive construction, where

¹³ It might look surprising that this construction is included within this set of comparatives, since in English-like languages, this meaning is usually expressed by a comparison construction that is equative rather than comparative in nature, as indicated by the English translation. In contrast to this, Turkish displays a basic comparative-like construction, here, just like many Romance languages, as illustrated in (i) below with the French equivalent of (32):

(i) *Le livre de Marie est cinq fois plus long que celui de Pierre.*
 the book of Mary is five time(s) more long than that of Peter

comparison is not made to a precise, contextually supplied standard (as indicated by the bracketed material preceding the actual sentence with (2/34a)), but to the general standard introduced by the positive operator, which might consist for instance in the average size of an adult man or that of a ten-year-old child, depending on the respective comparison class to which Peter belongs (cf. subsection 3.3.2.3.1 of this dissertation on the question of how precisely this comparison class is established with a positive construction). In total, I therefore draw the general conclusion that the adverb *daha* is usually optional in Turkish comparatives, unless the standard term of the comparison is not overtly realised.¹⁴

2.2.2 The Semantic Contribution of *daha* in Comparative Constructions

Just like its syntactic status as an optional or obligatory element, the semantic contribution the adverb *daha* makes in a Turkish comparative construction has also been the matter of a heated controversy in the existing descriptive literature on comparison in this language. The three most widespread positions on this issue can be summarised as follows: (i) *Daha* represents a purely optional expression not affecting the overall meaning of the comparative at all (cf. for example Underhill (1976), p. 225); (ii) this adverb constitutes the comparative marker as such that can, but does not have to be phonologically realised (hence its omissibility; cf. Cimilli/Liebe-Harkort (1979), p. 37 or Göksel/Kerslake (2005), p. 198, among many others); (iii) *daha* makes a semantic contribution of its own, acting as an intensifier (cf. Kornfilt (1997), who talks of an “intensifying effect” (ibid., p. 220) in this respect, and Lewis (2000), who has it that “**daha** [...] may be inserted for emphasis” (ibid., p. 51)). With the latter option, it often remains highly unclear, though, what type of intensifier *daha* should be considered as, there being at least two plausible possibilities to take into account: It could either be an element operating on the differential itself, in which case it would correspond to *much/considerably* in the English (2/35a) on the following page (cf. also footnote 16 below on the Japanese adverb *motto* performing exactly this function), or else, *daha* could constitute an evaluative expression on a par with English *still* as used in (2/35b),¹⁵ stating that Peter is already fairly tall compared to other individuals within the same comparison class:

¹⁴ Note in passing that an exactly parallel situation is attested in Udmurt (Perm language) as well, where the suffix *-ges* is generally optional as well, except for cases where the standard term has been omitted and where leaving out this suffix would also inevitably make the corresponding structure lose its comparative meaning altogether (cf. Eckhardt (2011), p. 143, footnote 1 and Winkler (2005)). It would be interesting to know if its insertion with comparatives featuring an overt standard of comparison leads to the same or at least similar semantic effects as that of Turkish *daha* described in subsection 2.2.2 below, but unfortunately, this does not seem to have been tested for Udmurt.

¹⁵ Here and in what follows, I shall use ‘evaluative’ in its norm-relating sense (cf. also footnote 170 below).

- (2/35) a. *Mary is much/considerably taller than Peter.*
 b. *Mary is still taller than Peter.* [cf. also the natural language example in (2/65a)]

Obviously, these different positions adopted make quite incompatible predictions about the distribution of *daha*, in that the first two predict there to be no difference in meaning in sentences with and without this adverb (except for cases where an overt standard of comparison is missing, as discussed in section 2.2.1 above), whereas approach (iii), depending on its exact implementation, makes us expect *daha* to be licensed either only in cases where the differential is large enough or alternatively, whenever the overall degree to which the entities involved in the comparison possess the property in question is sufficiently high. The overall situation can thus be summarised as in the following table (2/36):

(2/36)	(i)	(ii)	(iii)	
<u>positions adopted in descriptive grammars:</u>	purely optional element not affecting the overall meaning	comparative marker (that can, but does not have to be phonologically realised)	adverb making a semantic contribution of its own; intensifier	
			expression operating on the differential (cf. English <i>considerably</i> ; German <i>wesentlich</i> , <i>erheblich</i>)	evaluative element (cf. English <i>still</i> ; German <i>noch</i>)
<u>expected truth-conditional effects:</u>	Comparatives with and without the adverb <i>daha</i> are not expected to differ in meaning.		<i>Daha</i> should only be licensed in cases where the differential is sufficiently large.	Insertion of <i>daha</i> should only be possible when the overall degree to which the entities involved possess the relevant property is high enough.

Manipulating individual contexts, I first tested the validity of these predictions on the basis of sentence (2/27a) repeated from above, as illustrated in (2/37) on the next page:

- (2/27) a. *Maria Peter'den (daha) uzun.*
 Mary Peter.ablative (DAHA) tall
 'Mary is taller than Peter.'

(2/37)		<i>daha</i>	<i>daha</i>
	- context 1: Mary: 1.62m; Peter: 1.60m [small overall sizes & small differential]:	√	*
	- context 2: Mary: 1.62m; Peter: 1.52m [small overall sizes & large differential]:	√	*
	- context 3: Mary: 1.92m; Peter: 1.90m [large overall sizes & small differential]:	√	√
	- context 4: Mary: 1.92m; Peter: 1.82m [large overall sizes & large differential]:	√	√

From this test, two main insights can immediately be gained: First of all, while the test sentence without *daha* is likewise acceptable in all four contexts, this does not hold for the sentence including *daha*, showing that there is a clear difference in meaning, so that positions (i) and (ii) described above should clearly be abandoned in favour of the third. Secondly, what seems to matter for compatibility with *daha* is not so much the size of the differential itself as the overall size of the items of comparison (the individuals Mary and Peter, in this case), which suggests analysing this adverb in comparatives as an evaluative intensifier equivalent to English *still* and not as an element operating on differentials. Testing example (2/38) in a similar fashion (cf. (2/39) below) led to exactly parallel results (just like other scenarios and test sentences that I shall not reproduce here), given that once again, (2/38) with and without *daha* evidently differs in meaning and that once more, it is the absolute price of the entities compared and not the size of the difference separating them that accounts for the potential (non-)occurrence of this adverb, thus underlining its status as an evaluative intensifier:

(2/38)	<i>Maria'nın</i>	<i>araba.sı</i>	<i>Peter'in</i>
	Mary.genitive	car.possessive	Peter.genitive
	<i>araba.sın.dan</i>	(<i>daha</i>)	<i>pahalı.</i>
	car.possessive.ablative	(DAHA)	expensive
	'Mary's car is more expensive than Peter's car.'		

(2/39)		<i>daha</i>	<i>daha</i>
	- context 1: Mary's car: 2,000 €; Peter's car: 1,800 € [low overall prices & small differential]:	√	*
	- context 2: Mary's car: 2,000 €; Peter's car: 900 € [low overall prices & large differential]:	√	*
	- context 3: Mary's car: 83,000 €; Peter's car: 81,000 € [high overall prices & small differential]:	√	√
	- context 4: Mary's car: 83,000 €; Peter's car: 74,000 € [high overall prices & large differential]:	√	√

Moreover, two additional arguments can be adduced in favour of analysing *daha* as an evaluative intensifier rather than as an element operating on differentials: First, this adverb is fully compatible with canonical expressions operating on differentials as such, as can be seen

from the perfectly impeccable status of (2/40), which would be completely unexpected under a differential-operating approach, given that *daha* would then have to compete for the same syntactic slot as *çok* (*much*), leading to ungrammaticality, as depicted for the English and German equivalents in (2/41) and (2/42), respectively:

(2/40) *Maria Peter'den çok daha uzun.*
 Mary Peter.ablative much DAHA tall
 ‘Mary is much taller than Peter.’

(2/41) **Mary is considerably much taller than Peter.*

(2/42) **Maria ist wesentlich/erheblich viel größer als Peter.*
 Mary is considerably much tall.-er than Peter
 intended as: ‘*Mary is considerably much taller than Peter.’

Second, the adverb *daha* can even be combined with explicit differentials themselves (cf. (2/31a), repeated from above), just like English *still* or German *noch* ((2/43a) and (2/44a), respectively). However, these never tolerate co-occurrence with elements operating on them, but are in complementary distribution with these, instead, as shown by the ungrammatical status of the English and German counterparts given in (2/43b) and (2/44b):¹⁶

(2/31) a. *Maria Peter'den iki santim (daha) uzun.*
 Mary Peter.ablative two centimetre (DAHA) tall
 ‘Mary is two centimetres taller than Peter.’

(2/43) a. *Mary is still two inches taller than Peter.*
 b. **Mary is two inches considerably taller than Peter.*

(2/44) a. *Maria ist noch zwei Zentimeter größer als Peter.*
 Mary is still two centimetre(s) tall.-er than Peter
 ‘Mary is still two centimetres taller than Peter.’
 b. **Maria ist zwei Zentimeter wesentlich/erheblich größer als Peter.*
 Mary is two centimetre(s) considerably tall.-er than Peter
 intended as: ‘*Mary is two centimetres considerably taller than Peter.’

¹⁶ In Beck/Oda/Sugisaki (2004), the contribution the expression *motto* makes in a Japanese comparative is discussed, where the authors also reject an analysis in terms of a comparative operator in a parallel fashion. In contrast to the Turkish adverb *daha*, Japanese *motto* is not compatible with an overt differential (cf. (i)), though, from which the authors conclude that it constitutes an “intensifier [operating on] the difference degree” (ibid., p. 328):

(i) **Sally.wa Joe.yori motto 5 cm se.ga takai.*
 Sally.topic_marker Joe.YORI “more” 5 cm back.NOM tall
 intended as: ‘Sally is 5 cms taller than Joe.’ [ibid., p. 328; their (130b)]

Also note that whenever *daha* (and likewise English *still* as well as German *noch*) appear in combination with an overt differential, their order happens to be fixed and cannot be reversed:

(2/31) b. **Maria Peter'den daha iki santim uzun.*
 Mary Peter.ablative DAHA two centimetre tall
 also intended as: 'Mary is two centimetres taller than Peter.'

(2/43) c. **Mary is two inches still taller than Peter.*

(2/44) c. **Maria ist zwei Zentimeter noch größ.er als Peter.*
 Mary is two centimetre(s) still tall.-er than Peter
 '*Mary is two centimetres still taller than Peter.'

In sum, I therefore conclude two things: First, in Turkish comparatives, the adverb *daha* is neither an element not affecting the overall meaning at all, nor the comparative marker, nor is it an expression operating on differentials, but it rather constitutes an intensifier that is evaluative in nature and that should thus be glossed accordingly (cf. (2/27b) below):

(2/27) b. *Maria Peter'den daha uzun.*
 Mary Peter.ablative still tall
 'Mary is still taller than Peter.'

Second, it is only in comparatives lacking an overt standard term in the ablative case that *daha* performs the function of a comparative marker as a sort of lexical last resort operation to mark the comparative as such.

2.2.3 Deriving the Meaning of *daha* in Turkish Comparatives in Truth-Conditional Semantics

2.2.3.1 König (1977)'s Analysis for German *noch*

Next, I shall try to derive a denotation adequately capturing the meaning of the adverb *daha* in Turkish comparatives identified in the last subsection. As it turns out, not much work has been dedicated to such evaluative intensifiers in linguistic literature up to now, for even though a lot has been written on the topics of gradability and comparison in general (cf. section 1.1) and also on temporal meanings of particular adverbs closely related to Turkish *daha* such as German *noch* (cf. for example König (1991), in particular section 7, Löbner (1989) or Ippolito (2007), among many others),¹⁷ the role these adverbs play in comparatives has hardly

¹⁷ It will become clear in section 2.2.4 below why an adverb like *daha* is indeed closely related to temporal (and/or spatial) adverbs such as German *noch* and why it thus seems perfectly natural to first look for a model for its denotation among these.

been tackled so far. A rare exception to this rule can be found in König (1977), where the German adverb *noch* is discussed and where the author proposes a denotation for it that is very economic in that it is supposed to simultaneously account for this adverb's temporal and spatial usages as well as for the evaluative function it assumes in comparatives. I shall therefore reproduce the discussion in König (1977) here, where the statement in (2/46) below is made with regard to sentence (2/45) (to which I add glosses and an English translation), including *noch* in precisely the function as an evaluative intensifier as was noted for Turkish *daha* in section 2.2.2 above (the accent on its vowel indicating stress):

(2/45) *Paul ist nóch größer als Peter.*
 Paul is still tall.-er than Peter
 'Paul is still taller than Peter.' [König (1977), p. 188; his (49a)]

(2/46) "How can we account for the meaning of sentences like [(2/45)] in terms of our analysis? The following formula is a possible candidate for the representation of [(2/45)] in our formal language:

[(2/45')] $\langle \text{noch, Peter} \langle \lambda, x \langle \text{Paul ist größer als } x \rangle \rangle \rangle$ [his (49')]

The truth conditions for this expression specify that other people satisfy the open sentence in addition to Peter and that Peter is ranked higher than these people along a scale relevant for the predication of the sentence. Peter is a marginal case for the open formula and the reason for this can only be that he is quite tall. In other words, [(2/45')] presupposes that Peter is taller than many other people and since the sentence asserts that Paul is taller than Peter it also implies that Paul is very tall indeed." [ibid., p. 189]

Successful as such an analysis may appear at first glance, it turns out on closer inspection that this approach is not really tenable in the end, in that it clearly makes wrong predictions. To see this, consider sentence (2/45) in a simple context involving just five people, Mary, Robert, Peter, Stan and Paul, who are 1.53m, 1.56m, 1.57m, 1.58m and 1.59m tall, respectively. The requirement listed in the second half of (2/46) according to which other people in addition to Peter himself have to satisfy the open formula, Peter being ranked higher than these people on the relevant scale,¹⁸ is fully met and yet, in contrast to the assumptions in König (1977), it does not necessarily follow from this that Peter is indeed quite tall: In fact, he is even unusually short in the context introduced above, so that after all, the truth conditions proposed in König (1977) are obviously too weak in that a sentence like (2/45) would wrongly be predicted to come out

¹⁸ In König (1977), these requirements are simply listed in exactly the same fashion as I repeat them in (2/46), without these really being implemented in any formal fashion. What I am showing here is that even if this could be achieved, the approach would still make empirically wrong predictions, some of which could admittedly be alleviated to a certain extent if one considered global rather than local contexts.

true in such a scenario. However, these truth conditions also turn out to be too strong, in that in a situation where only two people are present, Peter and Paul, whose respective sizes are 1.82m and 1.95m, contrary to intuitions, sentence (2/46) would be predicted to be false, Peter not exceeding other people in height. In total, while it is conceivable that the denotation offered for German *noch* in König (1977) may be correct for temporal and spatial uses of this adverb (an issue which I shall not enter, here), it clearly cannot be maintained for its usages as an evaluative intensifier in comparatives, the proposed truth conditions being both, too weak and too strong, at the same time. Given that this approach can therefore not be transferred to *daha*-like adverbs, I shall next proceed to make a new proposal for these, primarily with the intention of handling their role as evaluative intensifiers in comparatives in a more appropriate way.

2.2.3.2 A New Proposal Based on Evaluativity

As a matter of fact, sentences such as (2/45) come with two meaning components: They combine a standard comparative meaning, requiring that for the sentence to come out true, Paul has to exceed Peter in size and an additional meaning part, according to which Peter must be relatively tall. Whereas the first of these components directly follows from the comparative meaning of the entire sentence as such, the status of the second one is less clear in that it could in principle be part of the sentence's actual assertion, constitute an implicature or represent a presupposition. The first of these options can be excluded by virtue of the fact that when I presented sentence (2/45) to native speakers in a scenario in which Paul was indeed taller than Peter, but where both happened to be very short, these normally did not plainly rule out this sentence right away, but typically reacted in a rather hesitant way, often producing statements like "Well, not quite.", arguing that the sentence felt not totally wrong, but somehow inappropriate in that the two individuals involved were too short for the sentence to be uttered truthfully in this situation. Such reactions indicate that in such a scenario, this sentence can neither be judged true nor false, but rather gives rise to an undefined meaning, as is typical of a presupposition failure, thus already pointing in the direction of pursuing the third option. And the alternative consisting in ascribing this second meaning component the status of an implicature has in fact to be dismissed in that it is not cancellable, as shown in turn for Turkish (cf. (2/47) below), English (2/48) and German (2/49), respectively, cancellability however constituting a characteristic feature of implicatures:

(2/47) **Paul Peter'den daha uzun,*
 Paul Peter.ablative still tall
ama Peter uzun değil.
 but Peter tall sentential_negation
 intended as: ‘*Paul is still taller than Peter, but Peter is not tall.’

(2/48) **Paul is still taller than Peter, but Peter is not tall.*

(2/49) **Paul ist noch größ.er als Peter,*
 Paul is still tall.-er than Peter
aber Peter ist nicht groß.
 but Peter is not tall
 also intended as: ‘*Paul is still taller than Peter, but Peter is not tall.’

Applying a standard family test for presuppositions, on the other hand, as done in (2/50) for English in an exemplary fashion,¹⁹ clearly reveals that all members of the family directly presuppose that Peter is comparatively tall, thus showing that the presuppositional option is indeed on the right track:²⁰

- | | | |
|-----------|---|--|
| (2/50) a. | <i>Paul is still taller than Peter.</i> | [positive declarative] |
| b. | <i>It is not the case that Paul is still taller than Peter.</i> | [negative declarative] |
| c. | <i>Is Paul still taller than Peter?</i> | [interrogative] |
| d. | <i>Perhaps Paul is still taller than Peter.</i> | [embedding under a possibility operator] |
| e. | <i>If Paul is still taller than Peter, Paul can definitely reach the upper shelf.</i> | [antecedent of a conditional; following the family test for presuppositions in Kadmon (2001), p. 11] |

In order to fully formalise this approach, I first of all need to establish a basic semantics for comparatives in Turkish as such, so that I can then proceed to add an evaluative expression like *daha* to that. I shall therefore anticipate here an approach to phrasal comparison that will be introduced under the term ‘Revised Phrasal Analysis’ and discussed in some detail in section 2.3.2 below. This Revised Phrasal Analysis mainly consists of the following three ingredients:

¹⁹ I have also run the family test for presuppositions with the equivalent Turkish and German sentences, but since these behave exactly like their English counterparts, I limit myself to explicitly listing the latter, here.

²⁰ In a similar fashion, Umbach (2009a) also reaches the conclusion that expressions like German *noch* essentially trigger a presupposition. Unfortunately, the author does however not develop a fully compositional analysis of these elements, which is precisely what I envisage doing in the following paragraphs and restricts herself to proposing the syncategorematic meaning for the entire string of words *noch größer (still taller)*, given in (i) below, instead:

(i) $[[[_{AP} \text{noch} [_{AP} \text{größer}]]]] = \lambda y [\in D_e]. \lambda x [\in D_e]: \text{ht}(y) > \text{d}. \text{ht}(x) > \text{ht}(y)$
 [Umbach (2009a), p. 557; her (24), where “ht” is used as an abbreviation of ‘height’ and the degree “d” does not seem to be properly introduced]

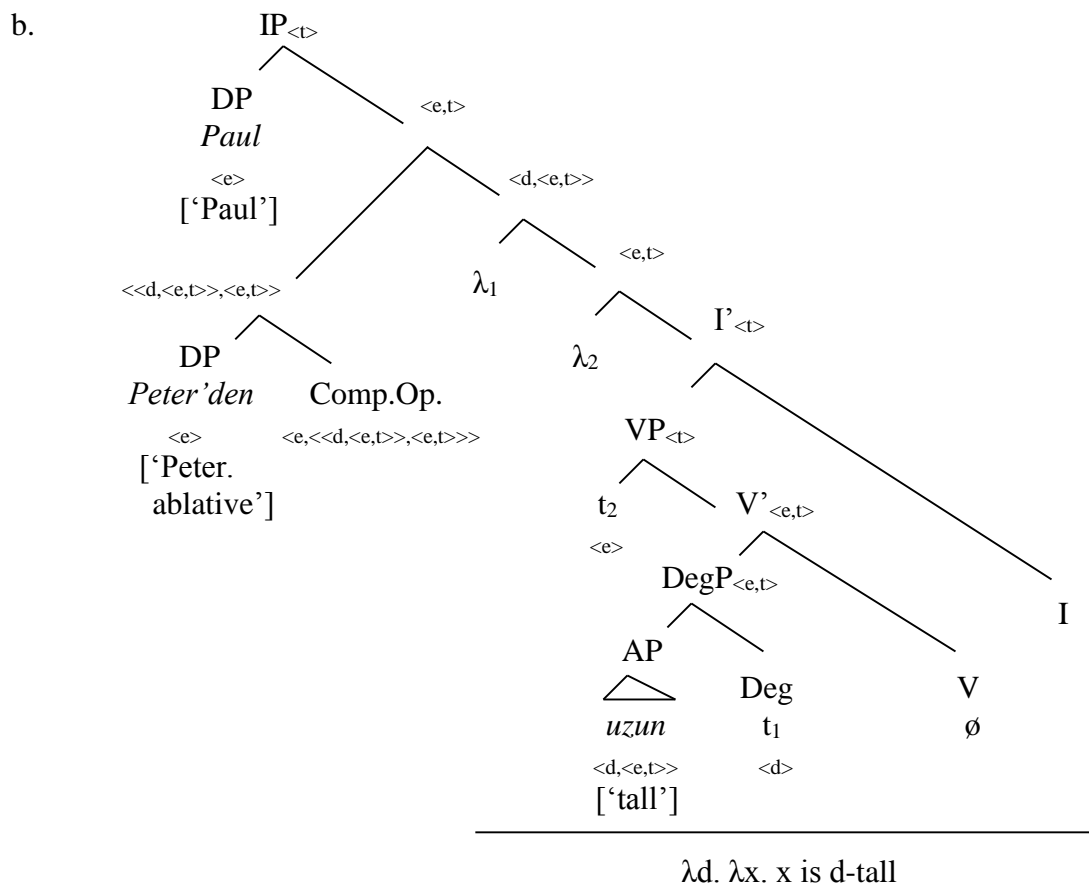
(i) Gradable adjectives denote relations between individuals and degrees, as can be seen from the model lexical entry for *uzun* (*tall*) given in (2/51) below (cf. also section 1.2 above); (ii) the comparative's comparee and its standard term both provide us with an individual and (iii) the comparison operator forms and compares the maximal degrees to which these two individuals possess the property in question (cf. the entry for the comparison operator specified in (2/52)):

(2/51) $[[uzun]] = \lambda d \in D_d. \lambda x \in D_e. \text{height}(x) \geq d$

(2/52) $[[\text{Comp.Op.}_{\text{Turk.}}]] = \lambda x \in D_e. \lambda A \in D_{\langle d, \langle e, t \rangle \rangle}. \lambda y \in D_e. \max(\lambda d. A(d)(y)) > \max(\lambda d. A(d)(x))$

As an illustration of how this approach is supposed to work in practice, consider example (2/53a) below, the LF of which (including an annotation with semantic types and a partial calculation) looks as in (2/53b):

(2/53) a. *Paul Peter'den uzun.*
 Paul Peter.ablative tall
 'Paul is taller than Peter.'



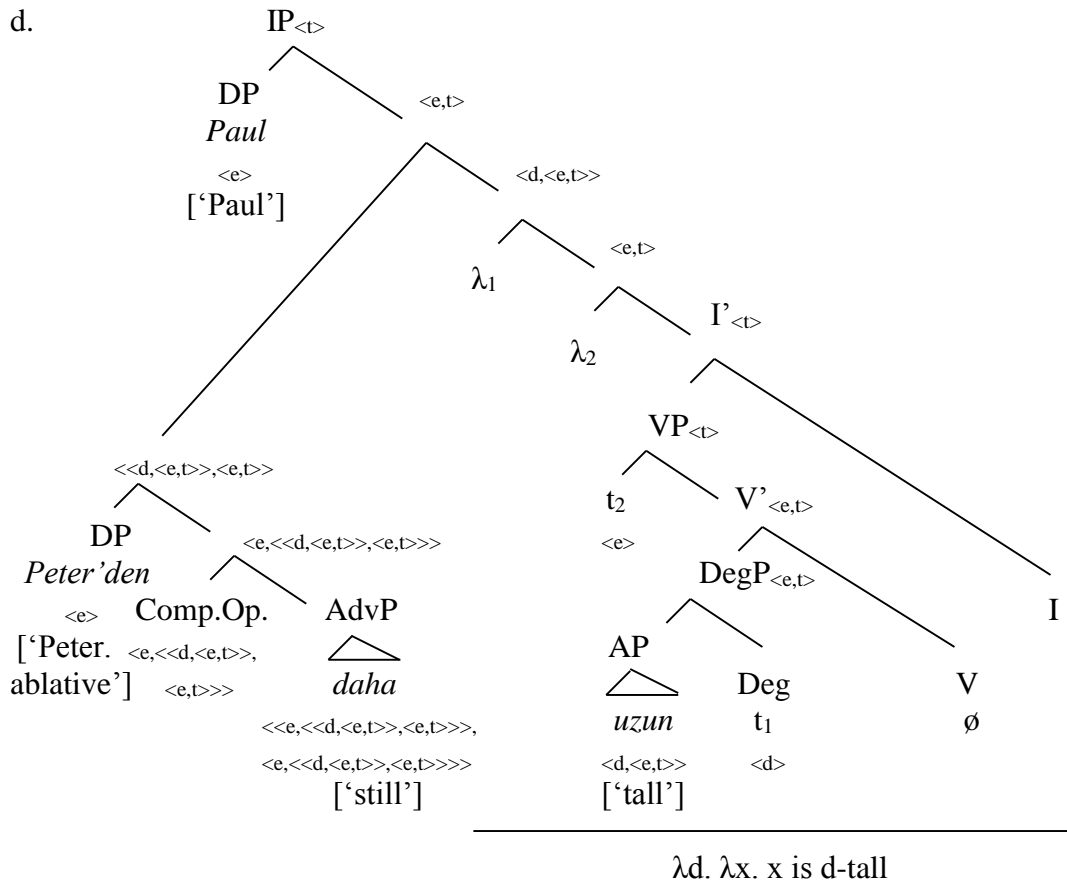
Completing the semantic calculation will ultimately yield the following result: Sentence (2/53a) is predicted to come out true if and only if $\max(\lambda d. \text{Paul is } d\text{-tall}) > \max(\lambda d. \text{Peter is } d\text{-tall})$,

which is as desired, given that this is exactly what (2/53a) arguably means. Next, let me specify a denotation for the adverb *daha* in its evaluative reading, as shown in (2/54) below:

(2/54) $[[daha_{\text{evaluative}}]] = \lambda \text{Comp.Op.} \in D_{\langle e, \langle \langle d, \langle e, t \rangle \rangle, \langle e, t \rangle \rangle \rangle}. \lambda x \in D_e. \lambda A \in D_{\langle d, \langle e, t \rangle \rangle}. \lambda y \in D_e: \exists d' \in D_d [A(d')(x) \ \& \ d' \geq s_c]. \text{Comp.Op.}(x)(A)(y)$,
 where “ s_c ” is a standard of height provided by the utterance context and “Comp.Op.” is the comparative operator ²¹

Application to example (2/53c) will now produce an LF along the lines of (2/53d) below, and sentence (2/53c) is thus predicted to give rise to the denotation sketched in (2/53e), which in fact adequately captures its meaning:

(2/53) c. *Paul Peter'den daha uzun.*
 Paul Peter.ablative still tall
 ‘Paul is still taller than Peter.’



²¹ In section 2.3 below, I shall eventually reject the Revised Phrasal Analysis, to which I stick here for ease of exposition. The analysis I shall finally settle on there will require the slightly altered entry for *daha* given in (i) below, all the other aspects of the analysis I am pursuing here remaining fully intact:

(i) $[[daha_{\text{evaluative}}]]_{\text{rev.}} = \lambda \text{Comp.Op.} \in D_{\langle d, \langle \langle d, \langle e, t \rangle \rangle, \langle e, t \rangle \rangle \rangle}. \lambda d' \in D_d. \lambda A \in D_{\langle d, \langle e, t \rangle \rangle}. \lambda x \in D_e: \underline{d'} \geq s_c.$
 Comp.Op. (d') (A) (x),
 where “ s_c ” is a standard of height provided by the utterance context and “Comp.Op.” is the comparative operator

(2/53) e. [[(2/53c)] = 1 iff the presupposition is met and Paul is taller than Peter
 0 iff the presupposition is met and Paul is not taller than Peter
 undefined iff the presupposition fails, irrespective of whether
 Paul is taller than Peter or not

Crucially observe that I have actually included a second requirement in (2/54) above, to the effect that an appropriate use of the adverb *daha* in its evaluative function not only presupposes that the individual introduced by the standard term disposes of the relevant gradable property to a degree equalling or exceeding the contextually given standard, but also requires the operator it combines with to be a comparative one and not a different type of comparison operator. While this admittedly constitutes a rather stipulative step that unfortunately results in an almost syncategorematic interpretation of the adverb *daha* and the comparison operator, making this move seems to be absolutely necessary in that the occurrence of evaluative *daha* is restricted to comparatives, while its overt inclusion in other comparison constructions is not licit, as shown in an exemplary fashion with the equative in (2/55) below:

(2/55) #*Paul Peter kadar daha uzun.*
 Paul Peter as...as still tall
 ‘#Paul is still as tall as Peter.’²²

At this point, one might then wonder if the assumption that an evaluative element like *daha* directly modifies the comparison operator itself is actually correct. In my opinion, there is good reason to believe that this is indeed the case: Notice first that this assumption automatically makes us predict the proper Turkish output linearisation with sentences like (2/53c), which is undoubtedly a most welcome result per se. Furthermore, the cross-linguistic distribution of such evaluative expressions provides us with an additional indication that this is indeed on the right track: In languages displaying an analytical comparative, these elements are normally directly adjacent to the comparison operator, as illustrated for English *still* and *even*, French *encore* as well as Spanish *aún* and *todavía* in the parallel set of examples given in (2/56)

²² I do not star this Turkish example as well as its English translation by virtue of the fact that even though it is equally impossible in both languages to insert an evaluative adverb into an equative construction, these sentences are actually quite fine, but note that they only come with a temporal and not the evaluative meaning I am after here, in that they state that at present, it is still the case that Paul has the same height as Peter, but that this is going to change, as would for instance be conceivable if Paul was a fully-grown adult, while Peter was a teenager still in the process of growing. In subsection 2.2.4 below, I shall come back to such temporal readings and discuss them in more detail. Interestingly enough, also observe that in Turkish (2/55), the adverb *daha* precedes the adjective itself and not the comparison operator (*kadar*), which I take to lend additional support to the analysis developed here, where evaluative, but not temporal *daha* is argued to immediately combine with the comparison operator.

to (2/58) below, which I take to constitute an immediate reflex of the direct interaction of these two elements:²³

- (2/56) a. *Mary is still more beautiful than Sandy.*
 b. *Mary is even more beautiful than Sandy.*

(2/57) *Marie est encore plus belle que Sophie.*

- (2/58) a. *María es aún más guapa que Sofía.*
 b. *María es todavía más guapa que Sofía.*

Next, introducing a lexical entry for these expressions that is compatible with clausal comparison (in contrast to phrasal comparison in Turkish, the need of which will be verified at length in section 2.3 below) will then immediately allow to straightforwardly transfer the analysis proposed for Turkish *daha* here to English *still* and *even*, French *encore* or German *noch*, as can be seen in an exemplary way for the English sentence in (2/56a) above, (2/59) providing the lexical entry required for evaluative *still*, (2/60) the sentence's LF and (2/61) finally sketching its truth conditions:²⁴

- (2/59) $[[still_{\text{evaluative}}]] = \lambda \text{Comp.Op.} \in D_{\langle\langle d,t \rangle, \langle\langle d,t \rangle, t \rangle\rangle}. \lambda D_1 \in D_{\langle d,t \rangle}. \lambda D_2 \in D_{\langle d,t \rangle}: \exists d' \in D_d$
 $[D_1(d') \ \& \ d' \geq s_c]. \text{Comp.Op.} (D_1) (D_2),$
 where “ s_c ” is a standard of height provided by the utterance context and “Comp.Op.” is the comparative operator²⁵

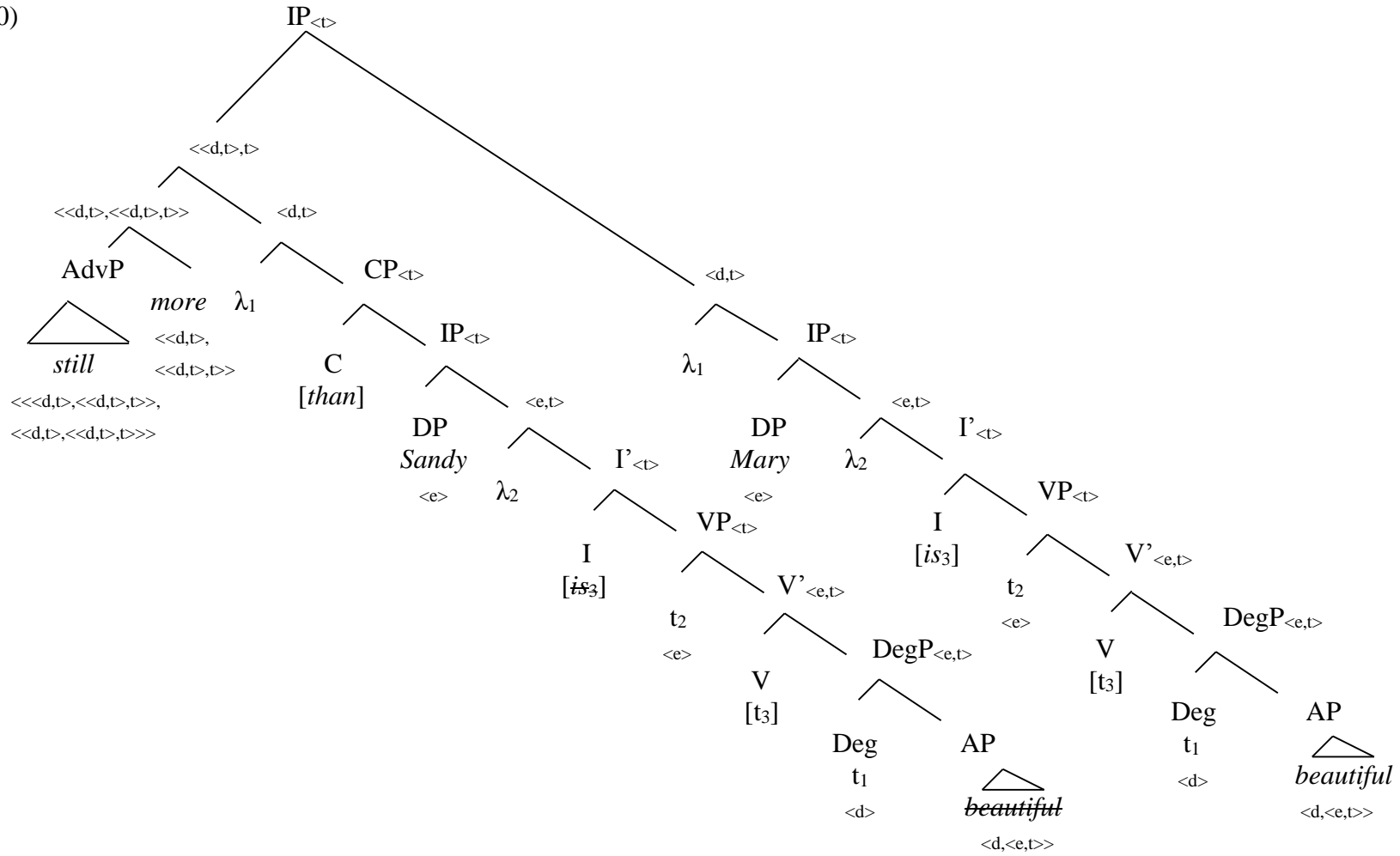
(2/60) Cf. next page

²³ With synthetic comparatives like English (i) or German (ii), this relation is less clearly visible since the fact that here, the comparative operators are bound morphemes that need to attach to a lexical stem (the gradable adjective, in this case), obscures matters somewhat:

- (i) a. *Mary is still taller than Sandy.*
 b. *Mary is even taller than Sandy.*
 (ii) a. *Maria ist noch größer als Sophie.*
 b. *Maria ist noch schöner als Sophie.*

²⁴ Given that comparison is usually phrasal in Spanish just like in Turkish (at least for the class of ‘ordinary’ adjectives that will be identified in section 3.3.2.2 of this dissertation), the entry associated with Turkish *daha* in (2/54) above can be directly used for Spanish *aún* and *todavía* (in their evaluative use) as it stands.

²⁵ As with the Turkish variant specified in (2/54) before, in the entry in (2/59), I also introduce the additional requirement according to which the operator the adverb *still* combines with (in its evaluative use; cf. footnote 22 above) has to be comparative in nature, for while an appearance of this expression in positive or superlative constructions could probably be ruled out on the basis of unsuitable semantic types alone, the positive and the superlative operators being of semantic types different from that of the comparative operator (cf. their entries specified in (3/49) and (3/53) in subsection 3.3.2.2 below), without this extra prerequisite, it would remain highly mysterious how its occurrence in other comparison constructions featuring operators of the same semantic type, such as for example equatives, could eventually be blocked.



required state of affairs.²⁶ Moreover note that besides these wrong predictions, directly combining evaluative adverbs with gradable predicates is also problematic in still another respect: As mentioned above, the occurrence of such adverbs is strictly limited to comparative constructions only, but given that a gradable predicate appears in any comparison construction whatsoever, under this approach, nothing should prevent a *daha*-like adverb from also modifying this predicate in other types of comparison constructions, which constitutes yet another unwelcome prediction of such an altered account. All in all, I therefore conclude that there is thus convincing evidence, both, from a theoretical as well as from an empirical perspective, showing that an approach in which evaluative adverbs like *daha* and its equivalents in other languages immediately combine with a comparative operator is indeed essentially correct, it faring not only much better than the previous account offered for this type of expression in König (1977), but also than an alternative approach where such evaluative adverbs are taken to directly modify gradable predicates.

2.2.4 Temporal Meanings with Evaluative Adverbs from a Cross-Linguistic Perspective

2.2.4.1 The Synchronic Picture

Interestingly enough, the Turkish adverb *daha* is by no means limited to the evaluative function it takes on in comparative constructions discussed so far, but it also appears with a temporal meaning elsewhere in this language, as shown in the question in (2/63) or the declarative sentence in (2/64) in an exemplary fashion (cf. also footnote 22):

(2/63) *O.nu daha bekl.iyor mu.sunuz?*
 he.accusative still wait.present_tense question_particle.2plural
 ‘Are you still waiting for him?’ [Underhill (1976), p. 227]

(2/64) *Orhan daha gel.me.di.*
 Orhan still come.verbal_negation.past_tense
 ‘Orhan has not come yet.’ [ibid.]

As a matter of fact, similar polysemies exist in many other languages, too, where adverbs typically used for intensificational purposes in comparatives in the sense described in section 2.2.3 at the same time often come with a basic temporal meaning as well. In this context,

²⁶ Observe in passing that with clausal comparison, interpreting *still* in a hierarchically high position where it takes scope over both sets of degrees, that introduced by the comparative’s matrix clause as well as that stemming from its standard term, would inevitably result in the same difficulty as has been described for phrasal comparison above, given that in such a configuration, the heights of both individuals involved would incorrectly have to be presupposed to exceed the contextual standard.

observe for instance that the English adverbs *still* and *yet* allow for both, an evaluative intensifying meaning along with a temporal interpretation, as illustrated in (2/65a) versus (2/65b) and (2/66a) as opposed to (2/66b), respectively and essentially the same is also true for German *noch* (cf. (2/67)), the French adverb *encore* (2/68) and even both corresponding Spanish adverbs *aún* (2/69) and *todavía* (2/70), all of which display an analogous polysemy:

- (2/65) a. *Returning to the spot next day, he heard the sound still louder than before.*
 (evaluative)
 b. *When I first came to London, Piccadilly still had its goat.* (temporal)
 [Oxford English Dictionary, s.v.]

- (2/66) a. *The thought [...] gave a yet deeper colour of carnation to her complexion.*
 (evaluative)
 b. *I have yet printed off but 72 pages.* (temporal)
 [Oxford English Dictionary, s.v.]

- (2/67) a. *Es ist heute noch wärmer als gestern.*
 it is today still warmer.-er than yesterday
 ‘Today, it is still warmer than yesterday.’ (evaluative)
 b. *Er hat noch nie gewonnen.*
 he has still never win.past_participle
 ‘He has never won yet.’ (temporal)
 [Deutsches Universalwörterbuch (Duden), s.v.]

- (2/68) a. *Elle est encore moins patiente que moi.*
 she is still less patient.feminine than me
 ‘She is still less patient than me/I am.’ (evaluative)
 b. *Vous êtes encore là?*
 you(2plural or form of politeness) are still here
 ‘Are you still here?’ (temporal)
 [Le Petit Robert, s.v.]

- (2/69) a. *Este es aún mejor.*
 this is still better
 ‘This (one) is still better.’ (evaluative)
 b. *Aún llueve.*
 still rain.3singular
 ‘It is still raining.’ (temporal)
 [Pons Großwörterbuch Spanisch, s.v.]

- (2/70) a. *Juan es todavía más aplicado que su hermano.*
 Juan is still more hard-working.masculine than his brother
 ‘Juan is still more hard-working than his brother.’ (evaluative)

- b. *Está durm.iendo todavía.*
 is sleep.present_participle still
 ‘He/She is still asleep.’ (temporal)
 [Diccionario de la lengua española (Real Academia española), s.v.]

Note that the Turkish data are of particular interest in this respect, given that Turkish is a genetically unrelated language: While one might argue for a random development within Germanic and Romance or even the whole group of Indo-European languages in view of data like (2/65) to (2/70), Turkish *daha* suggests that this phenomenon is in fact much more pervasive than that and that it might after all be indicative of closely related underlying cognitive concepts, rather than being a matter of pure coincidence or mutual influences within a given group of languages. As a next step, I should therefore like to pursue precisely this issue further, by taking a closer look at the historical development of the respective polysemies.

2.2.4.2 The Diachronic Picture

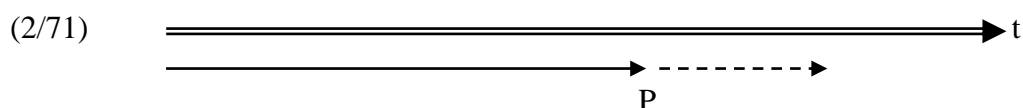
A brief diachronic investigation on the basis of etymological dictionaries shows right away that for the most part, the temporal meaning of these adverbs was attested much earlier than the evaluative one in comparatives. This holds for English *still* (cf. Barnhart (1988), p. 1068, Onions (1966), p. 869 and Simpson/Weiner (21989), volume XVI, p. 696) as well as for German *noch* (cf. Pfeifer (21993), pp. 927f.), French *encore* (cf. Rey (1992), p. 688), Spanish *aún* (cf. Gómez de Silva (1985), p. 519) and also for Spanish *todavía* (cf. Corominas (1961), p. 71). As far as English *yet* and Turkish *daha* are concerned, the situation is somewhat more complex, albeit for very different reasons: With the former, it just so happens that both meanings were present in Old English and thus in the oldest (documented) stage of this language, already (cf. Simpson/Weiner (21989), volume XX, p. 736), so that it is no longer possible to tell which one preceded which and with the latter, I simply do not have the relevant information, because, in spite of quite some efforts made, I could not get hold of a comprehensive Turkish etymological dictionary, the lack of which represents a most unfortunate gap in the documentation of this language, justly criticised in Laut (2000, pp. 184f.). Crucially observe, however, that neither *yet* nor *daha* constitutes a counterexample displaying a development in the opposite direction, but that instead, I simply lack reliable data and if I was to make a guess, I should definitely assume that with these two adverbs, the temporal meaning was found prior to the intensifying one, too.

The general pattern, then, is one of “Bedeutungsaufbau” (Blank (1997), pp. 119ff.), where a linguistic sign associated with one or several meanings adopts an additional meaning

on top of the one(s) existing beforehand.²⁷ Of course, such new meanings normally do not just come about in a purely accidental fashion, but their emergence is oftentimes triggered by a close cognitive relation between the original meaning(s) and the one that gets added, metaphors and metonymies being particularly productive in this respect (cf. for instance the large-scale statistical evaluation on this phenomenon carried out in Koch/Marzo (2007), pp. 279-281 and see also Blank (1997), p. 157, Koch (2008), Taylor (1989), p. 124 and Ullmann (1964), p. 212, all of which stress the predominance of metaphoric and/or metonymic relations in linguistic change). In the next subsection, I therefore envisage examining the cognitive relations involved in the polysemies attested by *daha*-like adverbs in more detail.

2.2.4.3 Relating the Evaluative to Temporal, Spatial and Additive Meaning Components

The basic cognitive relation linking the temporal meaning of adverbs like *daha* to the evaluative intensifying denotation attested with these in comparative constructions is undoubtedly one of similarity, as is generally taken to be typical of metaphors: In its temporal use, this adverb (and its equivalents in many other languages) expresses that an action, a state, etc. has already been going on at a time prior to the reference time (in the sense of Reichenbach (1947)) and is still continuing beyond that reference time made salient by the utterance context, as sketched in (2/71) below ('P' representing that particular point in time I am referring to as the 'reference time', here):

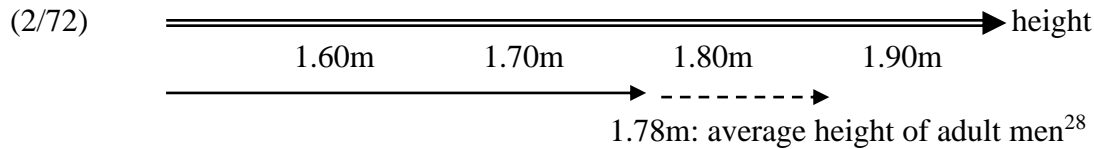


Similarly, in its evaluative use, it states that the compared entities possess the property in question up to a particular point on the scale of a measurable dimension and actually exceed it: In this fashion, with a sentence like (2/45) repeated from subsection 2.2.3.1 above, the two individuals at hand, Paul and Peter, dispose for example of the degrees of height up to a specific reference point, constituted by a contextually determined standard of height, which might for instance plausibly correspond to the average height of men in general in the absence of any other overt specification such as an explicit *for*-phrase (cf. section 3.3.2.3.1 below), and they

²⁷ In this context, one might also wonder why this attested process of “Bedeutungsaufbau” always seems to proceed in this direction, that is from times (and/or spaces; cf. below) to degrees rather than the other way around. While I cannot finally settle this issue here, I assume that ultimately, this state of affairs is related to considerations of saliency, the former probably being more salient than the latter by virtue of the fact that these are directly perceptible, as argued for in more detail in subsection 2.2.4.4.

possibly surpass it, so that this sentence ends up meaning that Peter reaches at least the average height of adult men, Paul being even taller, as illustrated in the little drawing in (2/72):

(2/45) *Paul ist noch größer als Peter.*
 Paul is still tall.-er than Peter
 ‘Paul is still taller than Peter.’



This parallel meaning component of adverbs displaying the temporal versus evaluative polysemy also directly reveals itself when one compares the lexical entry I suggested for Turkish *daha* or English *still* above (cf. (2/54) and (2/59) repeated from section 2.2.3.2, respectively) to those proposed for corresponding temporal adverbs in the relevant literature and for the sake of concreteness, I shall contrast these with the denotation for temporal *still* proposed in Ippolito (2007), which I reproduce in (2/73) below:

(2/54) $[[daha_{\text{evaluative}}]] = \lambda \text{Comp.Op.} \in D_{\langle e, \langle \langle d, \langle e, t \rangle \rangle, \langle e, t \rangle \rangle \rangle}. \lambda x \in D_e. \lambda A \in D_{\langle d, \langle e, t \rangle \rangle}. \lambda y \in D_e: \exists d' \in D_d [A(d')(x) \ \& \ d' \geq s_c]. \text{Comp.Op.} (x) (A) (y),$
 where “ s_c ” is a standard of height provided by the utterance context and “Comp.Op.” is the comparative operator

(2/59) $[[still_{\text{evaluative}}]] = \lambda \text{Comp.Op.} \in D_{\langle \langle d, t \rangle, \langle \langle d, t \rangle, t \rangle \rangle}. \lambda D_1 \in D_{\langle d, t \rangle}. \lambda D_2 \in D_{\langle d, t \rangle}: \exists d' \in D_d [D_1(d') \ \& \ d' \geq s_c]. \text{Comp.Op.} (D_1) (D_2),$
 where “ s_c ” is a standard of height provided by the utterance context and “Comp.Op.” is the comparative operator

(2/73) $[[still]]^{c, g, w} = \lambda t \in D_i. \lambda e \in D_e. \lambda P \in D_{\langle e, \langle i, t \rangle \rangle}: \exists t' [sic: t'] < t [P(e)(t') = 1]. P(e)(t) = 1$
 [Ippolito (2007), p. 9; her (21)]

What the lexical entries for evaluative *daha/still* and temporal *still* have in common is that the respective presuppositions they trigger strongly resemble each other. For what the former two presuppose in the domain of degrees corresponds exactly to what the latter one presupposes in the temporal domain: With the latter, it is required that an event or the like has already started at a time preceding the actual reference time and is still going on and with the former, an individual has to dispose of the degrees of a given quality or property up to a particular reference

²⁸ This is the standard height of German men according to the website of the *Statistisches Bundesamt Deutschland*, consulted on 30 August 2013 (cf. www.destatis.de/DE/Publikationen/Thematisch/Gesundheit/Gesundheitszustand/Koerpermasse523900309904.pdf).

point (the contextually supplied standard) and can possibly exceed it.²⁹ What clearly distinguishes them, though, is the different argument structures these expressions give rise to: Whereas in the evaluative use, combination with a comparative operator is required, no such requirement exists with the temporal use, a state of affairs that is immediately reflected in the actual distribution of these elements: While temporal *still* can occur in various comparison constructions or even in sentences not containing a comparison of any sort, its evaluative counterpart does not appear outside comparative constructions proper, as can be seen from the set of examples listed in (2/74) below, where the (a)-variant involving a comparative is ambiguous between a temporal and an evaluative interpretation,³⁰ whereas the latter is absent from examples (2/74b) to (2/74d), featuring a positive construction, a superlative one and a sentence not including a comparison construction at all, in turn:³¹

- (2/74) a. *Mary is still taller than Peter.*
 b. *Mary is still tall.*
 c. *Mary is still (the) tallest.*
 d. *Mary is still in Paris.*

In total, even though the argument structures temporal and evaluative adverbs come with are quite different, these display strong parallels in the presuppositions they give rise to. And as a matter of fact, this is not yet the whole family of meanings such adverbs are typically associated with and interestingly enough, these additional meanings once more come with very similar presuppositions, which is what I should like to illustrate on the basis of the German adverb *noch* in what follows: In order to get the complete picture, I first repeat example (2/45) featuring an occurrence of an evaluative usage of this adverb, in (2/75a), we are then dealing with a usage that is temporal in nature, whereas sentences (2/76a) and (2/77) instantiate spatial and additive uses, respectively:³²

(2/45) *Paul ist noch größer als Peter.*
 Paul is still taller than Peter.
 ‘Paul is still taller than Peter.’

²⁹ To make this parallel even more easily discernible, one could actually rewrite the presupposition of (2/73) as $\exists t [P(e)(t) \& t > t']$.

³⁰ For a suitable scenario underlying the temporal reading of the sentences in (2/74a) to (2/74c), cf. the discussion offered in footnote 22 above.

³¹ This behaviour actually goes for German *noch*, French *encore*, Spanish *todavía* and *aún*, English *yet* (although the resulting sentences sound slightly old-fashioned in present-day English) as well as for Turkish *daha* itself as well, where the corresponding comparatives also show a temporal/evaluative ambiguity that is not attested with other comparison constructions or comparison-less sentences, these allowing for a temporal interpretation, only.

³² To avoid complicating matters further, I leave yet another, adversative usage, that is attested with some of these adverbs like for instance English *still* or French *encore* (when followed by an inversion pattern) out of consideration, an example of which is given in (i) below:

(i) *The child has some new toys and still cries.* [Collins English Dictionary, s.v.]

- (2/75) a. *Hans war noch in sein.e.m Büro.*
 Hans was still in his.masculine.dative office
 ‘Hans was still in his office.’
- (2/76) a. *Mannheim liegt.t noch in Baden-Württemberg.*
 Mannheim lie.3singular still in Baden-Württemberg
 ‘Mannheim is still in Baden-Württemberg.’
- (2/77) *Ich kenn.e noch ein.e.n Mann,*
 I know.1singular still a.masculine.accusative man
der fließend Russisch spricht.t. [König (1977), p. 196; his (70)]
 who fluently Russian speak.3singular
 ‘I know yet another man who speaks Russian fluently.’

I should furthermore like to suggest that these different usages of the German adverb *noch* in turn trigger the set of presuppositions (PSPs) listed in (2/78) below:³³

- (2/78) a. PSP triggered by evaluative *noch*:
 $\exists d \in D_d [D(d) \ \& \ d \geq s_c]$, where “D” is the set of degrees introduced by a comparative’s standard term and “ s_c ” is a contextually given standard
- b. PSP triggered by temporal *noch*:
 $\exists t_1 \in D_t [P(t_1) \ \& \ t_1 < t \ \& \ \sim \exists t_2 [t_1 < t_2 < t \ \& \ P(t_2)]]$, where “P” is a proposition in the form of a set of points in time true at “t”
- c. PSP triggered by spatial *noch*:
 $\exists l \in D_l [P(l) \ \& \ l \geq s_z]$, where “P” is a proposition in the form of a set of paths and “ s_z ” is the standard distance from a contextually given centre z
- d. PSP triggered by additive *noch*:
 $\exists y \in D_{\langle e \rangle} [y \neq x \ \& \ P(y)]$, where “P” is a quality holding of the individual “x”

Comparing these individual presuppositions now straightforwardly reveals that these all share a common core in requiring there to be elements of an adequate type (degrees, points in time, paths and individuals, respectively) which are located lower on the corresponding scale than

³³ I restrict myself to listing the various presuppositions these different usages of *noch* bring about rather than providing entire lexical entries by virtue of the fact that their exact shape varies considerably with the syntactic position these appear in. In this fashion, the temporal usage of *noch* in sentence (2/75a) in the main text occurs inside a predicate nominal, while it modifies a mere temporal adjunct in (i) below:

- (i) *Peter bestell.t.e noch vor zwei Uhr drei Bier.*
 Peter order.past_tense.3singular still before two o’clock three beer
 ‘Peter ordered three beers (when it was) still before two o’clock.’

The corresponding lexical entries are thus bound to show substantial variation depending on the syntactic function the element the adverb *noch* co-occurs with performs and exhaustively establishing such entries would not only constitute a highly complex and rather intricate task, but it would ultimately also make a comparison of the various presuppositions triggered more difficult and thereby even obscure the main point I am interested in, here.

What is more, given that I take these diverging argument patterns (as well as the different presuppositions introduced in the main text) to be indispensable for the proper derivation of adverbs in their different usages as argued for here, it follows directly that it is impossible to formulate a single entry (or at least parallel ones) for expressions like *noch* subsuming these different uses. If this is essentially correct, it also immediately explains why previous accounts trying to achieve this such as König (1977) failed: Such attempts necessarily had to fail in view of the fact that these phenomena, even though similar in certain respects, simply cannot be put entirely on a par.

their counterparts explicitly appearing in the statement containing *noch*, albeit to different extents: While evaluative and spatial usages of *noch* require exceeding a standard (cf. (2/78a and c)), the other two usages are less restrictive in this respect (2/78b and d). To see this, observe that sentence (2/45) would for instance not be true in a scenario where Robert measured 1.53m, Peter 1.55m, Paul 1.57m, Randy 1.87m and Tom 1.93m, which shows that it is not enough if there are other people who are shorter, but that an average standard of size does indeed have to be surpassed (as also argued for in section 2.2.3.1 above) and similarly, (2/76a) could not be uttered felicitously either if Mannheim was located very close to the centre of Baden-Württemberg, even if there happened to be other cities or towns still closer to that centre. In contrast to this, example (2/75a) does not make any statement as to how long Hans has been in his office beforehand, nor does a sentence like (2/77) require there to be a minimum amount of other Russian-speaking men – in fact, it is enough if there is just one such man. At the same time, these different usages however also come with differing expectations as far as the continuation on the respective scale is concerned, given that the evaluative and the additive versions do not lead to any expectations in this regard (sentence (2/45) will for example be judged true as long as Paul is taller than Peter and both exceed the average standard of height, no matter if there are any other people who happen to be even taller in a given situation and in a similar fashion, in (2/77), there also might (but do not have to) exist additional Russian-speaking men). Conversely, temporal *noch* implies an impending change (uttering sentence (2/75a) would for instance be fairly weird if Hans still remained in his office for several hours afterwards) and its spatial counterpart actually expresses a borderline case, as argued for in König (1977). In view of the fact that this expectation of an impending change can easily be cancelled (cf. the impeccable extension in (2/75b) below), while this is not possible with the borderline interpretation (2/76b), I assume that temporal *noch* comes with a corresponding additional implicature, whereas its spatial equivalent actually comes with a stronger presupposition than the one introduced in (2/78c) before (for example one along the lines of ‘[...] $l \leq 10\%$ of the distance from a given centre to the border’):

(2/75) b. *Zu dies.e.m* *Zeitpunkt* *war* *Hans* *noch* *in*
at this.masculine.dative point_in_time was Hans still in
sein.e.m *Büro* *und* *tatächlich* *war* *er* *fünf*
his.masculine.dative office and in_fact was he five
Stunde.n *spät.er* *immer* *noch* *da.*
hour.plural late.-er always still there
‘At that moment, Hans was still in his office and in fact, five hours later, he was still there.’

(2/76) b. *Stadt X *lieg.t* *noch* *in* *Baden-Württemberg und*
City X *lie.3singular* *still* *in* *Baden-Württemberg and*
tatsächlich *ist* *sie* *nur* *zehn* *Kilometer* *vo.m*
in_fact is she only ten kilometre(s) of-the.dative
Landeszentrum *entfernt.*
country's_centre away
‘City X is still in Baden-Württemberg and in fact, it is only ten kilometres
from its centre.’

In sum, it should thus have become obvious that while it is true that the different usages of an adverb like *noch* come with various subtle differences in meaning, it is nevertheless also true that these trigger a set of very similar presuppositions.³⁴ And, coming back to the Turkish adverb *daha* after this little digression into the entire family of meanings such adverbs are associated with, it does of course not come as much of a surprise that the attested strong parallels in presuppositions have facilitated it for adverbs that originally were only temporal (and spatial and/or additive) in nature to take on this additional, closely related meaning in a different conceptual area, namely that of gradation.³⁵ And evidently, this transfer from one conceptual domain to another, that is from one involving temporal scales to one giving rise to scales of a completely different nature, also represents a characteristic feature of metaphors in general, which are taken to be characterised precisely by the following two aspects: a relation of similarity and a transfer from one specific area to another one (cf. Blank (1997), among many others).

In addition, it seems very likely that apart from this basic metaphor, a metonymic relation helped stimulating the emergence of the new, evaluative meaning, given that there are also cases where *daha* conveys this evaluative meaning precisely within a fundamentally

³⁴ Observe in passing that if this proposal is essentially right and adverbs like *noch* can indeed modify various different expressions, we would actually expect combinations of different uses of such adverbs to be possible, a prediction which indeed seems to be borne out: In German, it appears for instance not to be totally impossible to combine temporal and evaluative *noch* as has been done in (i) below to describe a situation where Mary and Hans both happen to be fairly tall, but where Hans will soon exceed Mary in height because he is still in the process of growing, while Mary no longer is:

(i) ?*Noch* *ist* *Maria* *noch* *größ.er* *als* *Hans.*
 still is Mary still tall.-er than Hans
 ‘As yet, Mary is still taller than Hans.’

While this sentence actually sounds slightly odd to most of the native speakers I confronted this sentence with, this is probably just due to the immediate repetition of the expression *noch*, and all of them did in fact get the intended reading.

³⁵ Note that these extra spatial and additive meanings are however less widespread with evaluative adverbs than the temporal one (at least in the languages I am taking into account here), in that English *yet*, French *encore*, both Spanish adverbs *aún* as well as *todavía* and most importantly, Turkish *daha* itself do not give rise to a spatial reading and likewise, English *still*, Spanish *aún* and *todavía* do not display additive meanings so that with these, a spatial and/or additive meaning can actually be excluded as a potential source for the attested evaluative reading (unless they existed in earlier stages of these languages and have disappeared since), in other languages it being of course fully conceivable that the evaluative function is indeed due to one of these.

temporal context, so that the two meaning components appear in one and the same cognitive frame (in the sense of Ungerer/Schmid (1996)), as exemplified in (2/79) below:

- (2/79) a. *Dün* *tren* *bugün.den* *daha* *geç* *gel.di.*
 yesterday train today.ablative still late arrive.past_tense
 ‘Yesterday, the train arrived still later than today.’
- b. *Dün* *tren* *bugün.den* *daha* *erken* *gel.di.*
 yesterday train today.ablative still early arrive.past_tense
 ‘Yesterday, the train arrived still earlier than today.’

Having discovered a basic metaphoric connection that is arguably supported by a metonymic relation between the original, temporal and the additional, evaluative meaning of *daha*-like adverbs as well, I want to put forward the following two hypotheses: First, if there is indeed such a striking metaphoric and/or metonymic relation between the original and the new meaning component and these two are the most frequent relations involved in linguistic change (cf. the discussion in the previous subsection and the references listed there), it is to be expected that similar polysemies, even if these are not absolutely universal, should exist in many other languages, too. Second, it is very likely that from a diachronic point of view, the evaluative function of these adverbs initially appeared in combination with temporal comparatives (and/or spatial ones), before the pattern spread to perfectly non-temporal (non-spatial) ones later on. Of course, I cannot finally settle these issues here, but these hypotheses allow me at least to raise clear-cut claims for verification or falsification in future linguistic research within this linguistic domain. And interestingly enough, the intrusion of expressions with a fundamentally temporal (or spatial) meaning into the realm of gradability actually represents a quite frequent phenomenon, which is why I shall next leave the field of the specific adverbs treated here and try to shed some light on this issue from a more general perspective in the ensuing subsection 2.2.4.4.

2.2.4.4 **A Word on Temporal and Spatial Expressions in the Domain of Gradability**

The observation that adverbs performing the function of evaluative intensifiers in comparatives originate as expressions with a temporal and/or spatial meaning as argued for in the previous subsection also nicely fits a broader picture of gradability and comparison in general, in that it is a well-known fact that elements in this domain often strongly correlate with

expressions pertaining to the grammar of time and space.³⁶ In this context, Stassen (1985) noticed for instance that from a universal point of view, comparatives in many languages derive from a former locative construction, Hohaus (2010) proposed an account of comparison constructions in Samoan on the basis of a comparison of underlying paths, in von Stechow (2006), a strong relation between times and degrees is assumed in that adjectives like *early* or *late* are directly analysed in terms of degrees as such and similarly, Champollion (2010) reasons that “both time and space could be thought of as degree scales” (ibid., p. 30), to name but a few examples.³⁷ One might therefore wonder why it is that temporal and spatial concepts have so frequently made their way into the area of comparison proper. While I cannot give a detailed account of this question, here, let me at least offer some basic ideas on this issue: Remember from the introductory section 1.2 of this dissertation that I follow many other semanticists in assuming that gradable adjectives and adverbs are associated with linearly ordered, dense scales and that degrees directly correspond to points on such scales. Interestingly enough, this is exactly how we normally conceive of time and space: Ordinary time scales or paths, that is spatial scales, are characterised by precisely these properties in that they come with a linear ordering, are generally dense in nature and allow us to select particular points on them, such as a specific point in time or in space. It therefore seems very plausible to propose that temporal and spatial scales served as a model for other scales such as scales of quality or beauty with adjectives like *good* or *pretty* that do not necessarily come with such a naturally given linearly ordered and dense scale. From a more general perspective, also note that the dimensions of time and space are the only ones human beings can actually perceive: Whereas modern string theory has it that there exist thirteen different dimensions in total (cf. Hawking (²2007)), only four of these are directly accessible to us, namely the three spatial dimensions of ‘up’ versus ‘down’, ‘left’ versus ‘right’ and ‘front’ versus ‘back’ in addition to the one temporal dimension. In view of these biological facts, it seems thus all the more natural to assume that these dimensions of time and space that can be experienced directly are more ‘basic’ and can serve as a fundamental model for comparison along other, less immediately perceivable dimensions. Of course, a lot

³⁶ For the time being, I shall leave the additive meaning component, that is sometimes additionally attested, out of the discussion, given that I cannot really tell whether it actually preceded or followed the other one(s).

³⁷ A quite funny literary passage playing around with the temporal and comparative meaning components of the German adverb *mehr* (*more*) can actually be found in Kuntz (2006), where the author is introduced as follows:

(i) *Mark Kuntz ist verheiratet, hat zwei Kinder, lebt in Hamburg und raucht seit Anfang des Jahres nicht mehr. Aber auch nicht weniger.*

‘Mark Kuntz is married, has got two children, lives in Hamburg and has not been smoking (any) more since the beginning of this year. But no less, either.’ [ibid., p. 2]

Of course, the English equivalent *more* is polysemous in pretty much the same fashion, so that the joke can even be largely maintained in the English translation of (i).

more could and possibly should be said on the topic of this issue, but doing so would lead us far beyond the proper scope of this dissertation with a primarily linguistic orientation, in that finally settling matters in this respect would probably require diving deeply into far-reaching insights from other scientific disciplines, such as biology, anthropology or cognitive sciences.

2.2.4.5 Interim Summary

In sum, subsection 2.2 has made three main points about the adverb *daha* in Turkish comparative constructions: Firstly, it has been shown that this element is obligatory only in those Turkish comparatives that are used without an overt standard term, whereas it constitutes a purely optional element in all other configurations. Secondly, in comparatives featuring an explicit standard of comparison in the ablative case, *daha* has been argued to represent an evaluative intensifier, rather than a semantically vacuous element, the comparative marker as such or an expression operating on differentials. And thirdly, I have pointed out the fact that Turkish *daha* displays exactly the same polysemy as English *still* and *yet*, German *noch*, French *encore* or Spanish *aún* and *todavía*, where I have also offered a principled and new semantic account of these adverbs and elaborated on the striking similarities holding between their different meanings. At the end, I furthermore presented a couple of general ideas on spatial and temporal concepts entering the domain of gradability, which have rounded this section off.

2.3 Phrasal Comparison in Turkish: Associating Individuals with Implicit Degrees

Having introduced some basic data on various Turkish comparison constructions and dealt with the adverb *daha* appearing in some of these, the following section 2.3 of this dissertation will now focus on a different aspect of comparison in Turkish, namely on providing a theoretical analysis of comparison in this language that can adequately handle these empirical findings. Before going into specific details, it will first of all be argued that Turkish requires an account of comparison that is genuinely phrasal in nature (subsection 2.3.1). I shall then check traditional literature for what is on the market in this regard and combine the strengths of two existing approaches into a ‘Revised Phrasal Analysis’ (2.3.2), which will however turn out to systematically fail in several respects (sections 2.3.3.1 to 2.3.3.4). In view of these apparent deficiencies, a novel proposal for phrasal comparison will be suggested that essentially relies on the concept of associating individuals with implicit degrees, which will be shown to account for the empirical data in a much more appropriate fashion and different consequences and

potential refinements of which will also be considered, always contrasting the situation in Turkish with that in an English-like language (section 2.3.4) and finally, I shall address the question of whether or not phrasal comparison is attested in these latter languages as well (subsection 2.3.5), the concluding section 2.3.6 ultimately summarising the major results obtained in the course of part 2.3 of this dissertation.

2.3.1 Phrasal as Opposed to Clausal Comparison

For several decades now, an impressive amount of work in linguistic research on comparison constructions has been dedicated to the issue of whether a comparative apparently featuring nothing but a simple noun phrase (or determiner phrase, depending on the syntactic approach one is pursuing) in its standard term such as (2/80a) below should be given a direct, phrasal analysis or whether it should rather be derived from an underlying source that is clausal in nature, roughly along the lines of (2/80b) (cf. for instance the discussion in Hankamer (1973), Brame (1983), Hoeksema (1983), Napoli (1983), von Stechow (1984a), Kennedy (1997, 2009), Lechner (2004), Bhatt/Takahashi (2007, to appear) or O'Connor (2010), where fundamentally different conclusions are reached):³⁸

- (2/80) a. *Mary is taller than Peter.*
b. *Mary is taller than Peter is ~~[d]~~ tall.*

At the same time, however, a directly related question has received considerably less attention in the literature and that is the following: What exactly should a direct, phrasal account of comparison look like? For even though it remains highly controversial till this very day whether

³⁸ Given that Turkish will be shown to display phrasal comparison only, I shall not go into the details of clausal approaches to comparison, here. Let me just note in passing that these come in two basic versions, an elliptical one (sketched in (2/80b) in the main text) adopted in the vast majority of cases (cf. for instance Bresnan (1973) among many, many others) and a movement type of account, defended in particular in Lechner (2004), where the gradable adjective is assumed to originate within the clause constituting the comparative's standard term and is then supposed to move to a higher position located inside the main clause. In my opinion, the former option is preferable both, from an empirical as well as from a theoretical point of view: First of all, the elliptical approach fares much better with subcomparatives such as (i) below:

(i) *The knife is longer than the drawer is deep.* [cf. (2/16) above]

With these, both gradable adjectives are directly expected to survive without any further ado under such an approach, given that they are distinct (in contrast to what happens in an ordinary comparative), so that no deletion under identity is bound to occur. In a movement-type account, however, the adjective originating in the standard term (*deep*, in this case) should rise to a position in the matrix clause, which happens to be occupied by the other gradable predicate (*long(er)*) already. The derivation should therefore actually crash, contrary to empirical facts, it being admitted in Lechner (2004) itself that this approach cannot successfully cope with this specific type of construction. Secondly, in contrast to the movement analysis, elliptical approaches do not have to postulate long movement across clausal boundaries which is expected to be illicit under normal circumstances (cf. the discussion in subsection 2.3.4.5.2 below and the rather awkward "move α without form chain"-step assumed in Lechner (2004) in order to save this otherwise prohibited form of movement (ibid., pp. 86-88)).

languages like English or German display truly phrasal comparison at all (an issue to which I shall come back in section 2.3.5 below), the need for such an analysis has been shown independently for other languages, including in particular the *-se*-suffix-construction in Hindi-Urdu (cf. Bhatt/Takahashi (2007, to appear)). And as matters turn out, comparison in Turkish precisely constitutes a further case in point: As has already been noted in section 2.1.2, the Turkish language is characterised by what I informally called a ‘one predicate per sentence only’-constraint, and it is thus completely impossible to form a comparison featuring a clausal standard term, as shown by the totally ungrammatical status of (2/13) repeated here:³⁹

- (2/13) a. **Maria (hızlı) koştu Peter'den hızlı koştu.*
 Mary (fast) run.past_tense Peter.ablative fast run.past_tense
 b. **Maria Peter'den (hızlı) koştu hızlı koştu.*
 Mary Peter.ablative (fast) run.past_tense fast run.past_tense
 intended as: ‘Mary ran faster than Peter ran.’

Note that this situation contrasts sharply with what we find in an English-like language, where it is perfectly natural to have comparatives involving entire finite clauses as their standard term (cf. (2/81a)) alongside with their (at least superficially) phrasal equivalents (2/81b):

- (2/81) a. *Mary ran faster than Peter.*
 b. *Mary ran faster than Peter had run the day before.*

By contrast, clausal standard terms in an English comparative are usually expressed by means of a nominalisation in Turkish, as illustrated in (2/14), also repeated from above:

- (2/14) *Maria benim düşün.düşü.m.den zengin.*
 Mary my think.participle.1singular.ablative rich
 ‘Mary is richer than I thought.’

And interestingly enough, the unavailability of clause-like standard terms in Turkish comparatives is not just an isolated phenomenon as such, but matches the above-mentioned overall ‘one predicate per sentence only’-constraint operative in this language to the effect that subordination (be it finite or infinitival in nature) is generally unattested in Turkish. Canonical subordination structures in English-like languages such as relative clauses or the complements

³⁹ As a matter of fact, the sentences in (2/13a, b) are not just ruled out due to a simple stylistic awkwardness arising from the immediate repetition of *(hızlı) koştu* ((fast) ran), given that selecting two distinct verbs in the matrix clause and the standard term of the comparative does not lead to an improvement in the well-formedness of this sentence at all, as can be seen from (i) below, where two different verbs have been chosen:

- (i) **Maria Hans (sesli) ıslık çalma.di şarkı söyle.di.*
 Mary Hans (loud) whistle(verb).past_tense sing.past_tense
 intended as: ‘Mary sang louder than Hans whistled.’

of expressions of perception or thinking also typically correspond to constructions featuring the exact same nominalisation patterns as attested in the standard terms of Turkish comparatives, as shown in (2/82) and (2/83) below, respectively.⁴⁰

(2/82) *Maria'nın* *al.dığı* *kitap* *enteresan.*
 Mary.genitive buy.participle book interesting
 ‘The book that Mary bought is interesting.’; more closely corresponds to:
 ‘The book bought by Mary is interesting.’

(2/83) *Yağmur* *yağ.dığı.na* *emin.im.*⁴¹
 rain(noun) rain(verb).participle.dative sure.1singular
 ‘I am sure (that) it is raining.’

In sum, I therefore conclude that in contrast to languages such as English, Turkish is characterised by a total lack of clausal comparison altogether, and it seems that I have come across a language confirming a conjecture uttered in Kennedy (2009), according to which “future work will no doubt turn up [...] examples of languages that have only individual comparison” (ibid., p. 154; his “individual comparison” being the equivalent of what I call ‘phrasal comparison’ here, for reasons that will become clear soon).⁴² Turkish thus clearly requires a genuinely phrasal approach to comparison, a first variant of which I shall develop in the next subsection.⁴³

2.3.2 **Standard Phrasal Accounts of Comparison (Kennedy (1997) and Bhatt/Takahashi (2007, to appear)) and a Revised Phrasal Analysis**

At present, there are mainly two approaches to phrasal comparison, one proposed in Kennedy (1997) and the other in Bhatt/Takahashi (2007, to appear), both of which were strongly influenced by early insights on this phenomenon gained in Heim (1985), the former

⁴⁰ I shall provide a principled account of these nominalisation patterns in subsection 2.3.4.3 below, when vital parts of the analysis I am going to propose will already be in place.

⁴¹ In the absence of an overt verb, the suffix *-im* encoding information about grammatical person still attaches to a sentence’s predicate, which happens to be the adjective *emin* (*sure*) in the case of example (2/83). This is essentially the same configuration we had already encountered with sentence (2/5) in subsection 2.1.2 above.

⁴² Comparison in Hindi-Urdu represents a less clear-cut case than Turkish in this respect in view of the fact that in addition to the *se*-comparative mentioned in the main text, this language also shows correlative constructions that are uncontroversially clausal in nature (cf. Bhatt/Takahashi (2007, to appear)), whereas Turkish does not have such an alternative strategy at its disposal.

⁴³ Strictly speaking, I am simplifying things somewhat in that there happens to be a third option besides the clausal and the phrasal approaches I am considering here, which has become known under the term ‘small clause analysis’ and was originally proposed by Pancheva (2006, 2009) for comparison in Slavic languages. While this approach does indeed seem to be very appropriate for this particular subgroup of languages, it makes largely wrong predictions when applied to a language like Turkish (among other things for instance in that it does not permit the blocking of clausal standard terms), which is why I shall not enter the details of this alternative option, here. For an application of this type of analysis to a non-Slavic language, I refer the interested reader to O’Connor (2010).

suggesting the lexical entry given in (2/84) below for a phrasal comparison operator (without specifying semantic types at this point) and the latter that in (2/85):

(2/84) $[[er/more_3]] = \lambda G. \lambda y. \lambda x. [MORE (G(x)) (G(y))]$
 [Kennedy (1997), p. 171; his (184)]

(2/85) $[[er]] = \lambda x [\in D_e]. \lambda P [\in D_{\langle d, \langle e, t \rangle \rangle}]. \lambda y [\in D_e]. \exists d [\in D_d] [P(y, d) [sic] \& \neg P(x, d) [sic]]$
 [Bhatt/Takahashi (2007), p. 21; their (8);
 similarly in Bhatt/Takahashi (to appear), section 1.2; their (4)]

As it turns out, however, neither of these two approaches can be directly transferred to phrasal comparison in Turkish as it stands (nor can they be maintained as such in English or Hindi-Urdu, that is the two languages for which they were originally designed, respectively, for that matter), in that both face severe difficulties with certain empirical data, which I shall next illustrate for the two analyses in turn. What is problematic about (2/84) suggested in Kennedy (1997) is above all that the order in which the arguments of the phrasal comparison operator are Schönfinkeled makes us expect this operator to be scopally inert in that the gradable predicate goes first.⁴⁴ But as a matter of fact, Turkish displays exactly the same kind of ambiguities English does that are traditionally accounted for by postulating movement of precisely this operator (cf. Heim (2001), pp. 224ff.): In a situation where somebody has written a draft that is ten pages in length and enquires about the length requirement of the paper that is to be written on the basis of this draft, uttering a sentence like (2/86) below gives for instance rise to an interesting ambiguity, in that it can either mean that the prospective article has to be exactly 15 pages long and is not allowed to be any longer or shorter than that or else, it can be taken to specify just its minimal length requirement, in which case the final article would also be permitted to turn out somewhat longer, say 16, 17 or even 18 pages:

(2/86) *The paper is required to be exactly five pages longer than that.*
 [Heim (2001), p. 224; her (28a)]

In Heim (ibid.), it is suggested to explain this ambiguity in terms of a scope ambiguity,⁴⁵ resulting from the fact that the modal expression can either scope above or below the

⁴⁴ As already pointed out in Heim (1985), a lexical entry for the phrasal comparison operator along the lines of (2/84) also leads to difficulties in properly deriving adverbial comparatives such as those given in (i) below:

(i) a. *He played longer than the night before.* [ibid., p. 18; her (18)]
 b. *I will be happier than in Austin.* [ibid., p. 18; her (19)]

In view of the fact that the Turkish language does not allow for standard terms that are adverbial in nature, however, I shall abstract away from this additional problem, here.

⁴⁵ While this approach had been criticised and partly abandoned in its aftermath (cf. for instance Krasikova (2011), where these ambiguities are analysed in terms of implicatures), more recently, new support has been lent to it, in

comparison operator, as spelt out in the two LFs she sketches, respectively (cf. (2/87a, b)), the first one generating the exactly-15-pages-in-total reading and the second the minimal requirement interpretation:

- (2/87) a. required [[exactly 5 pp -er than that] the paper be t long] [ibid.; her (28b)]
 b. [exactly 5 pp -er than that] [required [the paper be t long]] [ibid.; her (28c)]

When testing the Turkish equivalent in (2/88) in the two contexts specified in (2/89a) and (2/89b), in turn (the bracketed material serving as the immediate context of utterance),⁴⁶ the vast majority of my Turkish native speaker informants readily accepted sentence (2/88) as an appropriate description of both scenarios alike:

- (2/88) (Müsvedde on sayfa uzunluğ.un.da.
 draft ten page length.possessive.in
 ‘The draft is ten pages in length.’)
 Makale müsvedde.den tam beş sayfa uzun olmak zorunda.
 article draft.ablative exactly five page long is_required
 ‘The article is required to be exactly five pages longer than the draft.’)

- (2/89) a. context 1:
Mary has to write an article and for that use, she has written a 10-page-draft. Now, she is not sure how long the article, into which her draft will be turned, needs to be. So she asks her professor about it. The professor knows that Mary has written a 10-page-draft and utters sentence (2/88). Thereby, he wants to express that the actual article must be at least five pages longer than her draft, which means: Mary’s article must be at least 15 pages long, but it is no problem if it is even longer than that (say, 16 pages or 17 pages).
- b. context 2:
Mary has to write an article and for that use, she has written a 10-page-draft. Now, she is not sure how long the article, into which her draft will be turned, needs to be. So she asks her professor about it. The professor knows that Mary has written a 10-page-draft and utters sentence (2/88). Thereby, he wants to express that the actual article must be exactly five pages longer than her draft, which means: Mary’s article must be exactly 15 pages long and is neither allowed to be any shorter than that (for instance 14 pages), nor any longer (for example 16 pages).

This then clearly shows that Turkish gives rise to the exact same type of ambiguity when a comparative featuring a modal is combined with an overt differential modified by an expression

particular by work carried out by Martin Hackl and colleagues (specifically cf. Breakstone/Cremers/Fox/Hackl (2011)), which is why I shall stick to this account in what follows.

⁴⁶ As the attentive reader may have spotted right away, Turkish (2/88) is not the exact counterpart of the English sentence in (2/86), given that I replaced the pronominal element *that* by the overt noun (or determiner) phrase *müsvedde(den)* ((*the*) *draft(ablative)*). I shall come back to this issue in section 2.3.3.3 below, but for the time being, this substitution makes no real difference in that it does not directly affect the question of whether the phrasal comparison operator should be scopally active or not that is under discussion, here.

like *exactly*, the latter being indispensable in that with a simple differential such as unmodified *five pages*, the attested ambiguity could also be ascribed to this differential being ambiguous between an exactly-five-pages reading and an at-least-five-pages reading itself. In view of the fact that the precise derivation and semantic calculation of sentences like (2/88) come with a couple of rather intricate complications, I shall skip that, here and take discussion of this sentence up again at two later points in the course of this dissertation, in subsections 2.3.3.3 and 2.3.4.3, when more ingredients of the actual analysis I am going to offer for phrasal comparison in Turkish will already have been introduced. For the moment, just observe that we are dealing with an ambiguity here that is essentially scopal in nature and that the entry for the comparison operator specified in Kennedy (1997) does precisely not allow the kind of scopal interaction between that operator and modals required with sentences like (2/86) or (2/88). In contrast to this, the argument structure of the phrasal comparison operator proposed in Bhatt/Takahashi (2007, to appear) (cf. (2/85) above) can handle these data in a simple and straightforward fashion, as will be shown in detail below.

Unfortunately, the latter has however serious trouble in adequately deriving a completely different type of comparison construction and that is comparatives featuring overt differentials of any sort, be these explicitly modified by elements like *exactly* or not and also irrespective of whether the corresponding comparative contains a modal expression or not. To see this, take a simple case such as sentence (2/9) repeated from the empirical section 2.1.2:

(2/9) *Maria Hans'tan iki santim uzun.*
 Mary Hans.ablative two centimetre tall
 ‘Mary is two centimetres taller than Hans.’

Given that Bhatt/Takahashi (2007, to appear)’s denotation of the comparison operator in (2/85) crucially relies on existential quantification over degrees, when trying to deal with differential comparatives like (2/9), we are always at a complete loss as to where we should add the amount denoted by the differential as such, that is two centimetres in the case at hand, to: By virtue of the fact that (2/85) applied to example (2/9) would simply require there to be a degree of height that Mary, but not Hans reaches, we lack an exact degree that we could increase by two centimetres. What complicates matters further is that more specifically, existential quantification actually results in saying that there is at least one such degree holding of Mary, yet not of Hans, which automatically means that there might in fact exist several such degrees, rendering it totally unclear to which of these degrees, even if we could identify them, the two centimetres specified by the differential should ultimately be added. In sum, it thus appears that both approaches cannot be upheld in their present forms, the one suggested in Kennedy (1997)

failing with scopal ambiguities and that proposed in Bhatt/Takahashi (2007, to appear) being unable to handle differential comparatives in view of a Seuren (1973)-style truth value description of the comparison operator that is inappropriate for these. In what follows, I shall therefore derive a modified version of phrasal comparison, which I shall henceforth refer to as the ‘Revised Phrasal Analysis’ (RPA), by combining an argument structure for the comparison operator paralleling that of Bhatt/Takahashi (2007, to appear) with a truth value description involving a maximality operator along the lines of von Stechow (1984a).

Let me illustrate this RPA on the basis of the canonical Turkish comparative in (2/90):

(2/90) *Maria* *Peter'den* *hızlı* *koştu*.
 Mary Peter.ablative fast run.past_tense
 ‘Mary ran faster than Peter.’

It mainly consists of the following three ingredients: First, gradable adjectives and adverbs are taken to denote relations between individuals and degrees, as can be seen from the model lexical entry for the adverb *hızlı* (*fast*) in (2/91), an idea widely adopted in degree semantics (cf. for instance Beck (2011), Cresswell (1976), Heim (1985, 2001), Kennedy (2007, 2009), Kennedy/McNally (2005), Schwarzschild (2005) or von Stechow (1984a), among many others):

(2/91) $[[hızlı]] = \lambda d \in D_d. \lambda x \in D_e. \text{speed}(x) \geq d; x \text{ is } d\text{-fast}^{47}$

Second, both the comparee term (*Maria* in the example under discussion) and the standard term of a comparison (*Peter'den*; *Peter(ablative)*) each provide us with an individual. And third, as specified in its lexical entry in (2/92), a Phrasal Comparison Operator (PCO) intervenes to form and compare the maximal degrees to which these two individuals possess a quality, perform an action, etc., as is spelt out in the matrix clause (the speed of their running in the case of (2/90)):

(2/92) $[[PCO]] = \lambda x \in D_e. \lambda A \in D_{\langle d, \langle e, t \rangle \rangle}. \lambda y \in D_e. \max(\lambda d. A(d)(y)) > \max(\lambda d. A(d)(x))^{48}$

If we now apply this machinery to example (2/90), this will result in an LF like the one depicted in (2/93) on the next page (where I annotate the tree with semantic types and a partial calculation

⁴⁷ In the remainder of this section, I shall often be careless enough to simply use the second notational option for reasons of simplicity, although strictly speaking, this is not quite correct, given that I do assume monotonicity (cf. also the discussion of this issue to follow in subsection 4.5.2.4.2 below).

⁴⁸ This is in essence the same entry as that suggested for a phrasal comparison operator in Kennedy (2009), which I reproduce in (i) below:

(i) $[[\text{MORE}_I]] = \lambda y. \lambda g. \lambda x. \max \{d' \mid g(d')(x) = 1\} > \max \{d'' \mid g(d'')(y) = 1\}$

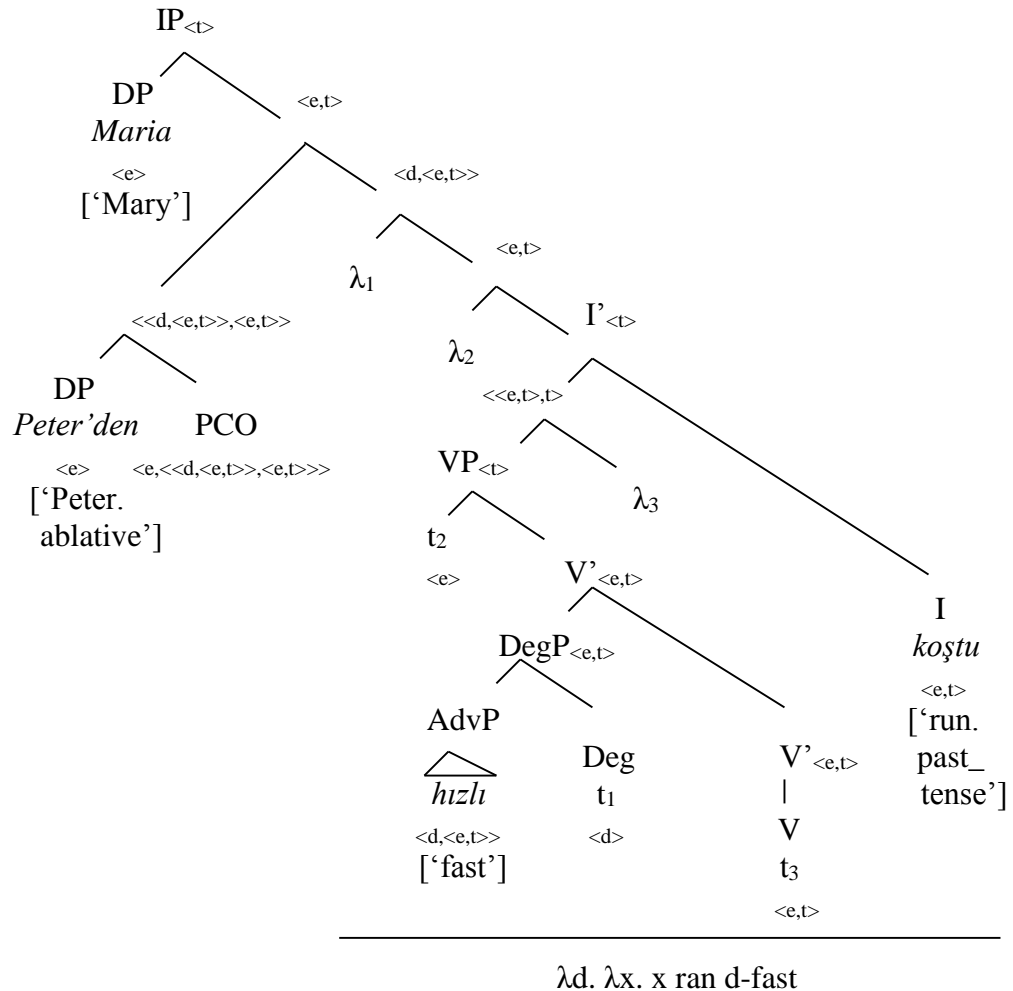
[ibid., p. 150; his (31); the subscript “I” indicating

“individual comparison” in Chris Kennedy’s terminology that corresponds to phrasal comparison, here]

Notice, however, that at the time I developed this RPA, Kennedy (2009) had not yet been published.

for ease of exposition),⁴⁹ and sentence (2/90) is thus predicted to be true iff $\max(\lambda d. \textit{Mary ran } d\text{-fast}) > \max(\lambda d. \textit{Peter ran } d\text{-fast})$, which is a very welcome result in view of the fact that this is exactly what this sentence actually means:⁵⁰

(2/93)



⁴⁹ In proposing a syntactic structure along the lines of (2/93), I follow the tradition of Abney (1987), Bowers (1987), Corver (1990, 1991, 1997a, b) or Kennedy (1997), among others, in assuming that a degree phrase takes the adverbial phrase headed by *hızlı* (*fast*) as its complement. Alternatively, Bhatt/Pancheva (2004), Bowers (1975), Heim (2001, 2006a), Jackendoff (1977), Schwarzschild/Wilkinson (2002), also among many others, propose to put the degree phrase into the specifier position of the phrase projected by the gradable adjective/adverb itself. For the purposes I am pursuing here, it will probably not make much of a difference which basic syntactic analysis is chosen and as a matter of fact, both are actually quite unsatisfactory per se in making clearly wrong predictions alike (for a recent and fairly comprehensive critical review of both, cf. Matushansky (2011)). A novel approach to the syntax of comparison that might eventually fare better is provided in Grimaldi (2009). It must however be stressed that this account is relatively unintuitive and depends heavily on the assumption that two separate degree phrases are projected, the various consequences of which have never really been examined as far as I am aware of. For the time being, I shall therefore remain largely indifferent with respect to this matter, and I have simply selected one approach fitting my rather modest syntactic purposes, here.

⁵⁰ At first glance, the LF specified in (2/93) might look somewhat peculiar, because the second instantiation of movement targets a position in between the first moved element and its binder index, so that we are dealing with a sort of ‘parasitic’ movement, here (likewise in Kennedy (1997), pp. 170-174 and (2009), p. 153 as well as in Bhatt/Takahashi (2007), pp. 21f. and (to appear), subsection 1.2). As argued in Beck/Sauerland (2000, in particular pp. 263f.), however, this special movement strategy is also indispensably at work with cumulative interpretations of relational plurals in combination with definite numerals, indefinite numerals and coordinations of proper names, so that there is independent motivation for it, anyway and its use does thus not constitute a mere stipulation for analysing phrasal comparatives.

Crucially observe, at the same time, that in contrast to the approach advocated in Bhatt/Takahashi (2007, to appear), this RPA also directly permits to account for comparatives involving an overt differential without any further ado, given that a sentence like (2/9) from above will now come out true iff $\max(\lambda d. \text{Mary is } d\text{-tall}) \geq \max(\lambda d. \text{Hans is } d\text{-tall}) + 2 \text{ centimetres}$, the inclusion of maximality in the comparison operator's truth value description enabling us to pick out precise degrees to which adding an amount specified by a differential is generally unproblematic.⁵¹ With only slight modifications, this RPA for 'ordinary' comparatives then translates in a simple and straightforward manner to other comparison constructions. If I posit for example the lexical entry given in (2/94) below for the Turkish equative operator *kadar*, sentence (2/23), also repeated from section 2.1.2 above, will properly be predicted true iff $\max(\lambda d. \text{Mary is } d\text{-tall}) \geq \max(\lambda d. \text{Hans is } d\text{-tall})$ and in a similar fashion, this approach can also be applied to all other basic Turkish comparison constructions introduced in the empirical overview in section 2.1.2 of this dissertation:

(2/94) $[[kadar]] = \lambda x \in D_e. \lambda A \in D_{\langle d, \langle e, t \rangle \rangle}. \lambda y \in D_e. \max(\lambda d. A(d)(y)) \geq \max(\lambda d. A(d)(x))$ ⁵²

(2/23) *Maria Hans kadar uzun.*
 Mary Hans as...as tall
 'Mary is as tall as Hans.'

In spite of such obvious successes, this RPA fares however considerably worse as soon as one leaves the field of standard, well-behaved cases and turns to more complex instantiations of comparatives, which is precisely what I intend to do next in section 2.3.3 on the basis of three exemplary cases.⁵³

2.3.3 Problematic Data for the Revised Phrasal Analysis

2.3.3.1 Non-Agentive and Adjunct-like Standard Terms

A first set of problematic data for the RPA is constituted by comparatives with a non-agentive standard term, as exemplified with the expression *dünya rekoru(dan)* (*world record(ablative)*) in (2/95) on the next page:

⁵¹ As will be shown in subsection 3.3.1.2.2 below, what is really at stake here is maximal informativity rather than plain maximality as such, but for present purposes, simply assuming the latter will be largely sufficient.

⁵² I follow Beck (2011) in assuming that equatives give rise to an ordering relation of type "≥" rather than to a simple ">"-one (cf. *ibid.*, p. 1349, in particular her (44)).

⁵³ Note in passing that the original proposals in Kennedy (1997) and Bhatt/Takahashi (2007, to appear) fail in this respect in exactly the same fashion as the RPA itself.

(2/95)	<i>Maria</i>	<i>dünya rekoru.dan</i>	<i>yüksek</i>	<i>atla.di.</i>
	Mary	world record.ablative	high	jump.past_tense
	‘Mary jumped higher than the world record.’			

The RPA predicts example (2/95) to be true iff $\max(\lambda d. \text{Mary jumped } d\text{-high}) > \max(\lambda d. \text{the world record jumped } d\text{-high})$, which arguably makes no sense at all. Critical minds might object at this point, that *dünya rekoru(dan)* (*world record(ablative)*) is simply not a term denoting an individual to begin with, but that it should rather be analysed directly as a degree-denoting expression. While this objection might indeed be fully justified, note that the difficulty I am describing here is by no means limited to apparently degree-denoting expressions, but that it actually reappears with any comparative featuring an adjunct-like element as its standard term. To a sentence like that in (2/3) below, repeated from section 2.1.2 above, the RPA would for example ascribe truth conditions according to which $\max(\lambda d. \text{Mary worked } d\text{-hard}) > \max(\lambda d. \text{the week before worked } d\text{-hard})$, which are equally nonsensical, given that weeks normally do not tend to work and yet, in contrast to *dünya rekoru(dan)* (*world record(ablative)*), the element *geçen hafta(dan)* (*the week before(ablative)*) surely cannot be directly treated as a degree-denoting expression:⁵⁴

(2/3)	<i>Maria</i>	<i>geçen</i>	<i>hafta.dan</i>	<i>ağır</i>	<i>çalıştı.</i>
	Mary	last	week.ablative	hard	work.past_tense
	‘Mary worked harder than the week before.’				

2.3.3.2 Nominalisation Patterns

A second difficulty for the RPA is related to the fact that as noted above (cf. section 2.1.2), in languages like Turkish, standard terms often appear in the form of nominalisations. If one tries for instance to express a statement like (2/96) on the following page, involving a clausal comparative, in Turkish, this typically results in a nominalisation, as shown in (2/14), repeated from above, where the nominal status of the deverbal element *düşündüğüm(den)* (*thinking(ablative)*) is underlined by its compatibility with a possessive determiner (*benim*

⁵⁴ Alternatively, one could conceive of sentence (2/3) as involving a phonologically not realised counterpart of ‘the week before’ in its matrix clause, that is, something like a silent equivalent of ‘this week’. This would yield the more plausible truth conditions for this sentence specified in (i):

(i) $\max(\lambda d. \text{Mary worked } d\text{-hard this week}) > \max(\lambda d. \text{Mary [had] worked } d\text{-hard the week before})$
 In the end, this makeshift solution will however not be able to adequately solve the problem either, because now, a difficulty of a different sort arises: Given that the phrasal comparison operator makes use of one and the same gradable property twice (with the comparee and the standard term; cf. section 2.3.3.4 below), we cannot guarantee that the appropriate tense, mood and aspect features get chosen. In (i) for instance, it is totally unclear to me where to get the perfective marker *had* in the second half of the truth conditions from, because the matrix clause does of course not contain this element, the insertion of which is even excluded there by virtue of the fact that this clause has a completely different temporal setting altogether.

(*my*) as well as by its ability to combine with a case affix (the ablative marker *-den*), both of which constitute properties restricted to elements that are genuinely nominal in nature:

(2/96) *Mary is richer than I thought.*

(2/14) *Maria benim düşün.düğü.m.den zengin.*
 Mary my think.participle.1singular.ablative rich
 approximately: ‘Mary is richer than my thinking.’; intended as: ‘Mary is richer than I thought.’

Blindly applying the RPA to this example predicts it to be true iff *max* (λd . *Mary is d-rich*) > *max* (λd . *my thinking is d-rich*), which, of course, is perfect nonsense. At this point, it seems reasonable to mention a short aside: For the time being, I shall simply treat the element *benim düşündüğüm(den)* (*my thinking(ablative)*) as a nominalisation pattern and provide it with the rather coarse gloss *my thinking*.⁵⁵ To the best of my knowledge, not much work has been dedicated to this Turkish participial construction so far and the only hint of an account I have been able to find is a passage in Kornfilt (2005), where it is stated that such participials could be analysed as light headed relative clauses “with a semantically minimally specified head” (ibid., p. 341, following a suggestion in van Riemsdijk (2000)), without however providing any further specification of matters. On the one hand, this proposal is interesting in so far as we would be dealing here with a relatively free relation between a relative clause and its light head and that I am going to suggest a similarly free relation between an individual and a degree that goes with it later on (cf. subsection 2.3.4.2), so that there would be independent evidence for the assumption of such a ‘loose’ relationship from a different area of Turkish grammar. On the other hand, I am not particularly optimistic about giving this participial construction a relative clause treatment, though, because the Turkish language is generally characterised by a total lack of relative clauses altogether, which is in fact rather unsurprising in view of the strict ‘one predicate per sentence only’-constraint operative in this language, since relative clauses would inevitably have to introduce a second, illicit predicate. In section 2.3.4.3 below, I shall therefore offer an alternative account of these participials that treats them as genuine nominalisations rather than as relative clauses. I shall thus return to the question of how exactly Turkish nominalisations like the one displayed in (2/14) should best be analysed and for the moment,

⁵⁵ Readers familiar with German might conceive of this element as corresponding to the nominalised participial construction *das von mir Gedachte* in this language, which is considerably closer to the Turkish original than the English approximation *my thinking*, participles not always being able to undergo nominalisation in the latter language.

all that matters is that these constitute a serious challenge for the RPA as it stands, just like standard terms that are inherently non-agentive in nature, as argued for before.

2.3.3.3 Ambiguities with Comparatives Featuring Modal Expressions in Combination with Overt *Exactly*-Differentials

A third complication for the RPA finally comes from certain comparatives including both, a modal as well as an overt differential modified by an expression like *exactly*, as introduced in section 2.3.2 with examples (2/86) and (2/88) for English and Turkish, respectively. Given that this is a highly complex matter, I shall go about things very carefully here and examine the two languages in turn, in this respect, starting with the English example (2/86), repeated from above:

(2/86) *The paper is required to be exactly five pages longer than that.*

Next, I replace the pronominal element in the comparative's standard term by the noun (or determiner) phrase *the draft*, thus rendering the English sentence perfectly parallel to Turkish (2/88), and I add a finite verb, because I want to contrast clausal comparison in English to its phrasal Turkish counterpart, as shown in (2/97) below:⁵⁶

(2/97) *The paper is required to be exactly five pages longer than the draft is.*

This sentence is first of all ambiguous in that it gives rise to two different readings depending on the size of the ellipsis site (under a clausal reduction analysis), as sketched in the corresponding reconstruction patterns indicated in (2/98a and b) below, respectively:

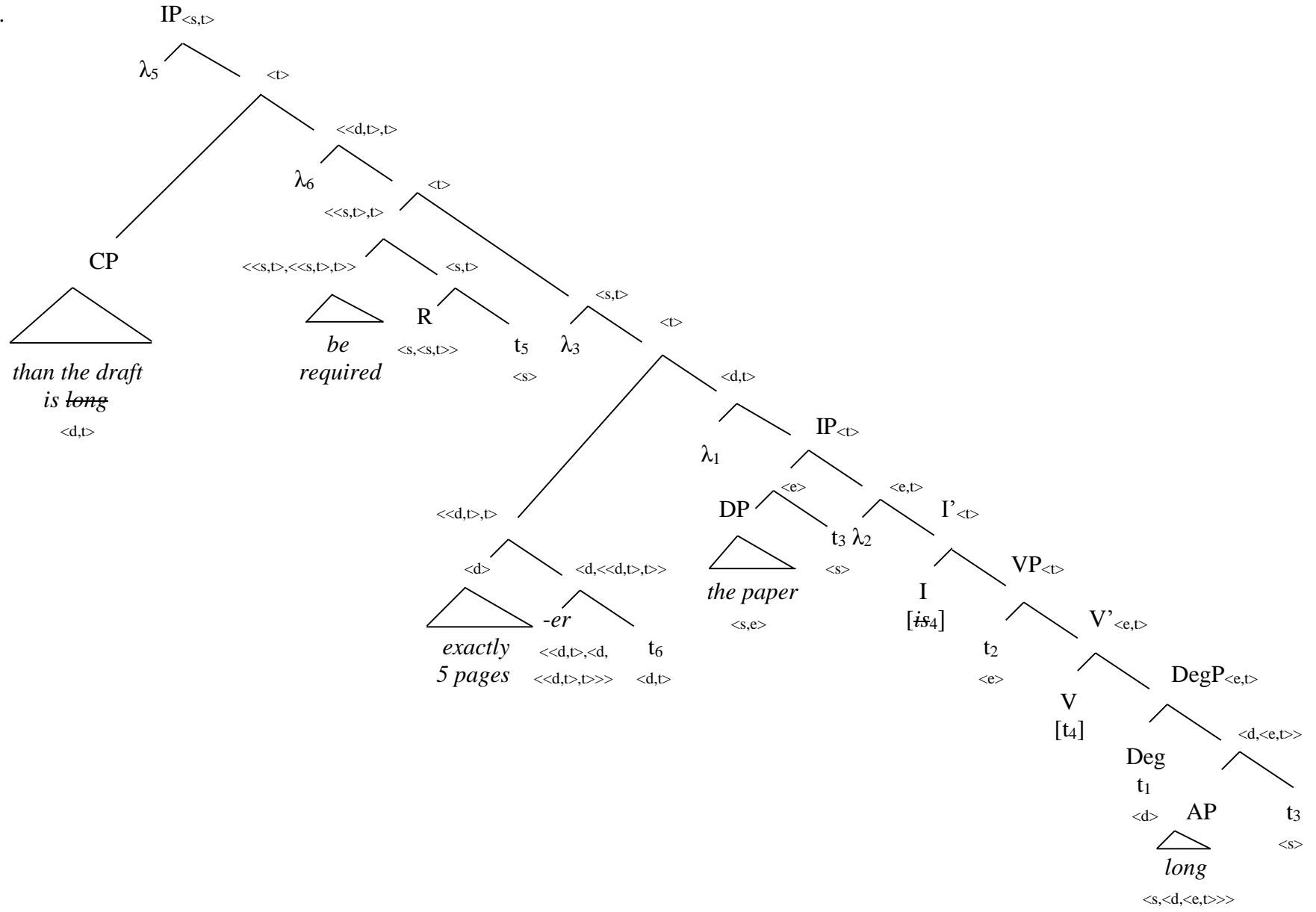
- (2/98) a. *The paper is required to be exactly five pages longer than the draft is ~~d-long~~.*
b. *The paper is required to be exactly five pages longer than the draft is ~~required to be d-long~~.*

Let me stress right from the beginning that in what follows, I shall only be concerned with the first of these two readings, that is the one given in (2/98a), which is in turn ambiguous in permitting for an exactly-15-pages-in-total reading as well as a minimal requirement interpretation as shown in section 2.3.2 above, which is exactly the ambiguity I shall be interested in deriving, here. In order to do so, I should next like to suggest that the LFs in (2/99a) and (2/99b) (for the internal structure of the complementiser phrase in (2/99a) cf. the one

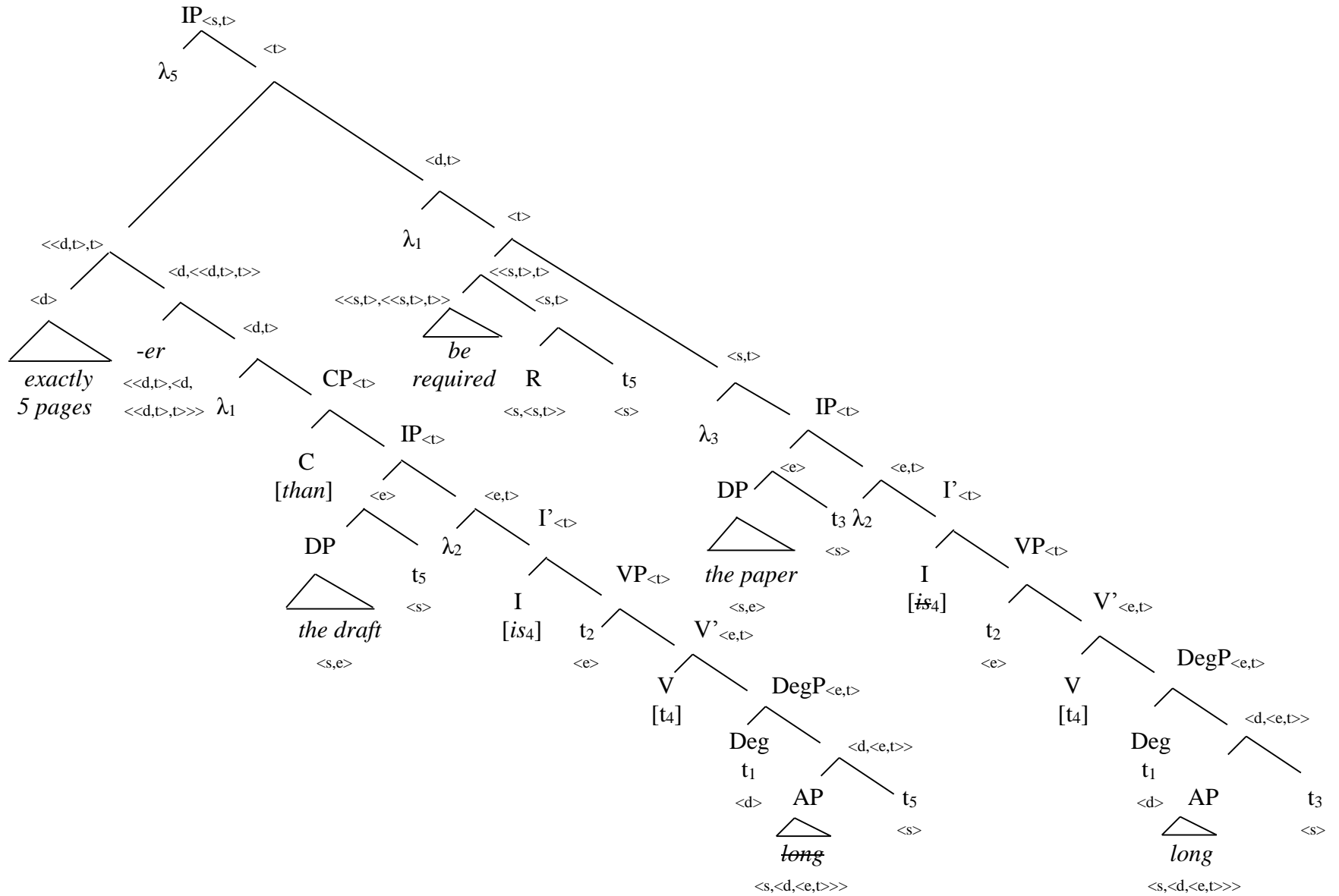
⁵⁶ As noted before (cf. section 2.3.1), the question of whether sentence (2/97) without an overt *is* in its standard term represents a true phrasal or an elliptical clausal comparative constitutes a largely controversial topic, so in order to play safe, I overtly include a verb in this standard term.

supplied in (2/99b)) on the following pages underlie sentence (2/97) (in the relevant readings), which differ in the scopal order of the comparison operator and the modal expression (*be required*) itself, as is necessary for deriving this ambiguity (cf. section 2.3.2): Whereas the modal outscopes the comparison operator in (2/99a), this operator takes wide scope with respect to the modal in (2/99b):

(2/99) a.



(2/99) b.



If we now introduce a standard entry for the clausal comparison operator as specified in (2/100) below, sentence (2/97) will be predicted to denote either (2/101a) or (2/101b) (in an intensional framework):

(2/100) $[[\text{-er}_{\text{clausal/diff}}]] = \lambda D_1 [\in D_{\langle d,t \rangle}]. \lambda d [\in D_d]. \lambda D_2 [\in D_{\langle d,t \rangle}]. \max (D_2) = \max (D_1) + d$
 [modified version of the clausal comparison operator equipped for combination with an overt differential proposed in Beck (2011), p. 1347; her (35a)]

- (2/101) a. $\lambda w. \forall w' \in W [w' \text{ is compatible with the requirements in } w \rightarrow \max (\lambda d. \text{the unique paper in } w' \text{ is } d\text{-long in } w') = \max (\lambda d. \text{the unique draft in } w \text{ is } d\text{-long in } w)] + \text{exactly five pages}$
 b. $\lambda w. \max (\lambda d. \forall w' \in W [w' \text{ is compatible with the requirements in } w \rightarrow \text{the unique paper in } w' \text{ is } d\text{-long in } w']) = \max (\lambda d. \text{the unique draft in } w \text{ is } d\text{-long in } w) + \text{exactly five pages}$

Evaluating these propositions with regard to the actual world @ will then result in the truth conditions specified in (2/102) below, which I provide with paraphrases to make them more easily accessible:

- (2/102) $[[[(2/97)]]^@ = 1 \text{ iff}$
 a. $\forall w' \in W [w' \text{ is compatible with the requirements in } @ \rightarrow \max (\lambda d. \text{the unique paper in } w' \text{ is } d\text{-long in } w') = \max (\lambda d. \text{the unique draft in } @ \text{ is } d\text{-long in } @)] + \text{exactly five pages}$
 ‘In every world w' that conforms to the requirements established in the actual world, the unique paper in w' reaches a length that exceeds that of the unique draft in the actual world by exactly five pages.’ or
 b. $\max (\lambda d. \forall w' \in W [w' \text{ is compatible with the requirements in } @ \rightarrow \text{the unique paper in } w' \text{ is } d\text{-long in } w']) = \max (\lambda d. \text{the unique draft in } @ \text{ is } d\text{-long in } @) + \text{exactly five pages}$
 ‘The length that the unique paper reaches in every world w' conforming to the requirements established in the actual world exceeds that of the unique draft in the actual world by exactly five pages.’

To assess the validity of these truth conditions, two aspects need to be taken into consideration: First of all, do these really yield the desired ambiguity and secondly, can we make sure that the paper and the draft in question as well as their predicated lengths are located in the appropriate sets of worlds? As matters turn out, (2/102) allows us to draw a positive conclusion in both respects alike: For the truth conditions specified in (2/102a) directly supply us with the exactly-15-pages-in-total reading, while those in (2/102b) in turn give rise to the minimal requirement interpretation. And at the same time, in both, (2/102a) and (2/102b), the draft and its length are situated in the actual world, in contrast to which the paper and its length are located in a set of

worlds distinct from that, which is exactly as desired, given that in the scenario at hand (cf. (2/89) in subsection 2.3.2 above), the draft exists already and is thus part of the actual world, while the paper remains yet to be written and can therefore only belong to a set of possible worlds differing from the actual one. Note however, that I have only been able to achieve this result by Quantifier Raising the entire complementiser phrase *than the draft is ~~d-long~~* in the LF in (2/99a) to a structurally very high position and that an interpretation of this element in its base position would have led to the output depicted in (2/103a) and (2/104a), where I underline the problematic elements for ease of comprehensibility:

(2/103) a. $\lambda w. \forall w' \in W [w' \text{ is compatible with the requirements in } w \rightarrow \max (\lambda d. \text{ the unique paper in } w' \text{ is } d\text{-long in } w') = \max (\lambda d. \text{ the unique draft in } w' \text{ is } d\text{-long in } w')] + \text{ exactly five pages}$

(2/104) a. $[[(2/97)]]^@ = 1 \text{ iff}$

$\forall w' \in W [w' \text{ is compatible with the requirements in } @ \rightarrow \max (\lambda d. \text{ the unique paper in } w' \text{ is } d\text{-long in } w') = \max (\lambda d. \text{ the unique draft in } w' \text{ is } d\text{-long in } w')] + \text{ exactly five pages}$

‘In every world w' that conforms to the requirements established in the actual world, the unique paper in w' reaches a length that exceeds that of the unique draft in w' by exactly five pages.’

While such a configuration accounts for a reading sentence (2/97) arguably also has (this would correspond to a scenario in which neither the paper nor the draft have been written as yet and where requirements for both of these exist), it does not adequately capture the reading I am after here, for which the draft (and its length) would have to be located in the actual world @. Next, notice that if Orin Percus is on the right track when postulating that binding of world variables with nominal elements is much less restricted than those occurring with predicates, the latter being subject to his “generalisation X” requiring world variables to be bound by the nearest λ -binder available in an underlying LF, in contrast to which the former are not (Percus (2000), pp. 201ff.), we could improve matters somewhat and get as far as (2/103b) and (2/104b):

(2/103) b. $\lambda w. \forall w' \in W [w' \text{ is compatible with the requirements in } w \rightarrow \max (\lambda d. \text{ the unique paper in } w' \text{ is } d\text{-long in } w') = \max (\lambda d. \text{ the unique draft in } w \text{ is } d\text{-long in } w')] + \text{ exactly five pages}$

(2/104) b. $[[[(2/97)]]]^@ = 1$ iff

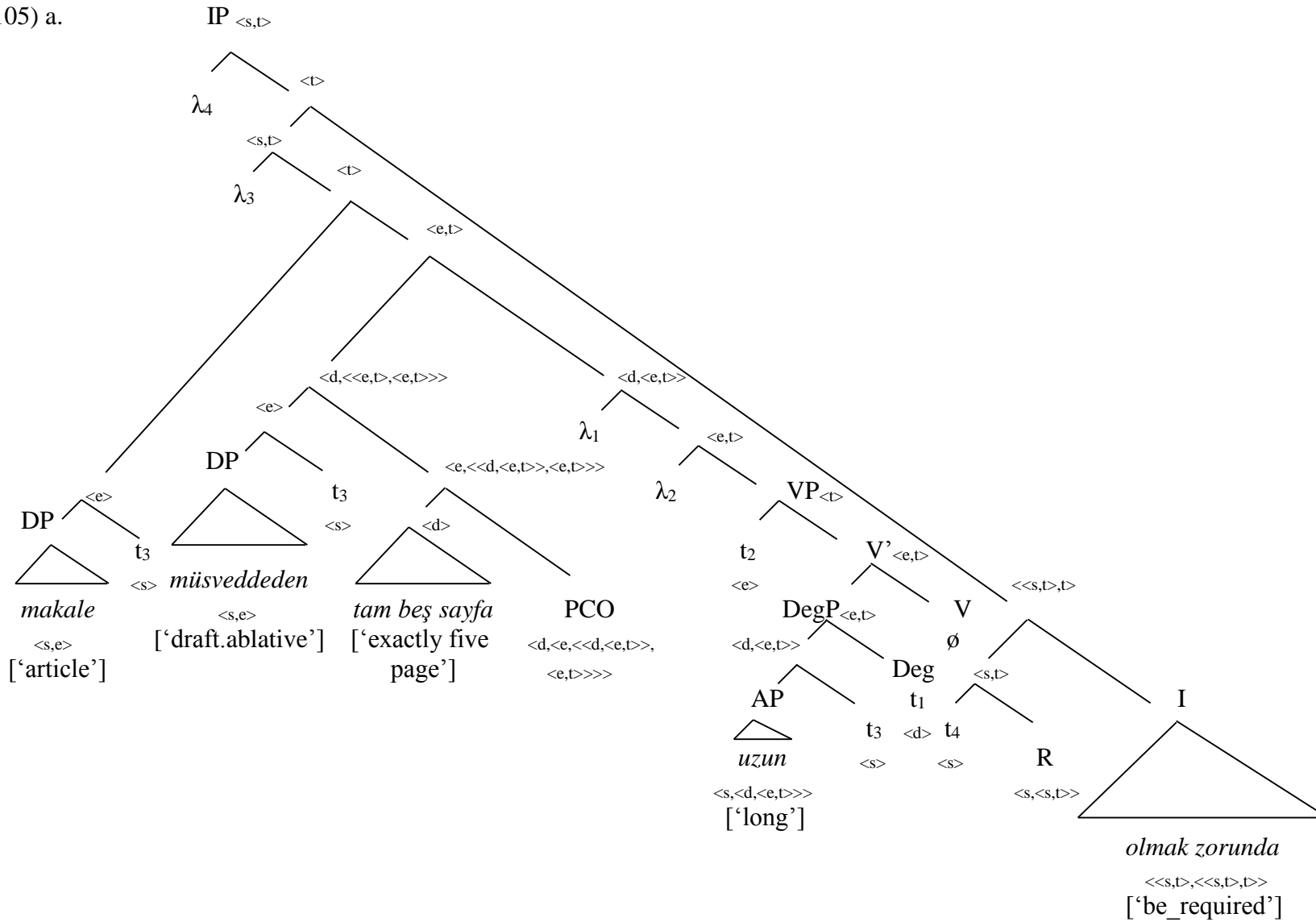
$\forall w' \in W$ [w' is compatible with the requirements in @ \rightarrow max (λd . the unique paper in w' is d -long in w') = max (λd . the unique draft in @ is d -long in w')] + exactly five pages

'In every world w' that conforms to the requirements established in the actual world, the unique paper in w' reaches a length there that exceeds the length that the unique draft in the actual world reaches in w' by exactly five pages.'

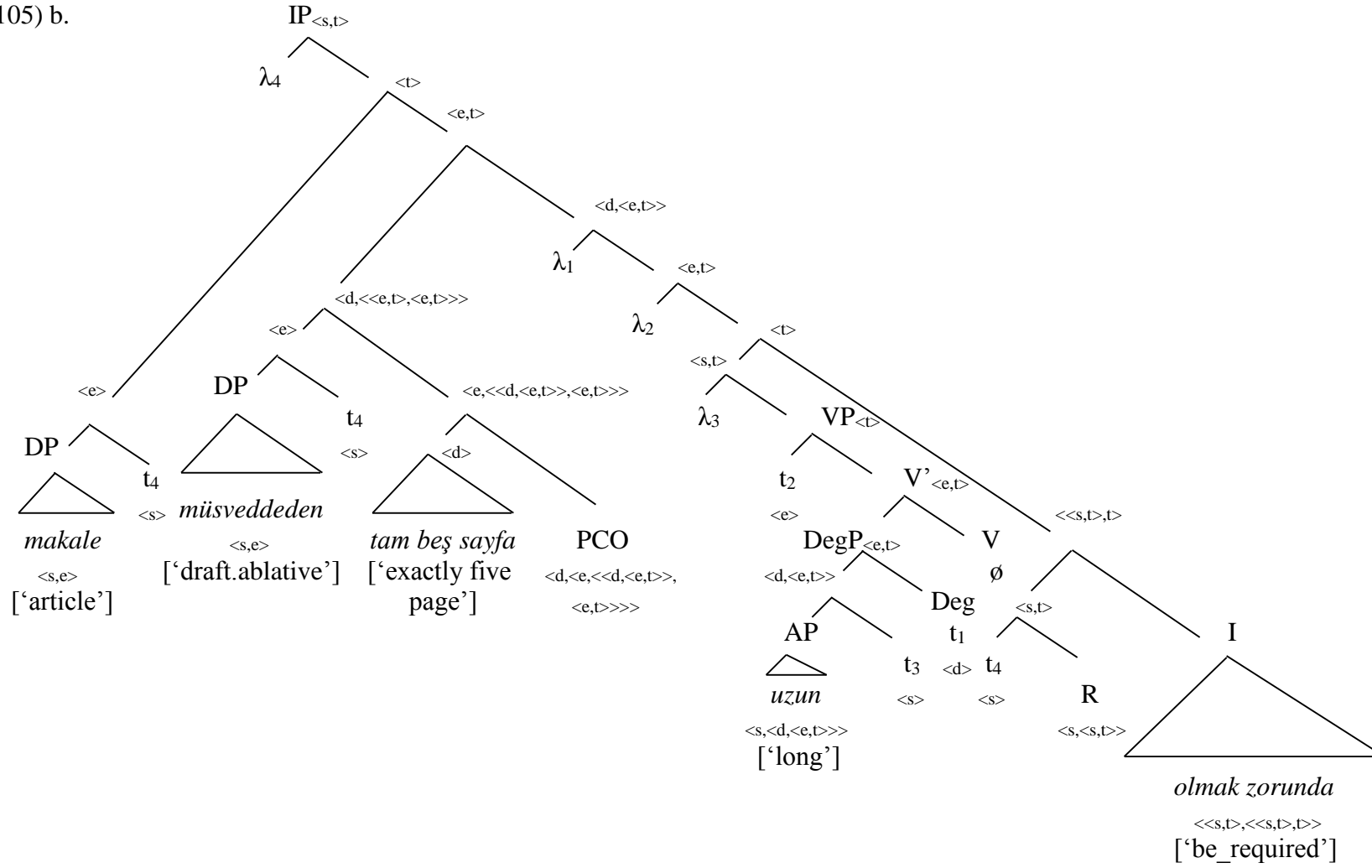
The outcome is thus still not really what I am after in that now, the draft at hand and its length are situated in different worlds, so that the greater liberty in assigning world variables suggested in Percus (2000) can eventually not fully remedy the basic problem we are faced with, here. Given that the desired result can however be achieved by an instantiation of Quantifier Raising as shown beforehand, I shall not take this difficulty too seriously. In this context, also observe that while Heim (2001) only discusses the example featuring a pronoun in the comparative's standard term (cf. (2/86) above), where ordinary pronoun resolution via a suitable assignment function could arguably do the trick and guarantee picking the draft (as well as its length) from the appropriate set of worlds, she explicitly noticed in later work that one should "make provisions to evaluate the embedded clause [that is, the comparative's standard term] in the actual world (rather than the world introduced by the modal)" (Heim (2006a), p. 52), which is exactly what I accomplish by means of my additional step of Quantifier Raising.

How about the situation with phrasal comparison in Turkish? As we have seen in subsection 2.3.2 above, the equivalent Turkish sentence (2/88) gives rise to the exact same ambiguity, so that in this language, we should be able to derive both readings as well. The corresponding LFs are provided in (2/105a) and (2/105b), respectively, supplying us with the two denotations given in (2/106), evaluation of which with respect to the actual world @ will eventually yield the truth conditions for example (2/88) that are specified in (2/107), where I once again provide paraphrases:

(2/105) a.



(2/105) b.



- (2/106) a. $\lambda w. \forall w' \in W [w' \text{ is compatible with the requirements in } w \rightarrow \max (\lambda d. \text{ the unique paper in } w' \text{ is } d\text{-long in } w') = \max (\lambda d. \text{ the unique draft in } w' \text{ is } d\text{-long in } w')] + \text{ exactly five pages}$
 b. $\lambda w. \max (\lambda d. \forall w' \in W [w' \text{ is compatible with the requirements in } w \rightarrow \text{ the unique paper in } w \text{ is } d\text{-long in } w']) = \max (\lambda d. \forall w' \in W [w' \text{ is compatible with the requirements in } w \rightarrow \text{ the unique draft in } w \text{ is } d\text{-long in } w']) + \text{ exactly five pages}$

(2/107) $[[(2/88)]]^@ = 1$ iff

- a. $\forall w' \in W [w' \text{ is compatible with the requirements in } @ \rightarrow \max (\lambda d. \text{ the unique paper in } w' \text{ is } d\text{-long in } w') = \max (\lambda d. \text{ the unique draft in } w' \text{ is } d\text{-long in } w')] + \text{ exactly five pages}$
 ‘In every world w' that conforms to the requirements established in the actual world, the unique paper in w' reaches a length there that exceeds the one the unique draft in w' reaches there by exactly five pages.’
 or
 b. $\max (\lambda d. \forall w' \in W [w' \text{ is compatible with the requirements in } @ \rightarrow \text{ the unique paper in } @ \text{ is } d\text{-long in } w']) = \max (\lambda d. \forall w' \in W [w' \text{ is compatible with the requirements in } @ \rightarrow \text{ the unique draft in } @ \text{ is } d\text{-long in } w']) + \text{ exactly five pages}$
 ‘The length that the unique paper in the actual world reaches in every world w' conforming to the requirements established in the actual world exceeds the length that the unique draft in the actual world reaches in w' by exactly five pages.’

As has been the case in English beforehand, deriving the basic ambiguity turns out to be fairly unproblematic, in that (2/107a) supplies us with the exactly-15-pages-in-total reading, (2/107b) resulting in the minimum requirement interpretation, just as desired. Next, situating the paper and the draft as well as their respective lengths in the appropriate sets of worlds ends up in a fair mess, though: In the (a)-version, everything, that is the paper, the draft as well as their respective lengths, gets located in the set of worlds w' alike, while we would actually want to situate the draft (and its length) in the actual world to successfully capture the scenario at hand. What is worse is that this time, we cannot fix this problem in a fashion analogous to the English derivation in (2/99a) above in that Quantifier Raising a string corresponding to *the draft be d-long* is impossible in Turkish by virtue of the fact that in the case of phrasal comparison, the predicate *be d-long* appears only once in the structure. All we could raise is thus the expression *müsvedde.den* (*draft.ablative*), which would lead to the following configuration:

- (2/108) $\lambda w. \forall w' \in W [w' \text{ is compatible with the requirements in } w \rightarrow \max (\lambda d. \text{ the unique paper in } w' \text{ is } d\text{-long in } w') = \max (\lambda d. \text{ the unique draft in } @ \text{ is } d\text{-long in } w')] + \text{ exactly five pages}$

(2/109) $[[(2/88)]]^@ = 1$ iff

$\forall w' \in W$ [w' is compatible with the requirements in @ \rightarrow max (λd . the unique paper in w' is d -long in w') = max (λd . the unique draft in @ is d -long in w')] + exactly five pages

‘In every world w' that conforms to the requirements established in the actual world, the unique paper in w' reaches a length there that exceeds the length that the unique draft in the actual world reaches in w' by exactly five pages.’

Observe that this corresponds precisely to the output we arrived at in (2/103b) and (2/104b) above, when making an attempt at deriving the exactly-15-pages-in-total reading for English without Quantifier Raising the complementiser phrase *than the draft is ~~d-long~~*, making use of insights gained in Percus (2000) and directly applying these to Turkish (2/105a) without previously Quantifier Raising *müsvedde.den* (*draft.ablative*) would of course yield exactly the same result again, given that according to Orin Percus’ “generalisation X”, only the world variable going with the noun (or determiner) phrase *müsveddeden*, but not that associated with the predicate *uzun* (*be d-long*) could be bound by a λ -binder that does not appear closest in the underlying structure. For the time being, I shall leave open the question of whether the fact that the draft and its length thus cannot be located within the same worlds constitutes a truly serious problem or not, because as we shall see next, the analysis cannot be maintained in its present form anyway, it running into even more serious trouble when we finally try to account for the minimum requirement interpretation (cf. (2/106b) and (2/107b)) as the second reading the Turkish sentence (2/88) gives rise to. To see this, let us have a close look at (2/106b) and (2/107b) again, which I repeat from above, this time underlining the problematic aspects:

(2/106) b. λw . max (λd . $\forall w' \in W$ [w' is compatible with the requirements in $w \rightarrow$ the unique paper in w is d -long in w']) = max (λd . $\forall w' \in W$ [w' is compatible with the requirements in $w \rightarrow$ the unique draft in w is d -long in w']) + exactly five pages

(2/107) $[[(2/88)]]^@ = 1$ iff

b. max (λd . $\forall w' \in W$ [w' is compatible with the requirements in @ \rightarrow the unique paper in @ is d -long in w']) = max (λd . $\forall w' \in W$ [w' is compatible with the requirements in @ \rightarrow the unique draft in @ is d -long in w']) + exactly five pages

‘The length that the unique paper in the actual world reaches in every world w' conforming to the requirements established in the actual world exceeds the length that the unique draft in the actual world reaches in w' by exactly five pages.’

Crucially observe, now, that even if we could guarantee ascribing the paper and the draft as well as their corresponding lengths appropriate world variables one way or another, as shown in (2/106c) and (2/107c) below, a new and still greater difficulty is inevitably bound to arise:

(2/106) c. $\lambda w. \max (\lambda d. \forall w' \in W [w' \text{ is compatible with the requirements in } w \rightarrow \text{the unique paper in } w' \text{ is } d\text{-long in } w']) = \max (\lambda d. \forall w' \in W [w' \text{ is compatible with the requirements in } w \rightarrow \text{the unique draft in } w \text{ is } d\text{-long in } w]) + \text{exactly five pages}$

(2/107) $[[(2/88)]]^@ = 1$ iff

c. $\max (\lambda d. \forall w' \in W [w' \text{ is compatible with the requirements in } @ \rightarrow \text{the unique paper in } w' \text{ is } d\text{-long in } w']) = \max (\lambda d. \forall w' \in W [w' \text{ is compatible with the requirements in } @ \rightarrow \text{the unique draft in } @ \text{ is } d\text{-long in } @]) + \text{exactly five pages}$

‘The length that the unique paper in w' reaches in every world w' conforming to the requirements established in the actual world exceeds the length that the unique draft in the actual world reaches there by exactly five pages.’

For as a matter of fact, (2/106c) and (2/107c) are inherently flawed, as a closer look at these two formulae reveals: In the constellations at hand, the second instantiation of the universal quantifier introduces a conditional in the consequent of which the variable it binds (w') does not appear any more, which ultimately results in a completely nonsensical statement comparable to that sketched in (2/110) below, which is paraphrasable as ‘For all managers x , y is an idiot.’:

(2/110) $\lambda y \in D_e. \forall x \in D_e [\text{manager } (x) \rightarrow \text{idiot } (y)]$

In contrast to the difficulties described beforehand, I consider this last problem as an obstacle that is truly insurmountable and ultimately, a serious additional difficulty for the RPA has thus been identified with respect to the proper derivation of a basic ambiguity a Turkish sentence like (2/88) shows just like its English counterpart, a problem case which then adds to those that have already been noted for the RPA in the two previous subsections in the context of non-agentive and adjunct-like standard terms as well as with regard to nominalisation patterns. Before developing an alternative approach to phrasal comparison better equipped to cope with these difficulties in section 2.3.4 below, I shall next elaborate on what all these problem cases have in common, thereby determining a core shortcoming of the RPA and at the same time, I shall also show that these difficulties actually go beyond cases merely involving comparatives that are qualitative in nature.

2.3.3.4 Generalising Matters and a Look at Quantitative Comparatives

The common core underlying all the problematic data for the RPA presented so far seems to be that this analysis always fails whenever the two individuals introduced by a comparative's comparee and its standard term would have to be compared with respect to two separate gradable predicates. This can however never be achieved given that it is precisely a characteristic feature of the RPA as such that a given gradable predicate appears just once in an LF and only gets interpreted twice by virtue of the shape of the phrasal comparison operator. It therefore follows necessarily that whatever the exact form of a gradable predicate may be, it is forced to occur in the exact same form with both individuals alike, which will ultimately make the derivation crash in all those cases where two distinct gradable predicates would actually be required. In this fashion, for the proper derivation of a sentence like (2/95) (repeated below for the reader's convenience), we would in fact need the predicates $\lambda d. x \text{ jumped } d\text{-high}$ and $\lambda d. x \text{ is } d\text{-high}$ at the same time, with (2/14) (likewise repeated below) the predicates $\lambda d. x \text{ is } d\text{-rich}$ and $\lambda d. I \text{ thought that } x \text{ is } d\text{-rich}$ and in the case of (2/88) discussed in the last subsection, $\lambda d. x \text{ is } d\text{-long}$ as well as $\lambda d. \forall w' \in W [w' \text{ is compatible with the requirements in } @ \rightarrow x \text{ is } d\text{-long in } w']$:

(2/95) *Maria* *dünya rekoru.dan* *yüksek* *atla.di.*
 Mary world record.ablative high jump.past_tense
 'Mary jumped higher than the world record.'

(2/14) *Maria* *benim* *düşün.düğü.m.den* *zengin.*
 Mary my think.participle.1singular.ablative rich
 approximately: 'Mary is richer than my thinking.'; intended as: 'Mary is richer than I thought.'

The basic problem thus seems to be the impossibility of deriving diverging gradable predicates within the interpretation of one and the same comparative construction. Up to now, I have only taken qualitative comparisons into account, but interestingly enough, the difficulty encountered here is even more pervasive in that it also shows up with quantitative comparatives. These typically involve the expression *fazla* in Turkish, as can be seen from the canonical example of a quantitative Turkish comparative provided in (2/111):⁵⁷

(2/111) *Maria* *Hans'tan* *fazla* *kitab.ı* *yaz.di.*
 Mary Hans.ablative more book.accusative write.past_tense
 'Mary wrote more books than Hans.'

⁵⁷ Note in passing that the element *fazla* only allows for quantitative readings, in contrast to which its English counterpart *more* can also be used to reinforce a comparative that is qualitative in nature, as illustrated in (i) below:
 (i) *When taking the exam for the second time, John was even more nervous than on the first occasion.*

Next, constructing quantitative comparatives that are parallel to the qualitative ones discussed in subsections 2.3.3.1 and 2.3.3.2 above immediately reveals that the RPA faces exactly the same kind of problems as before, as can be seen from the examples in (2/112a) to (2/114a) below and the once again totally nonsensical denotations the RPA derives for these specified in (2/112b) to (2/114b), respectively:⁵⁸

- (2/112) a. *Maria diinya rekoru.dan fazla hamburger.i*
 Mary world record.ablative more hamburger.accusative
ye.di.
 eat.past_tense
 ‘Mary ate more hamburgers than the world record.’
 b. $[[(2/112a)]] = 1$ iff
 $\max (\lambda d. \text{Mary ate } d\text{-many hamburgers}) > \max (\lambda d. \text{the world record ate } d\text{-many hamburgers})$
- (2/113) a. *Maria benim düşün.düğü.m.den fazla*
 Mary my think.participle.1singular.ablative more
kitab.ı yaz.dı
 book.accusative write.past_tense
 approximately: ‘Mary wrote more books than my thinking.’; intended as: ‘Mary wrote more books than I thought.’
 b. $[[(2/113a)]] = 1$ iff
 $\max (\lambda d. \text{Mary wrote } d\text{-many books}) > \max (\lambda d. \text{my thinking wrote } d\text{-many books})$
- (2/114) a. *Maria geçen hafta.dan fazla çalış.tı.*
 Mary last week.ablative more work.past_tense
 ‘Mary worked more than the week before.’
 b. $[[(2/114a)]] = 1$ iff
 $\max (\lambda d. \text{Mary worked } d\text{-much}) > \max (\lambda d. \text{the week before worked } d\text{-much})$

In sum, the RPA thus systematically fails in not being able to derive two separate gradable predicates in the course of a comparative construction’s derivation, irrespective of whether we are dealing with a qualitative comparative or a quantitative one. By now, it should therefore have become obvious that the RPA cannot be maintained as it presently stands and that an alternative approach to phrasal comparison that can handle these empirical data in a more

⁵⁸ In the context of this dissertation, quantitative Turkish comparatives are also of interest in yet another respect: Such quantitative comparatives overtly featuring the element *fazla* can be explicitly modified by the adverb *daha* as shown in the possible extension of sentence (2/111) from the main text given in (i) below (where it once more performs the function of an intensifier), thus directly supplying us with an additional argument for the fact that this expression cannot constitute the comparison operator itself (cf. the discussion in section 2.2.2 above):

(i) *Maria Hans'tan (daha) fazla kitab.ı yaz.dı.*
 Mary Hans.ablative (still) more book.accusative write.past_tense
 ‘Mary wrote (still) more books than Hans.’

adequate fashion is indispensable, instead, which is precisely what I shall set out for in the ensuing section 2.3.4.

2.3.4 A New Proposal for Phrasal Comparison

2.3.4.1 Three Preliminary Observations

Before introducing a novel account of phrasal comparison as such, I shall first of all present the three main observations that guided my way when developing this new analysis: First, it is the fact that the lexical entry of the phrasal comparison operator itself rigidly forces us to compare the individuals provided by the comparee and the standard term to the exact same property (cf. the entry in (2/92), repeated from section 2.3.2 above) which seems to be at the heart of all the difficulties underlying the various problem cases identified for the RPA in the previous section 2.3.3:

$$(2/92) \quad [[PCO]] = \lambda x \in D_e. \lambda A \in D_{\langle d, \langle e, t \rangle \rangle}. \lambda y \in D_e. \max (\lambda d. A (d) (y)) > \max (\lambda d. A (d) (x))$$

In order to solve these problems, it therefore looks most promising to directly revise this lexical entry in such a fashion that it allows for a considerably higher amount of flexibility. Second, what we would really need for successfully calculating the denotations of the above-mentioned examples is after all not the entire individual introduced by the comparatives' respective standard terms, but only a degree associated with it: In (2/95) (reproduced to facilitate readability), what matters is for instance not so much who set that world record, on what occasion or in which specific circumstances (strong or light winds, head or tail wind and the like), as the degree of height that goes with this record:

(2/95)	<i>Maria</i>	<i>dünya rekoru.dan</i>	<i>yüksek</i>	<i>atla.dı.</i>
	Mary	world record.ablative	high	jump.past_tense
	'Mary jumped higher than the world record.'			

With (2/3), what is relevant is likewise not every single event that occurred the week before, but we only care about the degree to which Mary worked hard, such as for example the number of working hours she spent in her office during that period of time:

(2/3)	<i>Maria</i>	<i>geçen</i>	<i>hafta.dan</i>	<i>ağır</i>	<i>çalıştı.</i>
	Mary	last	week.ablative	hard	work.past_tense
	'Mary worked harder than the week before.'				

In a similar fashion, in (2/14), we are not so much interested in the entirety of the speaker's thoughts as in the degree to which (s)he assumes Mary to be wealthy:

- (2/14) *Maria benim düşün.düğü.m.den zengin.*
 Mary my think.participle.1singular.ablative rich
 approximately: 'Mary is richer than my thinking.'; intended as: 'Mary is richer than I thought.'

And finally with (2/88), we do not really care about the authorship of the draft or the article, the language in which these are written or even their contents, but merely about their length:

- (2/88) (*Müsvedde on sayfa uzunluğ.un.da.*
 draft ten page length.possessive.in
 'The draft is ten pages in length.')
- Makale müsvedde.den tam beş sayfa uzun olmak zorunda.*
 article draft.ablative exactly five page long is_required
 'The article is required to be exactly five pages longer than the draft.'

Third, direct comparison with a degree happens to be unproblematic in Turkish, as has already been demonstrated in the empirical section 2.1.2, from where I repeat sentence (2/10) below:

- (2/10) *Maria bir metre yetmiş santim.den uzun.*
 Mary one/a metre seventy centimetre.ablative tall
 'Mary is taller than 1.70m.'

Therefore, apart from the phrasal comparison operator introduced above that takes two individuals and a gradable predicate as its direct input (cf. (2/92)), the inventory of Turkish must necessarily also comprise a second operator taking a degree as its first argument instead, a lexical entry for which I specify in (2/115) below:

- (2/115) $[[PCO_{degree}]] = \lambda d \in D_d. \lambda A \in D_{\langle d, \langle e, t \rangle \rangle}. \lambda y \in D_e. \max (\lambda d'. A (d') (y)) > d$

Taking these three considerations together, we are now equipped to tackle the development of a new account of phrasal comparison, next.

2.3.4.2 The Basic Approach: Associating Individuals with Implicit Degrees

On the basis of the three observations made in the previous subsection, I should now like to propose the following: The RPA built from the proposals offered in Kennedy (1997) and Bhatt/Takahashi (2007, to appear), which had in turn been heavily influenced by early insights from Heim (1985) (cf. subsection 2.3.2 above), should be altered in such a way that the phrasal comparison operator always combines with a degree argument first, that is not only in cases

where the standard term overtly contributes such a degree as with examples like (2/10) discussed beforehand, but also with those comparative constructions in which the standard term features an individual rather than a degree, as can be seen from its modified lexical entry in (2/116) largely corresponding to that introduced for direct comparison with a degree in (2/115) above:⁵⁹

$$(2/116) \quad [[PCO]] = \lambda d \in D_d. \lambda A \in D_{\langle d, \langle e, t \rangle \rangle}. \lambda x \in D_e. \max (\lambda d'. A (d') (x)) > d$$

With comparatives displaying an individual in their standard, I should furthermore like to suggest that this degree argument is directly associated with the individual provided by the respective comparative's standard term and that this degree rather than that individual itself then serves as the first input to the phrasal comparison operator. Finally, in order to render such implicit degree variables accessible, I moreover assume that the function given in (2/117) below operates on the comparative's standard term before the phrasal comparison operator enters the semantic calculation:

$$(2/117) \quad [[f]] = \lambda x \in D_e. d_{x,c}, \text{ where "d}_{x,c}\text{" is the most salient degree associated with } x \text{ in a given utterance context } c^{60}$$

Let me stress that similar suggestions have already been made in other areas of grammar, so that the approach I am offering for phrasal comparison, here, is not entirely without precedent and from a broader perspective, it can actually be subsumed under the tradition of so-called 'coercion' analyses. Such analyses have in particular been proposed for the resolution of mismatches concerning verbal aspect and complementation patterns (cf. for instance Moens/Steedman (1988) or Jackendoff (1997)), but also in various other contexts, such as for example in the field of metonymic shifts (Pustejovsky (1995)) or that of individual versus stage-level predicates (Fernald (1999), Escandell-Vidal/Leonetti (2002)) or for handling quantifiers appearing in combination with mass as opposed to count nouns (Escandell-Vidal/Leonetti

⁵⁹ A lexical entry for the phrasal comparison operator in line with the assumption that measure phrases denote entire sets of degrees rather than simple degrees, as will be argued for in the fourth part of this dissertation, would first combine with an element of semantic type $\langle d, t \rangle$ rather than $\langle d \rangle$, as shown in (i) below:

$$(i) \quad [[PCO]] = \lambda D \in D_{\langle d, t \rangle}. \lambda A \in D_{\langle d, \langle e, t \rangle \rangle}. \lambda x \in D_e. \max (\lambda d'. A (d') (x)) > \max (D)$$

The function f specified in (2/117) in the main text would next have to be changed accordingly, in that it would now associate the individual introduced by a comparative's standard term with an entire set of degrees (cf. (ii) below), which would then in turn provide us with the first argument of the phrasal comparison operator in (i):

$$(ii) \quad [[f]] = \lambda x \in D_e. D_{x,c}, \text{ where "D}_{x,c}\text{" is the most salient set of degrees associated with } x \text{ in a given utterance context } c$$

⁶⁰ The denotation given in (2/117) represents only a preliminary version of this function. As will be shown in subsection 2.3.4.4 below, it requires further restrictions that will lead to a substantial modification of its lexical entry to the effect that the function f will ultimately denote a contextually specified relation responsible for mapping individuals onto degrees.

(2002)), among others. Moreover, apart from these ‘classical’ fields of application, at least two other proposals have been made that are very similar in spirit to what I am suggesting here: First of all, in order to be able to account for questions such as that in (2/118) below, it has been argued in Chierchia (1993) that the ordinary functional as well as the list readings these give rise to should best be derived by assuming the intervention of a function that encodes a relation mapping individuals onto other individuals (individuals loved by these in the case of (2/118)),⁶¹ an approach which has later on also been transferred to relative clauses in Sharvit (1996, 1999), where the author talks about “contextually relevant ‘natural’ functions” in this context (Sharvit (1996), p. 239):

(2/118) *Who does everyone love?* [Chierchia (1993), p. 200; his (42a)]

Secondly, in Winter (2000), contextually specified functions have been introduced to appropriately capture the meaning of the sentences reproduced in (2/119a) (featuring an object in the singular) and (2/119b) (involving a plural object), for which Yoav Winter has sketched the meanings and the necessary contextual functions (denoting a relation that provides each individual soldier with the target(s) assigned to him) in (2/120a) and (2/120b), respectively, the latter of which is also assumed to be at work with sentence (2/119c) that contains definite plurals in its subject as well as its object position:

(2/119) a. *Every soldier hit the target.* [Winter (2000), p. 36; his (16)]
 b. *Every soldier hit the targets.* [ibid.; his (18)]
 c. *The soldiers hit the targets.* [ibid., p. 37; his (19)]

(2/120) a. $\forall x$ [**soldier**' (x) \rightarrow **hit**' ($x, t(x)$)]
 t : a contextually salient function from individuals to individuals mapping each
 soldier to a target [ibid.; his (21)]
 b. $\forall x$ [**soldier**' (x) \rightarrow **hit**' ($x, T(x)$)] or
 $\forall x$ [**soldier**' (x) \rightarrow $\forall y \in T(x)$ **hit**' (x, y)]
 T : a contextually salient function from individuals to individuals mapping any
 soldier to a set of targets [ibid., p. 38; his (24a-b)]

Essentially similar proposals have thus been made in different areas of grammar, but to the best of my knowledge, the analysis of phrasal comparison put forth here actually represents the first instantiation of this kind of approach within the field of gradability.

At this point, it is also interesting to observe that the existence of a rather intimate relation between individuals on the one hand and degrees on the other has already been noticed

⁶¹ Given that the exact technical implementation of this idea constitutes a rather complex matter, I shall not enter the intricate details of the approach defended in Chierchia (1993) at this point.

quite frequently in traditional literature on degrees, as is for instance the case in Lønning (1987), where degrees are regarded as elements located directly in between individuals and numbers, or in Champollion (2010), who follows suit and according to whom “degrees [constitute] an intermediate layer that mediates between individuals and numbers” (ibid., p. 30).⁶² Let me conclude this subsection by finally having a look at an alternative strategy to implement this idea, which I shall however not adopt in the end: An anonymous reviewer of a conference abstract once suggested to me directly incorporating the function given in (2/117) above into the entry of the phrasal comparison operator (cf. (2/116)). While this proposal might seem very attractive in that it immediately does away with the need to posit such an extra function, I ultimately decided against this option, because it inevitably leads to serious problems with data like (2/10), repeated from above:

(2/10)	<i>Maria</i>	<i>bir</i>	<i>metre yetmiş</i>	<i>santim.den</i>	<i>uzun.</i>
	Mary	one/a	metre seventy	centimetre.ablative	tall
	‘Mary is taller than 1.70m.’				

With such an example of direct comparison with a degree (or set of degrees, cf. the discussion in footnote 59 above), the comparative’s standard term does not yield an individual which would have to be associated with a (set of) degree(s) to begin with, but it immediately provides us with that (set of) degree(s), instead. Direct incorporation of the function in (2/117) into the entry of the comparison operator would thus wrongly make us expect this element to always combine with a standard term denoting an individual, which is why I eventually decided to dismiss this alternative. As a next step, let me now illustrate how this new approach to phrasal comparison helps to handle the problem cases that had been noticed for the RPA in section 2.3.3 above.

2.3.4.3 Application to Problem Cases Identified for the Revised Phrasal Analysis

Let me start my re-examination of the problem cases by having another look at example (2/14) (repeated on the next page), first:

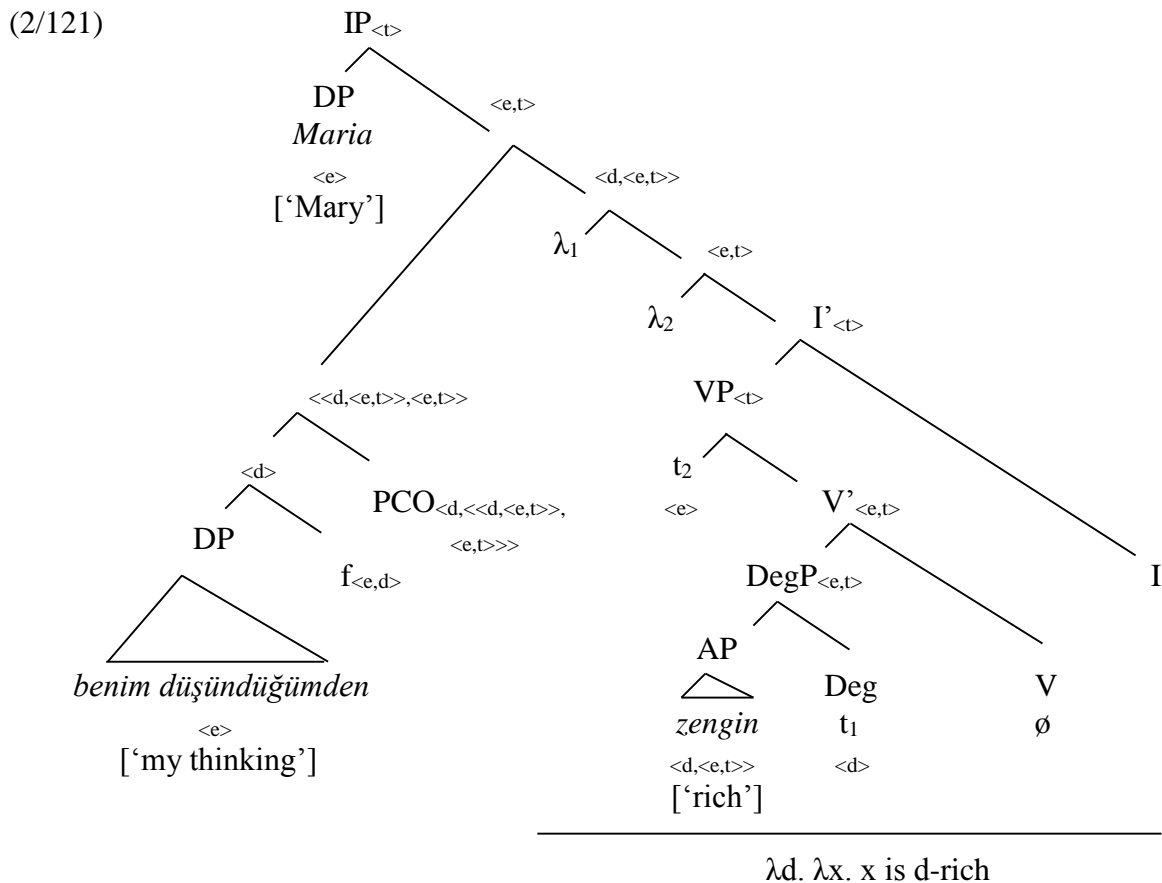
⁶² A particularly striking example can furthermore be found in Morzycki (2009), who even goes so far as to posit a semantic type $\langle o \rangle$, the domain of which consists precisely in the union of the classical domain of individuals and that of degrees, as depicted in (i) below:

(i) $D_o = D_e \cup D_d$ [Morzycki (2009), p. 193; his (70)]

Of course, it goes without saying that such a close relationship should obviously facilitate the association of individuals with degrees, as is postulated here.

- (2/14) *Maria benim düşün.düğü.m.den zengin.*
 Mary my think.participle.1singular.ablative rich
 approximately: ‘Mary is richer than my thinking.’; intended as: ‘Mary is richer than I thought.’

Here, my new analysis in terms of associating individuals with implicit degrees results in an LF roughly along the lines of that included in (2/121) below:



This sentence will then be predicted to be true iff $\max(\lambda d'. \text{Mary is } d'\text{-rich}) > d_{\text{my_thinking},c}$, which means that Mary has to be richer than the most salient degree associated with ‘my thinking’ in a given utterance context c for (2/14) to come out true. In a straightforward fashion, the adjective *zengin* (*rich*) in the immediate context will now guarantee selecting the speaker’s assumption about Mary’s financial situation for that degree. As had been announced in subsection 2.3.3.2 above, I shall now also offer a principled analysis of the inherent structure of the expression *benim düşündüğümden*, which I up to now quite coarsely glossed as ‘my thinking’ (cf. the alternative suggestion made in footnote 55, though), which runs as follows: I propose to analyse *düşünmek* (the corresponding infinitival form) as a simple transitive verb of semantic type $\langle e, \langle e, t \rangle \rangle$ (cf. (2/123a)), given that this Turkish verb does not perform the function of a propositional attitude verb (as is the case with English *to think that ...* or *to believe*

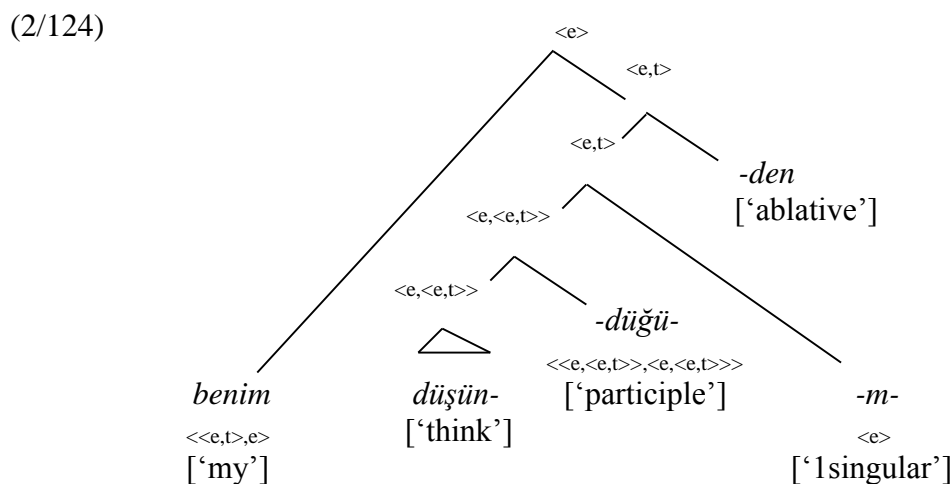
that ...), but rather corresponds to English *to think of x* or its German equivalent *denken an x*, to the effect that with the verb *düşünmek*, we do not enter a given subject's belief worlds. By contrast, this verb merely takes an individual of semantic type $\langle e \rangle$ (corresponding to what this subject is thinking of) in the form of an ordinary nominal as its complement.⁶³ Next, I assume that the participle *-düşü-* exerts a nominalising effect (2/123b) that is in essence comparable to that of passivisation in German, as illustrated by the transition from a verb to the nominalised form of the past participle that goes with it in (2/122) below:

(2/122) *denken* → *das Gedachte*

And ultimately, I provide the possessive pronoun *benim* (*my*) with a denotation similar to that of a definite article (enhanced by the contribution of the first person singular element, as shown in (2/123c)):

- (2/123) a. $[[\textit{düşünmek}]] = \lambda x \in D_e. \lambda y \in D_e. y \text{ thinks of } x$
 b. $[[\textit{-düşü-}]]$ (and its allomorphs) = $\lambda V \in D_{\langle e, \langle e, t \rangle \rangle}. \lambda x \in D_e. \lambda y \in D_e. y \text{ is } V\text{-ed (of) by } x$
 c. $[[\textit{benim}]] = \lambda f \in D_{\langle e, t \rangle}: \textit{there is a unique } z \in D_e \textit{ such that } f(z). \textit{ the unique } z \textit{ such that } f(z) \textit{ and such that } z \textit{ is associated with the speaker}$

A possible derivation of the complex element *benim düşündüğüm* would then proceed as indicated in (2/124) below:



⁶³ Observe in passing that this behaviour of the verb *düşünmek* is not that surprising after all in view of the fact that the Turkish language generally permits no more than one predicate per sentence (cf. the ‘one predicate per sentence only’-constraint introduced in section 2.1.2 above) and it is therefore to be expected that the complement of a verb such as *düşünmek* cannot appear in the shape of an entire proposition, but only in that of a nominal.

The entire expression *benim düşündüğüm*den is thus predicted to denote *the unique z such that z is thought of by the speaker (and such that z is associated with the speaker)*.⁶⁴ Note that this can actually refer to a plurality of things, which is as desired, given that a possessive pronoun like *benim* can also overtly combine with plural elements, as exemplified in (2/125):

(2/125) *benim kitap.lar*
 my book.plural
 ‘my books’

As already mentioned, the presence of the adjective *zengin* (*rich*) will then make it most plausible to associate what the speaker assumes with respect to Mary’s finances with the expression *benim düşündüğüm*den. Similarly, in an example like (2/95), it is the expressions *yüksek* (*high*) and *atladı* (*jumped*) in the immediate vicinity that ensure picking the world record in high jump and not for instance that in hammer-throwing or decathlon for that degree and with sentence (2/3), the adverb *ağır* (*hard*) in combination with the verb *çalıştı* (*worked*) automatically makes us choose the degree to which Mary worked hard for that degree, such as the number of hours she spent working:

(2/95) *Maria dünya rekoru.dan yüksek atla.dı.*
 Mary world record.ablative high jump.past_tense
 ‘Mary jumped higher than the world record.’

(2/3) *Maria geçen hafta.dan ağır çalış.tı.*
 Mary last week.ablative hard work.past_tense
 ‘Mary worked harder than the week before.’

In example (2/88), it is finally the adjective *uzun* (*long*) in the directly adjacent context that tells us that we are dealing with a degree of length that needs to be associated with the element *müsvedde(den)* (*draft(ablative)*):

(2/88) (*Müsvedde on sayfa uzunluğ.un.da.*
 draft ten page length.possessive.in
 ‘The draft is ten pages in length.’)
Makale müsvedde.den tam beş sayfa uzun olmak zorunda.
 article draft.ablative exactly five page long is_required
 ‘The article is required to be exactly five pages longer than the draft.’

⁶⁴ I am putting this last element into brackets given that it is strictly speaking redundant, since the information it conveys is basically the same as that supplied by the first person singular ending *-m* providing the external argument of the finite verb. That this analysis is largely correct is confirmed by the fact that it is actually possible to replace the element *benim* in (2/14) by the demonstrative pronoun *bu* (*this*) often performing the function of a definite article in Turkish, which constitutes a language that lacks definite articles proper.

Importantly, observe now that in contrast to the RPA, the modified phrasal approach to comparison defended here directly allows us to locate this draft (and its length) in the appropriate set of worlds without any further ado: By virtue of the fact that it only exists in the actual world (at least in the scenario relevant to our purposes specified in subsection 2.3.3.3 above) and not in the requirement-worlds introduced by the modal expression *olmak zorunda* (*be required*), it is only reasonable to associate it with the degree of length it displays in the actual world, for it surely makes no sense to associate this draft with a degree in a set of worlds where it does not even exist to begin with. As a last remark on this issue, notice that if Iatridou/Zeijlstra (2010) are right when proposing that modals can (and sometimes even have to) move, one might consider an alternative strategy to derive the exactly-15-pages-in-total reading versus the minimum requirement interpretation ambiguity by assuming a scopally inert comparison operator (cf. for instance that in (2/84) proposed in Kennedy (1997), as discussed in section 2.3.2 above), base-generating the modal in a position lower than that of this operator and subsequently raising it to a hierarchically higher position, from where it can then take scope over the comparison operator itself. While such an alternative would certainly not constitute an improvement with respect to the difficulty of assigning appropriate world variables to the article and the draft (as well as to the lengths predicated of these) in sentences like (2/88), it might solve yet another problem that has not been mentioned so far: Just like the original version proposed in Heim (2001), the analysis advocated here is hypergenerative in that it can always derive a scopal interaction between the comparison operator and any modal whatsoever, but, as already observed in Heim (2001), only a limited number of modals do indeed give rise to such ambiguities, whereas others such as for example *might*, *should* or *be supposed to* do not (ibid., p. 226). Given that the possible alternative inspired by Iatridou/Zeijlstra (2010) would crucially rely on moving the modal itself rather than the comparison operator, it might be easier to restrict movement and thus the derivation of ambiguities to particular modals, only. In view of the fact that the division line separating modals that show this type of ambiguity from those that do not does however not pattern with any classical kind of distinction such as for instance that between PPI and NPI types of modals (as discussed in Iatridou/Zeijlstra (2010) itself), that between existential and universal ones, that between deontic and epistemic ones or even that between modals that license verb phrase ellipsis and modals that do not do so (Gergel (2009b)), I do not really see how this could be achieved in practice, though. What is worse is that it even appears totally impossible to me to put up an LF where the modal would be base-generated in a position below and thus outscoped by that of the comparison operator, so that this potential alternative must also be ruled out for purely technical reasons alone.

But be that as it may, in sum, this novel approach to phrasal comparison hinging on the notion of associating individuals with implicit degrees is clearly flexible enough to yield a successful account of all the problem cases identified for the RPA beforehand, be it comparatives including non-agentive or adjunct-like standard terms, ones involving nominalised standards or even comparatives featuring a modal expression in combination with an overt differential.⁶⁵ As a next step, I shall now examine the question of whether the phrasal account of comparison newly introduced here should be maintained in its present shape, or if any systematic restrictions are to be added to it, be these of a syntactic or a semantic form.

2.3.4.4 Restricting the Unrestricted?

As it stands, my new phrasal analysis of comparison may seem very ‘loose’ in that in essence, with this kind of account, much boils down to the relatively free notion of association with implicit degrees, as can be seen from the denotation of my function *f* as introduced in (2/117), repeated from subsection 2.3.4.2 above:

(2/117) $[[f]] = \lambda x \in D_e. d_{x,c}$, where “ $d_{x,c}$ ” is the most salient degree associated with *x* in a given utterance context *c*

At this point, I should therefore like to address the question of whether any constraints should be imposed on it. Note that in its present form, both, the exact relation holding between a given individual and the degree associated with it as well as the precise choice of individual, remain largely free and in what follows, I should like to examine these two aspects in more detail, starting with the second one, first. To this end, observe that with a Turkish sentence such as that included in (2/126) below, nothing in the technical setup of my new phrasal analysis would prevent us from comparing Mary’s height for instance to that of Peter’s brother, his uncle, granny, sister-in-law or the like, provided that these individuals have been made sufficiently salient in the intralinguistic or extralinguistic context preceding or accompanying the utterance of this sentence:

(2/126) *Maria Peter'den uzun.*
 Mary Peter.ablative tall
 ‘Mary is taller than Peter.’

⁶⁵ What I have not shown explicitly is that this new analysis can equally well handle similar difficulties arising in the realm of quantitative comparison (cf. (2/112) to (2/114) in subsection 2.3.3.4 above), but I suppose that it should have become more than obvious by now how such a transfer to quantitative comparatives would have to proceed and that it would indeed supply us with the desired results.

Testing these matters empirically has however revealed that this is not the case: Even when I presented example (2/126) after a context featuring no other person than Peter’s granny at all and where her size was explicitly mentioned in the sentence immediately preceding (2/126), all my Turkish native speaker informants reported alike that the latter could still only express a comparison to the height of Peter himself and not to that of his granny, and other similar test cases invariably showed the same restriction to be operative, too. I therefore conclude that my function f has to be limited accordingly, as can be seen from the revised entry I propose in (2/127) for its denotation that depends on the contextually determined assignment function g :

(2/127) $[[f_i]]^{g_c} = g_c(f_i) = \lambda x \in D_e. \text{id} \in D_d [d = \max(\lambda d. A_{c\langle d, \langle e, t \rangle \rangle}(d)(x))]$, where “ A_c ” is the most salient gradable predicate in a given utterance context c

With sentence (2/126), the calculation of its meaning would then proceed as sketched in (2/128a) to (2/128c) below:

- (2/128) a. $g_c(f_7) = \lambda x \in D_e. \text{id} \in D_d [d = \max(\lambda d. x \text{ is } d\text{-tall})]$
 b. $[[f_7(\textit{Peter}'den)]] = \max(\lambda d. \textit{Peter} \text{ is } d\text{-tall})$
 c. $[[(2/126)]]^{g_c} = 1$ iff
 $\max(\lambda d'. \textit{Mary} \text{ is } d'\text{-tall}) > \max(\lambda d. \textit{Peter} \text{ is } d\text{-tall})$

And in an entirely parallel fashion, a successful interpretation of the comparative in (2/129) involving a rather complex nominalisation pattern in the position of its standard term could likewise be achieved, a sketch of the actual derivation being provided in (2/130a) to (2/130c):⁶⁶

(2/129) *Bu şemsiye.ø Maria'nın şemsiye.ye*
 this umbrella.nominative Mary.genitive umbrella.accusative
satın al.dıđı.n.dın uzun.
 buy.participle.possessive.ablative long
 ‘This umbrella is longer than the one bought by Mary/that Mary bought.’

⁶⁶ In Knecht (1976), such complex nominalisations have led the author to postulate a clausal comparative in Turkish, arguing that the restriction to exclusively phrasal standard terms merely results from the fact that these have to be case-marked and that case-marking is only possible with nominal, but not with clausal elements. In my opinion, this proposal is however clearly inferior to the one advocated here in that it immediately runs into several problems: First of all, the explanation for standard terms that are necessarily nominal in nature based on considerations of case assignment is only valid with comparatives as such, while it does not account for other types of comparison constructions such as for example equatives, where the standard term in Turkish is not case-marked (cf. (2/23) and (2/24) in the empirical section 2.1.2 above) and can nevertheless feature nothing but nominal expressions. Secondly, Knecht (1976)’s account would wrongly make us expect phrasal comparatives to be possible whenever their quasi-clausal equivalents are, but as Laura Knecht already observes herself, acceptability of the two often differs (for instance with objects appearing in the dative or the accusative case, locative complements or quantitative comparatives in general (ibid., pp. 295ff.)). And thirdly, comparatives whose interpretation requires the reconstruction of sentence-external material (an example of which will follow in (2/135) in the main text below), constitute yet another serious challenge for such an alternative approach to comparison in Turkish.

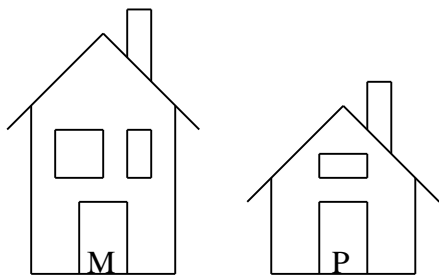
- (2/130) a. $g_c(f_7) = \lambda x \in D_e. \text{id} \in D_d [d = \max(\lambda d. x \text{ is } d\text{-long})]$
 b. $[[f_7(\text{Maria'nın şemsiyeye satın aldığındın})]] = \max(\lambda d. \text{the umbrella bought by Mary is } d\text{-long})$
 c. $[[[(2/129)]]^{g_c} = 1 \text{ iff } \max(\lambda d'. \text{this umbrella is } d'\text{-long}) > \max(\lambda d. \text{the umbrella bought by Mary is } d\text{-long})$

Next, let me consider the issue of whether a similar restriction should also be imposed on the relation involved in linking the individual provided by a comparative's standard term to a precise degree (that is "A_c" in the formula in (2/127)) in view of the fact that with the examples taken into account so far, the functions in (2/128a) and (2/130a) have actually constituted nothing more than measure functions of the simplest type. As a first step into this direction, consider sentence (2/131) below (where I use *büyük* (*tall*) rather than *uzun*, that, unlike the latter, can be used equally well for people as for inanimate objects, which will play a crucial role for the ambiguity I shall be driving at):

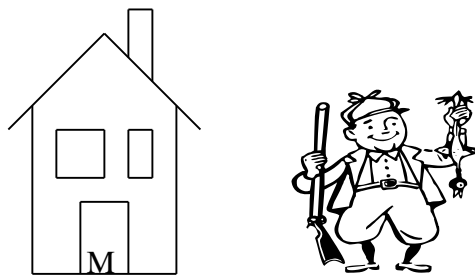
(2/131) *Maria Peter'den büyük bir ev.ø yap.ti.*
 Mary Peter.ablative tall one/a house.accusative build.past_tense
 'Mary built a taller house than Peter.'

According to my Turkish informants, sentence (2/131) states that Mary and Peter both built a house and that Mary's house happens to be larger than that of Peter. This is surely an interpretation that my modified analysis of phrasal comparison can derive, but by virtue of the fact that "A_c" remains fairly free, it also predicts there to be yet another reading: Since there is a second salient degree of height one could associate Peter with, namely that of the physical extension of Peter's body itself, example (2/131) should also be able to adequately describe a situation in which only Mary built a house and where this house exceeds Peter's height. The little drawings included in (2/132) below are intended to illustrate these two potential readings sentence (2/131) is expected to give rise to, respectively:

(2/132) a. illustration of reading (i)



b. illustration of reading (ii)



Crucially observe that when uttered out of the blue, my Turkish informants unanimously associated sentence (2/131) only with the first reading described above when enquired about its

meaning, but as soon as I provided these informants with a special context facilitating the second reading, they all of a sudden agreed that after all, sentence (2/131) can indeed refer to a scenario where the height of a house built by Mary is directly compared to that of Peter himself. For this purpose, I designed a context in which Mary and Peter are two five-year-old children putting together little wooden houses on a playground. By virtue of the fact that in such a context, the size of the houses and that of the children involved in building them is certainly quite comparable, an ambiguity surfaces that is not attested in normal circumstances, there usually being such a great distance between the height of buildings and that of people that comparing these to each other seems quite unnatural. In order to successfully account for this ambiguity, two distinct functions are thus required in the derivation of example (2/131) as indicated in (2/133) as opposed to (2/134), only the first of which is tantamount to a measure function of the simplest conceivable type as before, whereas the second involves a more complex sentence-internal reconstruction pattern:

- (2/133) a. $g_c(f_7) = \lambda x \in D_e. \lambda d \in D_d [d = \max(\lambda d. x \text{ is } d\text{-tall})]$
 b. $[[f_7(\textit{Peter}'den)]] = \max(\lambda d. \textit{Peter} \text{ is } d\text{-tall})$
 c. $[[(2/131)]]^{g_c} = 1$ iff
 $\max(\lambda d'. \textit{Mary} \text{ built a } d'\text{-tall house}) > \max(\lambda d. \textit{Peter} \text{ is } d\text{-tall})$

- (2/134) a. $g_c(f_7) = \lambda x \in D_e. \lambda d \in D_d [d = \max(\lambda d. x \text{ built a } d\text{-tall house})]$
 b. $[[f_7(\textit{Peter}'den)]] = \max(\lambda d. \textit{Peter} \text{ built a } d\text{-tall house})$
 c. $[[(2/131)]]^{g_c} = 1$ iff
 $\max(\lambda d'. \textit{Mary} \text{ built a } d'\text{-tall house}) > \max(\lambda d. \textit{Peter} \text{ built a } d\text{-tall house})$

At the end of the day, sentence (2/131) does thus indeed show the ambiguity expected under the relatively ‘loose’ approach defended here, and the fact that the second reading is normally absent with (2/131) is due to questions concerning the pragmatic (im-)plausibility of such a reading, rather than semantic and/or syntactic features of the construction at hand. I am therefore facing a situation here that is essentially similar to that encountered by Beck/Rullmann (1996) when trying to account for the availability of ‘mention-some’ interpretations of questions, where the two authors reach the conclusion that “factors [...] that are of a pragmatic nature, including considerations of plausibility and world knowledge” (ibid., p. 85) are at stake. And in fact, plausibility and world knowledge is exactly what matters when a potentially ambiguous sentence like (2/131) is interpreted in practice: How plausible is it to compare the height of a building to that of a human being if general world knowledge tells us that there usually is a large difference between the physical extensions of buildings and that of people? In normal circumstances, this represents an extremely implausible move to make, and a sentence such as (2/131) thus only gives rise to reading (i), but as soon as we take the

playground scenario specified above into account, comparing the size of children to that of the little wooden houses they are forming is fully compatible with our world knowledge, and the plausibility of such a comparison increases accordingly, finally making reading (ii) accessible to us. It therefore seems to be mainly considerations of (im-)plausibility and thus in essence pragmatic principles that guide our selection of reasonable candidates for these relations. For the sake of concreteness, let me also give a brief sketch of what such a pragmatic principle (other than plain plausibility) governing our choice of an implicit degree might look like. The issue at hand with a statement such as (2/131) could for instance be recast in a fairly simple and straightforward fashion in terms of an analysis in the form of the so-called “Question Under Discussion”-approach (cf. Roberts (1996), among many others): A ‘Question Under Discussion’ along the lines of “Who built a house that is taller than the one built by Peter?” would then most naturally trigger reading (i) of sentence (2/131), whereas an alternative question such as “What is the size of the house Mary built?” would plausibly give rise to the second reading attested with this sentence.

And interestingly enough, this is not yet the end of the story: There are even cases where my function *f* needs to be enriched by additional, sentence-external material. To see this, imagine a situation in which someone has just read that on average, casual workers earn 1.200 € a month. Immediately afterwards, that person is told that Mary earns as much as 1.500 € per month and then says the following:

(2/135) *Maria benim düşün.düğü.m.den fazla*
 Mary my think.participle.possessive.ablative more
kazan.ır.
 earn.aorist
 ‘Mary earns more than my thinking/I thought.’

In this context, it is important to observe that Mary does not necessarily have to be a casual worker herself nor does the speaker have to know about this for this utterance to work, so that we can actually be sure that we are not simply dealing with an entailment pattern, here. A sketch of a possible derivation for sentence (2/135) could then look as specified in (2/136a) to (2/136c) on the next page:⁶⁷

⁶⁷ As already noted in section 2.3.4.3 above, the Turkish verb *düşünmek* (*think*) represents a standard transitive rather than a propositional attitude verb. I freely admit that in order to complete the empirical picture, one would also have to test sentences featuring predicates expressing such ‘attitudes’, thereby adding intensionality. This might lead to rather intricate complications when it comes to deriving an individual from the standard term in a comparative construction, for which I have not yet been able to come up with a satisfactory account, and I must therefore leave this project for future linguistic research.

- (2/136) a. $g_c(f_7) = \lambda x \in D_e. \lambda d \in D_d [d = \max(\lambda d. x \text{ earns } d\text{-much})]$
 b. $[[[f_7 (\textit{benim d\u00fc\u015f\u00fcnd\u00fc\u011f\u00fcmden})]] = \max(\lambda d. \text{the speaker thought of a casual worker earning } d\text{-much})$
 $= 1.200 \text{ \u20ac} \quad [\text{according to the context at hand}]$
 c. $[[[(2/135)]]^{g_c} = 1 \text{ iff}$
 $\max(\lambda d'. \text{Mary earns } d'\text{-much}) > 1.200 \text{ \u20ac}$

In total, it thus seems that while the individual appearing in the contextually determined function should indeed be strictly restricted to the one overtly occurring in a respective comparative's standard term (cf. (2/127) above), no similar restrictions should be imposed on the exact nature of the relation involved, given that after all, this relation does indeed appear to allow for a fairly great amount of flexibility. At the same time, also note that the uniqueness constraint introduced in (2/127) can in fact be empirically substantiated as well: The following Turkish sentence (to which I add glosses and a potential translation) is extracted from Knecht (1976) and is judged to be ungrammatical, there:

- (2/137) **Benim kedi.nin oyna.yabil.ece\u011fi.n.den*
 my cat.genitive play.capable_of.participle.possessive.ablative
fazla kutu.m var.
 more box.possessive existential [Knecht (1976), p. 299; her (30)]
 roughly corresponds to: ^{*/*} 'I've got more boxes than the cat's playing is possible.'

In my opinion, the main difficulty with this sentence resides in the fact that it is not possible to identify a uniquely salient gradable property: For on the one hand, we could choose the one given in (2/138a) below, but on the other, it would be likewise plausible to go for that in (2/138b), instead, depending mainly on the actual size of the boxes that are involved:

- (2/138) a. $g_c(f_7) = \lambda x \in D_e. \lambda d \in D_d [d = \max(\lambda d. \text{the cat is able to play in } d\text{-many boxes})]$
 b. $g_c(f_7) = \lambda x \in D_e. \lambda d \in D_d [d = \max(\lambda d. \text{the cat is able to play with } d\text{-many boxes})]$

That this line of argumentation is on the right track is corroborated by the reactions my Turkish native speaker informants produced when confronted with sentence (2/137): Presenting this sentence without any accompanying context resulted in an average judgment of "3.6" on the scale introduced in section 2.1.1 above and thus in a fairly bad result, whereas it received one of "2.0" and therefore a considerably better one when I first established a context including as many as twenty fairly huge boxes (in order to arrive at the reading (2/138a) gives rise to) and asked them to judge sentence (2/137) afterwards.⁶⁸

⁶⁸ At present, I do not have a good explanation as to why judgments did not improve to an extent even greater than that, approaching a "1" on the underlying scale of acceptability, as one might possibly have expected.

Let me conclude this section with a short aside that appears to be in place, here: Actually, one might wonder whether or not data like (2/131) also provide additional evidence in favour of my new phrasal analysis and against the more traditional RPA. In this respect, it is interesting to observe that a similar ambiguity does not arise with the equivalent English example given in (2/139) below, which only permits reading (i):

(2/139) *Mary built a taller house than Peter.*

In order to arrive at reading (ii) at all, substantial syntactic reordering as executed in (2/140) below is actually indispensable (cf. Bresnan (1973) and Lechner (2004), the latter stating that “in the postnominal construction, the CD [comparative deletion] site has to be small (consisting of AP [adjectival phrase] only)” (ibid., p. 61)):

(2/140) *Mary built a house taller than Peter.*

As it turns out, however, from a technical point of view, it is indeed possible to derive both readings associated with sentence (2/131) via an application of the original RPA alike by assuming a very low position of the comparative operator simply yielding the string of words *Peter'den büyük (tall(er) than Peter)* to successfully derive the second reading.⁶⁹ I am thus cautious enough to tentatively conclude that while the attested ambiguity is surely fully compatible with my new account of phrasal comparison, it might after all not supply additional evidence for favouring it over the more classical RPA.

Having thus all the ingredients of my novel approach to phrasal comparison in place, I shall next examine some of the predictions it makes in the Turkish language, in particular with regard to standard terms that are quantificational in nature (subsection 2.3.4.5.1), before contemplating the question of whether it is conceivable or not to transfer this newly developed analysis to English (superficially) phrasal comparatives with quantificational standard terms as well (2.3.4.5.2).

⁶⁹ Note in passing that if one was to apply a phrasal approach (no matter whether the RPA or the modified one defended here) to an English example like (2/139) (cf. the discussion to follow in section 2.3.5 below on the question of whether phrasal comparison should be assumed for English-like languages, too), it would remain totally mysterious why this sentence does not give rise to the same ambiguity as its Turkish counterpart in (2/131), given that technically speaking, it is in fact possible to derive this reading.

2.3.4.5 Consequences of the Approach for Comparison Constructions Featuring Quantificational Elements

2.3.4.5.1 Welcome Predictions in Turkish

In this subsection, I shall first of all briefly sketch the empirical facts about Turkish comparatives containing a standard term that happens to be quantificational in nature. To begin, consider example (2/141) below involving universal quantification, which my native speaker informants judged to be acceptable only when Mary is indeed taller than all of the (contextually relevant) boys and where it is not enough for her to simply exceed the shortest among these in size:

(2/141) *Maria her oğlan.dan uzun.*
Mary every boy.ablative tall
'Mary is taller than every boy.'⁷⁰

This corresponds to a reading in which the quantificational determiner phrase *her oğlan(dan)* (*every boy(ablative)*) takes wide scope with respect to the phrasal comparison operator, as can be seen from the truth conditions specified in (2/142a) below, whereas the weaker reading derived from the reverse scopal order (cf. (2/142b)) is not attested:

(2/142) a. $[[[2/141]]] = 1$ iff $\forall x [\text{boy}(x) \rightarrow \max(\lambda d. \text{Mary is } d\text{-tall}) > \max(\lambda d. x \text{ is } d\text{-tall})]$
b. $[[[2/141]]] \neq 1$ if $\max(\lambda d. \text{Mary is } d\text{-tall}) > \max(\lambda d. \forall x [\text{boy}(x) \rightarrow x \text{ is } d\text{-tall}])$

A similar situation obtains with examples where the comparative's standard term consists of an existentially quantified determiner phrase as in (2/143) below, where it is sufficient for the sentence to come out true if Mary is taller than at least one other person and where she does not have to be taller than everyone else in a given scenario:

(2/143) *Maria herhangi birin.den uzun.*
Mary somebody.ablative tall
'Mary is taller than some other person.'

Thus, once again, we only get the reading where the quantified determiner phrase outscopes the phrasal comparison operator, as illustrated in (2/144a) below, and not the one where that operator takes scope above the determiner phrase itself (cf. (2/144b)):

(2/144) a. $[[[2/143]]] = 1$ iff $\exists x[\text{person}(x) \ \& \ \max(\lambda d. \text{Mary is } d\text{-tall}) > \max(\lambda d. x \text{ is } d\text{-tall})]$
b. $[[[2/143]]] \neq 1$ if $\max(\lambda d. \text{Mary is } d\text{-tall}) > \max(\lambda d. \exists x[\text{person}(x) \ \& \ x \text{ is } d\text{-tall}])$

⁷⁰ The acceptability of this English gloss actually happens to be somewhat controversial, an issue which I shall encounter again in subsection 2.3.4.5.2 below (cf. also footnote 74, there).

If we finally add negation to the picture as in (2/145), the same basic pattern shows up once more in that only the wide scope reading of the quantified determiner phrase is actually attested (cf. the sentence's truth conditions specified in (2/146) below), because in a given situation, Mary does indeed have to be shortest for sentence (2/145) to become true, it not being enough for her just to be not taller than the tallest individual among the relevant group of people, according to all my Turkish informants:

(2/145) *Maria hiç kimse.den uzun değil.*
 Mary somebody.ablative⁷¹ tall sentential_negation
 'Mary is (the) shortest.'; intended as: '*Mary is taller than nobody.'

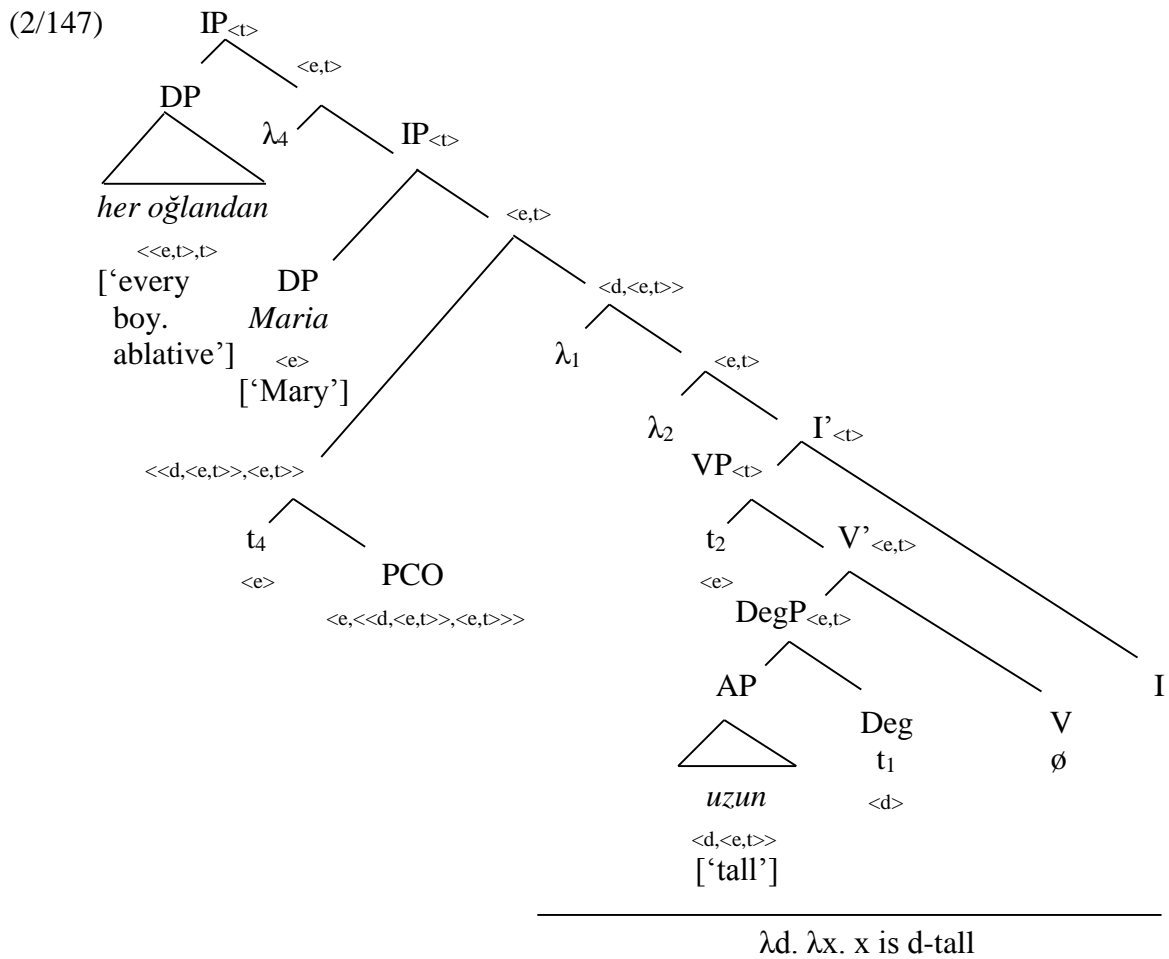
(2/146) a. $[[[(2/145)]]] = 1$ iff $\sim\exists x$ [person (x) & $\max(\lambda d. \text{Mary is } d\text{-tall}) > \max(\lambda d. x \text{ is } d\text{-tall})$]
 b. $[[[(2/145)]]] \neq 1$ if $\sim\max(\lambda d. \text{Mary is } d\text{-tall}) > \max(\lambda d. \exists x$ [person (x) & x is d-tall])

The general conclusion to be drawn from these empirical data is therefore that quantificational standard terms always take wide scope with respect to the phrasal comparison operator in Turkish and that the reverse situation, where the comparison operator would scope above such a determiner phrase, is not attested.⁷²

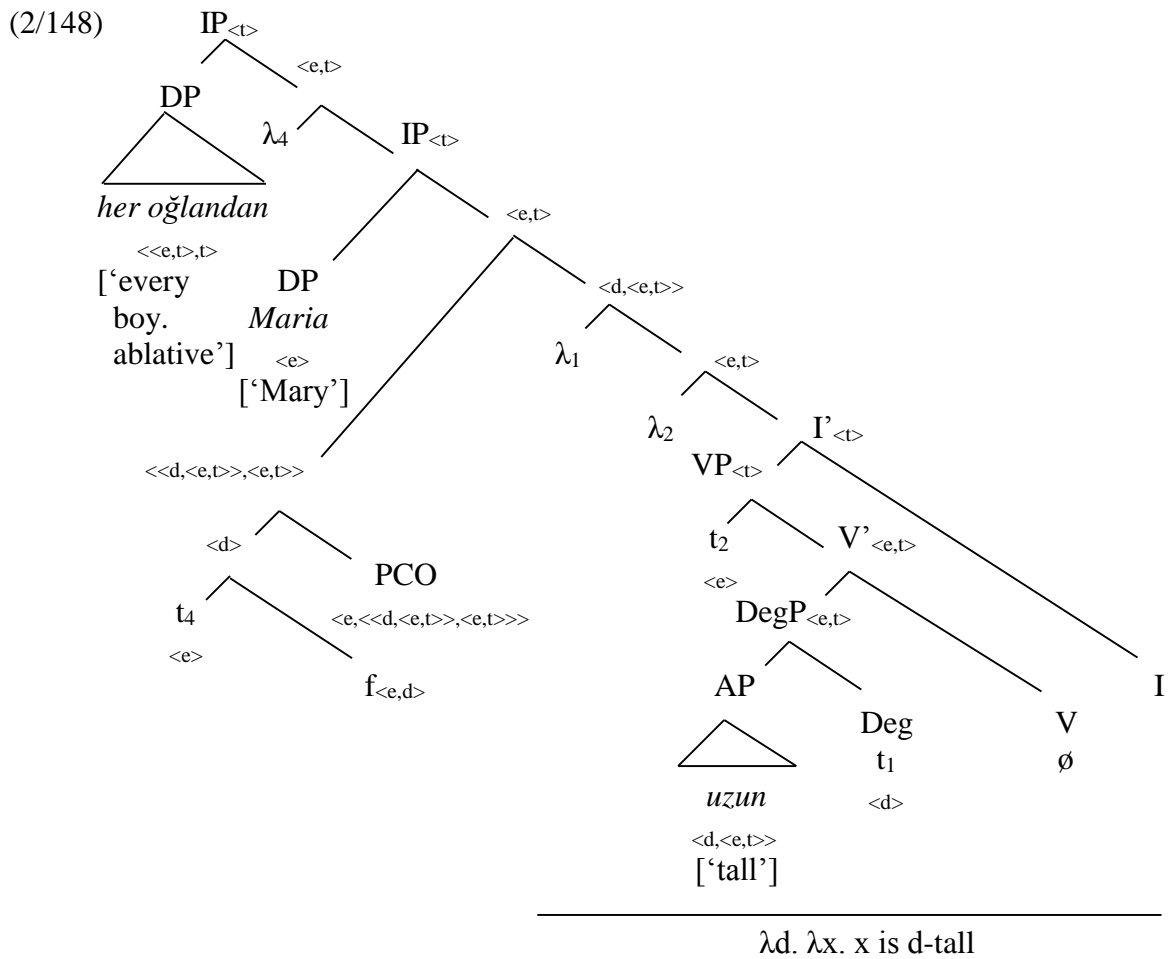
As I have shown in Hofstetter (2009, pp. 199-201), the RPA correctly predicts this scopal order on the assumption that a type mismatch forces a quantificational determiner phrase to Quantifier Raise: Due to the fact that in this version of phrasal comparison, the comparison operator requires an element of semantic type $\langle e \rangle$ as its first argument (cf. its lexical entry given in (2/92) in subsection 2.3.2 above) and finds something of the more complex type $\langle\langle e, t \rangle, t \rangle$, instead, the quantificational determiner phrase undergoes Quantifier Raising, as a result of which it automatically outscopes the phrasal comparison operator as desired, which is illustrated in (2/147) on the next page for sentence (2/141) in an exemplary fashion:

⁷¹ The expression *hiç kimse(den)* normally translates as 'nobody' into English, but it cannot be used felicitously without a sentential negation marker in Turkish (*değil*, in the case at hand). Given that the two negations clearly do not cancel each other (in which case Mary would have to come out tallest for sentence (2/145) to be judged true; cf. section 3.3.3 below), I decided to follow common practice in only interpreting the sentential negation marker *değil* as negative and glossing *hiç kimse(den)* positively as 'somebody', instead.

⁷² As a matter of fact, essentially the same empirical situation is found in corresponding English comparatives, too (cf. for example Beck (2010), Gajewski (2009), Heim (2006b), Kennedy (1997) or Schwarzschild/Wilkinson (2002), among many others). I shall address this phenomenon in some detail in the ensuing subsection 2.3.4.5.2.



Of course, it would be highly appealing if the modified proposal defended here essentially preserved these predictions for quantificational standard terms and luckily enough, this is exactly what it does: This time, the function introduced in (2/117) above and modified in (2/127) afterwards looks for an argument of semantic type $\langle e \rangle$ and is confronted with one of the incompatible quantifier type $\langle \langle e, t \rangle, t \rangle$. As before, I propose to fix this type mismatch by Quantifier Raising the quantificational determiner phrase (as shown in (2/148)), thereby once again arriving at an LF where the comparison operator ends up taking scope below this determiner phrase:



Additionally, one might consider cases with quantified noun (or determiner) phrases in the comparee rather than the standard term of a comparative, but given that the two potential readings are almost always indistinguishable in such a configuration (cf. Heim (2001), pp. 217f.), it does not really matter whether the quantificational phrase takes scope over the comparison operator or whether the reverse situation obtains. To see this, take an English sentence like (2/149), that would be associated with the two truth conditions specified in (2/150), depending on the scopal order of the quantified phrase and the comparison operator:

(2/149) *Every boy is taller than Mary.*

- (2/150) a. $[[(2/149)]] = 1$ iff $\forall x$ [boy (x) \rightarrow max (λd. x is d-tall) > max (λd. Mary is d-tall)]
 b. $[[(2/149)]] = 1$ iff max (λd. $\forall x$ [boy (x) \rightarrow x is d-tall]) > max (λd. Mary is d-tall)

In spite of their quite distinct surface appearance, (2/150a) and (2/150b) actually state exactly the same, for if the maximal degree to which every boy is tall is larger than that to which Mary is tall, it follows that even the shortest among the boys and thus every boy invariably happens to be taller than Mary. Therefore, even though data featuring comparatives with quantificational comparee terms are perfectly compatible with the specific kind of phrasal approach to

comparison outlined here, they do not really constitute further direct evidence in favour of it, given that pretty much any account could adequately handle such data.

Alternatively, one might obviously also think of a solution in terms of type-shifting, but then, my approach would inevitably lose much of its explanatory power, given that the Quantifier Raising account automatically forces the derivation of the readings that are indeed available (cf. the attested and unattested truth conditions in (2/142), (2/144) and (2/146) above), which would not be the case with a type-shifting account. And interestingly enough, recent work by Martin Hackl (cf., for instance, Hackl/Koster-Moeller/Varvoutis (2007), among other relevant publications) provides independent evidence for the need of Quantifier Raising, anyway. In total, my modified analysis for phrasal comparison in terms of associating individuals with implicit degrees thus not only allows me to appropriately handle comparatives that pose a challenge for the RPA as such (cf. section 2.3.4.3 above), but at the same time, it also enables me to maintain the very welcome predictions that analysis makes for comparatives featuring quantificational standard terms in the Turkish language.⁷³ As a next step, I shall now examine whether transferring this special kind of analysis to (superficially) phrasal comparatives in English buys us something for cases including quantificational standard terms in this language, as well.

2.3.4.5.2 The Situation in a Language like English

Before entering matters proper, let me stress here right from the beginning that the scope of this subsection is very modest: It is not about developing a comprehensive account of the behaviour of quantificational standard terms in English comparatives, but it just aims at checking whether the novel analysis primarily designed for the special needs of comparison in

⁷³ An additional good testing ground besides quantificational standard terms for the validity of my novel account of phrasal comparison in Turkish could theoretically be constituted by the behaviour of Negative Polarity Items in the standard terms of comparative constructions. Unfortunately, however, Turkish does not seem to dispose of any pronouns that are negatively polar in nature, in that all pronouns I have been able to come up with in this language are fully acceptable in episodic contexts throughout, a conclusion that was also corroborated by Jaklin Kornfilt, who confirmed that there simply are no negatively polar pronouns in this language (personal communication). The only Negative Polarity Item I have indeed come across in Turkish is the adverb *hiç* (*ever*), an example of which is given in (i) below (note in passing that in Turkish, dative rather than locative case is commonly used to mark the direction of a movement, which is why in this example, *Avustralya* (*Australia*) appears in the former case and not in the latter):

(i)	<i>Peter</i>	<i>hiç</i>	<i>Avustralya.ya</i>	<i>git.ti</i>	<i>mi?</i>
	Peter	ever	Australia.dative	go.past_tense	question_particle
	‘Has Peter ever been to Australia?’				

By virtue of the fact that such an expression invariably requires a clausal syntactic surrounding, its insertion into a comparative’s standard term is excluded right from the outset, though, given that the latter is always inherently phrasal in Turkish, as has been argued for at length, so that in the end, the issue of negative polarity does not yield any supplementary insights for the analysis of comparison in this language.

Turkish can be successfully applied to a language like English or not. In fact, this might actually look quite tempting, because in essence, precisely the same empirical situation obtains in English too, as has already been indicated in footnote 72 above. In this fashion, sentences like (2/151) and (2/153) below also only give rise to readings in which the quantificational noun (or determiner) phrase outscopes the comparison operator and where, exactly as was described for Turkish in subsection 2.3.4.5.1 above, readings deriving from a reverse scopal order do not exist, either, as can be seen from the attested as opposed to the unattested truth conditions these sentences are associated with that are given in (2/152) and (2/154), respectively:

(2/151) *Mary is taller than every boy.*⁷⁴

- (2/152) a. $[[[2/151]]] = 1$ iff $\forall x$ [boy (x) \rightarrow max (λd . Mary is d-tall) $>$ max (λd . x is d-tall)]
 b. $[[[2/151]]] \neq 1$ if max (λd . Mary is d-tall) $>$ max (λd . $\forall x$ [boy (x) \rightarrow x is d-tall])

(2/153) *Mary is taller than some boy.*

- (2/154) a. $[[[2/153]]] = 1$ iff $\exists x$ [boy (x) & max (λd . Mary is d-tall) $>$ max (λd . x is d-tall)]
 b. $[[[2/153]]] \neq 1$ if max (λd . Mary is d-tall) $>$ max (λd . $\exists x$ [boy (x) & x is d-tall])

It might thus look promising to transfer a phrasal analysis of comparison (either in the form of the RPA or in the modified version thereof based on the notion of associating individuals with implicit degrees as adopted here) to such (at least superficially) phrasal English comparatives, given that this would automatically provide us with a rather elegant explanation for the attested as well as for the unattested readings English comparatives involving quantificational standard terms give rise to, which could ultimately be achieved in a simple and straightforward manner via precisely the same line of argumentation as has been developed for Turkish beforehand. And at first glance, pursuing such an approach might even appear all the more plausible in that attempts to extend sentences like (2/151) and (2/153) into fully fledged clausal comparatives lead to at least strongly marked, if not downright ungrammatical results (cf. (2/155) and (2/156) on the following page), which could initially be taken as an indication of the fact that after all, the comparatives in (2/151) and (2/153) are truly phrasal in nature:⁷⁵

⁷⁴ I am using this very simple example here for ease of exposition, although it sounds slightly odd for some English native speakers. For a sketch of an explanation of the slightly marked status of example (2/151), I refer the interested reader to Beck (2012b).

⁷⁵ While in traditional literature on comparatives featuring quantificational standard terms, data like (2/155) and (2/156) have not necessarily been classified as degraded, this is what I actually found when confronting English native speakers with such sentences: On a scale ranging from “1” down to “4” (cf. section 2.1.1 above), these attracted the judgments “3” and “4” throughout. As matters turn out, these sound particularly bad when the verb *is* gets deaccented. In view of the fact that I shall eventually not pursue a phrasal approach to these cases anyway, I shall not enter the rather complex details of whether the mechanism of verb phrase ellipsis permits such a deaccentuation of *is*.

(2/155) ^{??/*} *Mary is taller than every boy is.*

(2/156) ^{??/*} *Mary is taller than some boy is.*

Tempting as the application of a phrasal account to such examples might therefore seem, it unfortunately turns out that there is rather compelling evidence that speaks against doing so: First of all, in contrast to Turkish, English displays uncontroversially clausal comparatives that can also feature a standard term that is quantificational in nature, as exemplified in (2/157) below, where once again, the same scopal order of the quantified standard term and the comparison operator is necessary to derive the attested and exclude the unattested reading, respectively, because for sentence (2/157) to come out as true, Mary did indeed have to run faster than all of the boys had run on the previous day, it not being sufficient for her to have outdone just the slowest among these (cf. the truth conditions listed in (2/158) below):

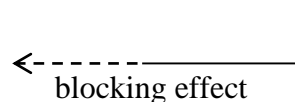
(2/157) *Mary ran faster than every boy had run the day before.*

(2/158) a. $[[[2/157]]] = 1$ iff $\forall x$ [boy (x) \rightarrow max (λd . Mary ran d-fast) > max (λd . x had run d-fast the day before)]

b. $[[[2/157]]] \neq 1$ if max (λd . Mary ran d-fast) > max (λd . $\forall x$ [boy (x) \rightarrow x had run d-fast the day before])

This time, however, Quantifier Raising (part of) the standard term to a position where it can take scope over the comparison operator is not a viable option, given that under the usual assumption that Quantifier Raising is subject to the same constraints on movement as ordinary movement that becomes visible at the surface structure, the clausal boundary intervening between this standard term and the comparative's matrix clause should obviously block such an extraction, as illustrated in (2/159) below:

(2/159) *Mary ran faster* [_{CP} *than every boy had run the day before*].



Such cases thus clearly underline the need for an alternative approach to English comparatives that comprise quantificational expressions. Second, simply carrying over a phrasal account to comparison in English is even problematic with certain cases where the comparative's standard term does in fact consist in nothing but a simple phrase (at least according to outward appearances), as can be seen from examples involving an *n*-word in that position such as the one introduced in (2/160):

(2/160) **Mary is taller than nobody.*

For the vast majority of English native speakers, this sentence is totally unacceptable, which would be completely unexpected under a phrasal approach, however, because here, no clausal boundary blocking Quantifier Raising would be bound to appear, and sentence (2/160) should thus come out true if and only if Mary is the shortest individual in a given scenario, as formalised in (2/161), a reading which example (2/160) hardly gives rise to, though, if at all:⁷⁶

(2/161) $[[(2/160)]]$ = 1 iff $\sim \exists x$ [person (x) & max (λd . Mary is d-tall) > max (λd . x is d-tall)]

By contrast, pursuing a clausal approach to English comparatives featuring standard terms that contain quantificational elements directly allows us to rule out a sentence like (2/160) by virtue of the fact that extraction of the expression involving the *n*-word will be blocked by the intervention of a clausal boundary and that it thus has to remain within the *than*-clause itself, which will immediately lead to an undefined denotation of the overall comparative.⁷⁷ That, in turn, represents a most welcome result, given that undefinedness is normally taken to lead to unacceptability rather than plain ungrammaticality, which adequately captures the status of a sentence such as (2/160). In view of data like (2/157) and (2/160), I therefore conclude that the phrasal account of comparison that proved to be very fruitful in a language like Turkish cannot be successfully transferred to English and that an alternative clausal approach is required, instead. Recently, an account of quantifiers appearing in the standard terms of comparatives mainly in terms of pragmatic selection has been proposed in Beck (2010), and an approach to this issue that certainly counts among those that have triggered most response is constituted by the one suggested in Gajewski (2009), the latter not only offering a critical review of a large number of previous accounts of this phenomenon, but also developing these further into a new approach, where the postulation of three basic ingredients (incorporation of (potentially phonologically silent) negation within the *than*-clause,⁷⁸ the requirement that the set of degrees

⁷⁶ A much more detailed description of the readings this sentence can and cannot have is offered in subsection 3.3.3 below, when Negative Island Effects and their absence in certain circumstances will be dealt with. For the time being, the crucial point is simply that the overwhelming majority of English native speakers will normally reject such a sentence (more precise figures will be offered in section 3.3.3).

⁷⁷ Since the exact mechanism responsible for causing this undefinedness effect happens to be fairly complex, I postpone introducing it to section 3.3.1 of this dissertation, where I shall discuss this issue in detail in the context of Negative Island Effects.

⁷⁸ I shall elaborate on some of the effects of assuming an inherently negative denotation for *than*-clauses with comparatives in subsection 3.3.3 below, when accounting for comparatives in French and Spanish that feature an *n*-word in their standard terms, where this assumption, that actually happens to be quite widespread (cf. for instance also Bresnan (1973), Morzycki (2009), Ross (1969), Schwarzschild (2008) or Seuren (1973, 1984), among many others) will play a key role.

denoted by the matrix clause and that contributed by the *than*-clause overlap as well as an implicature generating mechanism in combination with a pragmatic principle ensuring that these implicatures affect a comparative's truth conditions) allows the author to cover an impressive range of empirical data including all upward as well as downward monotonic and even most non-monotonic quantifiers, although certain non-monotonic discontinuous quantifiers (such as for instance *an even/odd number of*) and some conjoined determiners (like for example *some but not all*) remain problematic, the most serious shortcoming however undoubtedly being its incompatibility with comparatives involving overt differentials (cf. *Mary is two inches taller than Peter.*)⁷⁹ A very innovative and appealing approach unifying the semantics of comparison constructions (including the behaviour of quantifiers in *than*-clauses) with that of plural predication is furthermore proposed in Beck (2012b), Beck (2011) already offering an up-to-date and very condensed overview of earlier approaches to this issue (ibid., pp. 1366ff.).

Having thus reached the conclusion that (at least with the cases under consideration here, but cf. the discussion to follow in section 2.3.5 below) comparison in English is clausal rather than phrasal, one might wonder anew about the status of sentences like (2/155) and (2/156) above. In my opinion, their markedness should not be ascribed to a genuinely phrasal nature of these, as was initially hypothesised and is probably due to a completely different reason, simple stylistic oddity (after all, these sentences involve repetition of the fairly vacuous element *is* within a string of no more than six words) or purely syntactic considerations being plausible candidates.⁸⁰ In sum, the option of making use of a phrasal approach to comparison along the lines of Turkish does thus clearly not provide us with a solution to the puzzling behaviour quantificational expressions show in the standard terms of English comparatives and should therefore be rejected.

⁷⁹ What is at stake here is exactly the same difficulty as has been identified in section 2.3.2 above for the denotation of the phrasal comparison operator suggested in Bhatt/Takahashi (2007, to appear) (cf. (2/85), there), which was also shown to be inappropriate for handling comparatives including overt differentials such as for instance Turkish (2/9) above. For a criticism of the treatment of elements that might potentially be classified as Negative Polarity Items in Gajewski (2009), see Eckhardt (2011, p. 151).

⁸⁰ Cf. for instance Merchant (2003) for an account that is exclusively syntactic in nature of why under specific conditions, the verb phrase in the *than*-clause of a comparative even has to be obligatorily elided, although this account only concerns cases where subject auxiliary inversion has occurred and does therefore not directly carry over to the kind of data discussed here.

2.3.4.6 Interim Summary

On the basis of three sets of problem cases (comparatives including non-agentive or adjunct-like standard terms, comparatives featuring nominalised standards as well as comparatives containing an explicit *exactly*-differential and a modal expression), I have verified the need for a new approach to phrasal comparison in Turkish. I have presented such a new analysis, primarily hinging on the idea of associating individuals with implicit degrees, and I have demonstrated that such an approach fares much better with all the problematic data identified for the RPA, which had been developed from existing approaches to phrasal comparison beforehand. At the same time, after the implementation of a crucial restriction, it has also been shown that the relatively great flexibility of this new approach to comparison that still remains ultimately constitutes an advantage rather than a potential drawback. Moreover, it has been argued that this novel account of phrasal comparison is still able to make the correct predictions with respect to the scopal behaviour of quantificational standard and comparee terms.

In this context, I unfortunately have to admit that there is one aspect of the proposal developed here that I must leave for future research and that is the following question: How exactly do we get from an individual to a degree denotation or, to put things more precisely, can we always get from an element denoting an individual to a degree that goes with it, or is this only possible in specific circumstances and if so, what are the exact conditions under which this step is indeed licit? At the moment, it just so happens that I do not have anything particularly clever to say about this issue, which I hope I shall be able to address in some detail in future work within this linguistic domain. Instead, I shall conclude section 2.3 of this dissertation by having a look at yet another closely related aspect of the new analysis of phrasal comparison elaborated, here: While it is true that this new approach was primarily designed for comparison in the Turkish language, one might still wonder if there is any evidence for the existence of genuinely phrasal comparison in languages like English or German as well, which still represents a matter of much debate, as already briefly mentioned at the beginning of subsection 2.3.1 above.

2.3.5 Phrasal Comparison in Languages like English or German?

Having established in subsection 2.3.4.5.2 above that a clausal analysis lends itself better to English comparatives featuring quantificational elements in their standard terms than a phrasal approach to comparison, one might be curious to know if there is any evidence for

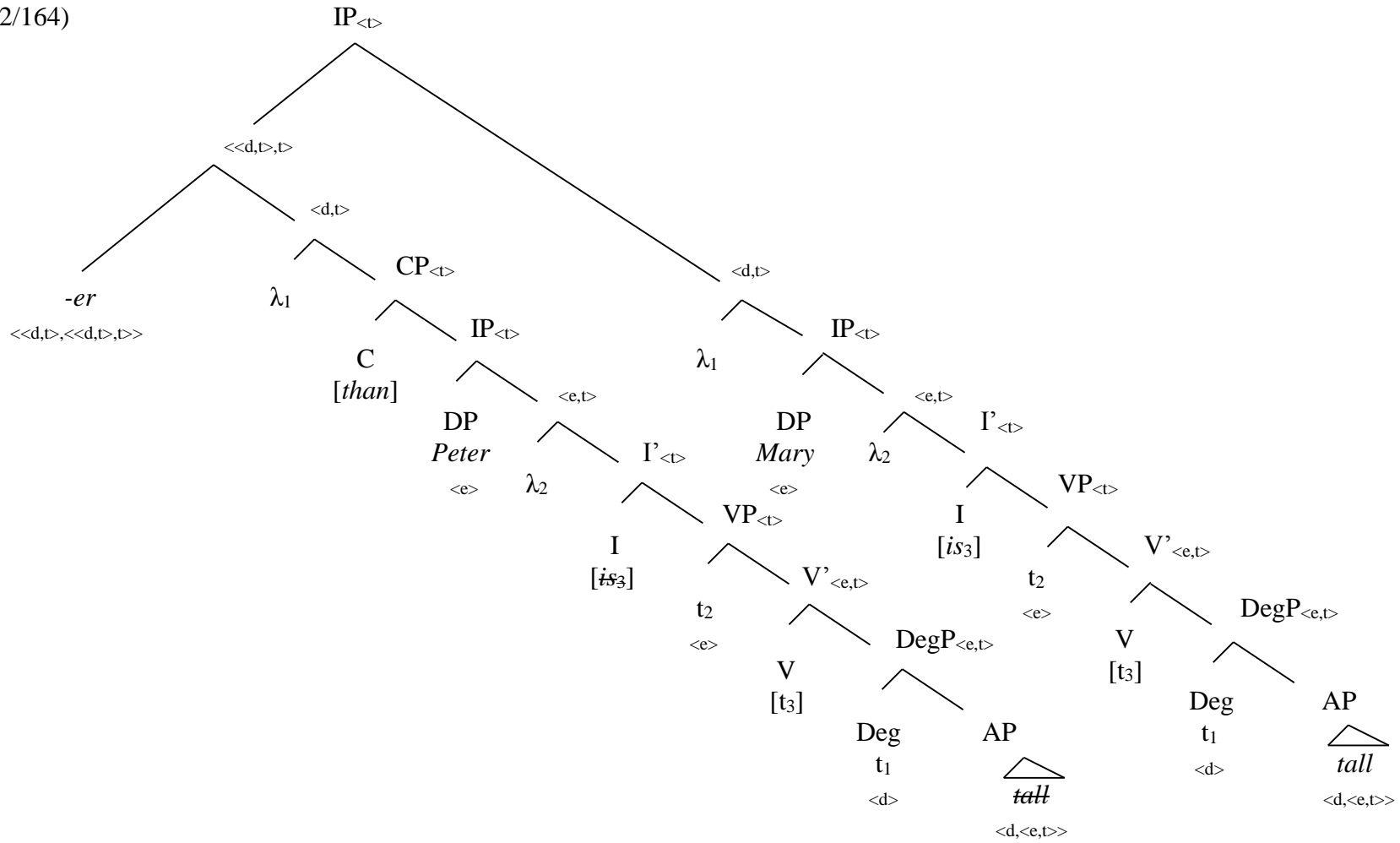
truly phrasal comparison in languages like English or German at all.⁸¹ Also note that if this was indeed the case, we would even expect these to also make use of the strategy of associating individuals with implicit degrees in their phrasal comparatives that I have developed for Turkish above. This follows from the fact that one of the main motivations for this special type of approach to phrasal comparison has been direct compatibility with standard terms in the form of degrees in Turkish (cf. subsection 2.3.4.1 above) and as a matter of fact, English and German also allow for direct comparison with a degree, as can be seen from the equivalent set of examples in (2/162a) and (2/162b) below in an exemplary fashion:

- (2/162) a. *Mary is taller than 1.80m.*
 b. *Maria ist größer als 1.80m.*
 Mary is tall.-er than 1.80m
 ‘Mary is taller than 1.80m.’

In order to shed light on these issues, let me start out by taking a look at a simple example of an (at least superficially) phrasal comparative such as the one given in (2/163) below, to which I shall in turn apply the three basic approaches to comparison considered here, consisting in a clausal approach, the RPA and my new phrasal account in terms of associating individuals with implicit degrees, and an LF for which could look as in (2/164) on the next page under the clausal analysis:

- (2/163) *Mary is taller than Peter.*

⁸¹ For the sake of simplicity, I shall treat comparison in English and German as being exactly on a par in what follows. Even though strictly speaking, this is of course far too coarse a treatment, I do not expect this to do any harm for the purposes I am pursuing, here.



Making use of a clausal comparison operator like the one introduced in (2/165) below, sentence (2/163) would thus be predicted to be true if and only if $\max(\lambda d. \text{Mary is } d\text{-tall}) > \max(\lambda d. \text{Peter is } d\text{-tall})$, exactly as desired:

$$(2/165) \quad [[-er]_{\text{clausal}}] = \lambda D_1 [\in D_{\langle d, t \rangle}]. \lambda D_2 [\in D_{\langle d, t \rangle}]. \max(D_2) > \max(D_1)^{82}$$

[Beck (2011), p. 1347; her (35b); cf. also (1/10) above]

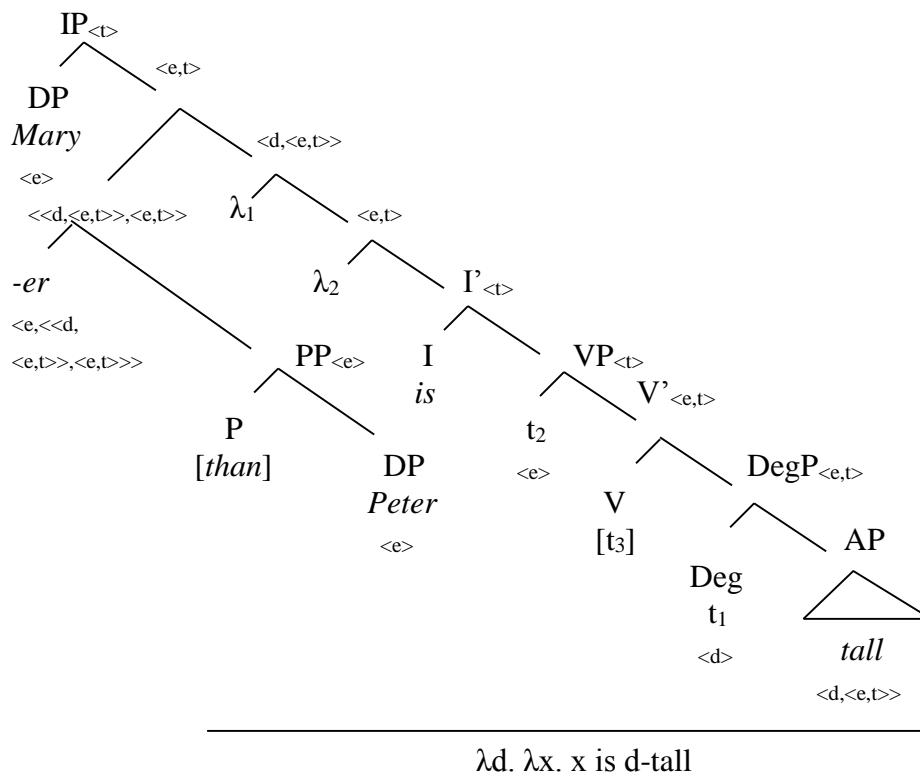
By contrast, the RPA would simply take (2/163) as its direct input, without anything being reconstructed, in a ‘what you see is what you get’-like fashion, as shown in the LF given in (2/166) on the next page, and it predicts precisely the same truth conditions for this sentence as the clausal approach before, namely that $\max(\lambda d. \text{Mary is } d\text{-tall}) > \max(\lambda d. \text{Peter is } d\text{-tall})$, in case the sentence is to end up true. This result might at first glance look rather surprising, given that the lexical entries for the comparison operators involved as well as the syntactic structures underlying the respective derivations actually happen to be quite different. On closer inspection, it turns out that these are in fact fairly superficial differences, though: It just so happens that under the clausal approach, we overtly reconstruct the gradable predicate, to the effect that it appears twice in the basic structure (cf. the LF included in (2/164) above), whereas under the phrasal approach, we simply interpret that gradable predicate twice, without reconstructing it overtly at the level of LF ((2/166) on the next page) and both times, the output thus looks exactly alike:

⁸² With respect to the truth value description, this corresponds to the comparative semantics suggested in von Stechow (1984a) in the version adopted in Heim (2001). Alternatively, one might also choose a simpler denotation for the comparison operator in which it simply compares two degrees (cf. (i) below) rather than the maxima of two sets of degrees and assume that maximality gets added as a principle that is independently available, as has for instance been suggested in Beck (2012b):

(i) $[[-er]] = \lambda d [\in D_d]. \lambda d' [\in D_d]. d' > d$ [ibid., section 1; her (4’)]

In my opinion, this has however the considerable disadvantage that one would have to specify in which linguistic configurations exactly maximality obtains in general, which constitutes a fairly complex and rather intricate task. I shall therefore continue using the version given in (2/165) in the main text, here, where the direct integration of a maximality operator into the denotation of the comparison operator itself merely boils down to saying that a comparison construction triggers maximality effects and where no claims about the absence or presence of maximality in other linguistic environments are made at all. As will become clear in subsection 3.3.1.2.2 below, this is a simplification, anyway, for what is actually at stake here is maximal informativity rather than plain maximality as such. For the purposes of this subsection, requiring simple maximality is however sufficient for making the correct kind of predictions, which is why I shall stick to this for the time being and revise things later on, when replacement by maximal informativity will really reveal itself to be crucial.

(2/166)



Finally, with my novel analysis for phrasal comparison, we would arrive at the truth conditions for sentence (2/163) that are spelt out in (2/167) below:

(2/167) $[[(2/163)]] = 1$ iff $\max (\lambda d'. \text{Mary is } d\text{'-tall}) > \text{id} [d = \max (\lambda d. A_{c\langle d, \langle e, t \rangle \rangle} (d) (x))]$,
 where “ A_c ” is the most salient gradable predicate in a given utterance context c

Given the presence of the adjective *tall* in the immediate context, it seems reasonable to assume that the degree that gets associated with the individual Peter is that of his physical size, so that in the end, application of all three approaches leads to precisely the same result. For a simple comparative such as the one contributed in (2/163), these three basic accounts are thus virtually indistinguishable. Remember from subsection 2.3.2 above, however, that with such vanilla cases, the RPA and my new modified version thereof had also made the exact same predictions in Turkish and that it was only with more sophisticated examples such as those identified in sections 2.3.3.1 to 2.3.3.4 that these two clearly diverged in their respective predictions. I therefore suggest to go through these problem cases again to see if a need for a phrasal approach to at least some comparatives in English arises from any of these. Under the assumption that in a sentence like (2/168) on the next page, the expression *the world record* can indeed immediately refer to a degree (cf. the discussion in subsection 2.3.3.1 above and Beck (2012b), section 3, in particular her (69a-c)), this sentence turns out to be unproblematic, because direct

comparison with a degree must obviously be an option in English, anyway, in view of data such as (2/162a) above:

(2/168) *Mary jumped higher than the world record.*

Next, sentences featuring non-agentive, adjunct-like standard terms with comparatives such as the one given in (2/169a) below surely do not present any evidence in favour of pursuing a phrasal approach to comparison in English either, because with these, the standard term can easily be extended into a full-fledged equivalent clause, as demonstrated in (2/169b):

(2/169) a. *Here, it is much warmer than in Southend.*

b. *Here, it is much warmer than ~~it is (d-)warm~~ in Southend.*

Such examples thus lend themselves perfectly well to a basic clausal analysis. Moreover, it has already been shown in section 2.3.3.3 above that in English, in contrast to Turkish, comparatives displaying a modal expression as well as an explicit differential modified by *exactly*, can by and large be successfully dealt with under a clausal approach and ultimately, English does not really show nominalisations corresponding to that in Turkish (2/14) to begin with, anyway. In total, there does therefore not seem to be any need to postulate the existence of comparatives that require a truly phrasal account in English and given that this language displays comparatives with uncontroversially clausal standard terms (cf. for instance example (2/157), repeated from section 2.3.4.5.2 above), the general conclusion in line with basic considerations of economy appears to be that a purely clausal strategy is thus sufficient to account for comparison in this language, a conclusion also reached in its most radical form in Lechner (2004):

(2/157) *Mary ran faster than every boy had run the day before.*

But wait a minute – we are moving far too fast. As a matter of fact, there is compelling evidence of a syntactic nature that clearly points in a different direction. Let me just reproduce two of these numerous arguments from syntax in an exemplary fashion, here: The first of them is illustrated with the contrasting set of examples given in (2/170) below and pertains to movement properties:

(2/170) a. *You finally met somebody you're taller than.*

b. **You finally met somebody you're taller than is.* [Kennedy (1997), p. 163; his (203) and (205); originally due to Hankamer (1973), p. 179; his (3)]

In sentence (2/170a), *somebody*, the direct object of the transitive verb *met*, originates in a position below *than*, representing the standard term of the comparison being made. In order to become the complement of *met*, it must thus undergo movement, which is expected to be unproblematic if (2/170a) constitutes a phrasal comparison, given that no intervening clausal boundary is bound to appear that could block this movement (cf. the structures displayed in (2/171a, b) below and the discussion of example (2/157) in subsection 2.3.4.5.2 above):

- (2/171) a. *You finally met somebody_i you're taller* [PP *than t_i*].
 b. **You finally met somebody_i you're taller* [CP *than t_i is*].

By contrast, the presence of the verb form *is* at the very end of the sentence shows that the minimally different (2/171b) features a clausal comparison so that the expression *somebody* cannot leave the complementiser phrase in which it is born, and extraction of this element directly leads to ungrammaticality. The different grammatical status of this minimal pair can therefore be explained in a simple and straightforward manner under the assumption that we are dealing with a phrasal and a clausal instantiation of a comparative, respectively, a difference in status which would otherwise remain completely mysterious. In a similar fashion, the set of examples listed in (2/172) below makes a parallel point, this time with respect to binding properties:

- (2/172) a. *No man is stronger than himself.*
 b. **No man is stronger than himself is.* [Hoeksema (1983), p. 405; his (8a, b)]

Here, the reflexive pronoun *himself* is subject to binding principle A and thus needs to be locally bound. Again, if we assume that (2/172a) represents a phrasal comparative and (2/172b) a clausal one, the attested difference in grammaticality follows immediately, given that in the (a)-variant, this pronoun can indeed be successfully bound by the noun (or determiner) phrase *no man* in the sentence's subject position, but not in the (b)-version, where *no man* is situated within a different clause than the pronoun it is supposed to bind, as can be seen from the coindexation patterns shown in (2/173a) versus (2/173b), below:

- (2/173) a. *No man_i is stronger* [PP *than himself_i*].
 b. **No man_i is stronger* [CP *than himself_i is*].

In the relevant literature, a whole array of other, largely similar syntactic arguments for the existence of phrasal comparatives in languages like English can be found (cf. for instance Hankamer (1973), Hoeksema (1983), Napoli (1983) or Kennedy (1997), among others), so that

at least from a syntactic point of view, there is good reason to believe that for certain superficially phrasal comparatives, pursuing a phrasal account is indeed indispensable.⁸³

However, it is not just considerations of a purely syntactic nature that lead to this conclusion. In order to see this, let us next have a closer look at nominalisation patterns again, because with these, matters are actually not as clear-cut as they might appear at first glance: As noted above, Turkish nominalisations like that exemplified in (2/14) do not have direct English equivalents. These correspond fairly closely to nominalised participles in German, though, where they actually produce very bad results when used as the standard term of a comparative construction, as shown in (2/174) below:

- (2/174) a. **Maria ist reich.er als das von mir*
 Mary is rich.-er than the(neuter) of me
Ge.dach.te.
 past_participleI.think.past_participleII⁸⁴
 intended as: ‘*Mary is richer than the thing thought by me.’; approximately:
 ‘Mary is richer than my thinking.’
- b. **Maria rann.te schnell.er als das von mir*
 Mary run.past_tense fast.-er than the(neuter) of me
Ge.dach.te.
 past_participleI.think.past_participleII
 intended as: ‘*Mary ran faster than the thing thought by me.’; approximately:
 ‘Mary ran faster than my thinking.’

Nevertheless, German *exceed*-comparatives can indeed feature nominals as their standard terms, as illustrated in (2/175a) and crucially observe that with such examples, pursuing an elliptical clausal approach to comparison is not a viable option (cf. the completely ungrammatical status of the extended version included in (2/175b)):

- (2/175) a. *Es übertrifft mein.e Vorstellungskraft, wie weit*
 it exceed.3singular my.feminine imagination how far
ein.e Raumsonde flieg.en kann.ø.
 a.feminine space probe fly.infinitive can.3singular
 ‘It exceeds my imagination how far a space probe can fly.’

⁸³ In a similar fashion, Pancheva (2006) concludes that it is largely “syntactic arguments that challenge that account [that is an application of the reduced clause analysis to all phrasal comparatives alike]” (ibid., section 1). As we shall see shortly, though, it is not exclusively syntactic arguments that point in this direction.

⁸⁴ The notation ‘past_participleI.think.past_participleII’ in the glosses of (2/174a) and (2/174b) (cf. also examples (3/9d) and (3/12c) to follow in sections 3.2.3 and 3.3.2.3.3.2.3 below) is intended to show that with verbs like *denken* (*think*), the past participle actually consists of two discontinuous parts in German, it being formed on the basis of the circumfix *ge*-verbal stem-*t*.

- b. **Es* *übertrifft* *mein.e* *Vorstellungskraft*, (*dass*
it exceed.3singular my.feminine imagination that
ein.e *Raumsonde* ~~*es*~~ *flieg.en* *kann.φ*,) *wie weit*
a.feminine space probe ~~*es*~~ fly.infinitive can.3singular how far
ein.e *Raumsonde* *flieg.en* *kann.φ*.
a.feminine space probe fly.infinitive can.3singular
intended as: ‘*It exceeds my imagination (that a space probe can fly ~~*es*~~) how far a space probe can fly.’

Even though the exact analysis of *exceed*-comparatives is something linguists have not settled on so far (cf. for instance Vanderelst (2010), according to whom “the *exceed*-strategy has not yet enjoyed [...] an in-depth study” (ibid., p. 343)), it is obvious that the novel account of phrasal comparison advocated here would face little difficulty in ascribing a sensible meaning to the expression *meine Vorstellungskraft* (*my imagination*) in (2/175a), where the largest degree of distance coverable by a space probe that the speaker is able to imagine would simply be selected as the relevant degree contributed by the standard term to the comparison being made. In sum, it therefore clearly seems to be the case that even in languages like English or German, defending a purely clausal account of comparison throughout is certainly not tenable in view of the fact that there is a whole miscellany of different kinds of comparatives with which a phrasal approach undoubtedly fares much better⁸⁵ and what is more, there is even evidence suggesting that the option of associating individuals with implicit degrees is available in these languages, too, as was already to be expected from the fact that just like Turkish, English and German also display direct comparison with degrees. If these conclusions are on the right track and languages like German or English do indeed display phrasal alongside with clausal comparison, one might wonder if there are any languages at all that feature clausal comparison across-the-board and what such a language would look like. A hint of this is offered in Hankamer (1973), where it is noted that “apparently [...] Papago [...] has only the clausal construction” (ibid., p. 190, footnote 7), unfortunately, however, without the details of comparison in this particular language being entered, there.

⁸⁵ In this context, it is also interesting to observe that while Bhatt/Takahashi (2007) largely follow Lechner (2004) in assuming that comparison is always clausal in English, they still concede that “the binding data constitutes the only argument against the availability of a Direct [that is, phrasal] Analysis in English” (ibid., p. 24, footnote 6), going on to clarify that “if this data turns out to be compromised, so will the argument against the availability of a Direct Analysis in English” (ibid.). I shall not go into these binding data, here, binding theory undoubtedly having represented one of the most controversial areas in linguistics over the past decades, anyway.

2.4 Summary

Section 2 of this dissertation has mainly completed the following three tasks: First of all, it has filled an empirical gap in existing literature on comparison by offering a survey of the major types of comparison constructions attested in Turkish and the particular shape these take in this specific language. Secondly, it has worked out when exactly the adverb *daha* is obligatory with these and when it constitutes a purely optional element, and it has also shed light on the precise semantic contribution it makes whenever present in a Turkish comparative, for which a new semantic analysis based on considerations of evaluativity effects has been developed, in the course of which this evaluative use of the Turkish adverb *daha* has been closely related to its other meaning components and where it has also been compared to adverbs with a similar function in other languages. And thirdly, a novel account of phrasal comparison hinging on the notion of associating individuals with implicit degrees has been proposed, which can handle the empirical data in a much more adequate fashion than other competing approaches and which was even shown to offer straightforward solutions to certain long-standing problems that the analysis of comparison in languages such as English or German raises. I shall now leave the field of comparison in Turkish and address another issue in the domain of gradability that also happens to be largely under-studied so far, namely the question of when exactly the insertion of an *n*-word within a comparative's standard term leads to the occurrence of a Negative Island Effect and when this is not the case.

3 NEGATIVE ISLAND EFFECTS AND THEIR ABSENCE: PROPOSITIONAL VERSUS ORDINARY ADJECTIVES

3.1 Introduction

In linguistic literature on comparatives, it has repeatedly been noted that the insertion of an *n*-word such as *no one* in sentence (3/1) below, *nobody* in (3/2) or *no* followed by an ensuing noun (or determiner) phrase as in (3/3) and (3/4) in the standard term of a comparative construction leads to a Negative Island Effect (NIE) that ultimately renders the corresponding comparative at least unacceptable, if not downright ungrammatical:⁸⁶

- (3/1) **Irene is prettier than no one of us.*⁸⁷ [von Stechow (1984a), p. 33; his (99b)]
- (3/2) **John weighs more than nobody weighs.* [Rullmann (1995), p. 39; his (2b)]
- (3/3) **Mary is taller than no boy is.* [Gajewski (2009), p. 340; his (2)]
- (3/4) **Fred is taller than no student is.* [ibid., p. 348; his (36)]⁸⁸

To the best of my knowledge, this phenomenon was first described in Lees (1961, p. 175) and has always remained a recurring issue to which much attention has been paid in the literature on comparatives ever since (cf. for instance Huddleston (1967), Ross (1969), Green (1970),

⁸⁶ At this point, a brief aside on terminology seems to be in place. In referring to the phenomenon under discussion here as a ‘Negative Island Effect’, I follow common practice in the relevant literature (cf. the references to be indicated in the main text later on), although this terminology actually happens to be somewhat misleading: Strictly speaking, we are not really dealing with an island effect in the classical syntactic sense of the word, here, such as for instance the ban on extraction out of complex noun phrases or relative clauses, given that these usually operate at the level of Phonological Form (PF). The issue under investigation here has however also been called ‘Negative Island Effect’ by virtue of the fact that in order to avoid the attested unacceptability, the corresponding *n*-word would have to be moved out of the standard term of the comparative containing it, as we shall see in detail in section 3.3.3 below, a movement which is normally blocked by the intervention of a clausal boundary, though (cf. also the discussion in subsections 2.3.4.5.2 and 2.3.5 above), so that we are facing an island for movement at the level of LF, in this case. Given the widespread assumption that covert movement at this level is for the most part subject to the exact same constraints as movement that is overtly visible, it does thus not come as much of a surprise that the term ‘Negative Island Effect’ has been frequently used for describing the linguistic phenomenon at hand here, as well. And since linguists have generally been following this terminological practice for several decades by now, I shall simply stick to this tradition, too, in what follows, bearing in mind, however, that the attested island effect is operative at LF rather than at PF, only.

⁸⁷ According to Jason Merchant (personal communication), sentence (3/1) is also problematic in that the string of words ‘no one of us’ happens to be very unidiomatic as such and should better be changed into ‘none of us’. Importantly note, however, that in the end, such a substitution is not able to save the sentence from unacceptability, as can be seen from the likewise unacceptable status of the modified version given in (i), where this replacement has indeed been carried out to the effect that now, the *n*-word included within the comparative’s standard term arguably represents the only remaining potential source for the ill-formedness of this sentence:

(i) **Irene is prettier than none of us.*

⁸⁸ In the light of the discussion of phrasal as opposed to clausal comparison in section 2 of this dissertation, it is interesting to notice that all these examples resulting in an NIE taken from the literature invariably involve a standard term that is clausal in nature. I postpone detailed discussion of whether the corresponding (at least superficially) phrasal comparatives would also be infelicitous to section 3.3.3, where I shall return to the issue of phrasal versus clausal comparison in the context of the (non-)occurrence of NIEs.

Cresswell (1976), Ross (1980), von Stechow (1984a), Bierwisch (1989), Rullmann (1995) or Gajewski (2009), among others), even though a robust empirical database on this phenomenon is still missing till this very day, a matter which the present work is supposed to remedy.

What I observed, however, is that this pattern is actually considerably less systematic than it might appear at first glance, as can be seen from the little dialogue in (3/5) below uttered on the occasion of a meeting that happened to be attended by nobody but Peter and that I accidentally overheard quite some time ago or from the exclamation given in (3/6) across which I came in the *Oxford English Dictionary*:

(3/5) A: *Only Peter turned up.*
 B: *That's still better than no-one at all.*

(3/6) *Better late than never!* [*Oxford English Dictionary*, under the entry for 'late']

Crucially note that in these two examples, the two *n*-words *no-one (at all)* and *never* occur precisely within the standard term of the respective comparatives containing them and thus give rise to exactly the same configuration as was held responsible for the attested NIEs with data such as (3/1) to (3/4) above. The existence of such apparent counter-examples thus immediately raises the following two questions: What is the exact empirical scope of these, both, in the English language itself, as well as from a cross-linguistic point of view, that is, are these part of a limited number of exceptions or do they constitute the visible sign of a productive pattern? And if the latter is indeed the case, is their distribution purely random or is it possible to detect a systematicity underlying their occurrence? In order to answer these questions, I ran individual corpus studies in the four languages English, German, French and Spanish, based on the *British National Corpus*, *Cosmas*, *Frantext* and the corpus provided by the *Real Academia Española*, respectively, the results of which on the absence of NIEs that would traditionally be expected to arise are presented in turn in the ensuing subsections 3.2.1 to 3.2.3, section 3.2.4 finally summing up these empirical findings. In section 3.3, I shall then develop a rather sophisticated analysis of the attested distribution of NIEs with comparatives, first accounting for those cases that do indeed give rise to an NIE (subsection 3.3.1) and then addressing the question of why others do not cause such NIEs (3.3.2). Additionally, I shall approach a whole array of directly related matters such as for example the issue of personal versus impersonal uses of adjectives or the choice of subordinator with clausal standard terms and the role factivity plays with these. Moreover, the validity of various empirical predictions of the analysis to be developed will also be the subject of close scrutiny, before subsection 3.4 will ultimately summarise the main insights obtained from the whole of section 3.

3.2 Evidence on the Absence of Negative Island Effects

3.2.1 Results Obtained from an English Corpus Study

The three main insights a corpus study in the English language offers on the absence of NIEs that we would under traditional assumptions expect to arise can be summarised as follows: First, there are comparative constructions lacking NIEs with pretty much every *n*-word there happens to be in this language, as shown by the set of examples listed in (3/7) below, featuring a wide variety of different *n*-words, as indicated by underlining:⁸⁹

- (3/7) a. *They needed a witness, and a servant from the street was better than nobody.*
[West, C. (1989): *Sherlock Holmes Short Stories*, Oxford: OUP.]
- b. *A father who loved you was better than no father at all.*
[Cole, M. (1993): *The Ladykiller*, London: Headline Book Publishing.]
- c. *She thinks that any husband is better than none.*
[Murphy, E. (1993): *A Nest of Singing Birds*, London: Headline Book Publishing.]
- d. *[...] because anything was better than never seeing him again.*
[Heywood, S. (1991): *Castle of Desire*, Richmond, Surrey: Mills & Boon.]
- e. *[...] but I suppose it's better than not telling them.*
[General portfolio management meeting, recorded on 7 April 1993.]
- f. *Work is a good deal less boring than doing nothing at all.*
[Bedford, S. (1993): *A Compass Error*, London: Virago Press.]

Second, it is not only with the expression *better*, but also with a whole miscellany of other gradable adjectives and adverbs that an *n*-word occurring in the standard term of a comparative does not necessarily give rise to the expected NIE, as can be seen in an exemplary fashion from the sentences included in (3/8) below (once again indicated by underlining of the relevant expressions):

- (3/8) a. *In areas of high unemployment many newly qualified staff are happier to have a part-time post [...] than to have no post at all.*
[Dean, D. J. (1987): *Manpower Solutions*, UK: Scutari Projects.]
- b. *Nothing is more confusing to staff than not to be able to foresee with reasonable certainty how a significant issue is likely to be resolved.*
[Owen, J. (1992): *Managing Education: The Purpose and Practice of Good Management in Schools*, Harlow: Longman.]
- c. *It may not be perfect but it's 90% more perfect than no "cat" at all.⁹⁰*
[goods advertisement.]

⁸⁹ In what follows, I always include the detailed sources of these examples within square brackets throughout, to the extent that the indications supplied by the respective corpora, which, unfortunately, often happen to be highly incomplete, allow me to do such.

⁹⁰ According to several English native speakers, sentence (3/8c) actually sounds rather awkward, but in my opinion, this is not so much due to a potential NIE resulting from the inclusion of the *n*-word *no* within the standard term of this comparative, as to the effect of putting the adjective *perfect* into the comparative form as such, *perfect* usually being considered to represent a non-gradable adjective to begin with (cf. also the discussion to follow in subsection 4.5.2.2 below).

- d. *A bad marriage is much worse than no marriage at all.*
[Frayn, M. (1969): *Towards the End of the Morning*, London: Penguin Books.]
- e. *He then asserted that it was greater to exist than not to exist.*
[Corner, M. (1991): *Does God Exist?*, Bristol: The Bristol Press.]
- f. *There is nothing more boring than not existing.*
[*Black Holes and Uncle Albert*, 1991/1992.]
- g. *[...] a teenager who isn't sure how to smoke a joint will be more worried about losing face from doing it wrong than not doing it at all.*
[*She*, London: The National Magazine Company, 1989.]
- h. *Nothing would be pleasanter than not having to make people redundant, not having to close a factory [...]*
[Oates, D./Derek, E. (1989): *Advice from the Top*, Newton Abbot, Devon: David & Charles Publishing.]

And third, it is absolutely astonishing with what ease and in what large numbers such example sentences can be found, which makes me conclude that this pattern of lacking NIEs must also be very frequent, even though I cannot properly prove this at this point, given that I did not really carry out a corpus study that is truly quantificational in nature. In total, then, these three results clearly indicate that examples such as the ones given in (3/5) and (3/6) in the introductory section 3.1 above cannot simply be treated as fully lexicalised exceptions to the rule and that instead, the pattern of comparative constructions featuring *n*-words in their standard terms not resulting in NIEs is indeed highly productive in present-day English. In the next subsection, I shall now compare these findings to those from German in order to check whether this holds for English, only, or whether an essentially similar situation is attested in that language as well.

3.2.2 Results Obtained from a German Corpus Study

As it turns out, the results obtained from a German corpus study even exactly parallel those described for English in the previous subsection: Example sentences lacking the expected NIEs can also be found with virtually every German *n*-word there is, as the following set of examples listed in (3/9), involving a diverse collection of these, indicates:⁹¹

- (3/9) a. *Besser die Nummer 1 in Kärnten als niemand [nobody] in der ganzen Welt [...]*
[*Kleine Zeitung*, 1997.]
- b. *Ein unbefriedigender Vertrag ist besser als kein [no] Vertrag [...]*
[*St. Galler Tagblatt*, 2001.]

⁹¹ With all of the non-English example sentences in this and the next subsection, I shall simply add an English translation for the relevant expression in square brackets immediately after that expression itself, and I shall abstain from providing exact glosses and translations for the entire sentences, which I assume to be legitimate by virtue of the facts that the translated expressions are the really decisive elements in these sentences and that supplying comprehensive glosses and translations would inevitably lead to a considerable increase with respect to the overall length of this dissertation.

- c. „Nicht wie zu Hause“, meinte der 53jährige H. H., „aber besser als nirgends [nowhere].“
[Salzburger Nachrichten, 1994.]
- d. [...] dass es besser ist, geliebt und diese Liebe verloren zu haben, als niemals [never] in seinem Leben dieses Gefühl gekannt zu haben.
[Salzburger Nachrichten, 2000.]
- e. Einen Teil zu schützen, sei besser als nichts [nothing].
[St. Galler Tagblatt, 2008.]
- f. Lieber überreagieren als gar nicht [not] reagieren.
[Niederösterreichische Nachrichten, 2007.]

Once again, there is an impressive number of adjectives and adverbs in the matrix clause of a comparative that allow a standard term including an *n*-word, as depicted in the list of example sentences given in (3/10) below, which is by no means exhaustive:

- (3/10) a. [...] daß Teilen viel schöner [more beautiful] sei als „überhaupt nichts hergeben zu wollen.“
[Tiroler Tageszeitung, 1998.]
- b. „Es ist erfolgreicher [more successful], etwas Angenehmes zu tun, als gar nichts“, sagt sie.
[Rhein-Zeitung, 2005.]
 - c. Nichts ist für die Verwaltung einfacher [easier], als gar nichts zu tun [...]
[Mannheimer Morgen, 2002.]
 - d. [...] aber wenigstens auf das Übel aufmerksam machen, ist sinnvoller [more sensible], als gar nichts zu tun.
[Hamburger Morgenpost, 2008.]
 - e. Ein Anstandssätzlein finde ich peinlicher [more embarrassing], als gar nichts zu sagen.
[Zürcher Tagesanzeiger, 1999.]
 - f. Denn ein Gesetz, das keiner lesen kann, ist schlechter [worse] als gar kein Gesetz.
[Salzburger Nachrichten, 1994.]
 - g. [...] Und lieber [preferably] diesen Betrag als überhaupt keinen“, so P. S.
[Die Südostschweiz, 2007.]
 - h. Jeder kleine Schritt in der Frauenpolitik sei ihr wichtiger [more important] als gar keinen zu machen [...]
[Vorarlberger Nachrichten, 1999.]
 - i. Ein schlechter Radweg ist oft gefährlicher [more dangerous] als gar keiner.
[Frankfurter Rundschau, 1998.]
 - j. Ein zu kleiner Zinsschritt ist schlimmer [more dreadful] als gar keiner.
[St. Galler Tagblatt, 2001.]
 - k. [...] aber eine kleine Rache ist laut Nietzsche menschlicher [more human] als gar keine Rache.
[Nürnberger Nachrichten, 2007.]
 - l. [...] warum die falsche Sonnenbrille für Ihre Augen schädlicher [more harmful] ist als gar keine.
[Niederösterreichische Nachrichten, 2007.]
 - m. Geringe Hilfe ist allemal nützlicher [more useful] als gar keine.
[Salzburger Nachrichten, 1993.]

- n. *3200 deutsche Soldaten im Norden Afghanistans sind für das Bündnis wertvoller* [more valuable] *als gar keine deutschen Soldaten am Hindukusch.* [Mannheimer Morgen, 2008.]
- o. [...] *ein doppelter Schnaps gesünder* [healthier] *sei als gar kein Schnaps* [...] [Die Presse, 1994.]

And once more, I also found such examples to occur with an absolutely surprising frequency, so that in sum, this overall pattern of comparatives containing *n*-words in their standard terms and yet obviating NIEs can be taken to be highly productive in German, too. As a next step, I shall proceed to discuss empirical data on this issue from French and Spanish, respectively.

3.2.3 Results from a French and a Spanish Corpus Study

With French and Spanish, two factors complicated the corresponding corpus studies, the first of which consists in the fact that in these two languages, the words *que/que* do not just constitute the standard elements introducing a comparative's standard term, but at the same time, they also function as the canonical subordinating expressions in these languages as such, being selected by nouns (cf. for instance French *le fait que* (*the fact that*)), verbs (such as French *penser que* (*to think that*)), adjectives (like French *Il est préférable que...* (*It is preferable that...*)), adverbs (for example French *Cela me plaît mieux que...* (*I like it better that...*)) and even a vast number of subordinations proper (cf. French *sans que* (*without (that)*) or *avant que* (*before*)), alike. To reduce an otherwise totally indigestible absolute number of hits, I therefore decided to limit my investigation to examples featuring the expressions *mieux* (*better*) and *plutôt* (*better/rather*⁹²) in French and *mejor* (*better*) in Spanish, respectively. Second, it turned out that in these two languages, *n*-words in the standard term of comparative constructions often do not come with a negative meaning at all, but rather give rise to a universal interpretation, instead, as has already been observed quite frequently in literature on negative concord/agreement (cf. for instance Marques (2003), p. 199 or Penka (2011), in particular her (115a) to (115c) on pp. 69ff., as well as the references included therein), which I exemplify for the two languages in turn in (3/11a) and (3/11b) on the following page (where I include glosses as well as English translations to ensure comprehensibility of these particular items):

⁹² For a detailed discussion of the expression *rather*, focussing in particular on its historical development from a temporal to a modal element, I refer the interested reader to Gergel (2009a).

- (3/11) a. [...] *bien sûr que Picasso a entendu, mieux*
 well sure that Picasso has hear.past_participle better
que personne, résonn.er le cristal d'
 than nobody sound.infinitive the crystal (glass) of
Ingres [...]
 Ingres
 ‘[...] of course, Picasso heard, better than anyone else, the sound of the crystal glass of Ingres [...]’
 [Éluard, P. (1951): *Picasso, dessins.*]
- b. [...] *tú lo sab.es mejor que nadie [...]*
 you it know.2singular better than nobody
 ‘[...] you know that better than anyone else [...]’
 [Gutiérrez Alcalá: *La Carta.*]

With these examples, the respective standard terms take on a universal denotation along the lines of ‘(better) than anyone (else/at all)’ and as a matter of fact, this phenomenon happens to be extremely widespread in both, French and Spanish: For while it is true that I have not carried out a quantificational corpus study as such, I should nevertheless roughly estimate that about 90 per cent of the French and Spanish examples of comparatives including *n*-words in their standard terms display this special kind of universal and not the ordinary negative interpretation. Interestingly enough, the situation is a totally different one in English and German and thus in two languages that do not normally show negative concord (at least in their standard varieties): In the course of my entire corpus study, I did not come across even a single example giving rise to such a universal meaning in English and in German, the phenomenon is also hardly attested at all, in that no more than the following three instantiations listed in (3/12) below (where I provide glosses and translations as with the French and Spanish data before) popped up in total:

- (3/12) a. *Abkürzung.en sind hier beliebt.er als nirgendwo sonst.*
 abbreviation.plural are here popular.-er than nowhere else
 ‘Here, abbreviations are more popular than anywhere else.’
 [Rhein-Zeitung, 2008.]
- b. [...] *er war geschäftig.er und überdrängt.er als nie.*
 he was busy.-er and overloaded.-er than never
 ‘He was busier and more overloaded than he had ever been before.’
 [Goethe-Korpus.]
- c. *Gerade 40 Jahr.e alt ge.word.en,*
 just 40 year.plural old past_participleI.become.past_participleII
musikalisch wohl besser als nie zuvor: Jimmy Sommerville.
 musical probably better than never before Jimmy Sommerville
 ‘He just turned 40 and as far as his music is concerned, he’s probably better than he’s ever been before: Jimmy Sommerville.’
 [Mannheimer Morgen, 2001.]

These empirical findings immediately raise two issues, a theoretical and a practical one: In terms of theory, it would be desirable to have a principled explanation first of all for why these universal readings exist as such and second, for why these are extremely frequent in languages like French and Spanish, but constitute only a very marginal phenomenon in German and English (if attested in the latter language at all). I shall postpone discussion of this theoretical aspect to subsection 3.3.3 below, where I shall already have all the different elements of the approach I am going to propose in order to account for the (non-)occurrence of NIEs in comparatives in place and should therefore like to ask the reader for a tiny little bit of patience at this point. From a practical point of view, examples such as those given in (3/11) and (3/12) above bringing about universal readings may obviously not be considered as data that produce evidence on the absence of NIEs in that it is of course a prerequisite for such data to involve an *n*-word in a comparative's standard term that is associated with a genuinely negative meaning. I therefore excluded all the French and Spanish examples involving such universal readings manually in my corpus studies, where it eventually turned out all the same that there is abundant evidence for comparatives with a standard term that indeed is truly negative in nature, and that does yet not give rise to an NIE in these two languages as well and, as was the case with English and German before, the corresponding example sentences come in combination with a variety of different *n*-words, as demonstrated in (3/13) for the French expression *mieux* (*better*), in (3/14) for French *plutôt* (*better/rather*) and finally in (3/15) for Spanish *mejor* (*better*):

- (3/13) a. *Du riz de merde, dit Joseph en riant de nouveau, ce serait mieux que pas de riz du tout.*
 [Duras, M. (1950): *Un barrage contre le Pacifique*.]
 b. *[...] cela me fera moins de plaisir bien sûr, mais cela sera tout de même mieux que rien.*
 [Anouilh, J. (1950): *La répétition ou l'amour puni*.]
- (3/14) a. *[...] choisit la Suisse plutôt qu'un autre pays, ou plutôt que pas de pays du tout.*
 [Benoziglio, J.-L. (1980): *Cabinet portrait*.]
 b. *Elle crèverait plutôt que de ne pas faire son devoir.*
 [Anouilh, J. (1977): *Chers Zoiseaux*.]
 c. *[...] ce monstrueux besoin d'activité, d'agir, presque de faire n'importe quoi plutôt que de ne faire point [...]*
 [Du Bos, Ch. (1927): *Journal 3*.]
 d. *[...] et ils préfèrent vendre avec des faibles bénéfiques, ou même sans bénéfiques, plutôt que de ne rien vendre.*
 [Lesourd, J.-A./Gérard, C. (1968): *Histoire économique : XIX^e et XX^e siècles*, volume 1.]
 e. *Il me fallait faire de la poésie plutôt que rien, faire de la mathématique plutôt que rien [...]*
 [Roubaud, J. (2000): *Poésie : récit*.]

- (3/15) a. *Que eso siempre es mejor que nada.*
 [España Oral: PCON003A.]
- b. *Es realmente poquísimo, pero [...] es mejor que nada.*
 [Habla Culta: México: M3.]
- c. *Era, me pareció, mejor que no hacer nada.*
 [Rossiello, L.: Barco en la nieve.]
- d. *[...] éste nos es útil y mejor que ninguno [...]*
 [Fernández de Lizardi, J. J.: Periquillo Sarniento.]
- e. *[...] que en conclusión será mejor que ninguna.*
 [Torres Naharro, B. de: Tinelaria.]

In the end, French and Spanish thus both pattern with English and German, in that these languages also show comparatives with which the insertion of an *n*-word into their standard terms does not result in an NIE that would render the corresponding comparatives infelicitous.

3.2.4 Summarising the Empirical Picture

The overall conclusion to be drawn from these corpus studies is thus that (at least) in the two Germanic languages English and German as well as in the Romance languages French and Spanish, comparative constructions lacking the NIEs we would traditionally expect there to arise are clearly productive and cannot simply be brushed aside as a handful of exceptional cases that have been lexicalised in a purely accidental fashion. As a final remark completing this empirical survey on the non-occurrence of NIEs with comparatives, let me note that all of the adjectives and adverbs that do not lead to the expected NIEs are highly subjective in nature in that they typically express a value judgment, but never an objective kind of measurement. In this fashion, observe that adjectives such as *good/better*, *bad/worse*, *pleasant*, *useful* and others likewise expressing personal attitudes frequently occur in such comparatives lacking an NIE in spite of the fact that they contain an *n*-word in their standard term, whereas I did not encounter a single such case where the comparison would be based on a neutral adjective like *tall*, *deep*, *wide*, *high*, *old* or the like.⁹³ In subsection 3.3.2.3.2 below, I shall take up this issue again and reconsider this effect of subjectivity, when also comparing the analysis I am going to suggest for the former group of adjectives to that pursued for propositional attitude verbs such as *to like* or *to hate* in Villalta (2007). Before doing so, I shall however first try to account for the overall picture: Why is it that in sentences like (3/1) to (3/4) in section 3.1 above, an NIE arises, yielding ill-formed comparatives, while such an effect is attested neither with the data in (3/5) and (3/6)

⁹³ I am careless enough here to simply speak of adjectives, even though strictly speaking, this concerns both, adjectives and adverbs. In what follows, I shall stick to this convenient practice, which is designed to avoid a great amount of repetition, and I should kindly ask my reader to bear in mind that I intend both word classes to be included alike.

there, nor in the English, German, French and Spanish examples introduced in sections 3.2.1 to 3.2.3 in (3/7) and (3/8), (3/9) and (3/10), (3/13) and (3/14) and finally (3/15), respectively? And of course, the cross-linguistic dimension of this phenomenon directly verifies the need to come up with a fairly general account of the data that can be applied across individual languages alike and ideally even happens to be universal in nature, which is precisely what I shall make an attempt at, next.

3.3 Accounting for the Attested Distribution of Negative Island Effects

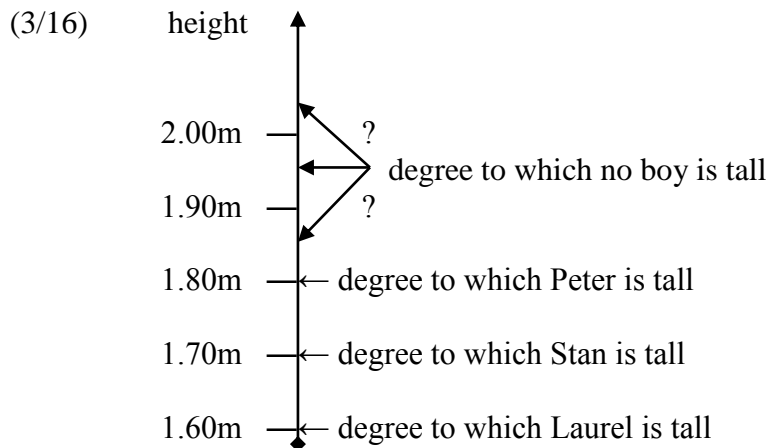
3.3.1 Explaining the Occurrence of Negative Island Effects

3.3.1.1 A First Informal Approximation

Let me begin by taking a look at the negative side of the issue first, that is by accounting for that subset of the data with which the inclusion of an *n*-word within a comparative's standard term does indeed give rise to an NIE, and I shall go about this by offering an informal approximation to matters, first. To start, have a look again at example (3/3), repeated from subsection 3.1 above:

(3/3) **Mary is taller than no boy is.*

Next, observe that an adjective like *tall* is typically linked to an objective scale of measurement, such as for instance the height scale with the adjective *tall* itself, or a year scale for representing a person's age in the case of *old*. Informally speaking, the NIE in example (3/3) comes about because the standard term of this comparative makes a statement about individuals whose existence is denied right from the start. What now happens is that people encountering such a sentence automatically find themselves at a complete loss as to where they should locate the degree to which non-existing entities possess the relevant quality or the property in question on such a measuring scale, that is their height in the case of sentence (3/3). For the sake of concreteness, imagine for example a scenario in which, to keep things at a very simple level, just three persons called Peter, Stan and Laurel, are present and where we know that the three are 1.80m, 1.70m and 1.60m tall, respectively. If someone now uttered (3/3), it would be perfectly impossible to determine the exact position of the degree to which none of the boys happens to be tall on the associated height scale: This position would certainly have to lie above that of the tallest boy (Peter, in the present case), for otherwise, there would indeed be a boy who is that tall, it remaining unclear, though, where precisely it should be situated, as illustrated with the help of the little drawing in (3/16) on the next page:



We thus lack an appropriate standard of comparison and therefore, the comparison is bound to fail, hence the NIE resulting in the attested unacceptability. This initial discussion was supposed to offer a first and admittedly rather rough idea of what is going wrong with sentences where an *n*-word in the standard term of a comparative leads to an NIE. In the ensuing section 3.3.1.2, I shall next proceed to provide a more formal account of such NIEs.

3.3.1.2 Formalising Matters

3.3.1.2.1 Undefined Maxima: von Stechow (1984a) and Rullmann (1995)

A formal account of the type of NIEs under discussion here was already sketched in von Stechow (1984a, pp. 33f.) and fully elaborated later on in Rullmann (1995). The crucial idea underlying this account is the observation that according to the comparative semantics adopted there, the standard term in a sentence like (3/3) above would have to denote (3/17):

(3/17) $\max(\lambda d. \text{no boy is } d\text{-tall})$

As things turn out, however, this maximal degree necessarily happens to be undefined, given that the height scale is an open scale and that there are thus infinitely many degrees of height above the height of the tallest individual in a given scenario (Peter, measuring 1.80m, in the case at hand), such as for instance 1.81m, 1.87m, 1.91m, 1.93m and a half, etc. Within such an open set, it is therefore completely impossible to successfully identify a maximal element, and the undefined meaning of the comparative's standard term is then inherited and spreads to all higher nodes in the compositional calculation, so that the denotation of the entire comparative construction ends up being undefined. Of course, this represents a most welcome result in that this undefined meaning can offer a straightforward explanation for the NIE and the unacceptable status sentence (3/3) is associated with.

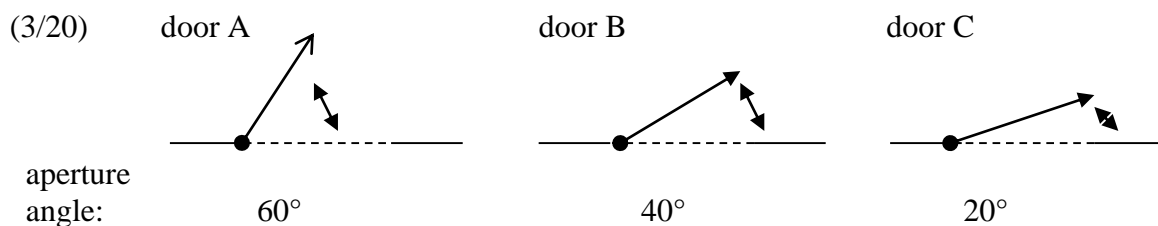
Attractive as this approach might at first glance certainly look, serious doubt has been cast on it in Beck/Rullmann (1996) already, where the authors find fault above all with the heavy reliance of this account on the notion of maximality alone. In this context, they show for instance that questions like (3/18) require a minimum rather than a maximum as an appropriate and informative answer and that with questions such as that in (3/19), it is even possible that these neither enquire for a maximum, nor ask for a minimum, in case the game in question could for example be played only with an odd or only with an even number of participants:

(3/18) *How many eggs are sufficient (to bake this cake)?*
 [Beck/Rullmann (1996), p. 77; their (13)]

(3/19) *With how many people can you play this game?* [ibid., p. 79; their (20a)]

With examples like these, maximality is obviously not the decisive element and Beck/Rullmann (1996) therefore suggest to replace the static notion of maximality by a more flexible one of maximal informativity, so that the crucial element is no longer necessarily the maximal one, but rather the maximally informative one, which corresponds to a minimum in the case of (3/18) and neither to a minimum nor to a maximum with (3/19).⁹⁴

Interestingly enough, an additional and new kind of argument against the maximality approach proposed in von Stechow (1984a) and Rullmann (1995) directly emerges from the domain of NIEs with comparatives dealt with, here: To appreciate this, imagine a situation involving three doors that are opened to different degrees, door A being open at an angle of 60 degrees, door B at one of 40 degrees and door C finally at one of no more than 20 degrees, as depicted in the illustration in (3/20) below, representing this scenario as seen from above:



In such a situation, the statements in (3/21) appropriately describe the given state of affairs, whereas those listed in (3/22) cannot be uttered felicitously and are judged to be unacceptable:

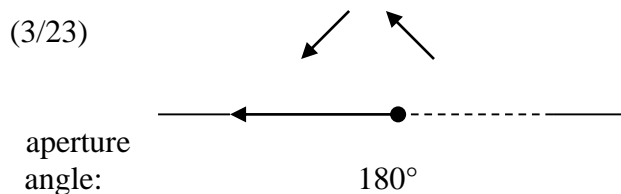
⁹⁴ Note in passing that additional difficulties for the original proposal in von Stechow (1984a) and Rullmann (1995) also arise from what has become known under the term ‘modal obviation effects’, an example of which is given in (i) below:

(i) *Peter is taller than no prospective gymnast should be.*

Here, no effect of unacceptability arises, even though this comparative’s standard term contains the *n*-word *no*. For a detailed discussion of such modal obviation effects (with a particular focus on their occurrence in questions), cf. Fox (2007) and the references cited therein.

- (3/21) a. *Door A is more open than door B.*
 b. *Door A is more open than door C.*
- (3/22) a. **Door A is more open than no door.*
 b. **Door A is more open than none.*

Crucially observe, now, that the unacceptability of the latter comes as a complete surprise under a von Stechow (1984a)/Rullmann (1995)-style analysis: For in contrast to the height scale associated with the adjective *tall(er)* in sentence (3/3) above, the scale representing the angles at which a door can be open does not constitute an open scale, but is in fact closed. Depending on the exact type of door one is dealing with, its maximal aperture angle might for instance plausibly be 180 degrees, as shown in (3/23) below:



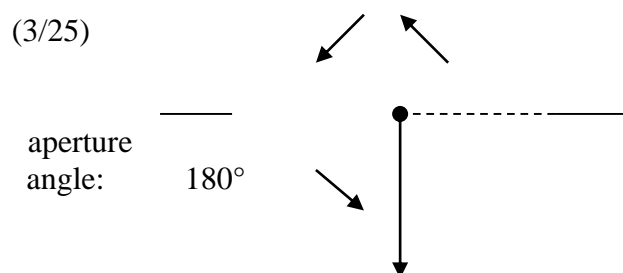
Of course, this maximal angle eventually varies with the precise configuration of the door and ultimately also with that of the building in which this door has been installed, so that it is for instance also fully conceivable that it comes out as 90 or even 270 degrees. But be that as it may, in any case, such a maximal aperture angle definitely exists for any door whatsoever and therefore, the denotation of the standard term of the sentences in (3/22) above (as specified in (3/24)) is well-defined after all, in that a maximal member of this set can indeed be identified without difficulty:

$$(3/24) \quad \max (\lambda d. \text{ no door is } d\text{-open})$$

As a consequence, no undefined meaning is expected to arise with the examples in (3/22a) and (3/22b), the denotations of which are predicted to be impeccable, instead, but in spite of that, these sentences are clearly out, a fact that the approach pursued in von Stechow (1984a) and Rullmann (1995) does not allow to capture in an adequate fashion.

At this point, a brief aside seems to be in place: Critical minds might object that sentences such as those introduced in (3/22) are not so much ill-formed due to the occurrence of an NIE, as to the fact that in a scenario such as the one considered here, these would actually have to express a blatant contradiction: Given that the maximal degrees of aperture associated with doors B and C happen to be angles of 180 degrees in the situation illustrated in (3/20) above, the sentences in (3/22) would in fact have to state that door A is open at an angle that

exceeds this maximum and thus lies above 180 degrees, which is not possible, however, because door A does not open any further than that itself. Uttering the examples in (3/22) would thus inevitably lead to a contradiction per se, which might be held responsible for their degraded status. But once we alter the basic scenario, it immediately becomes clear that such an objection is not really tenable after all: For if we assume that the building we are dealing with has been constructed in such a fashion that our door A disposes of a maximal aperture angle of 270 degrees (as illustrated in (3/25) below) and leave everything else unchanged, the potential contradiction is bound to disappear right away:



Such a modification of the underlying context does not improve the status of the examples in (3/22) in the least, though, so that I conclude that it is indeed the occurrence of an NIE and not a contradiction arising from a badly chosen scenario that is at the heart of their ill-formedness.

Finally notice that in a similar way, other “absolute” adjectives in the sense of Kennedy/McNally (2005) also give rise to NIEs, as demonstrated below in an exemplary fashion for the adjectives *closed*, *full* and *empty* in (3/26), (3/27) and (3/28), respectively:⁹⁵

- (3/26) a. **Door C is more closed than no door.*
 b. **Door C is more closed than none.*

- (3/27) a. **Bucket A is less full than no bucket.*
 b. **Bucket A is less full than none.*

- (3/28) a. **Bucket B is less empty than no bucket.*
 b. **Bucket B is less empty than none.*

⁹⁵ As the attentive reader may already have noted, I pass to *less* comparatives in the sets of examples in (3/27) and (3/28), given that the forms *??fuller* and *??emptier* sound rather awkward as such. One might therefore wonder if such “absolute” adjectives are gradable at all. Observe, however, that there is a marked contrast between the sentences in (3/27) and (3/28) and those given in (i) and (ii) that do not feature an *n*-word in the standard terms of the respective comparatives and that are felt to be virtually impeccable by English native speakers:

- (i) *Bucket A is less full than the other two buckets.*
 (ii) *Bucket B is less empty than the two other ones.*

For arguments further supporting the idea that such adjectives can indeed be graded, I should also like to refer the interested reader to the discussion in Winter (2005) and in particular to the rather lengthy footnote 18, included there (*ibid.*, p. 255).

In total, the expectation according to which comparatives formed on the basis of adjectives associated with closed scales should not lead to NIEs in that these should always come with well-defined maximal denotations of the respective standard terms, is therefore clearly not fulfilled. Evidence from the (non-)occurrence of NIEs as discussed here can thus supply an additional and novel kind of argument against the accounts in von Stechow (1984a) and Rullmann (1995) on top of those offered in Beck/Rullmann (1996) and by so-called ‘modal obviation effects’ (cf. footnote 94 above). At the same time, however, this also means that this approach has to be abandoned as a possible explanation for the NIEs attested in examples like (3/1) to (3/4), as which it had originally been intended, here. As a next step, I shall therefore look for a more durable alternative strategy of accounting for these in the following subsection.

3.3.1.2.2 Maximal Informativity and the Density of Scales: Fox/Hackl (2006)

Building on substantial insights gained from Beck/Rullmann (1996), Fox/Hackl (2006) propose a different account of NIEs in comparatives (alongside with a couple of other empirical phenomena) by combining the central concept of maximal informativity the former arrived at, an (intensional) formal definition (including a paraphrase) of which I reproduce in (3/29) below, with the assumption that all scales are invariably dense in nature, as captured by the notion of their so-called ‘Universal Density of Measurements’, specified in (3/30):

(3/29) $m_inf(w) (p_{\langle s, \langle d, t \rangle \rangle}) = \lambda d [\in D_d]. p(w)(d) \ \& \ \neg \exists d' [\in D_d] [p(w)(d') \ \& \ d \neq d' \ \& \ [p(w)(d') \rightarrow p(w)(d)]]$
 ‘The maximally informative degrees in a description of degrees are those whose presence in the description could not be inferred from the presence of any other element in the description.’ [Beck (2013), section 2.3; her (36)]

(3/30) The Universal Density of Measurements (UDM):
 measurement scales needed for natural language semantics are *always* dense.
 [Fox/Hackl (2006), p. 542; their (8)]

To get an idea of how this approach is supposed to work in practice, let us take another look at sentence (3/3), once more repeated from section 3.1 above:

(3/3) **Mary is taller than no boy is.*

What the standard term of this comparative would now have to denote is the maximally informative degree to which none of the boys happens to be tall, as can be seen from its denotation given in (3/31) on the next page, where “inf” abbreviates ‘informativity’:

(3/31) $[[\textit{than no boy is}]] = \max_{\text{inf}} (\lambda d. \textit{no boy is } d\text{-tall})$

Obviously, this most informative degree corresponds to the first degree above that of the tallest boy in a given scenario, because all greater degrees would automatically be classified as less informative, in that these could always be directly inferred: Suppose for instance that we know that there is no boy reaching a height degree of 1.85m. In that case, it would immediately be entailed that the size of no boy attains any degree larger than that, either, such as for example 1.86m, 1.88m or 1.91m. For the sake of illustration, let us next return to the context elaborated at the beginning of section 3.3.1.1 above, where just three boys were present, Peter, Stan and Laurel, being 1.80m, 1.70m and 1.60m tall, respectively. If anyone uttered sentence (3/3) in these circumstances, we would have to be able to pick the maximally informative degree to which none of these three boys is tall in order to interpret this sentence. By virtue of the fact that Peter happens to be the tallest individual present, him measuring 1.80m, this would amount to identifying the first degree above these 1.80m. One might plausibly go for 1.81m, but at this point, the second main ingredient of Fox/Hackl (2006)'s proposal enters the stage: Their 'Universal Density of Measurements' has it that all scales employed in natural language measurement are invariably dense and thus, the height scale involved in our scenario must necessarily be such as well. It is therefore possible to find other degrees in between 1.80m and 1.81m on that scale, say, for instance, 1.805m. Then, selecting 1.806m for this maximally informative degree will however not improve matters in that a height degree such as 1.8055m would still lie between 1.805m and 1.806m and likewise, subsequently choosing for example 1.8056m for the relevant most informative degree will not be of much help either, given that further degrees within the interval ranging from 1.8055m to 1.8056m on our height scale, such as 1.80555m, could still be easily identified and of course, this reasoning could be carried on ad infinitum, because there always happens to be a third degree in between any other two degrees on a dense scale, as recast in a more formal fashion in (3/32) below:

(3/32) $\forall d_1 \in D_d, d_2 \in D_d [d_1 > d_2 \rightarrow \exists d_3 \in D_d [d_1 > d_3 > d_2]]$

In the end, the maximal degree to which none of the boys is tall therefore remains unidentifiable, so that the denotation of the standard term in an example like (3/3) ends up being undefined and so will the denotation of the entire comparative containing it, given that this undefined meaning component will be inherited by all higher nodes in the semantic computation. Just as was the case with the original proposal by von Stechow (1984a) and Rullmann (1995), the analysis in Fox/Hackl (2006) thus allows us to account for the unacceptable status of data such as (3/3) in terms of undefinedness, which indeed typically results in unacceptability.

As it turns out, the approach in Fox/Hackl (2006) is however preferable to the former one, because it also permits to successfully handle comparatives including “absolute” adjectives, that is adjectives which are associated with closed scales, as exemplified on the basis of the gradable predicate *open* in (3/22), repeated from the previous subsection:

- (3/22) a. **Door A is more open than no door.*
 b. **Door A is more open than none.*

Remember from above that a von Stechow (1984a)/Rullmann (1995)-style analysis systematically fails in such cases due to the fact that the maximal degree to which a door opens is in fact fully determined, so that no effect of undefinedness is bound to arise within these comparatives’ standard terms, the entire comparatives therefore wrongly being expected to be acceptable in having completely well-defined meanings. In contrast to this, the approach offered in Fox/Hackl (2006) makes entirely different predictions in this respect: In a scenario such as that introduced in (3/20) above, the standard term of the comparatives in (3/22) will denote (3/33), which corresponds to the first degree above an aperture angle of 40 degrees, that is the smallest angle exceeding that of the other doors’ which counts as largest (that of door B in our case):

(3/33) $\max_{\text{inf}} (\lambda d. \text{no door is } d\text{-open})$

By precisely the same line of argumentation as with example (3/3) before, it will now once again be impossible to identify the value of a degree of openness minimally surpassing 40 degrees on the dense scale of aperture, so that this standard term does indeed give rise to undefinedness after all, which constitutes a most welcome result, in that this provides us with an immediate account of the infelicitous status of sentences like (3/22). And of course, Fox/Hackl (2006)’s approach directly carries over to data such as (3/26) to (3/28), where the denotations of the standard terms of the respective comparatives are also expected to be undefined in an entirely parallel way, thereby accounting for their unacceptable status.

Before moving on, a brief aside on the analysis advocated in Fox/Hackl (2006) seems to be appropriate: For the cases under consideration here, such as the height of people or the degrees to which doors open up, the assumption of dense scales underlying these measurements may of course appear perfectly natural. However, in Fox/Hackl (2006), all scales are invariably claimed to be dense right from the outset, and one might therefore wonder how things are supposed to work out when it comes to handling issues such as the number of children a woman has given birth to or the number of planes an airline operates, with which the corresponding

cardinalities are normally restricted to comprise natural numbers, only. In order to adequately account for phenomena of this sort, it is proposed in Fox/Hackl (2006) to still stick to the idea of dense scales underlying such measurements, but to add a level of granularity later on in the derivation (cf. for instance their “Granularity for the measurement of collections of indivisible objects” (ibid., p. 569)), which successfully prevents the occurrence of thirds of children, 27.3482 planes and the like.

In sum, the combination of maximal informativity and general density of scales as suggested in Fox/Hackl (2006) thus ultimately allows us to account for the attested NIEs with examples such as (3/1) to (3/4) in a principled way. This then leaves us with the question of why no such NIEs related to undefinedness occur in examples like (3/5) or (3/6) in section 3.1 above or those listed for English, German, French and Spanish in subsections 3.2.1 to 3.2.3, an issue which I shall address in some detail in the following section 3.3.2, for in contrast to cases that do indeed lead to NIEs, those that obviate them, have – at least as far as I am aware of – never been systematically taken into account in linguistic literature, so far.

3.3.2 Accounting for the Absence of Negative Island Effects

3.3.2.1 Two Initial Observations

Let me begin this section by introducing two empirical observations that will reveal themselves to be decisive for the development of the analysis I am going to propose for comparatives featuring *n*-words in their standard terms that do nevertheless not show the kind of NIEs that have been discussed and accounted for in the previous subsection. The first of these consists in the fact that a deeper embedding of the respective *n*-word within a comparative’s standard term usually prevents the occurrence of an NIE, as demonstrated by an example like (3/34a) below, where the corresponding *n*-words *nobody* and *nothing* happen to appear inside a complementiser phrase in turn modifying the noun (or determiner) phrase *an exhibition* and therefore to be embedded more deeply within the comparative’s standard term, as shown by the partial structure provided for this sentence in (3/34b) below:

- (3/34) a. *There’s nothing I hate more than going to an exhibition where there’s nobody there whom I know and there’s nothing there which I like.*
 [Schoolgirls’ Creative Writing.]
- b. *There’s nothing I hate more [CP1 than going to an exhibition [CP2 where there’s nobody there whom I know and there’s nothing there which I like]].*

Crucially observe that this time, the situation we are facing is a fundamentally different one altogether: In (3/34a), what is denied is not the existence of the exhibition about which the comparative's standard term makes a statement as such, but only that of particular properties characterising this exhibition. The denotation of the standard term (given in (3/35) below) will thus end up being fully defined under an approach along the lines of Fox/Hackl (2006), because it is no problem to identify the maximally informative degree to which the speaker in question hates attending an exhibition with the properties specified in the second complementiser phrase of (3/34b), which sort of accidentally happen to be negative in nature:

(3/35) $\max_{\text{inf}} (\lambda d. \text{I hate [going to an exhibition where there's nobody there whom I know and there's nothing there which I like] } d\text{-much})$

For good measure, let me provide a second instantiation of such a basic constellation in (3/36a), where the *n*-word *never* is embedded deeply enough within the comparative's standard term to obviate an NIE, an indication of the underlying structure being once again offered in the (b)-version of this sentence:

- (3/36) a. *We can infer from these studies that horses reared with other horses in a free and enriched environment [...] will be more intelligent than a horse that never leaves its paddock or continually lives in a stable or yard.*
 [Langley, G. (1989): *Understanding Horses*, Newton Abbot, Devon: David & Charles Publishing.]
- b. *We can infer from these studies that horses reared with other horses in a free and enriched environment [...] will be more intelligent [CP1 than a horse [CP2 that never leaves its paddock or continually lives in a stable or yard]].*

Here, too, the horse about which the comparison is being made is not denied per se, but simply ascribed a negative property, instead, which will of course not block identification of a most informative degree from the material out of which the comparative's standard term is composed, as can be seen from its denotation specified in (3/37) below:

(3/37) $\max_{\text{inf}} (\lambda d. \text{a horse [that never leaves its paddock or continually lives in a stable or yard] is } d\text{-intelligent})$

A second important observation concerns the exact shape the standard terms of comparatives based on adjectives with which the insertion of an *n*-word into these does not lead to an NIE can take, which is that of an entire proposition,⁹⁶ as illustrated by the overt

⁹⁶ For the time being, I shall confine myself here to familiarising my reader with just one such sentence in each of these four languages in an exemplary fashion, but in the further course of this section, it will actually become clear that in all those cases included in sections 3.1 and 3.2.1 to 3.2.3 where the inclusion of an *n*-word in a comparative's

conditionals for the four languages English, German, French and Spanish under consideration here, in turn, in the set of examples listed in (3/38) below:

- (3/38) a. *The market price for the good will be higher than if no tariffs were imposed [...]*
[KBS Open Learning MBA Programme, London: BPP Publishing, 1989.]
- b. *Das ist viel besser, als wenn sie allein zu Hause sind, fernsehen und sich möglicherweise noch schlecht ernähren.*
[St. Galler Tagblatt, 2008.]
- c. *Te déshabiller, à quoi bon, je les vois d'ici tes seins [...] mieux que si tu me les avais montrés.*
[Rheims, M. (1987): *Les Greniers de Sienne.*]
- d. [...] *una sociedad es justa cuando [...] la situación material de los menos favorecidos es mejor que si se hubieran elegido otras instituciones.*
[Cortina, A.: *España: ABC.*]

Bearing these two important preliminary empirical observations in mind, we are now fully equipped to tackle an explanation as to why no NIE arises with examples such as (3/5) and (3/6) in subsection 3.1 or the data listed in (3/7) to (3/10) and (3/13) to (3/15) in section 3.2 above.

3.3.2.2 The Basic Approach: Propositional versus Ordinary Adjectives and Adverbs

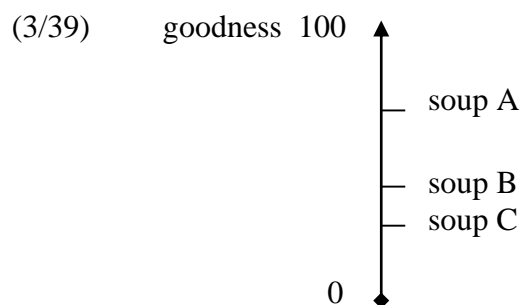
In what follows, I shall propose a novel analysis of what I shall refer to as ‘propositional’ adjectives and adverbs. Doing so, I shall greatly make us of an important insight taken from Villalta (2007), where propositional attitude verbs such as *to hate* or *to want* are discussed and where the author has it that these typically give rise to an “alternative semantics” in the sense of Rooth (1985, 1992), an assumption which in my opinion is crucial to the proper understanding of the class of propositional adjectives and adverbs I am concerned with here, as well.⁹⁷ In subsection 3.3.2.3.2 below, I shall point out various other parallels between these expressions and the group of propositional attitude verbs on which Villalta (2007) focusses, when large parts of the analysis I am going to suggest will already have been established. Let me also stress right from the outset, though, that certain aspects of the proposal I am about to make differ radically from the approach defended in Villalta (2007) for that special subclass of verbs and that I shall in particular deviate from the latter in two significant respects: First of all, I shall not assume a semantics for propositional adjectives and adverbs that is inherently

standard term does not result in an NIE, it is indeed possible across-the-board to extend that standard term into a fully fledged proposition.

⁹⁷ The proposal in Villalta (2007) was in turn heavily influenced by Heim (1992), where the set of contextual alternatives to be taken into account was however considerably more limited in only consisting of the proposition actually uttered and its direct negation. As will be seen shortly, I am following Villalta (2007), here, in likewise permitting a much wider range of possible alternatives.

superlative in nature (cf. the discussion to follow in section 3.3.2.3.2 below on this issue) and secondly, I shall also dissociate myself from the very special contribution attributed to the choice of the subjunctive (as opposed to that of the indicative) mood in Villalta (2007) (see section 3.3.2.3.1). As a next step, I shall develop the fundamental ideas of my analysis for propositional adjectives and adverbs on the basis of the adjective *good*, which lends itself particularly well to this kind of enterprise in that it displays both, uses as an ordinary alongside with usages as a propositional gradable expression.⁹⁸ To this end, I should first like to introduce two basic scenarios and then go through the derivation of the comparative, the positive and the superlative as the three most basic comparison constructions both, for ordinary as well as for propositional *good*, in a stepwise fashion.

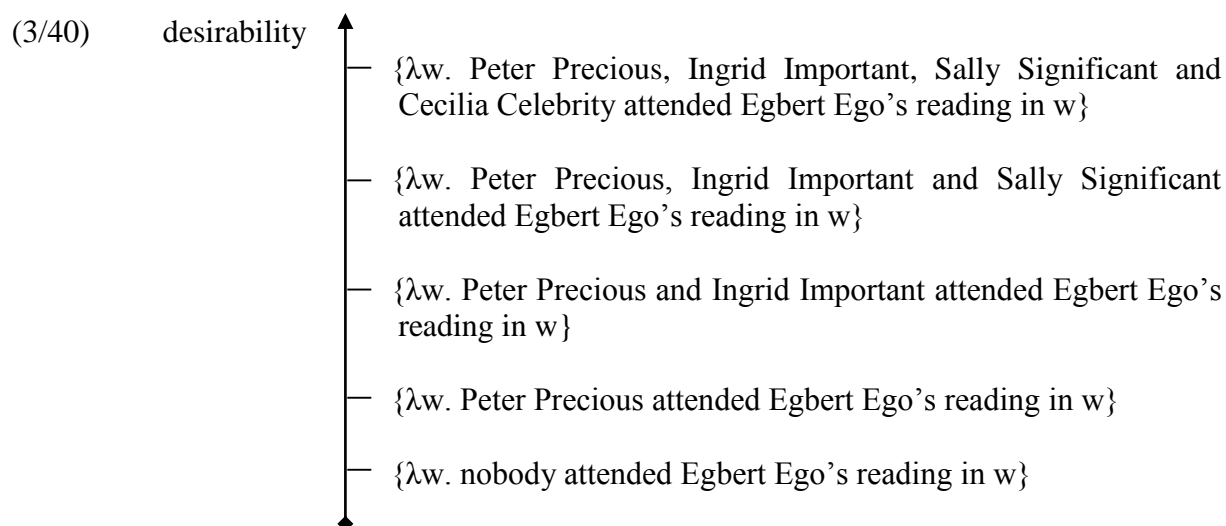
As the first scenario, imagine a company producing soups that wants to launch a new product. About two months ago, it had come up with three new recipes, but the company's executives were not sure which of these would sell best on the market and therefore decided to make a number of volunteers try them. Participants in this test were then asked to judge the soups on a scale ranging from "0" (corresponding to perfectly unpalatable) up to "100" (absolutely delicious). Suppose now that soup A received an average judgment of 74, while soup B scored 48 points on this scale and soup C got 32 points on average, as depicted in the little drawing in (3/39) below:



As a second basic scenario for illustrative purposes assume further that Egbert Ego is a would-be poet and happens to have a rather conceited wife. Last week, he gave a reading at a public library, and his wife would have appreciated it highly if the following people had turned up to attend her husband's performance: Peter Precious, the managing director of a huge publishing company, Ingrid Important, an influential patron of the fine arts, Sally Significant, the local

⁹⁸ Interestingly enough, about 50 years ago, it was observed in Vendler (1963), that adjectives like *good* are often associated with (possibly non-overt) verbs, and the author already distinguished substantially different usages of such adjectives, what I am referring to as 'ordinary' *good*, here, directly corresponding to *good*₃ and my 'propositional' *good* to *good*_{4, 5, 7} in the taxonomy developed in Vendler (1963), respectively (*good* not being compatible with the uses 1, 2 and 6 identified there).

mayor and finally Cecilia Celebrity, a member of the House of Commons. Moreover, Egbert Ego’s wife had the following personal preferences about the presence of these people, as shown in (3/40) below in decreasing order of actual desirability, that is, she would have preferred a situation in which all four of these renowned people showed up to one in which only three assisted her husband’s reading, etc.:⁹⁹



Let me now start discussing individual examples by first having a look at the comparative in (3/41) on the next page, featuring the adjective *good* in its ordinary use, where it expresses a relation between an entity and a degree, as shown in (3/42) (where “ord” is intended as an abbreviation of the ‘ordinary’ usage of this adjective):¹⁰⁰

⁹⁹ The description of this state of affairs in (3/40) actually constitutes a huge simplification of matters, in that strictly speaking, all sorts of various combinations of people would have to be taken into account, too, that is a scenario in which all four relevant persons attended Egbert Ego’s reading, but also differing triples and couples formed on the basis of these individuals as well as four distinct configurations in which only one of them turned up, in addition to the *nobody*-case. In an attempt at keeping things halfway manageable and in order to avoid an excessive degree of complexity, I shall however restrict my attention to the five basic possibilities included in (3/40) in what follows.

¹⁰⁰ Note in passing that I change to an intensional type of semantics here (as I have already done in section 2.3.3.3 before, where this step also seemed indispensable), given that propositional adjectives take propositions as one of their arguments, which I conceive of as sets of possible worlds of semantic type $\langle s, t \rangle$. For the sake of convenience, I also exchanged the relative order of the degree and the individual argument slots in what follows, so that in the entry of an ordinary adjective like *good* (cf. (3/42) in the main text), the individual now precedes the degree argument rather than the other way around, as had been proposed in section 2 above (cf. for instance the lexical entry specified for the Turkish adjective *uzun* (*tall*) in (2/51) in section 2.2.3.2 or that provided for the adverb *hızlı* (*fast*) in (2/91) in section 2.3.2, in the extensional framework adopted there). This additional move is particularly handy for the special kind of data discussed in this subsection, in that with the propositional adjectives and adverbs dealt with here, their propositional arguments (systematically replacing the individual-type arguments of the corresponding ordinary adjectives and adverbs, as will be seen shortly) directly serve as the syntactic complement of these gradable predicates. Given that the exact position of the degree argument however normally remains invisible and that it is not interpreted in situ, degree abstraction being an essential step in the derivation of comparatives (cf. for example Bresnan (1973) or Beck et al. (2009), among many others), nothing crucial hinges on this choice and both options, assigning a gradable adjective a denotation of basic (extensional) semantic type $\langle d, \langle e, t \rangle \rangle$ or $\langle e, \langle d, t \rangle \rangle$, respectively, seem to be equally viable. According to Sigrid Beck (personal communication), a resultative featuring a pronominal measure phrase such as the one given in (i) might eventually

(3/41) *Soup A is better than soup B.*

(3/42) $[[good_{ord}]] = \lambda w \in D_s. \lambda x \in D_e. \lambda d \in D_d. goodness_w(x) \geq d$

If we further assume a standard entry for the comparison operator such as the one introduced in (2/165) in subsection 2.3.5 above enhanced by the notion of maximal informativity (cf. (3/43)),¹⁰¹ sentence (3/41) will be predicted to denote the set of possible worlds specified in (3/44), that is those worlds in which soup A outdoes soup B in taste, quality or the like, which is as desired, given that this corresponds exactly to what example (3/41) arguably means:

(3/43) $[[[-er]]] = \lambda D_1 \in D_{\langle d,t \rangle}. \lambda D_2 \in D_{\langle d,t \rangle}. \max_{inf}(D_2) > \max_{inf}(D_1)$

(3/44) $[[[(3/41)]]] = \lambda w. \max_{inf}(\lambda d. goodness_w(soup A) \geq d) > \max_{inf}(\lambda d. goodness_w(soup B) \geq d)$

With example (3/45), I now turn to a comparative including a propositional instantiation of the gradable adjective *good*:

(3/45) *That Peter Precious attended Egbert Ego's reading was better than that Cecilia Celebrity stayed away.*

In order to account for such a sentence, I propose simply replacing the individual type argument in the lexical entry of ordinary *good* in (3/42) above by one that is propositional in nature, as has been done in (3/46) below (where “prop” abbreviates a ‘propositional’ use of a gradable adjective, that is precisely one in which that adjective denotes a relation between a whole proposition and a degree):

(3/46) $[[good_{prop}]] = \lambda w \in D_s. \lambda p \in D_{\langle s,t \rangle}. \lambda d \in D_d. desirability_w(p) \geq d$

point in the former direction, in that in this case, the adjective might indeed combine directly with the degree supplied by that measure phrase:

(i) *He hammered the metal that flat.*

For the kind of data I am going to address here, deciding between these two strategies appears to be a largely arbitrary issue, though, which is why I shall settle for the latter option, leading to simpler syntactic structures with propositional adjectives and adverbs throughout.

¹⁰¹ Observe that this corresponds to adopting a clausal rather than a phrasal approach to comparison (cf. the discussion in section 2.3.1 above), which seems a very plausible assumption to make, given that with the class of propositional adjectives and adverbs on which I am focussing here, the standard term of a comparison based on these always consists in an entire proposition. Also note that pursuing a phrasal strategy instead would inevitably lead to exactly the same type of complications as discussed in section 2.3.3 for phrasal comparison in Turkish. As a concrete illustration, consider sentence (i) below, containing a comparative with an adjunct-like standard term, that an intensional version of the RPA would predict to denote (ii), which is of course perfectly nonsensical:

(i) *Had Peter arrived yesterday, it would have been better than the day before.*

(ii) $[[[i)]]] = \lambda w. \max_{inf}(\lambda d. desirability_w(\lambda w'. Peter\ had\ arrived\ yesterday\ in\ w') \geq d) > \max_{inf}(\lambda d. desirability_w(\lambda w''. the\ day\ before\ had\ arrived\ in\ w'') \geq d)$

For obvious reasons, passing to a phrasal approach in terms of associating individuals with implicit degrees as suggested in section 2.3.4 would improve matters, but for the cases discussed here, assuming a clausal analysis (which, in contrast to Turkish, must be an option in a language like English, anyway) will also do the trick.

Leaving the comparison operator (cf. (3/43)) completely untouched, sentence (3/45) will denote the set of worlds given in (3/47) below, namely those worlds in which a situation where Peter Precious did indeed attend Egbert Ego’s reading is judged to be preferable to one in which Cecilia Celebrity stayed away, which is once again as desired:

$$(3/47) \quad [[(3/45)]] = \lambda w. \max_{\text{inf}} (\lambda d. \text{desirability}_w (\lambda w'. \text{Peter Precious attended Egbert Ego's reading in } w') \geq d) > \max_{\text{inf}} (\lambda d. \text{desirability}_w (\lambda w''. \text{Cecilia Celebrity stayed away in } w'') \geq d)$$

Next, let us consider positive constructions, starting as before with one involving an ordinary use of the adjective *good*, such as that introduced in (3/48) below:

$$(3/48) \quad \textit{Soup A is good.}$$

Adding a positive operator along the lines of (3/49) below to our technical machinery, sentence (3/48) will now correctly be predicted to denote the proposition specified in (3/50):

$$(3/49) \quad [[\text{POS}_{\text{Cord}}]] = \lambda D \in D_{\langle d, t \rangle}. \forall d \in D_d [d \in L_C \rightarrow D(d)] \text{ (where “}L_C\text{” corresponds to the neutral zone of the respective scale)}$$

[cf. Beck (2011), p. 1352; her (65), following von Stechow (2006)]

$$(3/50) \quad [[(3/48)]] = \lambda w. \forall d \in D_d [d \in L_C \rightarrow \text{goodness}_w (\text{soup A}) \geq d]^{102}$$

Leaving the lexical entry of propositional *good* (cf. (3/46) above) as well as that of the positive operator (3/49) unaltered, a positive construction such as (3/51) below including *good* in its propositional use will then automatically be expected to denote the set of possible worlds identified in (3/52), which once more represents a most welcome result, in that this adequately captures sentence (3/51)’s actual meaning:

$$(3/51) \quad \textit{That Peter Precious attended Egbert Ego’s reading was good.}$$

$$(3/52) \quad [[(3/51)]] = \lambda w. \forall d \in D_d [d \in L_C \rightarrow \text{desirability}_w (\lambda w'. \text{Peter Precious attended Egbert Ego's reading in } w') \geq d]$$

The introduction of a superlative operator, the denotation of which is specified in (3/53) on the following page (where the term “g (C)” corresponds to the set of contextual alternatives made available by applying the variable C to the assignment function g with respect to which a given sentence is interpreted), will finally allow us to deal with superlative

¹⁰² In the course of section 3.3.2.3.1, I shall elaborate in quite some detail on the question of how exactly this neutral zone “ L_C ” is established in the case of a propositional as opposed to an ordinary gradable predicate.

constructions such as the one exemplified by (3/54), involving the gradable adjective *good* in its ordinary usage and whose meaning will thus look as in (3/55):

$$(3/53) \quad [[\text{-est}_{\text{Cord}}]]^g = \lambda D \in D_{\langle e, \langle d, t \rangle \rangle}. \lambda x \in D_e. \forall y \in D_e [(y \in g(C) \ \& \ y \neq x) \rightarrow \max_{\text{inf}} (\lambda d. D(x)(d)) > \max_{\text{inf}} (\lambda d. D(y)(d))] \text{ (where “g(C)” corresponds to a contextual set of relevant alternatives)}^{103}$$

(3/54) *Soup A is (the) best.*

$$(3/55) \quad [[(3/54)]]^g = \lambda w. \forall y \in D_e [(y \in \{\text{soup A, soup B, soup C}\} \ \& \ y \neq \text{soup A}) \rightarrow \max_{\text{inf}} (\lambda d. \text{goodness}_w(\text{soup A}) \geq d) > \max_{\text{inf}} (\lambda d. \text{goodness}_w(y) \geq d)]$$

And a minor modification of the superlative operator as shown in (3/56) below with the intention of making it applicable to propositional rather than individual type arguments will ultimately enable us to derive a superlative like (3/57) based on a propositional instantiation of the adjective *good*:

$$(3/56) \quad [[\text{-est}_{\text{Cprop}}]]^g = \lambda D \in D_{\langle \langle s, t \rangle, \langle d, t \rangle \rangle}. \lambda p \in D_{\langle s, t \rangle}. \forall q \in D_{\langle s, t \rangle} [(q \in g(C) \ \& \ q \neq p) \rightarrow \max_{\text{inf}} (\lambda d. D(p)(d)) > \max_{\text{inf}} (\lambda d. D(q)(d))] \text{ (where “g(C)” corresponds to a contextual set of relevant alternatives)}$$

(3/57) *That Peter Precious, Ingrid Important, Sally Significant and Cecilia Celebrity attended Egbert Ego’s reading was best.*

In the end, sentence (3/57) will then denote the set of worlds specified in (3/58) below, which once again successfully captures this sentence’s actual meaning:

$$(3/58) \quad [[(3/57)]]^g = \lambda w. \forall q \in D_{\langle s, t \rangle} [(q \in g(C) \ \& \ q \neq [\lambda w'. \text{Peter Precious, Ingrid Important, Sally Significant and Cecilia Celebrity attended Egbert Ego’s reading in } w']) \rightarrow \max_{\text{inf}} (\lambda d. \text{desirability}_w([\lambda w'. \text{Peter Precious, Ingrid Important, Sally Significant and Cecilia Celebrity attended Egbert Ego’s reading in } w']) \geq d) > \max_{\text{inf}} (\lambda d. \text{desirability}_w(q) \geq d)], \text{ where “g(C)” = the set of contextual alternatives that have been specified in (3/40) above, that is:}$$

$$g(C) = \{[\lambda w'. \text{Peter Precious, Ingrid Important, Sally Significant and Cecilia Celebrity attended Egbert Ego’s reading in } w'], [\lambda w'. \text{Peter Precious, Ingrid Important and Sally Significant attended Egbert Ego’s reading in } w'], [\lambda w'. \text{Peter Precious and Ingrid Important attended Egbert Ego’s reading in } w'], [\lambda w'. \text{Peter Precious attended Egbert Ego’s reading in } w'], [\lambda w'. \text{nobody attended Egbert Ego’s reading in } w']\}$$

¹⁰³ Cf. the structurally similar superlative operator proposed in Beck (2011, p. 1350; her (56)), which I however modified slightly.

In total, I therefore arrive at exactly parallel derivations for comparative, positive and superlative constructions featuring ordinary and propositional usages of the gradable adjective *good* throughout, with just one systematic difference: The individual type arguments associated with the former are invariably replaced by arguments that are propositional in nature in the case of the latter, which directly reflects the different kinds of arguments involved, whereas all other components of the semantic derivation can remain unchanged, so that the approach I am proposing for propositional gradable predicates is characterised by a great amount of economy right from the start. Crucially observe, now, that this analysis immediately accounts for the fact that no NIE is bound to appear when an *n*-word is inserted within the standard term of comparatives based on such propositional predicates: From the approach suggested here, it follows without any further ado that with these, an *n*-word will generally happen to be embedded within an entire proposition and as has already been shown in the first part of subsection 3.3.2.1 before, a deeper embedding of the respective *n*-word usually makes the NIE vanish right away. To see this, let us have a look again at the little dialogue in (3/5), repeated from the introductory section 3.1:

- (3/5) A: *Only Peter turned up.*
 B: *That's still better than no-one at all.*

Here, speaker B's reply constitutes an elliptical version of the corresponding full-fledged comparative given in (3/59) below, where its standard term has been extended into the equivalent complete proposition.¹⁰⁴

- (3/59) *That's still better than (if) no-one at all (had turned up).*

Applying the technical machinery developed in this section will then directly yield the denotation specified in (3/60) below for this statement:

- (3/60) $[[(3/59)]] = \lambda w. \max_{\text{inf}} (\lambda d. \text{desirability}_w (\text{that } (= \lambda w'. \text{only Peter turned up in } w') \geq d) > \max_{\text{inf}} (\lambda d. \text{desirability}_w (\lambda w''. \text{no-one at all turned up in } w'') \geq d))$

Of course, the *no-one*-case represents a proposition that can be ranked on the corresponding scale of desirability without any difficulty, and the (maximally informative) degree to which this proposition is desirable is fully defined, too, so that in contrast to the cases discussed in section 3.3.1 above, no NIE is correctly predicted to arise. For obvious reasons, this line of

¹⁰⁴ In subsection 3.3.2.3.3 below, I shall enter the principles guiding the choice of subordinator (*if* as opposed to *that*) when it comes to reconstructing entire propositions in elliptical standard terms of comparatives.

argumentation straightforwardly carries over to all comparatives formed on the basis of a propositional adjective or adverb alike, by virtue of the fact that with all of these, an *n*-word in their standard term automatically happens to be embedded within a whole proposition, so that no effect of undefinedness is expected to produce itself, and the corresponding sentences are therefore predicted to be fully acceptable (if impeccable in other respects), which is exactly what the English, German, French and Spanish data obviating NIEs in sections 3.2.1 to 3.2.3 show.¹⁰⁵ Furthermore notice that the fact that such a ‘not’-case often corresponds to the worst alternative among a given set of possible alternatives normally makes comparison to it even all the more unproblematic,¹⁰⁶ because such a configuration ends up being tantamount to a comparison to the direct zero point of the relevant scale (for a concrete illustration, cf. for instance the scale specified in (3/40) above, where the negative case is indeed ranked lowest on the desirability scale the adjective *good* is associated with in its propositional use).

For the sake of completeness, let me finally add one more technical detail of the analysis I propose to account for handling propositional gradable adjectives and adverbs: I assume that with this group of elements, the precise nature of the scale they give rise to is ultimately determined by the lexical contribution of the respective expression itself, precisely as is the case with ordinary gradable predicates, generally:¹⁰⁷ Just as ordinary gradable adjectives like *tall*, *heavy* and *old* come with scales of height, weight and age, respectively (cf. their model lexical entries given in (3/61) below), propositional ones are also associated with scales matching their basic meaning, such as scales of desirability, utility and desirability again or undesirability in the case of *good*, *useful* and *bad*, as illustrated with their respective entries specified in (3/62) on the next page:

- (3/61) a. $[[tall_{ord}]] = \lambda w \in D_s. \lambda x \in D_e. \lambda d \in D_d. height_w(x) \geq d$
 b. $[[heavy_{ord}]] = \lambda w \in D_s. \lambda x \in D_e. \lambda d \in D_d. weight_w(x) \geq d$
 c. $[[old_{ord}]] = \lambda w \in D_s. \lambda x \in D_e. \lambda d \in D_d. age_w(x) \geq d$

¹⁰⁵ As readers may easily verify for themselves, with all of these comparatives, it is invariably possible to overtly reconstruct a full-fledged proposition in their respective standard terms.

¹⁰⁶ While this is a very frequent basic constellation, this does not necessarily have to be the case, as will be shown in subsection 3.3.2.3.1 below (cf. in particular the desirability scales given in (3/70) and (3/71) as an example of a scenario where things are different).

¹⁰⁷ In a similar fashion, in Villalta (2007), it is also claimed that the type of scale associated with a gradable expression (a verb, in her case) “may differ from predicate to predicate and should be contributed by the lexical meaning of the predicate” (ibid., p. 109), whereas in Heim (1992), by which Villalta (2007)’s analysis was largely inspired, only scales of desirability were considered. In Krifka (1999), on the other hand, varying scales are also permitted, where for instance even scales of taxonomic subordination and superordination are included, though within a theoretical framework that differs considerably from the one I am using here, in that Manfred Krifka envisages ordering entire propositions as such rather than degrees to which these propositions fulfil a given quality or the like.

- (3/62) a. $[[good_{prop}]] = \lambda w \in D_s. \lambda p \in D_{\langle s, t \rangle}. \lambda d \in D_d. desirability_w(p) \geq d$
 b. $[[useful_{prop}]] = \lambda w \in D_s. \lambda p \in D_{\langle s, t \rangle}. \lambda d \in D_d. utility_w(p) \geq d$
 c. $[[bad_{prop}]] = \lambda w \in D_s. \lambda p \in D_{\langle s, t \rangle}. \lambda d \in D_d. desirability_w(p) \leq d$
 or $\lambda w \in D_s. \lambda p \in D_{\langle s, t \rangle}. \lambda d \in D_d. undesirability_w(p) \geq d$ ¹⁰⁸

Mainly for expository reasons, with the exception of the dialogue in (3/5), I have only discussed artificially made up examples in this section, up to now. I should therefore like to conclude it by introducing the naturally occurring German example in (3/63) that I owe to Golluch (2005), which features exactly the adjective *gut* (*good*) on that I have focussed exclusively in this section in its comparative form *besser* (*better*), and which gives rise to an interesting ambiguity in that it also contains the *n*-word *keine* (*no*) (albeit in the comparative's comparee and not in its standard term), which can take scope in two different positions:

- (3/63) *Keine Antwort ist besser als eine falsche.*
 no.feminine answer is better than a.feminine wrong.feminine
 'No answer is better than a wrong one.'

Depending on the scope one ascribes to the noun (or determiner) phrase *keine Antwort* (*no answer*), sentence (3/63) can either be taken to mean that giving no answer at all is preferable to giving a wrong one, or it can express that giving a wrong answer is the most desirable thing to achieve as such and given the overall highly satirical turn of voice in which the entire passage containing this sentence is written, it is even very probable that this ambiguity was indeed fully intended this way by the author.

In this section, I have presented an analysis of gradable adjectives and adverbs designed to simultaneously meet two separate requirements: On the one hand, it is intended to derive proper denotations for ordinary and propositional uses of gradable predicates in different comparison constructions alike and on the other, it provides us with an immediate explanation of the fact that the insertion of an *n*-word into a comparative's standard term leads to an NIE and thus to an unacceptable status of the corresponding comparative with ordinary, but not with propositional usages of gradable predicates. So far, I have however only introduced the main ideas underlying this approach that remains as yet to be revised and refined in several ways, which is what I shall address in the ensuing section 3.3.2.3.

¹⁰⁸ The question of whether antonymous adjectives like *bad* project a scale of their own (cf. the second option sketched in (3/62c)) or whether these rather make use of degrees situated on the same scale as those of their corresponding non-antonymous equivalents (*good* in the case of *bad*, as indicated in the first version of (3/62c)), will be taken up in section 4.5.2.4 below, where the semantics of antonyms will be dealt with at some length.

3.3.2.3 Various Refinements of the Proposal

3.3.2.3.1 What we Compare to

Let me begin refining my analysis of propositional gradable predicates by looking more closely at what exactly is being compared to in the case of a comparative, a superlative and a positive construction, in turn. Doing so, it will also immediately become clear with which of these types of comparison constructions an “alternative semantics” in the sense of Rooth (1985, 1992) comes into play and in what way the possible alternatives necessary with this type of semantics are derived as well as how their evaluation proceeds in practice.

In this respect, the by far easiest case conceivable is constituted by comparatives as such, since with these, the respective comparee and standard terms simply give us the two propositions that are directly compared to each other. In this fashion, in a canonical comparative based on a propositional instantiation of the gradable adjective *good* such as (3/45), repeated below from the previous subsection, the first proposition provided by the comparative’s comparee term enters a comparison to that supplied by its standard term, as indicated in (3/47), also repeated from above:

(3/45) *That Peter Precious attended Egbert Ego’s reading was better than that Cecilia Celebrity stayed away.*

(3/47) $[[[(3/45)]] = \lambda w. \max_{\text{inf}} (\lambda d. \text{desirability}_w (\lambda w'. \text{Peter Precious attended Egbert Ego’s reading in } w') \geq d) > \max_{\text{inf}} (\lambda d. \text{desirability}_w (\lambda w''. \text{Cecilia Celebrity stayed away in } w'') \geq d)$

A comparative like the one introduced in (3/45) is thus interpreted in a straightforward ‘what you see is what you get’-like fashion and in the course of its derivation, no contextual alternatives appear on the stage at all.

The situation then gets slightly more complex as soon as superlatives like (3/57), reproduced from above, are taken into account:

(3/57) *That Peter Precious, Ingrid Important, Sally Significant and Cecilia Celebrity attended Egbert Ego’s reading was best.*

Here, only one proposition is mentioned explicitly, the desirability of which is then compared to that of all relevant contextual alternatives, as specified in the denotation of sentence (3/57) that is provided in (3/58) on the following page, once again repeated from the previous subsection:

- (3/58) $[[[(3/57)]]^g = \lambda w. \forall q \in D_{\langle s, t \rangle} [(q \in g(C) \ \& \ q \neq [\lambda w'. \text{Peter Precious, Ingrid Important, Sally Significant and Cecilia Celebrity attended Egbert Ego's reading in } w']) \rightarrow \max_{\text{inf}} (\lambda d. \text{desirability}_w([\lambda w'. \text{Peter Precious, Ingrid Important, Sally Significant and Cecilia Celebrity attended Egbert Ego's reading in } w']) \geq d) > \max_{\text{inf}} (\lambda d. \text{desirability}_w(q) \geq d)]$, where “g(C)” = the set of contextual alternatives that have been specified in (3/40) above, that is:
 $g(C) = \{[\lambda w'. \text{Peter Precious, Ingrid Important, Sally Significant and Cecilia Celebrity attended Egbert Ego's reading in } w'], [\lambda w'. \text{Peter Precious, Ingrid Important and Sally Significant attended Egbert Ego's reading in } w'], [\lambda w'. \text{Peter Precious and Ingrid Important attended Egbert Ego's reading in } w'], [\lambda w'. \text{Peter Precious attended Egbert Ego's reading in } w'], [\lambda w'. \text{nobody attended Egbert Ego's reading in } w']\}$

In contrast to comparatives, superlatives thus represent a first type of comparison construction making use of a set of alternatives supplied by context, and we therefore need to figure out how exactly these alternatives originate. As a matter of fact, the position of focus plays a crucial role in this regard, propositions bearing the main focus on their subject for instance giving rise to alternatives differing precisely in this position, whereas propositions where parts of their objects receive focus produce alternatives that vary in that very position as well, as illustrated by the three exemplary cases in (3/64a) to (3/64c) below, where the subscript “F” indicates focus marking, and the corresponding set of alternatives these statements are associated with are listed in (3/65a) to (3/65c) in turn:

- (3/64) a. *It was best that [Cecilia Celebrity_F] attended Egbert Ego's reading.*
 b. *It was best that Cecilia Celebrity attended [Egbert Ego's_F] reading.*
 c. *It was best that Cecilia Celebrity attended Egbert Ego's [reading_F].*
- (3/65) a. $\{p \in D_{\langle s, t \rangle} : p = \lambda w \in D_s. x \text{ attended Egbert Ego's reading in } w \mid x \in D_e\}$
 b. $\{p \in D_{\langle s, t \rangle} : p = \lambda w \in D_s. \text{Cecilia Celebrity attended } x\text{'s reading in } w \mid x \in D_e\}$
 c. $\{p \in D_{\langle s, t \rangle} : p = \lambda w \in D_s. \text{Cecilia Celebrity attended Egbert Ego's } x \text{ in } w \mid x \in D_{\langle e, t \rangle}\}$

The basic constellation we are facing here is therefore highly reminiscent of that in Rooth (1985, 1992), according to whom “the focus semantic value for a phrase [...] is the set of propositions obtainable from the ordinary semantic value by making a substitution in the position corresponding to the focused phrase” (Rooth (1992), p. 76). If we now return to our initial example (3/57) and assume first that the subjects are given focus in this sentence, as shown in (3/66) and second, that it is uttered in the basic scenario of Egbert Ego's reading as depicted in section 3.3.2.2 above, the set of alternatives picked by an appropriate assignment function g, with respect to which sentence (3/57) is evaluated, will consist of the propositions listed in

(3/67) below, on the basis of which we can then ultimately derive its denotation (as already specified in (3/58) above):

(3/66) *That [Peter Precious, Ingrid Important, Sally Significant and Cecilia Celebrity]_F attended Egbert Ego's reading was best.*

(3/67) $g(C) = \{\lambda w. \text{Peter Precious, Ingrid Important, Sally Significant and Cecilia Celebrity attended Egbert Ego's reading in } w,$
 $\lambda w. \text{Peter Precious, Ingrid Important and Sally Significant attended Egbert Ego's reading in } w,$
 $\lambda w. \text{Peter Precious and Ingrid Important attended Egbert Ego's reading in } w,$
 $\lambda w. \text{Peter Precious attended Egbert Ego's reading in } w,$
 $\lambda w. \text{nobody attended Egbert Ego's reading in } w\}$

Moreover, I propose the three conditions on the definedness of a propositional superlative construction introduced in (3/68) below, where “p” abbreviates the ‘proposition’ appearing overtly in a given superlative and “alt” is used as an abbreviation of an expression’s ‘alternative semantic value’ in the sense of Rooth (1985, 1992), the third of these conditions being intended to rule out situations where for instance only two alternatives emerge, where the use of a comparative appears to be much more appropriate:

(3/68) definedness conditions on propositional superlatives:

- (i) $g(C) \subseteq [[p]]_{\text{alt}}$
- (ii) $p \in g(C)$
- (iii) $|g(C)| \geq 3$

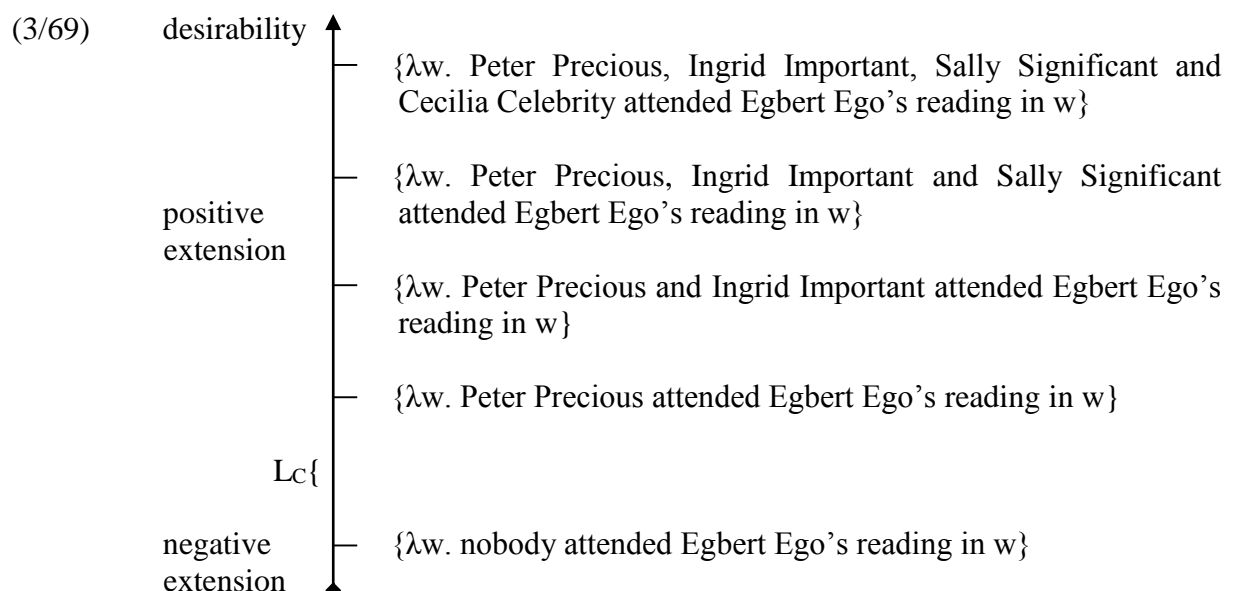
Thus, whereas comparatives derived from propositional adjectives and adverbs do not make use of contextual alternatives, these constitute an integral part of the semantic calculation with superlative constructions. As it turns out, matters are still different with positives, a comparison construction which I shall discuss next.

With a positive on the basis of the adjective *good* in its propositional use such as (3/51), again reproduced from above, the meaning of which is given in the likewise repeated (3/52) below, contextual alternatives do not directly enter the semantic calculation proper, as can be seen from the fact that the denotation of this sentence arrived at in (3/52) does not contain an instantiation of “g(C)” or any similar meaning component:

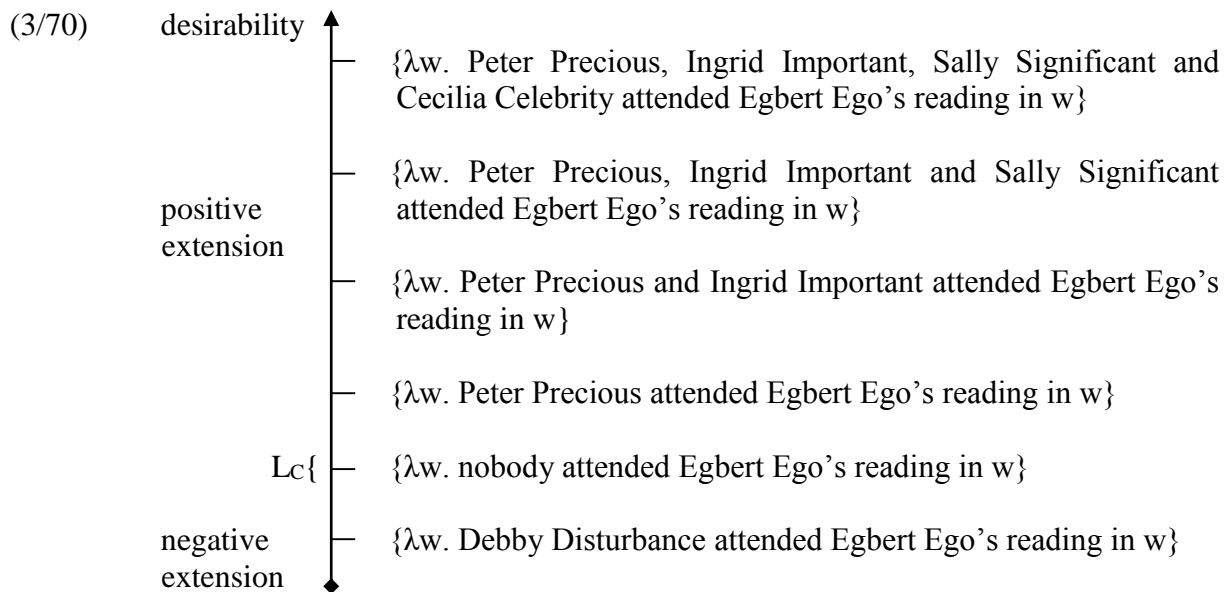
(3/51) *That Peter Precious attended Egbert Ego's reading was good.*

(3/52) $[[[3/51]]] = \lambda w. \forall d \in D_d [d \in L_C \rightarrow \text{desirability}_w (\lambda w'. \text{Peter Precious attended Egbert Ego's reading in } w') \geq d]$

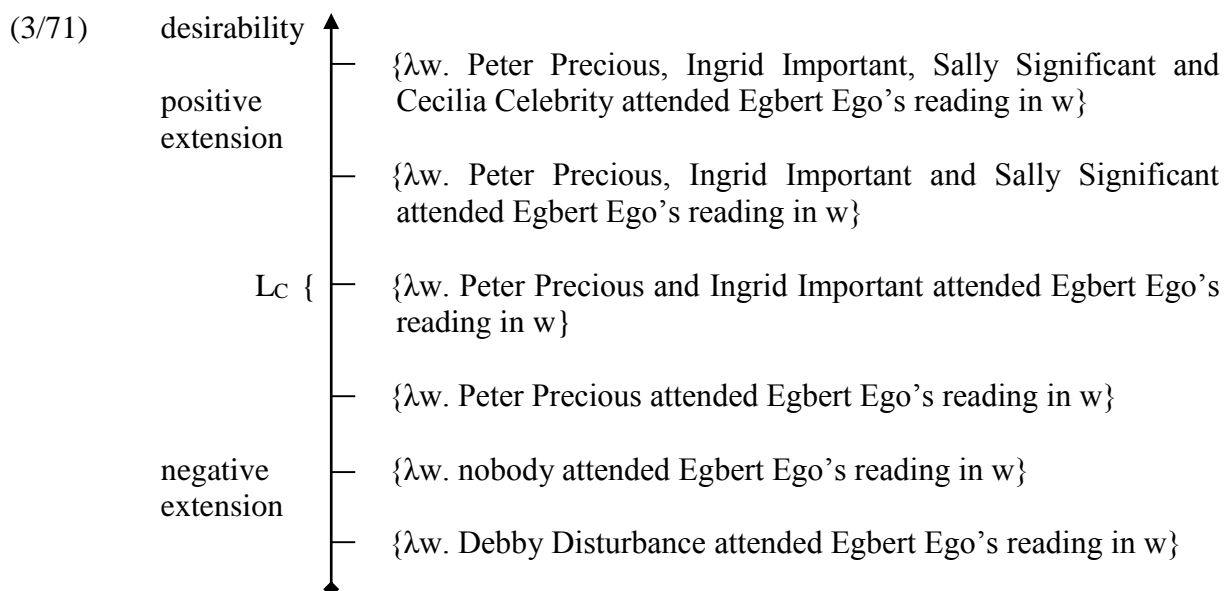
At the same time, the precise contribution a statement like (3/51) makes is however highly dependent on what exactly the neutral area “ L_C ” is fixed to and interestingly enough, this step of determining the specific extent of this neutral zone is in fact influenced directly by the set of contextual alternatives one takes into consideration and the way one assesses these with respect to the gradable property at hand. In the case of our basic scenario involving Egbert Ego and his conceited wife, it is for instance conceivable that the first four alternatives form the positive extension of the adjective *good*, whereas the negative one consists of the *nobody*-case alone and that the neutral area “ L_C ” is located in between these two, so that all situations in which at least one of the renowned people in question attended our would-be poet’s reading are sufficient to count as good, as depicted in (3/69) below:



It is also possible, though, that the *nobody*-case does not yet represent the worst case scenario, which could for example be constituted by Debby Disturbance turning up, a troublemaker well known over town, whose habit it is to aptly ruin every event whatsoever by permanently interrupting people with all sorts of partly just silly and partly even embarrassing questions. In these circumstances, the *nobody*-case might for instance already be considered as neutral, the adjective’s negative extension now comprising the newly added alternative that is judged worse, as illustrated in (3/70) on the next page:



And of course, once we assume that Egbert Ego's wife took it for granted that Peter Precious and Ingrid Important would show up at her husband's reading in any case, the situation would still look different and could for instance come out as shown in (3/71) below, where the higher expectations held by Egbert Ego's wife are directly reflected in corresponding shifts as far as the locations of the adjective's positive and negative extensions as well as that of the neutral zone are concerned:

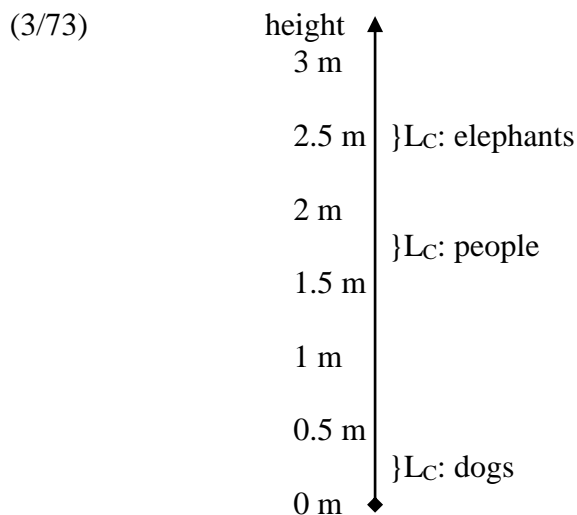


In sum, with propositional positive constructions, contextual alternatives are relevant indeed, in that although these are not immediately involved in the semantic calculations of such constructions, they are nevertheless indispensable in serving the function of delimiting a given adjective's positive and negative extension alongside with its neutral area "Lc". Note, in this context, that the way this neutral area is established with a positive featuring a propositional

adjective or adverb differs radically from the manner in which this is normally achieved with an ordinary, that is an individual type argument gradable predicate such as *tall*. In case of the latter, this neutral zone is either directly specified by an overt *for*-phrase (cf. for instance (3/72a) below)¹⁰⁹ or else, it can remain implicit (as illustrated in (3/72b)):

- (3/72) a. *John is tall for a five-year-old.*
 b. *Peter is tall.*

Observe, however, that even in the second case, there is usually a fairly neutral and objective way of fixing this area, making use of the respective “comparison class” in the terminology of Klein (1980): If Peter happened for instance to be an adult man, it would be most natural to build that neutral area around the standard height of adult men (1.78m; cf. footnote 28 in subsection 2.2.4.3 above) in the absence of any other indication in the context of utterance. Of course, people might object at this point that an average person does not necessarily have to be aware of this precise figure, but in my opinion, it is actually enough for standard purposes of communication to have just a rough idea of matters and to know, for example, that adult people do not measure 30 inches, one metre twenty, three metres, several kilometres, etc., whereas other entities such as elephants or dogs come with completely different average sizes, giving in turn rise to likewise different neutral areas on the corresponding height scale, as can be seen from (3/73) below:



¹⁰⁹ Two diverging proposals for the exact compositional interpretation of overt *for*-phrases with the ordinary type of adjectives are offered in Kennedy (2007) and Schwarz (2010) and for an account of which classes of adjectives can and cannot directly combine with such explicit *for*-phrases, I refer the reader to the discussion in Toledo/Sassoon (2011, pp. 146f.).

In contrast to this, there are no such objective criteria at all for delimiting this neutral zone with adjectives and adverbs that are propositional in nature. As I have shown above for sentence (3/51) in an exemplary fashion, the exact location of the neutral zone on the corresponding scale of desirability essentially depends on just two factors: the choice of the alternatives to be considered (including or excluding for instance an alternative in which Debby Disturbance shows up (cf. the configuration in (3/69) as opposed to that in (3/70) or (3/71) above)) and the inherently subjective assessment of these by the individual making the utterance (who might for instance judge the presence of Ingrid Importance as more valuable than that of Peter Precious or the like). As a consequence, identifying the neutral zone thus always constitutes a highly subjective matter with propositional as opposed to ordinary adjectives and adverbs. As noted before, with an ordinary adjective like *tall*, the corresponding neutral zone can either be established indirectly, as was the case in (3/72b) (normally giving rise to an objective introduction of a neutral area as described above) or in a more overt fashion by adding an explicit *for*-phrase (cf. example (3/72a)) and interestingly enough, most propositional adjectives and adverbs also permit the insertion of a *for*-phrase,¹¹⁰ as shown in an exemplary manner for the adjective *good* in example (3/74) below (representing the corresponding extended version of sentence (3/51) above):

(3/74) *It was good for Egbert Ego's wife that Peter Precious attended her husband's reading.*

Explicitly adding the phrase *for Egbert Ego's wife* directly mirrors what is at stake in the establishment of the neutral zone with an adjective like *good* in its propositional usage, namely the individual responsible for selecting the relevant set of alternatives as well as for their assessment, that is Egbert Ego's wife in our given situation. With sentence (3/51), where no such *for*-phrase was present, these properties were simply ascribed to the speaker in a kind of default fashion, while in (3/74), this person happens to be mentioned explicitly, this time. In both cases, with ordinary and with propositional gradable predicates, *for*-phrases therefore perform the function of delimiting the neutral zone in positive constructions, albeit in quite different forms, a quasi-neutral and objective one in the case of ordinary adjectives and adverbs and a highly subjective one related to a particular individual (or to particular individuals with a plural *for*-phrase) with propositional expressions. Of course, *for*-phrases appearing with

¹¹⁰ This goes for all 'impersonal' instantiations of a propositional adjective or adverb and thus for the vast majority of propositional gradable predicates, as will be shown in some detail in subsection 3.3.2.3.2 below (cf. in particular the second column of the table included in (3/75)), whereas with a limited number of expressions, overtly mentioning the individual(s) holding the value judgment is actually obligatory (cf. the third and the fourth columns in the table provided there).

ordinary predicates cannot be put exactly on a par with their counterparts co-occurring with propositional predicates, in that in the former case, these represent simple adjuncts that exclusively serve to fix a gradable predicate's comparison class, while in the latter, these introduce an extra argument with the role of a beneficiary, an argument which happens to be likewise optional, though. Strikingly enough, it is precisely the same prepositions that introduce benefactive *for*-phrases with propositional predicates and merely comparison class-fixing *for*-phrases with ordinary ones in all four languages under consideration here, throughout (English *for*, German *für* (*for*), French *pour* (*for*) and Spanish *para* (also *for*)), but given that these languages are genetically related, it is difficult to tell whether this is truly indicative of a fundamental similarity holding between these or not.¹¹¹

Having looked at propositional comparatives, superlatives and positives in more detail now, the basic pattern that emerges with respect to the potential use of contextual alternatives is therefore the following: Whereas these play no role with comparatives, where two propositions are explicitly mentioned to begin with, they affect the derivations of both, superlatives and positives, albeit in different ways. What remains however to be accounted for as yet is how these alternatives get evaluated, an issue I shall tackle in the next paragraph.

Given that the approach which I am developing here has a lot in common with that defended for Spanish propositional attitude verbs in Villalta (2007) (such as the use of contextual alternatives determined by focus, the idea that the exact scale a gradable predicate gives rise to depends on its lexical meaning or even the potential parallel analysis of propositional attitude verbs to be suggested in section 3.3.2.3.2 below), let me first of all underline that the evaluation of alternatives constitutes one of the rare aspects with regard to which I shall deviate from the original proposal in Villalta (2007): It is assumed there that it is the subjunctive mood that evaluates the set of alternatives supplied by context and while this might indeed be correct for propositional attitude verbs in Spanish (for some points of criticism cf. subsection 3.3.2.3.2 below, though), this account does clearly not extend to the group of propositional adjectives and adverbs under discussion here, neither in Spanish itself nor in the three other languages taken into consideration.¹¹² Instead, I intend to implement the alternative

¹¹¹ In order to reliably settle this issue, more data from genetically unrelated languages would have to be taken into account, which I unfortunately have not yet been able to do and must thus leave for future research.

¹¹² As a matter of fact, the choice of indicative as opposed to subjunctive mood cuts diagonally across individual languages (and even across whole language families) as well as across the type of subordinate clause involved, and it does so in an almost accidental fashion, as summarised in the two rough overviews provided in (i) on the next page, so that obviously, the selection of a particular mood cannot generally be held responsible for the evaluation of contextual alternatives alike:

semantics required with propositional adjectives and adverbs exactly in the fashion specified in Rooth (1985, 1992).¹¹³ I shall thus not argue that mood plays a role in the evaluation of contextual alternatives, and I shall stick to the postulation of a classical “~”-operator precisely as elaborated in Rooth (1985, 1992) to perform this function, instead.¹¹⁴

In sum, this subsection has made the following three major points about propositional gradable predicates: First of all, it has been argued that while comparatives do not make use of contextual alternatives at all, these make a direct meaning contribution with superlative constructions and an indirect one in the case of positives, where they help to establish the neutral zone on the respective scale associated with a given adjective or adverb. Secondly, I have shown

(i) a. propositional adjectives/adverbs introducing a <i>that/dass/que/que</i> -clause:			
- German:	indicative mood throughout	- Spanish:	mostly subjunctive mood
↔			
- English:	indicative mood throughout	- French:	often subjunctive mood
_____		_____	
Germanic languages		Romance languages	
b. propositional adjectives/adverbs introducing a conditional subordinate clause:			
- German:	indicative mood (<i>realis</i> type) or subjunctive mood (all other types)	- Spanish:	indicative mood (<i>realis</i> type) or subjunctive mood (all other types)
↑			
- English:	indicative mood throughout	- French:	indicative mood throughout
_____		_____	
Germanic languages		Romance languages	

Also note in passing that if the analysis I am developing here is essentially correct, in Spanish, propositional adjectives and adverbs taking complements in the form of conditionals rather than *que*-clauses also give rise to alternatives, even though only some of them appear in the subjunctive mood, while others occur in the indicative (depending on the type of conditional clause one is dealing with), a basic configuration of which I am not so sure that it could be brought in line with the approach advocated in Villalta (2007).

¹¹³ The main difference between Rooth (1985) and Rooth (1992) resides in the fact that in the former approach, an expression’s alternative semantic value consists of the entire domain including all elements of the same semantic type as the expression in question itself, whereas in the latter, this alternative semantic value happens to be restricted to just a subset of the whole of that domain, which seems much more plausible to me (cf. also the first definedness condition I have identified for propositional superlatives in (3/68) above). Other than that, these two approaches are essentially parallel, and I shall therefore treat them on a par, here.

¹¹⁴ For present purposes, I consider Rooth (1985, 1992) to be absolutely sufficient for handling the data under consideration here, but given that this approach has been criticised on independent grounds, mainly for not being able to cope with overfocussed answers in question-answer pairs, let me stress that what is being done here could easily be recast in terms of a ‘structured meanings’-approach along the lines of von Stechow (1990) or Krifka (2001). The set of alternatives specified for sentence (3/64a) from the main text would for instance correspond to the ordered pair <λw. λx. x attended Egbert Ego’s reading in w, Cecilia Celebrity> in such a framework.

that the shape of these alternatives supplied by context is ultimately determined by the assignment of focus and thirdly that they are most plausibly evaluated with the help of a classical “~”-operator as proposed in Rooth (1985, 1992), rather than by the choice of a particular mood.

3.3.2.3.2 Personal and Impersonal Propositional Adjectives and Adverbs

Up to now, I have been careless enough to treat all propositional adjectives and adverbs as being exactly on a par, but as a matter of fact, these expressions happen to be more heterogeneous than they might appear at first glance. In particular, they differ with respect to whether the person responsible for the value judgment they express has to be mentioned explicitly or not and if so, which syntactic position this judgment holder occurs in. In this fashion, propositional gradable predicates can be subdivided into three basic classes, as follows: Firstly, there are class I expressions displaying what I shall refer to here as an ‘impersonal’ use in that with these, the individual holding the respective value judgment can remain completely unexpressed and whose inclusion as an adjunct in the form of a *for*-phrase is entirely optional (cf. also the discussion of *for*-phrases in the immediately preceding subsection). If unexpressed, sentences containing such class I expressions either take on a quasi-generic reading (*It is good in general that...*, *It is good for everyone that...* or the like) or else, the person the value judgment stems from is to be inferred from the surrounding intralinguistic or extralinguistic context (that person can for instance be identical with the speaker, someone who has just been talked about, etc.). Secondly, there are class III elements that show what I shall call a ‘personal’ use, here, because with these adjectives and adverbs, the corresponding judgment holder directly appears in the form of the syntactic subject of a given statement, so that in contrast to class I expressions, this piece of information must now be overtly realised. And thirdly, in between these two classes, I finally situate an intermediate stage containing predicates that on the one hand resemble class III ones in obligatorily requiring the overt mentioning of the person responsible for the value judgment, but on the other hand are like their class I counterparts in featuring only a semantically vacuous, dummy subject, in that this time, the judgment holder fills the syntactic position of an indirect object. This situation is summarised in the table provided in (3/75) on the following page, where I also include an example for each of the three classes of propositional gradable predicates distinguished and supply an exhaustive classification in terms of these three basic groups of all those adjectives and adverbs that occurred in the natural

language examples obtained from my corpus studies in the four languages English, German, French and Spanish (cf. subsections 3.2.1 to 3.2.3):

(3/75)

class	I (impersonal use)	II (intermediate stage)	III (personal use)
example	<i>It is good that Peter Precious attended Egbert Ego's reading.</i>	<i>Es ist mir lieber, wenn Peter Precious Egbert Egos Lesung besucht.</i>	<i>Egbert Ego's wife would be happy if Peter Precious attended her husband's reading.</i>
adjectives and adverbs	English: <i>bad, boring, confusing, good, great, perfect, pleasant</i> ; German: <i>gut, einfach, erfolgreich, gefährlich, gesund, menschlich, nützlich, peinlich, schädlich, schlecht, schlimm, schön, sinnvoll, wertvoll, wichtig</i> ; French: <i>mieux, plutôt</i> ; Spanish: <i>mejor</i>	German: <i>lieber</i> [without a corresponding positive form]	English: <i>happy, worried</i> ; French: <i>plutôt</i>

As can be seen from (3/75) right away, the vast majority of propositional gradable predicates is characterised by an impersonal use and thus belongs to the first class. For these, the basic analysis proposed so far can simply be maintained in its present form. By contrast, adjectives and adverbs belonging to the second and third class established here open up an additional argument slot and as a direct consequence, their lexical entries need to be revised accordingly, providing them with an extra slot for an individual in their argument structure, as has been done in an exemplary fashion for the adjective *happy* in its propositional use in (3/76) below:

(3/76) $[[happy_{prop}]] = \lambda w \in D_s. \lambda p \in D_{\langle s, t \rangle}. \lambda x \in D_e. \lambda d \in D_d. desirability_{x,w}(p) \geq d$

For the sake of completeness, let me also include a comparative, a positive and a superlative construction on the basis of this personal adjective, here (cf. (3/77a), (3/77b) and (3/77c), respectively) and show that the denotations resulting from my slightly modified analysis still come out as desired, which can be seen from the sets of possible worlds these examples are predicted to denote that are listed in (3/78a-c), in turn:

- (3/77) a. *Egbert Ego's wife was happier that Ingrid Important attended her husband's reading than (she was happy) that Peter Precious attended his reading.*
 b. *Egbert Ego's wife was happy that Peter Precious attended her husband's reading.*
 c. *Egbert Ego's wife was happiest that Peter Precious, Ingrid Important, Sally Significant and Cecilia Celebrity attended her husband's reading.*

- (3/78) a. $[[[(3/77a)]]] = \lambda w. \max_{\text{inf}} (\lambda d. \text{desirability}_{\text{Egbert Ego's wife}, w} (\lambda w'. \text{Ingrid Important attended her husband's reading in } w') \geq d) > \max_{\text{inf}} (\lambda d. \text{desirability}_{\text{Egbert Ego's wife}, w} (\lambda w''. \text{Peter Precious attended her husband's reading in } w'') \geq d)$
- b. $[[[(3/77b)]]] = \lambda w. \forall d \in D_d [d \in L_C \rightarrow \text{desirability}_{\text{Egbert Ego's wife}, w} (\lambda w'. \text{Peter Precious attended her husband's reading in } w') \geq d]$
- c. $[[[(3/77c)]]]^g = \lambda w. \forall q \in D_{\langle s, t \rangle} [(q \in g(C) \ \& \ q \neq [\lambda w'. \text{Peter Precious, Ingrid Important, Sally Significant and Cecilia Celebrity attended Egbert Ego's reading in } w']) \rightarrow \max_{\text{inf}} (\lambda d. \text{desirability}_{\text{Egbert Ego's wife}, w} ([\lambda w'. \text{Peter Precious, Ingrid Important, Sally Significant and Cecilia Celebrity attended Egbert Ego's reading in } w']) \geq d) > \max_{\text{inf}} (\lambda d. \text{desirability}_{\text{Egbert Ego's wife}, w} (q) \geq d)]$, where “g(C)” = the set of contextual alternatives, that is:
 $g(C) = \{[\lambda w'. \text{Peter Precious, Ingrid Important, Sally Significant and Cecilia Celebrity attended Egbert Ego's reading in } w'], [\lambda w'. \text{Peter Precious, Ingrid Important and Sally Significant attended Egbert Ego's reading in } w'], [\lambda w'. \text{Peter Precious and Ingrid Important attended Egbert Ego's reading in } w'], [\lambda w'. \text{Peter Precious attended Egbert Ego's reading in } w'], [\lambda w'. \text{nobody attended Egbert Ego's reading in } w']\}$

Interestingly enough, the fact that the individual holding a given value judgment can (class I expressions) and sometimes even has to (elements belonging to class II or III) be expressed overtly, suggests a striking parallel between the group of propositional gradable predicates dealt with, here and that of propositional attitude verbs such as *to want*, *to wish* or *to hate* that are at the centre of the investigation in Villalta (2007), in that with these latter elements, the subject responsible for the value judgment is normally mentioned explicitly, too and obviously, propositional gradable adjectives and adverbs and such attitude verbs express a quite similar meaning: For intuitively speaking, a statement like *I want that p*. means something very similar to *It would be good/desirable for me if p*. And this parallel meaning is actually straightforwardly mirrored in the lexical entries of my propositional predicates as compared to those offered for attitude verbs in Villalta (2007), as a direct comparison of the entry proposed for the verb *to want* there, which I reproduce in (3/79) below, to that I have offered for the adjective *happy* in (3/76), repeated from above, shows right away:

$$(3/79) \quad [[[\textit{want}]]] = \lambda d [\in D_d]. \lambda p [\in D_{\langle s, t \rangle}]. \lambda x [\in D_e]. \lambda w [\in D_s]. x \text{ wants } p \text{ to a degree } d \text{ in } w \quad [\text{Villalta (2007), p. 170; her (107)}]$$

$$(3/76) \quad [[[\textit{happy}_{\text{prop}}]]] = \lambda w \in D_s. \lambda p \in D_{\langle s, t \rangle}. \lambda x \in D_e. \lambda d \in D_d. \text{desirability}_{x, w} (p) \geq d$$

Except for the exact Schönfinkelisation of the separate elements, these two entries share precisely the same argument structure and given that both, world variables as well as degree variables, are not normally overtly visible anyway (cf. also the discussion in footnote 100

above), I consider this difference in ordering as perfectly harmless. What is more, the truth value descriptions are also very much alike, with the only difference that in Villalta (2007), a simple metalinguistic description was chosen, whereas I have formalised matters slightly more and also introduced monotonicity. A crucial divergence in the two approaches can however be stated with respect to their precise workings: Whereas I always assume the intervention of a comparison operator in all comparison constructions alike, it is argued in Villalta (2007) that an abstract morpheme “ \emptyset_c ” with the denotation given in (3/80) is present with attitude verbs appearing in sentences involving no overt comparison morphology like positive constructions and that in sentences containing such overt morphology (like for instance comparative *-er/more* or superlative *-est/(the) most*), these morphemes replace the “ \emptyset_c ”:

$$(3/80) \quad [[\emptyset_c]]^g = \lambda P \in D_{\langle d, \langle \langle s, t \rangle, \langle e, \langle s, t \rangle \rangle \rangle \rangle}. \lambda p [\in D_{\langle s, t \rangle}]. \lambda x [\in D_e]. \lambda w [\in D_s]. \forall q: q \neq p \ \& \\ q \in g(C): \max(\lambda d. P(d)(p)(x)(w)) > \max(\lambda d'. P(d')(q' [sic: q])(x) \\ (w)) \quad \text{[Villalta (2007), p. 171; her (111)]}$$

Observe now that this “ \emptyset_c ”-morpheme gives rise to a basic superlative meaning (cf. the lexical entry I originally suggested for propositional superlative *-est* in (3/56) in subsection 3.3.2.2 above), to the effect that a positive construction would thus for instance take on a superlative denotation ‘by default’ under such an analysis. In my opinion, this is a rather unwelcome result, though: For first of all, postulating such an overall superlative meaning makes far too strong predictions. To see this, take an example such as (3/81), which is impeccable, even though the proposition embedded there does not correspond to the situation ranked highest on the relevant scale of desirability, Cecilia Celebrity’s presence not being taken into account (in our basic scenario where Egbert Ego gave a public reading, as introduced in subsection 3.3.2.2):

(3/81) *Egbert Ego’s wife wanted Peter Precious, Ingrid Important and Sally Significant to attend her husband’s reading.*¹¹⁵

And in a similar fashion, sentence (3/82) below is likewise fine, although the embedded proposition does not constitute the worst option among the relevant set of alternatives, that one being represented by the *nobody*-case:

(3/82) *Egbert Ego’s wife would have hated it if only Peter Precious had attended her husband’s reading.*

¹¹⁵ At first glance, considering sentences such as (3/81) as positive constructions might actually seem quite weird, but this follows naturally if a propositional attitude verb like *to want* is taken to constitute a gradable expression (cf. its lexical entry specified in (3/79) above, where a degree argument slot opens up). That such verbs are indeed gradable is argued for very convincingly in Villalta (2007) and can also be seen from examples (3/83) and (3/84a) to follow below, where such a verb appears in its comparative and its superlative form, respectively.

Strikingly enough, it is even possible to combine two different propositions with one and the same verb, once in its positive form and once in the comparative, as demonstrated in (3/83) and for obvious reasons, this is completely unexpected under Villalta (2007)'s account, because there, the verb in its positive form is already expected to give rise to a superlative reading per se, so that it should not be possible at all to add an even worse case to the first half of the sentence:

(3/83) *Egbert Ego's wife would have hated (it) if no-one of interest had attended her husband's reading, but she would have hated (it) even more if Debby Disturbance had turned up, there.*

Secondly, the approach in Villalta (2007) also seems doubtful in so far as propositional attitude verbs are in fact fully compatible with overt superlative morphology, as shown in (3/84a):

(3/84) a. *Egbert Ego's wife would have hated it most if no-one of interest had attended her husband's reading.*

Under the analysis defended in Villalta (2007), such an example involving explicit superlative marking would actually denote precisely the same as the corresponding positive construction, which would take on this superlative meaning via an intervention of the “ \emptyset_c ”-operator.¹¹⁶ This clearly cannot be the case, though, given that in the respective minimal pair (3/84a) forms with (3/84b) below, the (a)-variant, in which the verb is modified by an overt superlative, carries a much stronger meaning than its non-superlative equivalent version in (3/84b):

(3/84) b. *Egbert Ego's wife would have hated (it) if nobody at all had attended her husband's reading.*

And apart from these empirical deficiencies, the approach advocated in Villalta (2007) also appears to be flawed for theoretical reasons already: For whereas it is largely uncontroversial to postulate a phonologically empty positive operator (cf. for example von Stechow (2006) or Beck (2011) among many, many others), introducing an abstract morpheme “ \emptyset_c ” with a basic superlative meaning is surely not. In total, it thus seems that while propositional gradable adjectives and adverbs and such attitude verbs do share a common basic meaning, the semantics that I have developed for the former group of expressions turns out to be more adequate than that proposed for the latter in Villalta (2007) both, from an empirical as well as from a

¹¹⁶ Of course, under such an account, it would also remain somewhat unclear why one would use an overt superlative at all, if its meaning could already be expressed by means of a simple and more economic positive construction.

theoretical perspective.¹¹⁷ I therefore suggest transferring the semantics adopted for propositional gradable predicates of the personal type here to the class of propositional attitude verbs, rather than proceeding the other way around. In this fashion, a suitable lexical entry for the verb *to want* could for example look as in (3/85) and in a sentence containing this expression, a propositional version of a comparison operator would then intervene in exactly the same way as was described for propositional adjectives and adverbs, beforehand:

$$(3/85) \quad [[want]] = \lambda w \in D_s. \lambda p \in D_{\langle s, t \rangle}. \lambda x \in D_e. \lambda d \in D_d. \text{desirability}_{x,w}(p) \geq d$$

Such an approach could handle the empirical data much more adequately, in that it would neither make too strong predictions for morphologically unmarked comparison constructions such as the positive, nor would it lead to difficulties with overt superlatives. In these regards, the analysis proposed here is clearly preferable to the one defended in Villalta (2007), even though the two have many other significant aspects in common, such as for example the use of an alternative semantics for propositional expressions or the idea that the type of relevant scale is directly determined by the lexical contribution a given gradable predicate makes per se, as has been elaborated before.

3.3.2.3.3 Choice of Complementiser and the Role of Factivity

Having established a basic distinction between personal and impersonal uses of propositional adjectives and adverbs in the preceding subsection, I shall now move on to taking a closer look at the embedded propositions themselves, where it is also possible to introduce a fundamental dichotomy that splits these into *that/dass/que/que*-clauses (depending on which of the four languages under consideration one approaches) on the one hand and conditional clauses on the other, as exemplified by the minimal pair in (3/86) on the next page:

- (3/86) a. *It is good that Peter Precious will attend Egbert Ego's reading.*
 b. *It is/will be good if Peter Precious attends Egbert Ego's reading.*¹¹⁸

¹¹⁷ Note that although I only discuss the verb *to want* (and to a certain extent also *to hate*) here, the attested shortcomings with Villalta (2007)'s approach are of course not restricted to this particular propositional attitude verb, but that these obtain generally and carry for instance over to expressions like *to wish* or *to be glad* also taken into account, there.

¹¹⁸ Opinions among English native speakers vary as to whether future marking in the matrix clause of sentence (3/86b) is really necessary or not, which is why I simply include both versions, here. Given that I shall not be going into the intricate details of tense and mood selection, anyway (cf. also footnote 124 in subsection 3.3.2.3.3.2.1 below), this simplification will surely not do any harm.

In this section, I shall enter the details guiding the choice of complementiser with propositional adjectives and adverbs, that is the question whether *that* or *if* is selected in the case of English and doing so, I shall first of all reject two inadequate hypotheses (subsection 3.3.2.3.3.1), before developing a novel approach to this phenomenon (3.3.2.3.3.2.1). As a next step, I shall then go through the various predictions this new analysis makes, first with respect to comparatives (section 3.3.2.3.3.2.2), second with regard to licit and illicit reconstruction patterns found with elliptical cases (3.3.2.3.3.2.3) and finally as far as examples that do not involve *n*-words at all are concerned (3.3.2.3.3.2.4). Before entering matters proper, let me mention one other aspect regarding the organisation of this section: While I have investigated this issue in all the four languages under consideration here (English, German, French and Spanish), I shall by and large confine my attention to examples taken from English only, in what follows, in view of the fact that these four languages essentially behave alike in this respect. Whenever this appears to be appropriate or necessary, example sentences from all four languages will however be included, as for instance with the sets of examples listed in (3/90) to (3/95) or (3/96) to (3/100) below.

3.3.2.3.3.1 Rejecting two Initial Hypotheses

From an intuitive point of view, the two sentences in (3/86), repeated from above, seem to differ in meaning in that the embedded proposition in the (a)-variant, involving an occurrence of the complementiser *that*, appears to be factive in nature, whereas this is not the case with that in the (b)-version, including the complementiser *if*, instead:

- (3/86) a. *It is good that Peter Precious will attend Egbert Ego's reading.*
b. *It is/will be good if Peter Precious attends Egbert Ego's reading.*

It might therefore seem plausible to hypothesise that the complementiser *that* triggers factivity, in contrast to which the complementiser *if* does not do so. Upon closer inspection, it immediately turns out, though, that this hypothesis is not really tenable after all, in view of data such as that shown in (3/87) below:

- (3/87) *I doubt that Peter Precious will attend Egbert Ego's reading.*

Here, we are again facing an instantiation of the complementiser *that* and yet, the subordinate clause in (3/87) is interpreted in anything but a factive way. I thus conclude that matters are not as simple and straightforward as this initial hypothesis has it and that the choice of

complementiser in and by itself cannot be blamed for the attested factivity effect in (3/86a) as opposed to (3/86b).¹¹⁹

Alternatively, one might also be tempted to consider the option of postulating two different lexical entries for propositional adjectives and adverbs, depending on which complementiser these happen to be combined with, say, for instance, one for the string of words ‘good that’ and a second one for that consisting of ‘good if’, ensuring that [[*good_that*]] triggers factivity, while [[*good_if*]] does not by brute force, as it were. Immediately observe, though, that pursuing such a hypothesis of systematic lexical ambiguity is not exempt from obvious difficulties, either: While it is in principle conceivable to posit two lexical entries for propositional gradable predicates across-the-board, this is evidently not a very attractive solution, neither in terms of economy of the lexicon, nor with respect to the compositional nature of grammar, because the corresponding lexical entries would necessarily have to be of a syncategorematic type. I should therefore like to dismiss both hypotheses introduced in this subsection as rather unappealing right away and to address a completely different approach to the choice of complementiser with propositional adjectives and adverbs in the next subsection that will hopefully fare better in this regard.

3.3.2.3.3.2 A New Presuppositional Approach

3.3.2.3.3.2.1 The Basic Idea and its Application to Examples Featuring a Positive Construction

Let me get started by taking yet another look at example (3/86a), once more repeated from above:

(3/86) a. *It is good that Peter Precious will attend Egbert Ego’s reading.*

What I suggest is that with such examples, the truth of the embedded proposition is actually presupposed. For as a matter of fact, the truth of the subordinate clause is indeed taken for

¹¹⁹ If one absolutely insisted on defending an approach in which complementisers like English *that* do indeed trigger factivity, one might argue that the doubt expressed in example (3/87) actually concerns a different level: What is put into doubt, here, might be not so much the contents of the subordinate clause per se, but rather that this contents constitutes a fact itself. Under such an account, verbs like *to doubt* or *to put into question* would then parallel verbs such as *to claim* or *to assert*, with the only difference that the former additionally introduce an element of negation that is absent from the latter: Whereas in a sentence in the shape of (ia) below, Peter would have to claim the fact that X is the case, in one taking that of (ib), Peter would in contrast doubt the fact that X holds:

(i) a. *Peter claims that X.*

b. *Peter doubts that X.*

Given that I am however not fully convinced that such a strategy could indeed be maintained throughout, I shall not pursue this line of argumentation any further, here.

granted in all basic configurations forming this sentence's family alike, as can be seen from an application of the family test for presuppositions that was proposed in Kadmon (2001, p. 11), which I have carried out in (3/88a) to (3/88e) below:

- (3/88) a. *It is good that Peter Precious will attend Egbert Ego's reading.*
 [positive declarative; = (3/86a)]
- b. *It is not good that Peter Precious will attend Egbert Ego's reading.*
 [negative declarative]
- c. *Is it good that Peter Precious will attend Egbert Ego's reading?* [interrogative]
- d. *Perhaps it is good that Peter Precious will attend Egbert Ego's reading.*
 [embedding under a possibility operator]
- e. *If it is good that Peter Precious will attend Egbert Ego's reading, I cannot understand this at all, because after all, he is such a blundering idiot.*
 [antecedent of a conditional]

This entire set of examples presupposes throughout that Peter Precious will indeed turn up at Egbert Ego's reading. Furthermore, I assume that this presupposition stems from the basic denotation of the gradable predicate involved, that is the adjective *good* in its propositional usage in the case at hand, the lexical entry of which I propose to revise accordingly, by enhancing it with precisely this presupposition, as can be seen from the shift from its original entry as specified in (3/46), reproduced from subsection 3.3.2.2 above, to the new one given in (3/89) below:

$$(3/46) \quad [[\textit{good}_{\text{prop}}]] = \lambda w \in D_s. \lambda p \in D_{\langle s, t \rangle}. \lambda d \in D_d. \text{desirability}_w(p) \geq d$$

$$(3/89) \quad [[\textit{good}_{\text{prop}}]]_{\text{revised}} = \lambda w \in D_s. \lambda p \in D_{\langle s, t \rangle}. \lambda d \in D_d: \underline{p(w) = 1}. \text{desirability}_w(p) \geq d$$

Under such an approach, the factive interpretation of the subordinate clause with examples like (3/86a) is thus due to a presupposition that is introduced by the propositional gradable predicate itself. One might therefore wonder why it is that the factivity effect attested in examples like (3/86a) disappears right away once the complementiser *that* is replaced by *if*, as in the minimally different sentence (3/86b), also repeated from above:

$$(3/86) \text{ b. } \textit{It is/will be good if Peter Precious attends Egbert Ego's reading.}$$

This is quite surprising under my current analysis, given that the example in (3/86b) features an instantiation of propositional *good* just like that in (3/86a) and from its lexical entry specified in (3/89) above, we would therefore expect the embedded proposition in (3/86b) to receive a factive interpretation exactly on a par with that of its equivalent in (3/86a). In order to account for the attested difference in factivity, two empirical observations seem to be instructive, which I should next like to illustrate in turn.

The first of these observations consists in the fact that contrary to superficial appearances, the two paradigms constituted by examples like (3/86a) as opposed to (3/86b) are not perfectly parallel, but are in fact associated with completely different underlying syntactic structures, which becomes immediately visible as soon as one fronts the embedded proposition, as carried out in (3/90) and in (3/91) below on the basis of examples (3/86a) and (3/86b) as exemplary cases involving the complementisers *that* and *if*, respectively:

- (3/90) a. *That Peter Precious will attend Egbert Ego's reading _____ is good.*
 b. **That Peter Precious will attend Egbert Ego's reading, it is good.*
- (3/91) a. *If Peter Precious attends Egbert Ego's reading, it is/will be good.*
 b. **If Peter Precious attends Egbert Ego's reading _____ is/will be good.*

As the contrast in (3/90) versus (3/91) demonstrates, in the case of a conditional, putting the subordinate clause into a sentence initial position requires the obligatory insertion of a resumptive pronoun such as *it* in the matrix clause,¹²⁰ whereas with a *that*-clause, matters are radically different in that here, adding a corresponding resumptive pronoun within the matrix clause not only is unnecessary, but even impossible. Interestingly enough, this pattern does not simply represent a peculiarity of the English language, but also shows up in German and French again, as shown for these languages with the exact equivalents of (3/90) and (3/91) in (3/92) to (3/93) and in (3/94) to (3/95) below, respectively, where the (a)-variants included at the beginning of each set of examples feature the embedded propositions in sentence final position before these are fronted:

- (3/92) a. *Es ist gut, dass Peter Precious Egbert Egos Lesung besucht.*
 b. *Dass Peter Precious Egbert Egos Lesung besucht, ist _____ gut.*
 c. **Dass Peter Precious Egbert Egos Lesung besucht, ist es gut.*
- (3/93) a. *Es ist gut, wenn Peter Precious Egbert Egos Lesung besucht.*
 b. *Wenn Peter Precious Egbert Egos Lesung besucht, ist es gut.*
 c. **Wenn Peter Precious Egbert Egos Lesung besucht, ist _____ gut.*
- (3/94) a. *Il est/C'est bon que Peter Precious assiste à la lecture d'Egbert Ego.*
 b. *Que Peter Precious assiste à la lecture d'Egbert Ego _____ est bon.*
 c. **Que Peter Precious assiste à la lecture d'Egbert Ego, il est/c'est bon.*
- (3/95) a. *Il est/C'est bon si Peter Precious assiste à la lecture d'Egbert Ego.*
 b. *Si Peter Precious assiste à la lecture d'Egbert Ego, il est/c'est bon.*
 c. **Si Peter Precious assiste à la lecture d'Egbert Ego _____ est bon.*

¹²⁰ As will be argued for in some detail below, what this pronoun actually 'resumes' is precisely the meaning contribution made by the subordinate clause.

As before, inclusion of a resumptive pronoun (like German *es (it)* or French *il/cela (it/this)*) is indispensable in the case of a conditional subordinate clause, but excluded with an ordinary *dass/que (that)*-clause.¹²¹ This empirical situation then immediately suggests drawing the following conclusion: In (3/86a), (3/92a) and (3/94a), the elements *it, es* and *il/ce* are just semantically vacuous ‘dummy’ pronouns filling the respective sentences’ subject slots, which is required by the fact that English, German and French are no pro-drop languages (cf. also the discussion offered in footnote 121 below). This allows an information structural constellation in which the corresponding subordinate clauses perform a rhematic rather than a thematic function and once these become the themes of the respective sentences as such and overtly fill their subject position as in (3/90a), (3/92b) and (3/94b), respectively, such ‘dummy’ pronouns are bound to disappear right away. On the other hand, with the conditionals in (3/91), (3/93) and (3/95), these pronouns cannot be omitted even when the subordinate clause is fronted, where it could occupy the subject position (thus meeting the non-pro-drop requirement of these languages), but they are always required to be overtly realised, instead. I therefore conclude that this time, the elements *it, es* and *il/ce* in the three languages under discussion are truly contentful pronouns that make a real semantic contribution to the sentences in which they occur. More specifically, these are pronouns directly taking up the meaning of the corresponding subordinate clause, either in an anaphoric fashion, as illustrated in (3/96a) below, or in a cataphoric one (cf. (3/96b)), depending on whether the subordinate proposition is fronted or appears in a sentence final syntactic slot:

¹²¹ One might wonder how Spanish, the fourth language under consideration here, behaves in this respect, but in this language, the empirical picture is not particularly revealing: Given that in contrast to English, German and French, Spanish is a pro-drop language displaying for instance sentences that (on the surface) do not contain an overt subject and consist of nothing but a simple verb phrase such as example (i) below, it does not come as much of a surprise that Spanish will not feature a subject pronoun in any of the configurations tested above, as can be seen from the corresponding Spanish equivalents included in (ii) and (iii):

- (i) *Viv.e.*
live.3singular
‘He/She is alive.’
- (ii) a. *Es bueno que Peter Precious asista a la lectura d’Egbert Ego.*
b. *Que Peter Precious asista a la lectura d’Egbert Ego _____ es bueno.*
- (iii) a. *Es bueno si Peter Precious asiste a la lectura d’Egbert Ego.*
b. *Si Peter Precious asiste a la lectura d’Egbert Ego, _____ es bueno.*

In the Spanish example (iib), the gap would have to be filled by a ‘dummy’ subject pronoun, which is prevented by virtue of the fact that Spanish constitutes a pro-drop language per se. And with (iiib), we do not expect there to surface a subject pronoun either, because its contents would be directly retrievable from the immediately surrounding context, which is yet another constellation where pro-drop languages do not normally make use of overt subject pronouns (cf. example (i) above, where the individual this statement is about would also have to be recovered from the adjacent intralinguistic or extralinguistic context). As an aside, also note that in some regions of Spain, the expression *estar bien (be good)* is preferred to *ser bueno/buena* appearing in examples (ii) and (iii), which does not make much of a difference for present purposes, though.

- (3/96) a. *If Peter Precious attends Egbert Ego's reading, it/that* (= 'Peter Precious attends Egbert Ego's reading.') *is/will be good.*
 b. *It* (= 'Peter Precious attends Egbert Ego's reading.') *is/will be good, if Peter Precious attends Egbert Ego's reading.*

In sum, it thus turns out that while such pronouns are truly contentful with conditional subordinate clauses in that they pick up the meaning of the latter, from a semantic point of view, these constitute completely vacuous elements in the case of *that/dass/que/que*-clauses, where they serve a purely syntactic function, if overtly realised at all.

The second observation I should like to mention here concerns the exact status of embedded propositions introduced by the complementisers *if*, *wenn*, *si* and *si* in English, German, French and Spanish, respectively and in particular the question of whether or not these should be considered as proper conditionals. In my opinion, such propositions are indeed genuinely conditional in nature, as can be seen from the fact that in German, it is unproblematic to substitute the complementiser *wenn* by *falls*, as demonstrated with the help of the minimal pair in (3/97a) versus (3/97b) below, the latter complementiser uncontroversially giving rise to nothing other than conditionals, in contrast to the former, which happens to be more flexible in this regard:

- (3/97) a. *Wenn Peter Precious Egbert Egos Lesung besucht, ist es gut.* [= (3/93b)]
 b. *Falls Peter Precious Egbert Egos Lesung besucht, ist es gut.*

At this point, two additional remarks seem to be in order: Firstly, the above substitution test yields somewhat less clear-cut results whenever the conditional clause occurs in sentence final rather than sentence initial position, as shown in (3/98) below, where the corresponding replacement of *wenn* by *falls* leads to a slightly marked result:

- (3/98) a. *Es ist gut, wenn Peter Precious Egbert Egos Lesung besucht.* [= (3/93a)]
 b. *?Es ist gut, falls Peter Precious Egbert Egos Lesung besucht.*

Crucially observe, however, that this should definitely not be taken as an indication of a non-conditional status of sentence (3/98a). For whereas replacing the complementiser *wenn* by *falls* is generally possible in German when the corresponding proposition is fronted, this step always leads to somewhat marked outputs whenever the embedded proposition appears at the end of a given sentence, even with cases that are undoubtedly conditional in nature, as can be seen below from the contrast in (3/99b), involving the former configuration, as opposed to (3/100b), in turn displaying the latter one:

- (3/99) a. *Wenn es regne.t, bleib.en wir zu.hause.*
 WENN it rain.3singular stay.1plural we at.home
- b. *Falls es regne.t, bleib.en wir zu.hause.*
 FALLS it rain.3singular stay.1plural we at.home
 ‘If it rains, we’ll stay at home.’
- (3/100) a. *Wir bleib.en zu.hause, wenn es regne.t.*
 we stay.1plural at.home WENN it rain.3singular
- b. *?Wir bleib.en zu.hause, falls es regne.t.*
 we stay.1plural at.home FALLS it rain.3singular
 ‘We’ll stay at home, if it rains.’

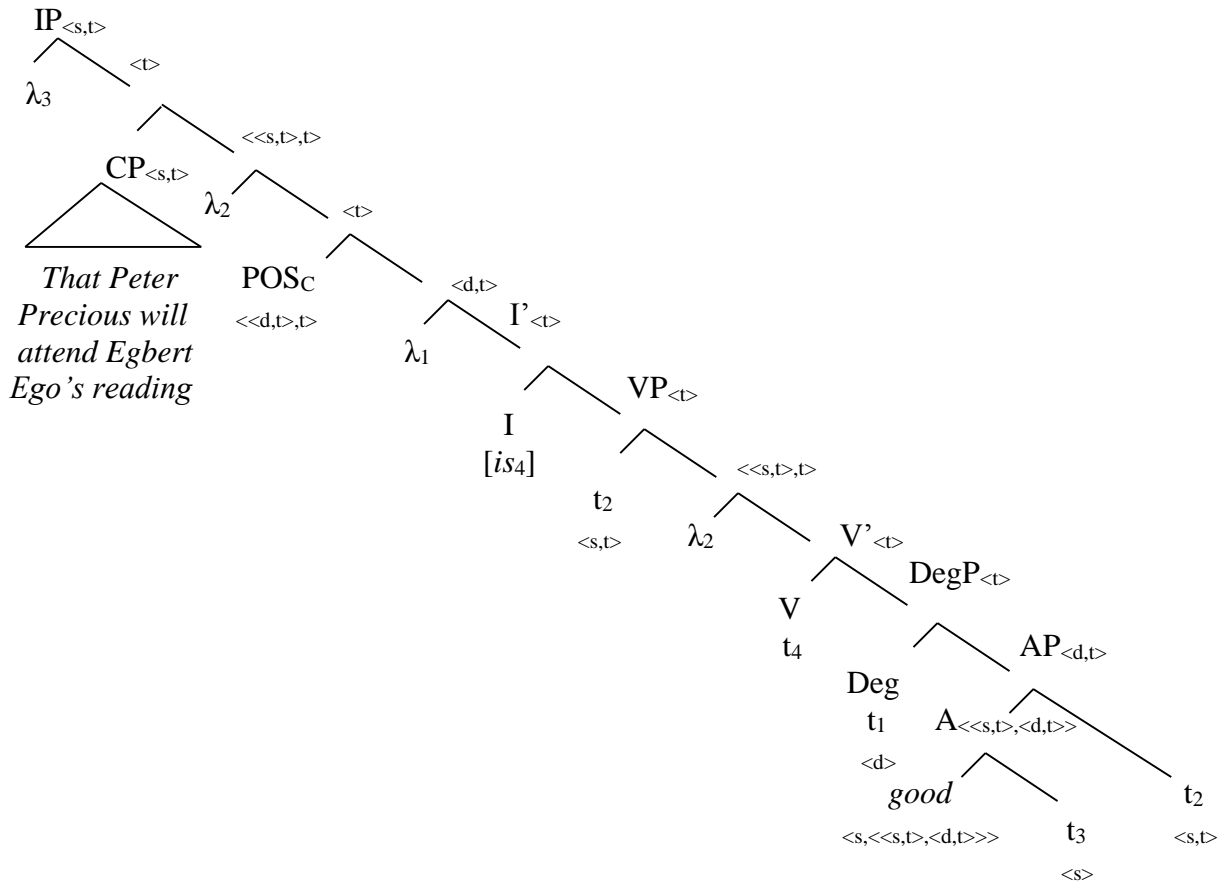
The slightly deviant status of sentence (3/98b) above should therefore be attributed to specific constraints on the distribution of the complementiser *falls* operative in the German language rather than regarded as a sign of its non-conditionality. Secondly, in the other three languages under consideration, the conditional status of the subordinate clauses introduced by English *if*, French *si* and Spanish *si* cannot be tested as straightforwardly as in German, because these languages lack everyday complementisers that come with an exclusively conditional meaning. By contrast, expressions like *in case* in English, *au cas où* (literally: *in the case where*) in French and *en caso de que* (literally: *in case of that*) in Spanish that are indeed unequivocally conditional in nature provide a less good empirical testing ground, because their use is generally felt to be somewhat clumsy or marked as such. Substituting these for standard English *if*, French *si* or Spanish *si* in the English example sentences (3/91a) and (3/91b), the French ones in (3/95a) and (3/95b) and ultimately the Spanish ones in (iiia) and (iiib) in footnote 121, respectively, invariably results in such minimally deviant sentences that are however not totally ungrammatical or unacceptable. In spite of these complicating factors, I therefore consider it safe to assume that the subordinate clauses headed by the complementisers *if*, *dass*, *si* and *si* that are being dealt with, here, should indeed be given a genuinely conditional treatment, after all.

Having the main ingredients of my analysis in place, let me now go through the derivation of the following two fundamental constellations to check whether things work out in practice: first, examples featuring a propositional instantiation of the adjective *good* involving a *that*-clause in sentence initial as well as in sentence final position and second, configurations that contain an *if*-clause in either of these syntactic slots. Doing so, I shall confine myself to English data as at the beginning of this subsection, given that matters proceed in exactly the same fashion in all four languages to be taken into account here, alike. Let me begin with

sentence (3/90a), once more repeated from above, for which I should like to propose an LF along the lines of that specified in (3/101) below:¹²²

(3/90) a. *That Peter Precious will attend Egbert Ego's reading is good.*

(3/101)



Example (3/90a) will thus be predicted to denote the set of possible worlds listed in (3/102) below, provided that the presupposition triggered by the propositional adjective *good* as such (also indicated there) is met:

(3/102) $[[[(3/90a)]]] = \lambda w. \forall d \in D_d [d \in L_C \rightarrow \text{desirability}_w (\lambda w'. \text{Peter Precious will attend Egbert Ego's reading in } w') \geq d]$;
 PSP: Peter Precious will attend Egbert Ego's reading in w .

¹²² To facilitate readability of my syntactic trees, I put all semantically vacuous elements within square brackets (a strategy that has already been adopted in sections 1 and 2 of this dissertation). With sentences (3/86a) and (3/86b) to be discussed below, I shall also follow common practice in minimalist syntax in assuming that a 'dummy' subject pronoun like *it* is directly base-generated in the specifier position of the inflectional phrase (Spec, IP) as a last resort operation in a non-pro-drop language (cf. for instance Radford (1997), among many others), rather than generating it in a lower syntactic slot such as the specifier position of the verb phrase (Spec, VP) and subsequently raising it (as is usually the case with contentful subjects; cf. for example raising of *Peter* and *Mary* in the LF included in (1/11) in section 1.2 above).

This is the basic configuration in which the *that*-clause appears in subject position, thereby automatically fulfilling this non-pro-drop requirement to the effect that no dummy subject gets added. Conversely, with sentence (3/86a), also repeated from above, we next face a case including the subject pronoun *it*, which is semantically vacuous and does not make a contribution to the sentence's meaning on its own, it just meeting the non-pro-drop requirement imposed by a language like English:

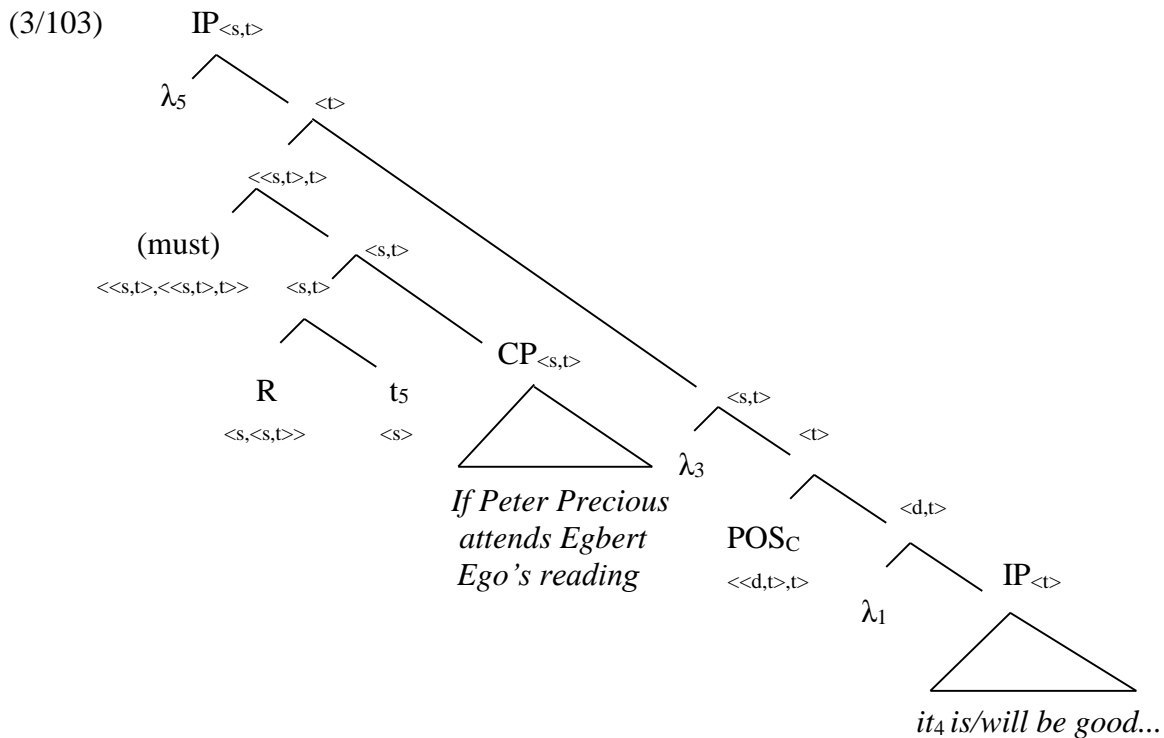
(3/86) a. *It is good that Peter Precious will attend Egbert Ego's reading.*

In this constellation, the *that*-clause now occupies a rhematic position, while it occurred in a thematic one with (3/90a) above, but other than that, the two sentences are perfectly parallel, and (3/86a) thus gives rise to the exact same denotation as has already been spelt out for (3/90a) in (3/102). Crucially observe that the analysis I am putting forth directly predicts the attested factive status of this *that*-clause by virtue of the fact that the presupposition specified in (3/102) must be satisfied in order for sentences (3/86a) and (3/90a) to come out true. Here and in what follows, I shall simplify matters somewhat in assuming that this presupposition triggered by a propositional adjective or adverb (*good* in the case at hand) projects and must also hold of the overall sentence containing it (unless a suitable conditional intervenes, as we shall see below), and I shall not enter the details of how precisely its projection proceeds, this simplification arguably being licit in view of the existing abundant literature on presupposition projection (cf. for instance Heim (1990) or more recently Schlenker (2009) or Rothschild (2011) as well as the references cited therein, among many others). Let me next move on to example (3/91a), reproduced from above as well, featuring a proposition in the form of a conditional:

(3/91) a. *If Peter Precious attends Egbert Ego's reading, it is/will be good.*

A possible LF for this sentence is spelt out in (3/103) on the next page (with the internal structure of the inflectional phrase being parallel to that displayed in (3/101) above)¹²³ and its denotation follows in (3/104):

¹²³ Note that in the LF given in (3/103), the conditional clause takes wide scope with respect to the positive operator. While the exact scopal order of these two elements does not really make much of a difference in the case of positive constructions, we shall see in the course of subsection 3.3.2.3.3.2.2 below that this is in fact the correct configuration in that conditionals do indeed have to outscope comparison operators when taking comparatives into consideration, where assuming the reverse scopal order would actually make a truth-conditional difference, as will be shown in some detail, there.



(3/104) $[[[(3/91a)]]^g = \lambda w. \forall d \in D_d [d \in L_C \rightarrow \forall w' [w' \text{ is compatible with what the speaker considers likely in } w \ \& \ \text{Peter Precious attends Egbert Ego's reading in } w' \rightarrow \text{desirability}_w(\lambda w'. \text{Peter Precious attends Egbert Ego's reading in } w') \geq d]]];$
 provided $g(4) = [\lambda w'. \text{Peter Precious attends Egbert Ego's reading in } w']^{124}$

Interestingly enough, in such a constellation, factivity immediately gets overridden in the subordinate clause: For what sentence (3/91a) actually states is the following: If it is indeed the case that Peter Precious will attend Egbert Ego's reading, then (the fact that) Peter Precious will attend Egbert Ego's reading is considered to count as good. That is, the conditional picks out precisely that set of worlds in which the presupposition triggered by the propositional adjective *good* is in fact met and if the denotation spelt out in (3/104) was for instance to be evaluated with respect to the actual world @, no presupposition to be satisfied in @ would remain. In essence, the situation we are facing here is therefore the same as has already been discussed on various occasions in literature on presuppositions in the context of the by now quite familiar

¹²⁴ I am making use of a rather simplistic meaning of conditionals in the spirit of von Fintel/Heim (2011, section 4.3), which is however absolutely sufficient for present purposes. In what follows, I shall neither go into the details of various types of conditional constructions nor into their different organisation in terms of tense and mood requirements in the four languages dealt with and that mainly for the following two reasons: First of all, the basic presuppositional approach I am defending here extends in precisely the same fashion to all of these alike, so that at least from this perspective, these can in fact all be put on a par. Secondly, conditionals undoubtedly constitute one of the best studied topics in linguistic research as such, given that an impressive amount of work has already been published on this phenomenon (cf. for example Stalnaker (1968, 1975), Lewis (1973), Kratzer (1986), Higginbotham (2003), Bhatt/Pancheva (2006), Leslie (2009), Gillies (2010), von Fintel (2011) or von Fintel/Heim (2011) and the references cited therein, among many, many others).

sentence given in (3/105) below (cf. for instance Krahmer (1996), among several others), which runs parallel to example (3/91a) in that with (3/105), the conditional also selects exactly those worlds in which the presupposition triggered by the definite article in the main clause does indeed hold to the effect that once again, no presupposition to be fulfilled in the worlds with regard to which the overall sentence gets evaluated is ultimately left:

(3/105) *If France has a king, then the king of France is bald.*

[Krahmer (1996), p. 500; his (1)]

This state of affairs then directly provides us with a straightforward explanation for why conditional subordinate clauses, in contrast to ordinary *that*-clauses, do not produce an effect of factivity, as was noted beforehand at the beginning of subsection 3.3.2.3.3.1. And finally, this account carries over to a sentence like (3/86b) as well, which I once more repeat from above, the main difference being the syntactic slot in which the conditional appears (a thematic instead of a rhematic one, precisely as was the case with (3/86a) as opposed to (3/90a) before):

(3/86) b. *It is/will be good if Peter Precious attends Egbert Ego's reading.*

This time, we are dealing with a contentful interpretation of the pronoun *it* in the subject position of (3/86b), which takes on the meaning of the embedded proposition and as an immediate consequence of which factivity will be overridden as beforehand, the conditional again selecting precisely those worlds in which the presupposition introduced by *good* is indeed satisfied, so that eventually, this sentence will also be associated with the denotation in (3/104), originally intended for sentence (3/91a), where no factive requirement survives for the set of worlds *w* with respect to which the entire sentence is to be evaluated in the end. In total, the following three main components of my analysis thus permit to adequately handle all four basic empirical configurations throughout: First of all, propositional gradable predicates presuppose the truth of the proposition they embed. Secondly, *if/wenn/si/si*-clauses are truly conditional in nature and thirdly, with the latter, pronouns such as English *it*, German *es* or French *il/ce(la)* are really contentive elements, as also suggested by their syntactic behaviour discussed at the beginning of this subsection. As has been shown, under such an analysis, it then follows without any further ado that cases involving *that/dass/que/que*-clauses produce an effect of factivity that is entirely absent from cases featuring conditional subordinate clauses, instead.

Let me conclude this section by having a look at an issue that was once proposed to me by an anonymous reviewer for a conference in this context. According to this reviewer, sentences based on a propositional adjective taking a complement in the form of a conditional

make a stronger meaning contribution than the one ascribed to them, here. To see what (s)he was actually after, let us take another look at example (3/86b), repeated below for a last time:

(3/86) b. *It is/will be good if Peter Precious attends Egbert Ego's reading.*

In this reviewer's opinion, (3/86b) not only states that it would be considered as good in the worlds in which this sentence gets evaluated if Peter Precious did in fact attend Egbert Ego's reading, but that it would also be considered as bad if Peter Precious did after all not turn up, there. Note that no such additional meaning component is expected under my present analysis, given that whenever the condition specified in the (second) antecedent in (3/104) fails, the whole sentence will always trivially come out true, no matter with respect to which worlds it will be evaluated in the end, because any conditional whose antecedent is not fulfilled will automatically hold. However, as matters turn out, this additional meaning component should at most be attributed the status of an implicature and not be included as part of this sentence's assertion proper, since it is actually quite easy to cancel this extra meaning component, as can be seen from the impeccable continuations given for English in (3/106) where precisely this cancellation has been carried out, (3/107) additionally presenting parallel evidence from German on this issue:

(3/106) a. *It is/will be good if Peter Precious attends Egbert Ego's reading, but if he doesn't, it won't make much of a difference, either.*

b. *It is/will be good if Peter Precious attends Egbert Ego's reading, but if not, it doesn't/won't really matter, either.*

(3/107) a. *Es ist gut, wenn Peter Precious Egbert Egos Lesung besucht, aber wenn nicht, macht es auch nichts.*

b. *Es ist gut, wenn Peter Precious Egbert Egos Lesung besucht, aber wenn nicht, ist es auch nicht weiter schlimm.*

c. *Es ist gut, wenn Peter Precious Egbert Egos Lesung besucht, aber wenn nicht, ist es auch egal.*

It can therefore be concluded that the basic meaning proposed for positives containing embedded propositions in the form of conditionals elaborated here is indeed correct in this regard, and I should thus like to propose maintaining it in its present form.

The derivation of corresponding superlative cases such as the one given in (3/108) on the following page would by and large parallel that of positives discussed up to now (the only major modification being the replacement of a positive by a superlative operator, which, for obvious reasons, will ultimately result in much stronger truth conditions), in that with both,

only one proposition is explicitly mentioned (cf. subsection 3.3.2.3.1 above), so that in terms of factivity, no differences are bound to appear:

(3/108) *It is/will be best if Peter Precious, Ingrid Important, Sally Significant and Cecilia Celebrity attend Egbert Ego's reading.*

Things change as soon as one turns to comparatives, though, where the corresponding comparee and standard terms introduce two individual propositions. This basic configuration then leads to interesting interactions with respect to the factive presupposition triggered by propositional gradable predicates. In the next subsection, I shall therefore examine the predictions my presuppositional analysis makes for comparatives in quite some detail.

3.3.2.3.3.2.2 Predictions of the Analysis for Comparatives

From an empirical point of view, comparatives featuring propositional adjectives and adverbs in which the respective standard term includes an *n*-word and expresses a 'negative' situation permit two different combinations as far as the two propositions these contain are concerned: It is either possible to join a *that*-clause and a conditional, as exemplified in (3/109) below or to choose two propositions that are both conditional in nature, as illustrated in (3/110):

(3/109) *That Peter Precious will attend Egbert Ego's reading is better than (it would be) if no-one of interest showed up at all.*

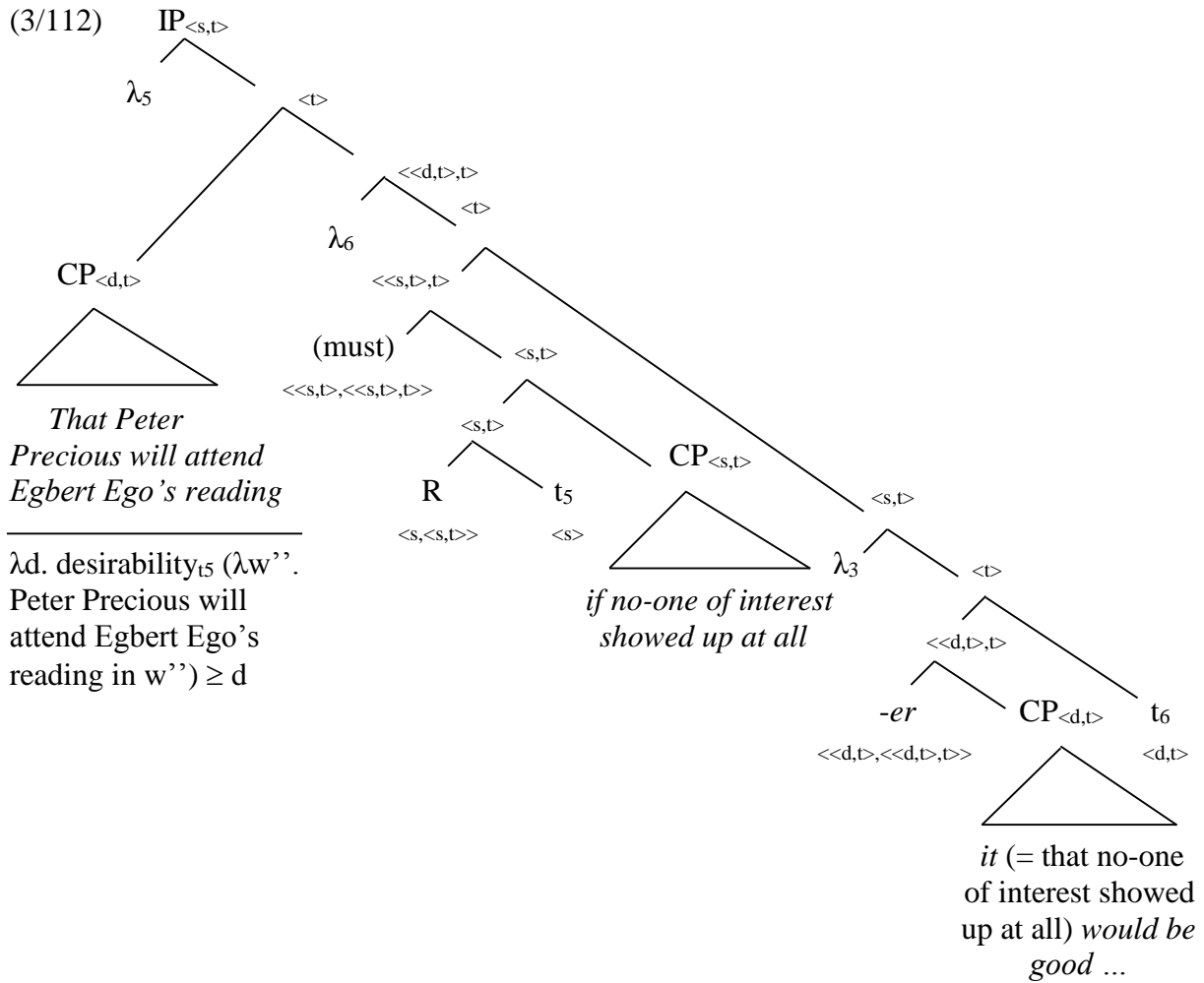
(3/110) *If Peter Precious attends Egbert Ego's reading, it is/will be better than if no-one of interest shows up at all.*

By contrast, what is not licit is the overt realisation of two *that*-clauses in the comparative's standard and comparee term, respectively, which immediately results in unacceptability, as can be seen from the infelicitous status of example (3/111) below, displaying exactly such a basic configuration:

(3/111) **That Peter Precious will attend Egbert Ego's reading is better than that no-one of interest will show up at all.*

Of course, it would be highly desirable if my current presuppositional analysis could directly account for this attested restriction on the distribution of the different types of propositions involved. Let me therefore go through these three constellations in turn in order to check what kind of predictions my analysis makes in this regard as it presently stands.

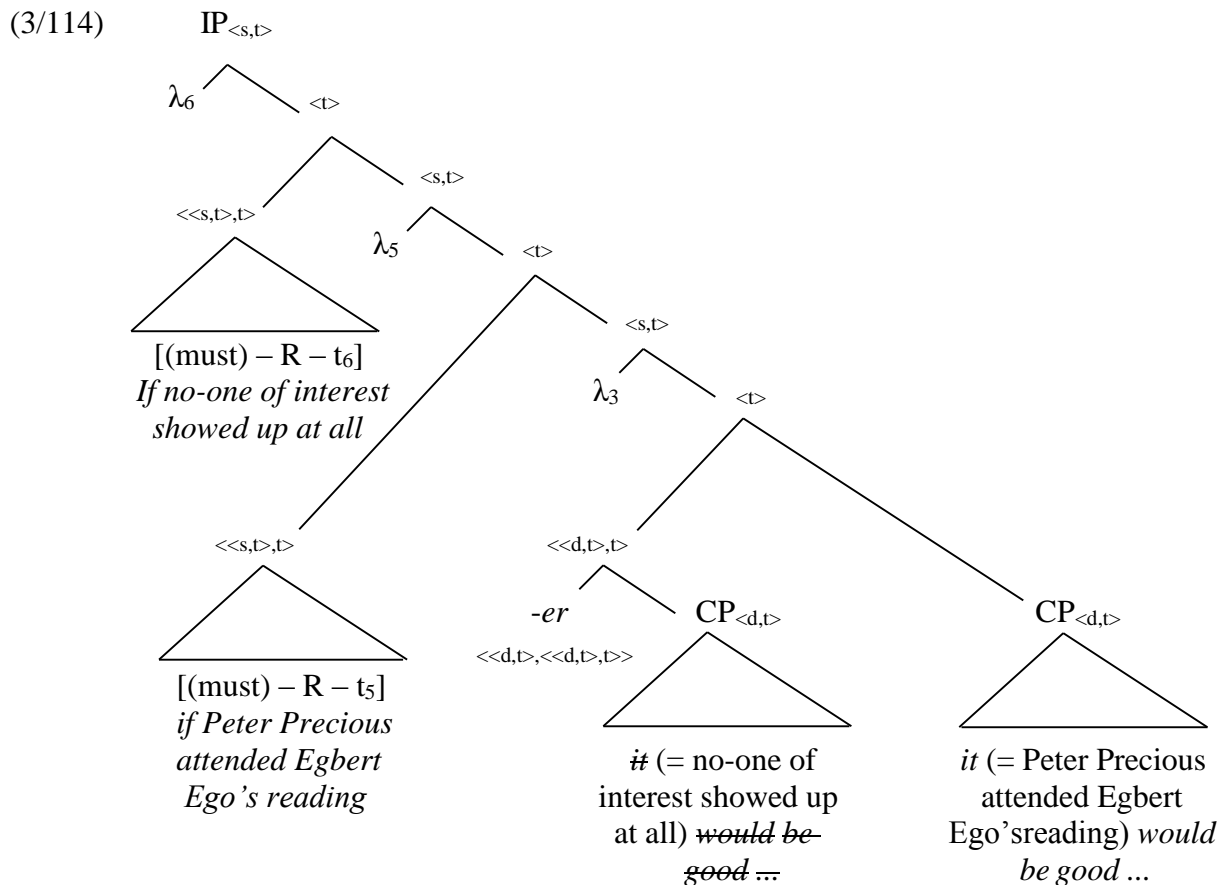
An LF for the comparative in (3/109) featuring a *that*-clause as its comparee and a conditional clause as its standard term would roughly look as in (3/112) below, where only the central aspects of the derivation are shown (with internal structures of the complementiser phrases and numbering as depicted in (3/101) and (3/103) above) and where I have also included partial calculations for the orientation of the reader:



Example (3/109) will thus be predicted to denote the set of possible worlds listed in (3/113):

(3/113) $[[[3/109]]] = \lambda w. \forall w' [w' \text{ is compatible with what the speaker considers unlikely in } w \ \& \ \text{no-one of interest shows up at all in } w' \rightarrow \max_{\text{inf}} (\lambda d. \text{desirability}_w (\lambda w''. \text{Peter Precious will attend Egbert Ego's reading in } w'') \geq d) > \max_{\text{inf}} (\lambda d. \text{desirability}_w (\lambda w'. \text{no-one of interest shows up at all in } w') \geq d)]$
 PSP: Peter Precious will attend Egbert Ego's reading in w .

Importantly, in (3/113), only one presupposition remains for the worlds in which sentence (3/109) is to be evaluated, the other one being immediately met within the conditional clause per se and given that it is fully conceivable that this presupposition can indeed be fulfilled in those worlds, no deviance is expected, as desired. Let us next consider example (3/110), in turn involving two conditional propositions. An LF for this sentence is spelt out in (3/114) below (the structure of the two conditionals paralleling that of the one explicitly specified in (3/112) before), and its denotation is given in (3/115):



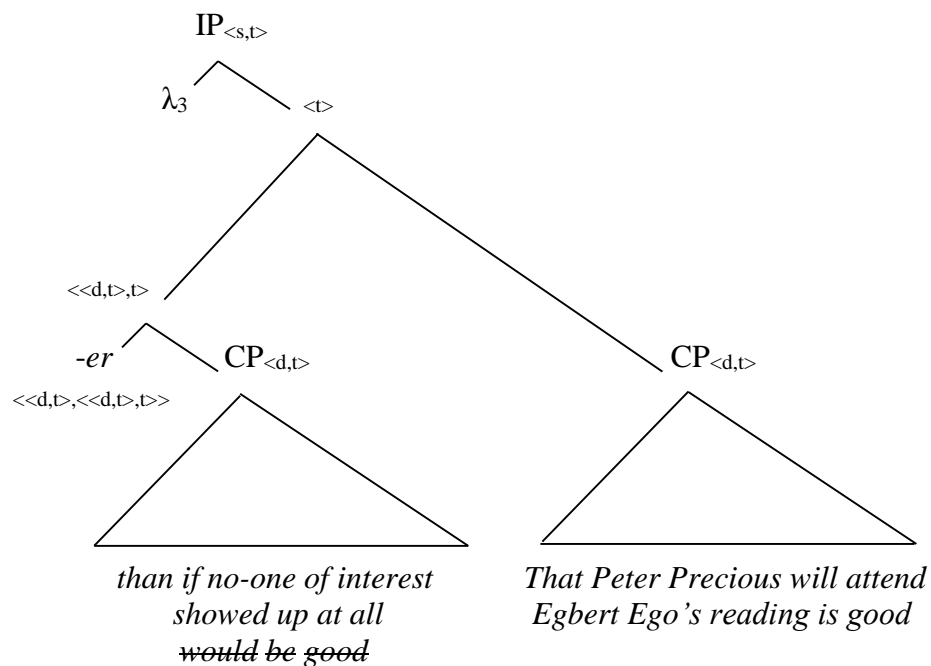
(3/115) $[[[(3/110)]] = \lambda w. \forall w', w'' [w' \text{ and } w'' \text{ are compatible with what the speaker considers unlikely in } w \text{ \& Peter Precious attends Egbert Ego's reading in } w' \text{ \& no-one of interest shows up at all in } w'' \rightarrow \max_{\text{inf}} (\lambda d. \text{desirability}_w (\lambda w'. \text{Peter Precious attends Egbert Ego's reading in } w') \geq d) > \max_{\text{inf}} (\lambda d. \text{desirability}_w (\lambda w''. \text{no-one of interest shows up at all in } w'') \geq d)]$

This time, no factivity requirement at all survives in the worlds of evaluation, because both presuppositions are already met within the two respective conditionals as such, where these are satisfied in that precisely those sets of possible worlds in which they hold are picked out, so that in the end, factivity is entirely overridden. Therefore, no conflict is predicted to arise in the

worlds of evaluation, and a sentence like that in (3/110) is expected to be well-formed, which it indeed is.

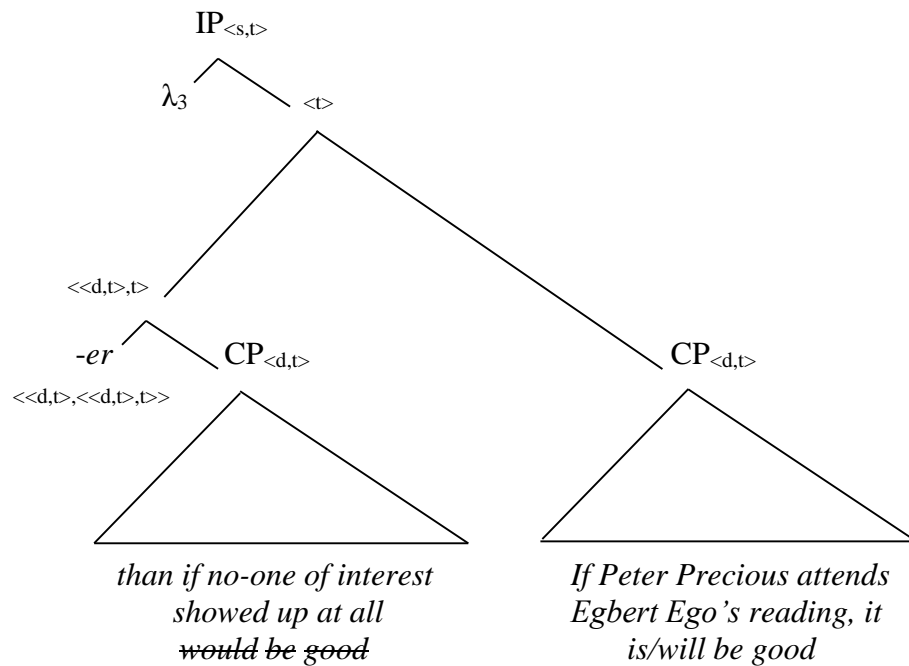
At this point, a little aside on the scopal order holding between conditionals and the comparative operator appears to be in place (cf. also footnote 123 in the previous subsection): In the LFs included in (3/112) and (3/114) above, I have made sure that the former invariably take wide scope with respect to the latter and in order to see that this must necessarily be the case, let me next briefly consider the reverse option, with LFs as specified in (3/116) and (3/118) and the resulting denotations as indicated in (3/117) and (3/119), respectively:

(3/116)



(3/117) $[[[(3/109)]]] = \lambda w. \max_{\text{inf}} (\lambda d. \text{desirability}_w (\lambda w'. \text{Peter Precious will attend Egbert Ego's reading in } w') \geq d) > \max_{\text{inf}} (\lambda d. \forall w'' [w'' \text{ is compatible with what the speaker considers unlikely in } w \ \& \ \text{no-one of interest shows up at all in } w'' \rightarrow \text{desirability}_w (\lambda w''. \text{no-one of interest shows up at all in } w'') \geq d]);$
 PSP: Peter Precious will attend Egbert Ego's reading in w .

(3/118)



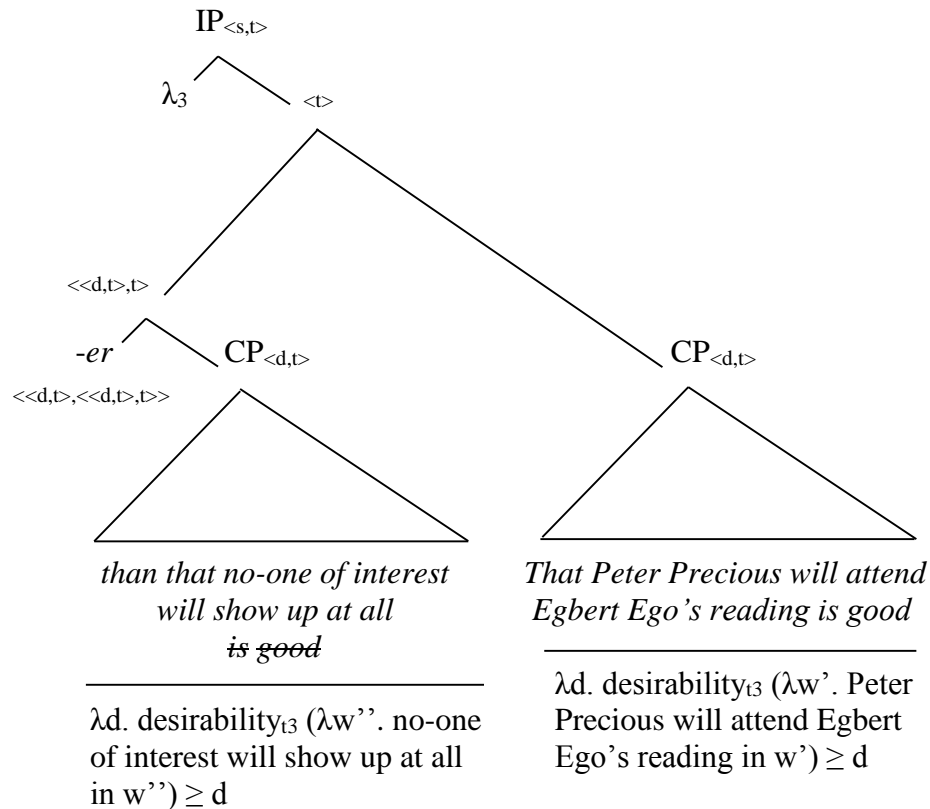
(3/119) $[[(3/110)]] = \lambda w. \max_{\text{inf}} (\lambda d. \forall w' [w' \text{ is compatible with what the speaker considers unlikely in } w \ \& \ \text{Peter Precious attends Egbert Ego's reading in } w' \rightarrow \text{desirability}_w (\lambda w'. \text{Peter Precious attends Egbert Ego's reading in } w') \geq d]) > \max_{\text{inf}} (\lambda d. \forall w'' [w'' \text{ is compatible with what the speaker considers unlikely in } w \ \& \ \text{no-one of interest shows up at all in } w'' \rightarrow \text{desirability}_w (\lambda w''. \text{no-one of interest shows up at all in } w'') \geq d])$

As matters turn out, both denotations are too weak in that with the one specified in (3/117), it would just be required that the maximally informative degree to which the proposition *Peter will attend Egbert Ego's reading* is considered to be desirable exceeds the maximally informative degree to which the proposition *No-one of interest shows up at all* is taken to be such in those worlds where the latter is least desirable, by virtue of the fact that the universal quantifier happens to appear within the scope of the second maximality operator. What sentence (3/109) arguably means, however, is something much stronger, namely that this relation will have to hold for all worlds and not merely for those in which the second proposition counts as least desirable. In a similar fashion, the denotation spelt out in (3/119) is likewise too weak, in that it only states that the maximally informative degree of desirability of the proposition *Peter Precious will attend Egbert Ego's reading* in the worlds where it is least desirable has to be greater than that of the proposition *No-one of interest shows up at all*, also only in those worlds where it counts as least desirable. I therefore conclude that the scopal order of the comparative operator and conditional clauses matters and that the LFs and the denotations arrived at previously (cf. (3/112) to (3/113) and (3/114) to (3/115) above) displaying constellations where the conditionals outscope the comparison operator are actually correct to the effect that this

time, the maximality operators occur within the scope of the universal quantifier(s), so that all relevant worlds and not merely those where the corresponding propositions are classified as least desirable are taken into account, exactly as is required.¹²⁵

After this little digression, let me next turn to an example like (3/111), where two *that*-clauses have been combined and an LF for which could look as in (3/120) below:

(3/120)



Here, things change drastically, for as can be seen from the set of possible worlds it denotes, given in (3/121), with this kind of example, two presuppositions have to be complied with simultaneously in the worlds w in which this sentence is to be evaluated:

(3/121) $[[[(3/111)]]] = \lambda w. \max_{inf} (\lambda d. desirability_w (\lambda w'. Peter Precious will attend Egbert Ego's reading in w') \geq d) > \max_{inf} (\lambda d. desirability_w (\lambda w''. no-one of interest will show up at all in w'') \geq d);$
PSPs: Peter Precious will attend Egbert Ego's reading in w .;
No-one of interest will show up at all in w .

¹²⁵ Note that this problem only surfaces with comparison operators making use of an element that can genuinely interact with a universal quantifier such as the maximality operator. With the positive constructions in sentences (3/86a), (3/86b), (3/90a) and (3/91a) discussed in the previous subsection, for instance, no similar difficulty arises in that these simply introduce a universal quantifier, so that we do not expect any scopal interaction with the universal quantifier brought into the derivation by an overt conditional, given that the ordering of two universal quantifiers does not normally make a difference. Similarly, with sentence (3/111), this problem is also unattested in that it contains two *that*-clauses that do not give rise to universal quantification.

Crucially observe, though, that it is completely impossible to meet this requirement in that these presuppositions happen to be mutually exclusive: Whenever it is true that Peter Precious will indeed attend Egbert Ego's public reading, it automatically follows that it cannot be the case at the same time that no-one of interest will show up, there, Peter Precious himself counting among the group of relevant people in our basic scenario. Likewise, whenever no-one of interest will turn up at Egbert Ego's reading, this inevitably entails that Peter Precious will not be present at this reading, either. The two presuppositions triggered in a sentence like (3/111) are thus totally contradictory, as depicted in (3/122) below, and I should like to suggest that it is precisely these incompatible presuppositions that are at the core of the unacceptability such a sentence gives rise to:

- (3/122) a. Peter Precious will attend Egbert Ego's reading. →
 ~No-one of interest will show up at all.
 b. No-one of interest will show up at all. →
 ~Peter Precious will attend Egbert Ego's reading.

And given that with comparatives featuring an *n*-word in their standard term, which, as a consequence, normally denotes a sort of 'not'-case, the proposition forming the comparative's comparee term and that constituting its standard term generally exclude each other,¹²⁶ this also provides us with an immediate explanation for why a combination of two *that*-clauses is usually impossible in such a case, whereas that of a conditional and a *that*-clause or of two conditionals is fully legitimate. In sum, the presuppositional analysis I am advocating here is thus very appealing in that, without any further assumptions or stipulations being necessary, it directly accounts for the various combinatory possibilities permitted and prohibited in different types of comparison constructions, depending on the kind of propositions involved. The following overview in tabular form in (3/123) on the next page summarises this state of affairs, where the first line lists the empirical pattern, the second indicates (un-)acceptability, and the third specifies how the presupposition(s) introduced by a propositional gradable predicate are satisfied in each case:

¹²⁶ As it stands, this claim is actually somewhat too strong, and I shall replace it by a slightly weaker version in subsection 3.3.2.3.3.2.4 below, when I shall finally be taking comparatives that do not contain *n*-words in their standard terms into account.

(3/123)

positive/ superlative + <i>that/dass/que/</i> <i>que</i> -clause	positive/ superlative + <i>if/wenn/si/</i> <i>si</i> -clause	comparative + a <i>that/dass/</i> <i>que/que-</i> clause and an <i>if/wenn/si/si-</i> clause	comparative + two <i>if/</i> <i>wenn/si/si-</i> clauses	comparative + two <i>that/</i> <i>dass/que/</i> <i>que</i> -clauses
✓	✓	✓	✓	*
PSP to be met in the worlds of evaluation	PSP met in the conditional worlds	PSPs to be met in the worlds of evaluation and met in the conditional worlds, respectively	PSPs met in the conditional worlds	conflicting PSPs that would both have to be met in the worlds of evaluation

So far, I have entirely focussed on fully fledged comparatives featuring complete, that is non-elliptical standard terms. In the next subsection, I propose to turn to comparatives that are deficient in this respect and to see what my presuppositional analysis predicts for the appropriate reconstruction patterns within comparatives that are elliptical in nature, which is in fact the case with most of the naturally occurring examples that I had obtained from my four corpus studies beforehand (cf. the data listed in subsections 3.2.1 to 3.2.3 above).

3.3.2.3.3.2.3 Predictions of the Analysis for Reconstruction Patterns in Elliptical Comparatives

Elliptical variants of propositional comparatives involving *n*-words in their standard terms can be subdivided into two major groups: On the one hand, there are quite radical cases of ellipsis, where this *n*-word survives as the only remnant in the corresponding comparative's standard term, as exemplified in the English sentence (3/5B), repeated from section 3.1 above or the slightly more complex German one given in (3/10n) (which I provide with glosses and an English translation, here, given that I intend to discuss this example in detail, later on) and on the other hand, there are less radical cases of ellipsis where non-finite, reduced clauses are left behind that feature either an infinitival construction or an *-ing* form in the case of English, as illustrated in turn in examples (3/8e) and (3/8h) below, reproduced from subsection 3.2.1 above, sentence (3/9d) taken over from subsection 3.2.2 finally displaying a German comparative containing an infinitival standard term, where I also added word-for-word glosses as well as a translation:

(3/5) B: *That's still better than no-one at all.*

(3/10) n. 3200 deutsch.e Soldat.en im Norden
3200 German.plural soldier.plural in_the north
Afghanistan.s sind für das Bündnis wertvoll.er als
Afghanistan.genitive are for the alliance valuable.-er than
gar kein.e deutsch.en Soldat.en am Hindukusch.
no_at_all.plural German.plural soldier.plural on_the Hindu Kush
'3200 German soldiers in the north of Afghanistan are more useful for the alliance
than no German soldiers at the Hindu Kush at all.'

(3/8) e. *He then asserted that it was greater to exist than not to exist.*

(3/8) h. *Nothing would be pleasanter than not having to make people redundant, not having to close a factory [...]*

(3/9) d. [...] dass es besser ist, ge.lieb.t und
that it better is past_participleI.love.past_participleII and
dies.e Liebe verlor.en zu hab.en, als
this.feminine love lost.past_participle to have.infinitive than
niemals in sein.em Leben dies.es
never in his.dative(masculine) life this.accusative(neuter)
Gefühl ge.kann.t zu hab.en.
feeling past_participleI.know.past_participleII to have.infinitive
'[...] that it is better to have loved and have lost this feeling than never to have
known this feeling in his life.'

Interestingly enough, with such elliptical instantiations of propositional comparatives, considerations of factivity and the general 'contradiction avoidance'-strategy elaborated in subsection 3.3.2.3.3.2.2 before, automatically make the correct kind of predictions as to which reconstructions in the respective comparatives' standard terms are indeed licit and which other ones are not legitimate, instead.¹²⁷ To appreciate this, let us next take a closer look at how reconstruction would proceed with (3/5B), (3/10n) and (3/9d), in an exemplary fashion. Given that the reply in (3/5B) already contains an overt *that*-clause in the comparee term of this comparative, the only option available for its standard term is the reconstruction of a conditional *if*-clause, as executed in (3/124), which indeed results in an acceptable structure:

(3/124) That's still better than ~~it would have been a good if~~ no-one at all ~~had turned up~~.

¹²⁷ In the course of this subsection and the next, I shall pursue a clausal analysis of comparison when discussing comparatives taken from English and German and in elliptical ones, I shall therefore always reconstruct entire clauses throughout. Let me stress, however, that I shall follow this practice purely for reasons of simplicity and that this does not mean that I shall commit myself to postulating clausal comparison to be exclusively at work in these two languages (cf. subsection 2.3.5 above where I came to the opposite conclusion) and as a matter of fact, the comparatives discussed here that merely feature a noun (or determiner) phrase in their standard terms could equally well be derived in terms of the new phrasal approach to comparison developed in section 2 of this dissertation.

Extension of this standard term into a *that*-clause is not possible, by contrast, for this would immediately lead to a comparative including two such *that*-clauses, as depicted in (3/125), yielding an unacceptable output, as is expected from the two conflicting presuppositions such a configuration would give rise to, in that with the continuation picked in (3/125), it would have to be taken for granted that nobody turned up and that still, Peter was present:

(3/125) *That's still better than ~~it would be d good that~~ no-one at all ~~turned up~~.

In a similar fashion, sentence (3/10n) only permits the reconstruction of a conditional proposition and not that of a *dass (that)*-clause by virtue of the fact that in the comparative it expresses, the comparee term is by default (lack of an overt complementiser and the choice of indicative mood) interpreted as a (factive) *dass (that)*-clause, as can be seen from the contrast in (3/126) as opposed to (3/127):

(3/126) 3200 deutsche Soldaten im Norden Afghanistans sind für das Bündnis wertvoller ~~als es für das Bündnis d wertvoll wäre, wenn es~~ gar keine deutschen Soldaten am Hindukusch ~~gäbe~~.

(3/127) *3200 deutsche Soldaten im Norden Afghanistans sind für das Bündnis wertvoller ~~als es für das Bündnis d wertvoll ist, dass es~~ gar keine deutschen Soldaten am Hindukusch ~~gibt~~.

As before, the reconstruction pattern carried out in (3/127) leads to the emergence of two totally contradictory presuppositions, given that both, the presence of 3200 German soldiers in Afghanistan and their complete absence would be imposed on the same set of worlds.¹²⁸ In this context, I should also like to draw my reader's attention to a little aside: Interestingly enough, sentences like (3/10n) require a fairly liberal sort of ellipsis resolution (cf. the indispensable insertion of an existential verb such as *geben (give; there is/are)* in the standard terms of (3/126) and (3/127), lacking an overt precedent altogether) that arguably does not lend itself to a standard 'deletion under identity'-account of ellipsis. Crucially observe, however, that this difficulty, recurring with a great portion of the highly elliptical natural language data introduced in sections 3.2.1 to 3.2.3 above, immediately disappears under a phrasal analysis of comparison in terms of free association of individuals with implicit degrees, as has been developed in section 2.3.4 of this dissertation. Finally, a parallel situation also obtains with sentence (3/9d), where once again, extending the comparative's standard term into a conditional *wenn (if)*-clause is unproblematic, whereas reconstruction of a corresponding *dass (that)*-clause is clearly not a

¹²⁸ Once more, I am simplifying things slightly, here (cf. also footnote 126 in subsection 3.3.2.3.3.2.2 above), and I shall come back to this example in the next subsection.

viable alternative, as illustrated in (3/128) versus (3/129) below, where the latter option fails in that the individual in question would be required to have been in love and yet not to ever have experienced this feeling, which constitutes a blatant contradiction per se:

- (3/128) [...] dass es besser ist, geliebt und diese Liebe verloren zu haben, als ~~es d-gut wäre~~, niemals in seinem Leben dieses Gefühl gekannt zu haben (= wenn er niemals in seinem Leben dieses Gefühl gekannt hätte).
- (3/129) * [...] dass es besser ist, geliebt und diese Liebe verloren zu haben, als ~~es d-gut ist~~, niemals in seinem Leben dieses Gefühl gekannt zu haben (= dass er niemals in seinem Leben dieses Gefühl gekannt hat).¹²⁹

The evidence discussed in this subsection up to now thus demonstrates that if the first proposition in a comparative is already factive in nature, reconstructing the second proposition as a conditional represents the only legitimate reconstruction mechanism that is capable of avoiding a direct contradiction, to which reconstruction of a second *that/dass/que/que*-clause would invariably lead.¹³⁰

As is to be expected from my present analysis of propositional predicates, matters change as soon as the first proposition consists of an overt conditional, as in example (3/130):

- (3/130) *It would be better if Peter Precious attended Egbert Ego's reading than nobody.*

Here, we can explicitly reconstruct another conditional in the second proposition (cf. the extension effected in (3/131) below) and in fact, this is the only option available, given that the reduced standard term in (3/130) does not contain any indication pointing towards a factive status, which arguably cannot be taken just for free:

- (3/131) *It would be better if Peter Precious attended Egbert Ego's reading than ~~it would be d-good if nobody attended it.~~*

Notice that in contrast to this, in examples such as (3/5B), (3/10n) and (3/9d) dealt with before, it was indeed possible to take the non-factive status of the second proposition for granted, because with these, the only alternative (insertion of a *that/dass*-clause retaining factivity) was blocked by the immediate contradiction such an extension would inevitably have given rise to.

¹²⁹ With this sentence, where the first proposition also appears in the form of an underspecified infinitival, it is actually more the immediately preceding context than the information conveyed in the sentence itself that clearly determines the form of the reconstruction, because this context specifies a 40-year-old man who has indeed been in love, and who has been unfortunate enough to lose that love, afterwards.

¹³⁰ Note in passing that as a direct consequence, this also means that ellipsis reconstruction can be guided by material that is presuppositional in nature.

In total, the presuppositional approach to propositional gradable predicates pursued here thus not only allows me to correctly predict the attested combinations of different types of propositions with comparatives featuring a complete standard term (as has been achieved in subsection 3.3.2.3.3.2.2 above), but at the same time, it also enables me to directly account for licit and illicit versions of ellipsis resolution with comparatives in which the standard term appears in an elliptical form. In order to round off the overall empirical picture, I shall ultimately proceed to consider comparatives without an explicit *n*-word in their standard term in the ensuing subsection.

3.3.2.3.3.2.4 Predictions of the Analysis for Examples not Involving *N*-Words

Once we leave the field of comparatives whose standard terms contain *n*-words, it turns out that the combinatory possibilities of different types of subordinate clauses, that is conditionals as opposed to *that/dass/que/que*-clauses, still crucially hinge on the question of whether the given propositions necessarily exclude each other or not. To see this, consider a scenario in which Peter, a trainee, knew that his advisor was to come and see him in order to assess the quality of his work either last Tuesday or last Wednesday. It then so happened that Peter's superior appeared on Tuesday, already, which Peter preferred by far, because it was his birthday on that day, and he was fully aware of the fact that he would spend an evening of convivial drinking that day and would thus probably not have been in particularly good shape the day after. To his great relief, Peter managed to convince his superior of his extraordinary abilities and when talking to one of his colleagues afterwards, he uttered (3/132):

(3/132) *Tuesday was better for me than Wednesday.*

In this case, we can only reconstruct a *that*-clause in the comparee term of the comparative and a conditional clause in its standard term, because we know for sure that Peter's advisor came to look after him on Tuesday and was not supposed to turn up a second time, as reflected in the possible and impossible extensions specified in (3/133) and (3/134) below:¹³¹

(3/133) ~~That my advisor came to look after me on~~ Tuesday was better for me than ~~(it would have been) if he had come on~~ Wednesday.

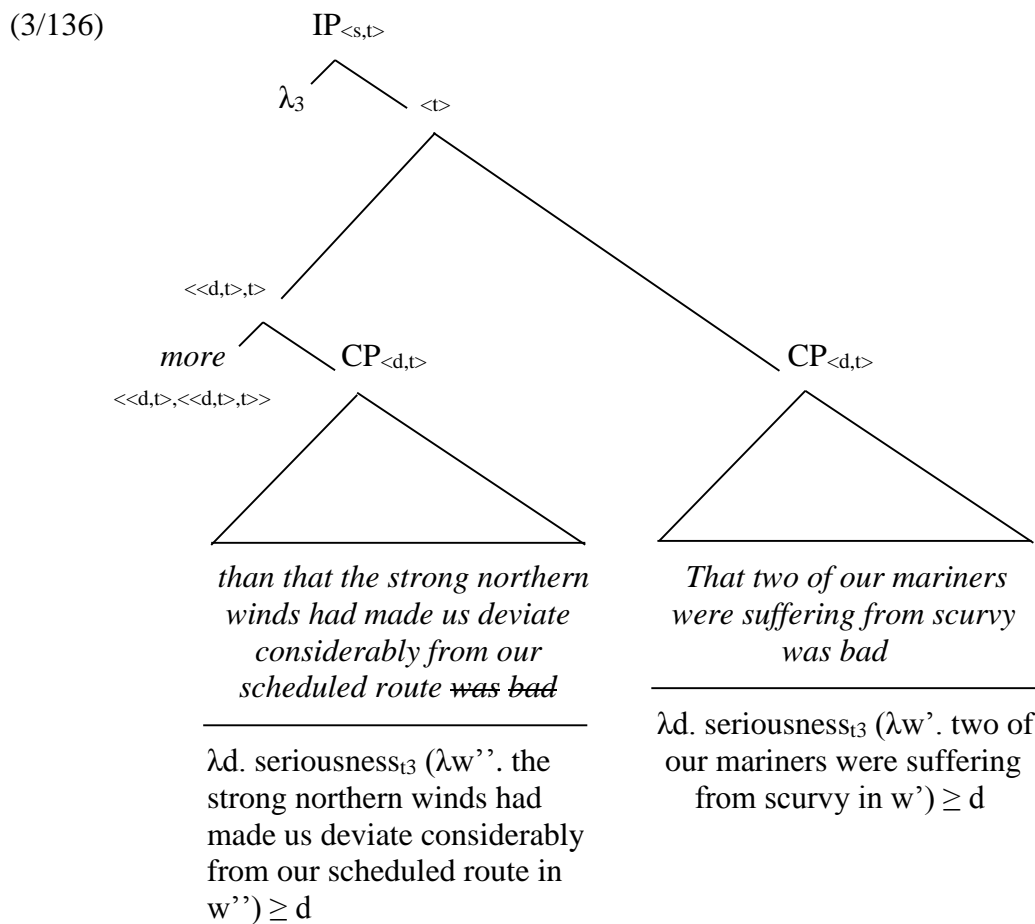
(3/134) *~~That my advisor came to look after me on~~ Tuesday was better for me than ~~that he came on~~ Wednesday.

¹³¹ Of course, reconstructing the first proposition as a conditional is likewise out with (3/132), because the situation this proposition expresses corresponds precisely to what has indeed happened in the actual world.

But once we turn to comparatives whose propositions encode information that is no longer mutually exclusive, a further prediction of the presuppositional analysis developed here is borne out in that now, the combination of two propositions that both trigger a presupposition with respect to the worlds in which a given comparative gets evaluated is not blocked any more. To this end, let us look at a comparative such as that introduced in (3/135):

(3/135) *That two of our mariners were suffering from scurvy was worse than that the strong northern winds had made us deviate considerably from our scheduled route.*

A simplified LF for this sentence including partial calculations is provided in (3/136) below, and its denotation is specified in (3/137):



(3/137) $[[(3/135)]] = \lambda w. \max_{\text{inf}} (\lambda d. \text{seriousness}_w (\lambda w'. \text{two of our mariners were suffering from scurvy in } w') \geq d) > \max_{\text{inf}} (\lambda d. \text{seriousness}_w (\lambda w''. \text{the strong northern winds had made us deviate considerably from our scheduled route in } w'') \geq d);$

PSPs: Two of our mariners were suffering from scurvy in w .;
 The strong northern winds had made us deviate considerably from our scheduled route in w .

Here, two presuppositions survive in the worlds of evaluation for sentence (3/135), which is however perfectly unproblematic in that these presuppositions are fully compatible with each other and can in fact both be true at the same time in the case of an especially unfortunate shipping tour. In contrast to examples such as (3/111), (3/127), (3/129) or (3/134) discussed before, we do not expect there to arise any contradiction, this time and sentence (3/135) is therefore not predicted to be unacceptable, which constitutes a most welcome result. This is also precisely what happens with a certain regularity with propositional comparatives in the present tense, where the propositions involved are often conceived of as mere possibilities for the future and which it is thus possible to combine even when these encode states of affairs that are clearly incompatible with each other. In this context, consider once more the natural language example provided in (3/10n), repeated below from the previous subsection:

(3/10) n. 3200 *deutsch.e* *Soldat.en* *im* *Norden*
 3200 German.plural soldier.plural in_the north
 Afghanistan.s *sind* *für* *das* *Bündnis* *wertvoll.er* *als*
 Afghanistan.genitive are for the alliance valuable.-er than
 gar kein.e *deutsch.en* *Soldat.en* *am* *Hindukusch.*
 no_at_all.plural German.plural soldier.plural on_the Hindu Kush
 ‘3200 German soldiers in the north of Afghanistan are more useful for the alliance
 than no German soldiers at the Hindu Kush at all.’

If this sentence did indeed constitute a statement about futurate potentialities, the reconstruction pattern indicated in (3/127), also reproduced from above, would indeed be fully legitimate:

(3/127) *3200 deutsche Soldaten im Norden Afghanistans sind für das Bündnis wertvoller
 ~~als es für das Bündnis d wertvoll ist, dass es gar keine deutschen Soldaten am~~
 ~~Hindukusch gibt.~~

Obviously, it is still not conceivable that there happen to be 3200 German soldiers on duty in Afghanistan and that there are no German soldiers in this country at the same time, but what really matters, here, is something quite different, namely that both propositions spell out viable options for the future as seen from a point of view located in the present. What ultimately rules out a reconstruction along the lines of (3/127) is thus not a matter of grammar, but rather one of world knowledge: At the time sentence (3/10n) appeared in the newspaper *Mannheimer Morgen*, 3200 German soldiers had already been sent to Afghanistan, so that an interpretation of example (3/10n) in terms of possibilities with an inherently futurate orientation is clearly not an option after all.

To sum things up, propositional gradable adjectives and adverbs are born into the lexicon in such a fashion that they presuppose the truth of the proposition they introduce, a

presupposition which may however be overridden by overt conditionals. This not only explains why *that/dass/que/que*-clauses functioning as their arguments retain a factive flavour that is lost when these are introduced by conditional *if/wenn/si/si* instead, but also accounts for possible and impossible combinations of proposition types with comparatives, where two propositions are explicitly expressed, depending on whether the truth of the one does or does not intrinsically exclude that of the other. Moreover, licit and illicit reconstruction patterns with comparatives featuring elliptical standard terms also follow directly from the presuppositional account developed here, and it makes the right kind of predictions for comparatives containing standard terms without *n*-words as well.

In section 3.3.2.3.2 above, I have proposed to transfer my analysis for (personal) propositional adjectives and adverbs to the class of propositional attitude verbs discussed in Villalta (2007), so a natural question to ask at this point is how these latter behave in terms of factivity. Interestingly enough, such verbs fall into two separate classes in this respect: On the one hand, verbs such as *to hate* can be put entirely on a par with propositional adjectives and adverbs, in that with these, the truth of the proposition they embed is also presupposed in the worlds of evaluation, a presupposition which can once again be overridden by an overt conditional, as can be seen from the examples given in (3/138a) and (3/138b) below, which is why I suggest a lexical entry for this type of attitude verb along the lines of (3/139):

- (3/138) a. *Egbert Ego's wife hates it that Debby Disturbance will attend her husband's reading.*
 b. *Egbert Ego's wife would hate it if Debby Disturbance attended her husband's reading.*

(3/139) $[[hate]] = \lambda w \in D_s. \lambda p \in D_{\langle s, t \rangle}. \lambda x \in D_e. \lambda d \in D_d: \underline{p(w) = 1}. \text{undesirability}_{x,w}(p) \geq d / \text{desirability}_{x,w}(p) \leq d$

On the other hand, propositional attitude verbs like *to want* do not display similar factivity effects in that these do not presuppose the truth of their embedded propositions (cf. the entry I offer in (3/140)), which directly correlates with the fact that these can only be introduced by the complementiser *that* (or infinitival *to*) and not by conditional *if*, as shown in (3/141):

(3/140) $[[want]] = \lambda w \in D_s. \lambda p \in D_{\langle s, t \rangle}. \lambda x \in D_e. \lambda d \in D_d. \text{desirability}_{x,w}(p) \geq d$

- (3/141) a. *Egbert Ego's wife wants that Peter Precious attends her husband's reading/Peter Precious to attend her husband's reading.*
 b. **Egbert Ego's wife wants if Peter Precious attends her husband's reading.*

With respect to factivity, verbs belonging to the *want*-class thus clearly differ from propositional adjectives and adverbs, whereas those in the *hate*-category exactly parallel the behaviour of the latter.

3.3.3 Clausal versus Phrasal Comparison Revisited

In the light of this discussion of the (non-)occurrence of NIEs in comparatives displaying *n*-words in their standard terms, I should finally like to take another look at the fundamental distinction between clausal comparison on the one hand and phrasal on the other that was established in section 2.3.1 above. For whereas the unacceptable status of comparatives featuring clausal standard terms containing an *n*-word happens to be a fairly uncontroversial issue in the relevant linguistic literature (cf. for instance the examples in (3/1) to (3/4) taken from there), which I relativised here by showing that this is true for ordinary (as opposed to propositional) adjectives and adverbs, only, that of (at least superficially) phrasal counterparts such as English (3/142a) below or its German equivalent in (3/142b) is still the matter of an open debate (cf. for example Eckhardt (2011), pp. 156 and 159ff., among others):

- (3/142) a. *?*Mary is taller than nobody.
 b. *?*Maria ist größ.er als niemand.
 Mary is tall.-er than nobody
 ‘*?*Mary is taller than nobody.’

When conducting informal investigations on the status of these sentences with groups of about 30 English and approximately 50 German native speakers, in turn, I found largely parallel results for these two languages: In both cases, more than half of the native speakers interviewed rejected the sentences in (3/142) as totally incomprehensible right away and among those who were indeed willing to accept these, about 80 per cent associated them with a superlative meaning (*Mary is (the) tallest./Mary is taller than everyone/anyone else.*), while only for about 20 per cent of them, the sentences gave rise to the reading expected under a Quantifier Raising analysis, which should be possible with a standard term genuinely phrasal in nature (cf. the discussion in subsection 2.3.4.5.2 above), that is one where Mary would have to come out shortest.¹³² To make sense of this at first glance rather puzzling empirical situation, I should

¹³² Eckhardt (2011, pp. 159-162) reports initial results from a pilot study on the acceptability of comparatives featuring an *n*-word in a (superficially) phrasal standard term, according to which even more than 50 per cent of the subjects taking part in this study got the superlative reading. At the moment, I suspect that this result might be traceable to the effect of confronting people with sentences they would classify as unacceptable right away in normal circumstances and of which they desperately try to make sense, instead, when facing these in a testing situation and of course, it also remains yet to be seen if these figures will be corroborated in the actual study as

like to propose the following: For the vast majority of native speakers, sentences like those in (3/142) constitute reduced clausal comparatives, where the clausal boundary at the left edge of the *than/als*-clause produces a blocking effect on the potential movement of material out of these comparatives' standard terms, so that the negative quantifiers (*nobody* and *niemand* (*nobody*), respectively) cannot be extracted, a configuration leading to an undefined denotation of these standard terms and thus ultimately to an unacceptable status of the entire comparatives, as has been elaborated in detail in section 3.3.1.2.2 before. By contrast, the few people who do in fact accept examples like (3/142) and ascribe them the meaning in which Mary is shortest interpret these sentences as truly phrasal comparatives, where the negative quantifiers undergo raising and leave their standard terms in exactly the same fashion as has been described to be generally the case with phrasal comparison in Turkish in section 2.3.4.5.1 above. Finally, for those consultants who judge such sentences to be acceptable and for whom these come with a superlative meaning, I suggest that essentially the same is going on as has already been noted (but not yet explained) for French and Spanish (and to a lesser extent also for German) in the context of examples like French (3/11a), Spanish (3/11b) or German (3/12a) to (3/12c) in subsection 3.2.3, which I repeat below:

- (3/11) a. [...] *bien sûr que Picasso a entendu, mieux*
 well sure that Picasso has hear.past_participle better
que personne, résonn.er le cristal d' Ingres [...]
 than nobody sound.infinitive the crystal (glass) of Ingres
 '[...] of course, Picasso heard, better than anyone else, the sound of the crystal glass of Ingres [...]'
- b. [...] *tú lo sab.es mejor que nadie* [...]
 you it know.2singular better than nobody
 '[...] you know that better than anyone else [...]'
- (3/12) a. *Abkürzung.en sind hier beliebt.er als nirgendwo sonst.*
 abbreviation.plural are here popular.-er than nowhere else
 'Here, abbreviations are more popular than anywhere else.'
- b. [...] *er war geschäftig.er und überdrängt.er als nie.*
 he was busy.-er and overloaded.-er than never
 'He was busier and more overloaded than he had ever been before.'

such. Also note in passing that while Regine Eckhardt does not provide a principled explanation of this finding, the speculations she offers go into a direction different from what I shall propose for such examples in what follows: Whereas I shall assume that two negations cancelling each other are responsible for the attested superlative interpretations, Regine Eckhardt relates these to similar superlative readings found in certain equative constructions, without elaborating this idea any further, though.

- c. *Gerade* 40 *Jahr.e* *alt* *ge.word.en*,
 just 40 year.plural old past_participleI.become.past_participleII
musikalisch *wohl* *besser als* *nie* *zuvor: Jimmy Sommerville.*
 musical probably better than never before Jimmy Sommerville
 ‘He just turned 40 and as far as his music is concerned, he’s probably better than
 he’s ever been before: Jimmy Sommerville.’

In order to account for such data, I propose that here, the respective comparatives’ standard terms already come with a negative denotation per se and that the negative contribution the corresponding *n*-words (*personne* (*nobody*), *nadie* (*nobody*), *nirgendwo* (*nowhere*) and twice *nie* (*never*), respectively) make is fully operative, so that in the end, the two negations cancel each other, which then immediately produces the attested superlative reading, as illustrated in (3/143) below in an exemplary fashion with the entailment pattern for the standard term of the Spanish comparative in (3/11b):

- (3/143) Nobody does not know this. →
 Everybody knows this.

I admit that at present, this only represents a fairly tentative sketch rather than an elaborated analysis of matters, and I should like to suggest starting from Marques (2003) if this was to be turned into a full-fledged proposal. Given that this is actually quite orthogonal to the main aim of this dissertation chapter, I shall however not make an attempt at that, here and shall confine myself to observing that yet another empirical contrast seems to confirm that this proposal is indeed on the right track: In languages like French and Spanish, a comparative’s clausal standard term can feature an overt marker of negativity (as already noted for instance in Zeijlstra (2004, p. 248) or *ibid.* (2009, section 3 (cf. in particular his (8b)), among others), which can be seen from the French examples given in (3/144) on the next page¹³³ and the Spanish one introduced in (3/145):

¹³³ As far as French is concerned, it is not totally inconceivable that a much stronger claim could actually be made, arguing that insertion of negation is even mandatory in the case of comparatives featuring clausal standard terms. Opinions among the French native speakers I consulted on this issue were however split: Whereas some considered the presence of negation indispensable, others reported that sentences like (3/144a) or (3/144b) sound better with the element *ne* (*not*), but that its omission is also legitimate and that the equivalent counterparts not containing this element are still fully acceptable. I therefore decided to better play safe and follow the weaker version, subscribing to the view that overt inclusion of negation is at least possible in French standard terms.

- (3/144) a. *Marie est plus grand.e que Pierre ne l' est.*
 Mary is more tall.feminine than Peter not it is
 b. *Marie est plus grand.e que ne l' est Pierre.*
 Mary is more tall.feminine than not it is Peter
 'Mary is taller than Peter is.'¹³⁴

- (3/145) *Aún así es mejor que no lo fues.e*
 still so is better than not it be(subjunctive).3singular
en otr.o caso.
 in other.masculine case
 'This way, it is still better than it would be otherwise.'¹³⁵

Conversely, such negative marking of a comparative's standard term is neither possible in English, as shown in the resulting perfectly unacceptable example included in (3/146) below, nor in standard German (cf. (3/147)), even if we add the resumptive pronoun *es (it)* in the appropriate places:

- (3/146) **Mary is taller than Peter isn't/is not.*

- (3/147) a. **Maria ist größ.er als Peter es nicht ist.*
 Mary is tall.-er than Peter it not is
 b. **Maria ist größ.er als es Peter nicht ist.*
 Mary is tall.-er than it Peter not is
 intended as: '*Mary is taller than Peter isn't.'

This basic contrast then provides us with an immediate explanation as to why the emergence of such superlative readings in comparatives containing *n*-words in their standard terms is very widespread in French and Spanish, whereas it is hardly attested in English and German.¹³⁶ And at the end of the day, these findings might actually have fairly strong theoretical implications,

¹³⁴ I shall leave open the precise status of this English translation which for most native speakers sounds rather awkward, this awkwardness probably being due to the repetition of the expression *is* in a string of no more than five words in total, resulting in strong stylistic oddity (cf. also the discussion in section 2.3.4.5.2 on this issue).

¹³⁵ In Spanish, I introduce a type of example differing from the parallel ones supplied for French in (3/144), English in (3/142a) and German in (3/142b), changing to the propositional adjective *mejor (better)* for practical reasons: As a matter of fact, ordinary gradable adjectives and adverbs never allow clausal standard terms in Spanish, comparison in this language normally being strictly phrasal in nature, as can be seen from the ungrammaticality the exact Spanish equivalents featuring ordinary *alta (tall(feminine))* would give rise to, irrespective of the inclusion or exclusion as well as of the exact positioning of the resumptive pronoun *lo (it)* and of whether explicit negation is present or not, as demonstrated in the set of examples listed in (i) below:

- (i) a. **María es más alt.a que (no) (lo) es Pedro.*
 Mary is more tall.feminine than (not) (it) is Peter
 b. **María es más alt.a que Pedro (no) (lo) es.*
 Mary is more tall.feminine than Peter (not) (it) is
 intended as: 'Mary is taller than Peter is.'

¹³⁶ The facts that a limited number of German and English native speakers do get these superlative readings and that my corpus study has indeed revealed three such examples for German (cf. (3/12a) to (3/12c)) might correlate with non-standard varieties of these languages, where multiple negation is possible. A plausible hypothesis might then be that it is mainly speakers of these non-standard varieties that come up with the attested superlative readings and produce corresponding examples, a hypothesis which I have not yet been able to test, though.

given that in certain approaches to comparatives (cf. for instance Bresnan (1973), Gajewski (2009),¹³⁷ Morzycki (2009), Ross (1969), Schwarzschild (2008) or Seuren (1973, 1984), among many others), the standard term is invariably taken to denote a negative set of degrees throughout and that even across languages in general. What the results arrived at here suggest in this respect, though, is that this claim might turn out to be far too pervasive, in that it only seems to be correct for a particular subset of languages including for example French and Spanish, with which the assumption of underlyingly negative standard terms does indeed make the right predictions for comparatives featuring *n*-words in their standard terms, in that the attested superlative readings are thereby expected to arise without any further stipulations being necessary. For others, such as (standard) English and German, this claim is however obviously not tenable, so that in the end, data on the behaviour of *n*-words in standard terms supplies us with a clear-cut indication of the fact that positing an inherently negative denotation of standard terms with comparatives constitutes an assumption that cannot be maintained universally.¹³⁸

At the same time, observe that the results obtained from my corpus studies in the four languages English, German, French and Spanish also provide at least indirect evidence against assuming that these four languages dispose of truly phrasal comparatives out of which an *n*-word could be raised to yield the inverse superlative reading (that in which Mary would be predicted to be shortest for sentences like those given in (3/142) above to come out true). For among the fairly substantial amount of data I have looked at, I did not come across a single instantiation of a comparative involving an ordinary adjective or adverb along with a (superficially) phrasal standard term containing an *n*-word, and I shall therefore argue that at least for the majority of speakers, superficially phrasal comparatives eventually pattern with their clausal counterparts, as has also been suggested by my little informal investigation on the sentences in (3/142) above, where most people actually classified these as totally unacceptable. However, it must of course also be admitted that I am reaching the practical limitations of my corpus studies, here, given that this empirical method is certainly not suitable for eliciting negative data as such (cf. also the discussion of this issue to follow in subsection 5.2 below), but I think that the complete absence of such examples in all four languages alike can nevertheless be considered as quite revealing in this regard.

¹³⁷ For the sake of fairness, it should be mentioned that Jon Gajewski notices in a rather self-critical fashion that “the use of negation in the *than*-clause must be refined” (Gajewski (2009), p. 356). Observe, however, that he reaches this conclusion on grounds that are completely different from what is being discussed here and that subsequently, he does not elaborate on this need any further.

¹³⁸ While Roger Schwarzschild speculates that postulating a negative denotation for standard terms is “unlikely to be correct for all [comparison] constructions” (Schwarzschild (2008), appendix II), my empirical findings in the context of NIEs thus clearly go further than that in showing that this position cannot even generally be upheld for comparatives as such.

Let me conclude this subsection by briefly taking a look at a passage from Charles Dickens's novel *Oliver Twist* including a (superficially) phrasal English comparative featuring an *n*-word in its standard term in addition to another negation in its matrix clause and at the effect that this special configuration produces.¹³⁹ In the excerpt in question, quoted in (3/148) below (where I underline the two relevant negative elements), Mr Brownlow and Mr Grimwig interrogate Mr Bumble about the present whereabouts of Oliver Twist:

- (3/148) 'Do you know where this poor boy is now?' 'No more than nobody,' replied Mr. Bumble. 'Well, what *do* you know of him?' inquired the old gentleman. 'Speak out, my friend, if you have anything to say. What *do* you know of him?'
[Dickens (1999), chapter 17, pp. 135f.]

Interestingly enough, Mr Bumble's response leads to a fair amount of confusion among his two interlocutors, in that these do indeed seem to interpret his answer in a negative way and yet, at the same time, it still makes them suspect that he might not be totally ignorant of where Oliver Twist is staying at present. It therefore appears that the author intentionally plays around with this particular linguistic constellation, in which an *n*-word in a comparative's standard term (in combination with a second one in its matrix clause) gives rise to considerable uncertainty with respect to the actual interpretation of the entire comparative construction involved. This literary example thus nicely matches the overall empirical picture according to which *n*-words in the standard terms of comparatives not associated with gradable predicates that are propositional in nature are not (fully) acceptable after all and that, even if phrasal in terms of surface appearance, such comparatives do not unequivocally yield inverse superlative readings, as would be expected from a phrasal analysis permitting Quantifier Raising of the respective *n*-word.

3.4 Summary

In essence, section 3 of this dissertation has made the following major point: The insertion of an *n*-word into the standard term of a comparative on the basis of an ordinary adjective or adverb invariably leads to an NIE rendering the corresponding comparative unacceptable, an empirically adequate account of which was provided in terms of Fox/Hackl (2006)'s seminal work combining the notions of maximal informativity with the idea of the general density of all scales and on the way, additional arguments against a classical analysis

¹³⁹ Many thanks to Matthias Bauer for drawing my attention to this literary example of a phenomenon I am mainly approaching from a purely linguistic angle, otherwise.

in the line of von Stechow (1984a) and Rullmann (1995), exclusively based on maximality alone, were supplied, too. In contrast to this, no comparable effect is attested with propositional gradable predicates, where the respective *n*-words happen to be embedded within a whole proposition, thus obviating undefinedness and resulting in acceptable outputs. I then went on to fully elaborate a new proposal for the comparison of entire propositions, where it was shown that some comparison constructions make use of alternative semantics. Doing so, I have paid particular attention to related aspects such as the question of how exactly the neutral zone is established on the scales associated with propositional gradable adjectives and adverbs in contrast to those of their ordinary counterparts or that of whether the choice of indicative versus subjunctive mood is relevant for the evaluation of contextual alternatives, in which respect I have come to a negative conclusion, just as I have argued that propositional gradable predicates should not be given a superlative kind of semantics per se. Furthermore, I have introduced a basic distinction separating personal from impersonal usages of propositional predicates, modifying my basic approach so as to also be able to adequately account for the former subclass of propositional adjectives and adverbs. Moreover, I have explained the factivity effect that the propositional arguments of propositional gradable predicates give rise to by adding a presupposition to their basic meaning, which ultimately allowed me to account for the different behaviour of conditional propositions as opposed to *that/dass/que/que*-clauses with regard to factivity and which at the same time also permitted me to explain the diverging licit and illicit combinations of these with comparatives, as well as possible and impossible reconstruction patterns in the case of elliptical forms of these. In addition, it has been shown that this presuppositional approach also makes the correct kind of predictions on the combinatory possibilities of conditionals and *that/dass/que/que*-clauses with comparatives not involving *n*-words in their standard terms and ultimately, I have reconsidered the issue of clausal versus phrasal comparison in the context of NIEs. There, I have also suggested an explanation for the emergence of universal readings with standard terms containing *n*-words, which immediately captured the fact that these are very frequent in languages like French or Spanish, but hardly attested in others such as English or German, if at all. In the ensuing section 4, I shall now leave the area of NIEs and turn to the distribution of direct measure phrase constructions, both inside and across individual languages, which, at least from an empirical perspective, represents yet another understudied domain within the grammar of comparison and gradability.

4 THE DISTRIBUTION OF MEASURE PHRASES IN ENGLISH, GERMAN AND FRENCH: EMPIRICAL AND THEORETICAL PERSPECTIVES

4.1 Introduction

Measure phrase constructions (MPCs) like the one introduced in (4/1) below typically consist of a gradable adjective (*long*, in the case at hand) that combines with a Measure Phrase (MP) (*sixty feet*), which is in turn formed from a numeral (*sixty*) and a unit of measurement (*foot/feet*):

(4/1) *This rope is sixty feet long.*

In linguistic literature, much attention has been paid to this special type of construction for more than three entire decades now (cf. for instance the fairly exhaustive list of references provided in Sassoon (2010b)), where the high amount of linguistic variation that MPCs are subject to has been given particular stress, both from a language internal as well as from a cross-linguistic point of view. Within these more than thirty years, an impressive number of extremely diverging claims about which adjectives precisely allow or disallow modification by MPs in a given language have been put forth, often making perfectly incompatible predictions about their exact distribution (cf. *ibid.*, pp. 177f.). In my opinion, much of this widespread dissent is due to the fact that these far-reaching hypotheses are for the most part based on empirical data involving no more than a handful of adjectives, if at all and that a reliable database is still missing altogether or, as put in Sassoon (2010b) itself, “future research should study the data [on MPs] more thoroughly within and across languages” (*ibid.*, p. 179). As a first step towards filling this empirical gap, I therefore decided to run a large-scale study on the (un-)availability of MPCs in the three languages English, German and French, taking into consideration as many as about eighty different adjectives in each of these three languages and also testing for various syntactic positions in which MPs can occur, a task which – to the best of my knowledge – has never been accomplished before and the main insights from which form the basis of the whole of section 4 of this dissertation. Of course, such an extensive data study not only permits to verify or falsify existing accounts of this phenomenon (and ideally even to come up with a better one), but at the same time, it also reveals numerous other fascinating details, many of which would undoubtedly deserve an in-depth presentation of their own. For the sake of this dissertation, I should however like to focus on answering the following three questions: What different types of linguistic variation do MPCs give rise to and what are their underlying sources? How can we account for their attested distribution in a principled way? And what kind

of theoretical conclusions do MPCs allow us to draw for the semantics of gradable predicates from a more general perspective?

More precisely, the following section 4.2 will present the three empirical studies as such: It will first of all briefly elaborate on their overall design (subsection 4.2.1), before summarising in tabular form the main results obtained thereby for English, German and French, in turn (subsections 4.2.2.1 to 4.2.2.3). Next, in section 4.3, I shall present the various sorts of variation found with MPCs: In a first step (subsections 4.3.1.1 to 4.3.1.3), I shall examine how English, German and French behave with respect to universal variation, language internal variation as well as cross-linguistic variation, that is the three classical types of variation that have traditionally been discussed in literature on MPs. In a second step (subsections 4.3.2.1 to 4.3.2.3), I shall then set out to describe three additional kinds of variation directly associated with MPCs which this study has newly revealed and that have thus been neglected in the relevant literature so far. Having the basic empirical picture in place, by then, the ensuing section 4.4 will include a review of the most prominent approaches to the distribution of MPCs defended in the literature up to now, taking into account the proposals made in Sassoon (2009, 2010a) (subsection 4.4.1), Kennedy (2001) (section 4.4.2), Winter (2005) (4.4.3), Murphy (1997) (4.4.4) and finally also Schwarzschild (2005) (4.4.5). In section 4.5, I shall next develop a new account of the distribution of MPCs intended to account for their (un-)availability both within as well as across individual languages. Doing so, I shall first of all introduce the basic approach as such (subsection 4.5.1), before four different types of generalisations will be added to it (section 4.5.2), which will ultimately lead to the establishment of a completely novel classification of gradable adjectives. In particular, I shall propose an entirely new semantics for antonymous adjectives such as for example *short*, various consequences of which will be examined in detail, like for instance those resulting from this approach for the potential decomposition of such antonyms. Furthermore, specific attention will also be paid to the predictions this newly developed analysis makes with respect to effects of evaluativity. The following section 4.6 is designed to summarise the main insights gained from the whole of section 4, that is the third and last part of the body of this dissertation. The actual test sentences underlying my empirical investigation on the distribution of MPCs, three tables displaying the results I thereby obtained for the individual native speaker informants consulted as well as a couple of diagrams illustrating significant contrasts will finally be presented in the form of an appendix on pages 267ff.

4.2 A Study on the Occurrence of Direct Measure Phrase Constructions in English, German and French

4.2.1 Design of the Empirical Study

In my empirical investigation on the (un-)availability of MPCs in the three languages English, German and French, I elicited empirical data by interviewing a substantial number of native speakers on a sample of more than 250 sentences each in order to obtain a thorough amount of positive and negative evidence alike. Doing so, I tested as many as approximately eighty adjectives in each of these languages, and I also made sure not to restrict myself to spatial dimensions of measurement only, but to carefully choose adjectives pertaining to various domains of measurement instead, including for instance space, time, temperatures, weight, volume, prices, etc., with the intention of arriving at a fairly complete picture of measurement in these three languages, as can be seen from the diverse concepts of measurement listed in tables (4/8), (4/9) and (4/11) in subsections 4.2.2.1 to 4.2.2.3 below.¹⁴⁰ Moreover, I investigated the (non-)occurrence of MPCs in three different basic syntactic configurations: First, I checked for the combination of an adjective with an MP in a predicative position, as illustrated in the example in (4/2a) below, second, for its modification by an MP in an attributive syntactic slot, as depicted in (4/2b) and third, for comparatives in which an MP performs the function of an overt differential, as is the case in (4/2c) below:

- (4/2) a. *This rope is almost 60 feet long.*
b. *To climb this mountain, you're highly recommended to take a 50-foot-long rope with you.*
c. *The clothesline on the right is about 20 feet longer than that on the left.*

The entire study was then based on an acceptability scale ranging from “1”, as the best result attainable, down to “4”, in turn corresponding to the worst judgment possible, as spelt out in the overview included in (4/3) on the following page, according to which I asked my informants to judge the respective test sentences:

¹⁴⁰ Obviously, not just any old adjective can be modified by an overt MP. When selecting the individual adjectives to be tested in this study, I therefore paid close attention to the following two aspects: First of all, as will be shown in more detail in subsection 4.5.2.2 below, an MPC has to contain an adjective for which it is conceivable that it can indeed be graded, because only gradable adjectives can express that an entity possesses the property or quality in question up to a particular degree that is then specified by the MP itself (with the exception of metaphorical uses of non-gradable adjectives, briefly addressed, there, as well). And secondly, only those areas of measurement were considered which come with an established unit of measurement such as *metre*, *degree Celsius*, *kilometre per hour*, *lux*, *decibel* or the like, except for the case of innovations to be discussed at some length in subsections 4.3.2.1 and 4.5.2.1 below.

- (4/3)
- 1: This sentence sounds perfect to me, and I could have used it myself.
 - 2: This sentence sounds slightly odd. I should probably not have used it myself, but I can well imagine other native speakers using it, and I have definitely heard/seen something like this, before.
 - 3: This sentence sounds rather strange. I am not sure whether I have ever come across anything along these lines before, and I doubt that a native speaker would use such a sentence.
 - 4: This sentence sounds bad to me, and I am sure that no native speaker would ever use it in a natural language situation.

Before next presenting the individual results obtained from this study in the three languages English, German and French in turn, let me briefly mention three more aspects concerning the organisation of this empirical investigation.

First, let me stress right from the outset that in the course of this study, I have focussed exclusively on MPCs formed on the basis of a gradable adjective and that from an onomasiological perspective, alternative and equally valid means of expressing the same concept have not been taken into account. In this fashion, I have for instance not considered verbal or purely nominal strategies in the expression of measurements, as exemplified for the concept ‘weight’ in English (4/4) and German (4/5) below, respectively:

(4/4) *This airline does not allow suitcases weighing more than 20 kilograms.*

(4/5)

<i>Um</i>	<i>dies.e</i>	<i>enorm.e</i>	<i>Menge</i>	<i>überhaupt</i>
for/in order to	this.feminine	enormous.feminine	amount	at_all
<i>transportier.en</i>	<i>zu</i>	<i>könn.en,</i>	<i>wir.d</i>	<i>dies.e</i>
transport.infinitive	to	can.infinitive	become.3singular	this.feminine
<i>Last</i>	<i>auf</i>	<i>mehrere</i>	<i>50-Kilo-Säck.e</i>	.
load	on	several	50-kilo-sack.plural	
<i>auf.ge.teil.t.</i>				
distributeI.past_participleI	distributeII.past_participleII			

‘In order to be able to transport this enormous amount at all, this load is distributed among several sacks holding 50 kilos.’

Likewise, I have not taken into consideration a special type of construction in French, either, where an expression, even though clearly taking the shape of an adjective as far as morphology is concerned, performs the function of a noun rather than that of an adjective, as can be seen from the fact that it typically serves as the complement of a preposition in this specific constellation. In (4/6) on the next page, I provide an example of this very special construction attested in the French language:

(4/6) *La* *tour* *Eiffel* *a* *trois* *cent* *vingt*
the(feminine) tower Eiffel has three hundred twenty
mètre.s *de* *haut.*
metre.plural of high [Le Petit Robert, under the entry for ‘haut’]
‘The Eiffel Tower is 300 metres in height.’

Second, a further remark on data elicitation on MPs in the French language seems to be in order, in that with MPs occurring in an attributive syntactic slot, this language gives rise to a peculiarity that needs to be controlled for: In this context, consider a canonical attributive French MPC, such as the one based on the adjective *épais* (*thick*) given in (4/7a) below:

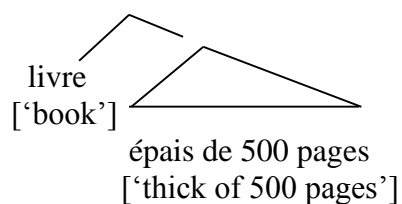
(4/7) a. *Il est impossible de li.re* *un livre épais*
it is impossible to read.infinitive a book thick
de 500 page.s *en deux heure.s.*
of 500 page.plural in two hour.plural
‘It is impossible to read a 500-page-thick novel within two hours.’

As a matter of fact, such attributive constructions are always structurally ambiguous in French in opening up two alternative ways of parsing these: A first one, in which the entire string of words “*épais de 500 pages*” modifies the noun “*livre*”, corresponding to the MPC I am after, here, but also a second one, in which the expressions “*épais*” and “*de 500 pages*” are taken to modify this noun separately, resulting in a meaning in which the book at hand happens to be fairly thick and to count 500 pages in length, which is clearly not the MP reading I am interested in. In view of this complicating factor, when carrying out the empirical study, I explicitly made efforts to ensure that the French informants really judged the respective test sentences in the relevant reading, only. In practice, I guaranteed this by reading out the test sentences to the native speaker informants myself rather than making these read them on their own and when doing so, I paid close attention to pause in between the words “*livre*” and “*épais*” and not after the latter with a sentence like (4/7a) to make sure that my informants indeed parsed it as an MPC and not simply as containing a noun that is in turn modified by two different expressions, as illustrated with the partial structures provided in (4/7b) as opposed to (4/7c) on the next page:¹⁴¹

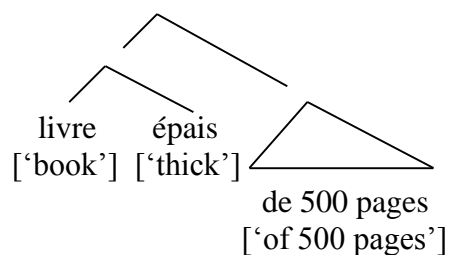
¹⁴¹ Note in passing that this difficulty does not arise with predicative MPs given that with these, the MP always happens to be separated from the respective noun by an intervening copula such as the infinitive *être* (*be*) in the corresponding French predicative test sentence for the adjective *épais* (*thick*) displayed in (i) below:

(i) *Selon* *le* *règlement* *administratif,* *ce.tte*
according_to the(masculine) regulation administrative this.feminine
porte *de* *secours* *doi.t* *êt.re* *épais.se* *de*
door of security must.3singular be.infinitive thick.feminine of
sept *centimètre.s.*
seven centimetre.plural
‘According to administrative regulations, this security door must be seven centimetres thick.’

(4/7) b.



c.



Third, while my empirical study is certainly very extensive with respect to the overall number of adjectives tested as well as the different syntactic constructions considered, it is less so in terms of the number of subjects consulted, given that limitations of a largely temporal nature unfortunately forced me to confine myself to interviewing no more than exactly five native speakers in each of the three languages addressed, here. In evaluating the data obtained from this study in section 4.3 below and when establishing several generalisations on its basis in subsections 4.5.2.1 to 4.5.2.4, I shall therefore be very cautious and stick to the following convention throughout: I shall only regard those test sentences as acceptable that received an average score of “2.0” or better, that is sentences for which the average speaker is at least certain to have heard or seen things along these lines before and similarly, I shall only consider sentences that got average results of “3.0” or worse as truly unacceptable. This will then leave a huge grey zone in between “2” and “3”, and I shall refrain from making any general statements about adjectives situated within this grey zone in terms of their compatibility with overt MPs. Increasing the number of participants might eventually push these intermediate cases further towards the “2” or the “3” and thus help to stabilise the study results, but given the considerable amount of variation across individual speakers MPCs are subject to (cf. the discussion in subsection 4.3.2.1 below), I am actually not entirely sure that such a stabilising effect would really come about. But be that as it may, in any case, I decided to better play safe and keep this grey zone for the time being, and I shall adopt the practice of marking sentences located in this intermediate area with a superscript “?”. After these introductory remarks, let me next go on to present the study results as such obtained for the individual gradable predicates in the different syntactic positions tested in the form of tabular surveys first for the English language (subsection 4.2.2.1), then for German (section 4.2.2.2) and ultimately for French (4.2.2.3).

The alternative way of parsing that needs to be excluded is thus nonexistent right from the outset in such a basic predicative configuration.

4.2.2 Study Results

4.2.2.1 Results Gained from the English Study

In (4/8) below, I include a table summarising the results from my investigation on the (un-)availability of direct MPCs in the English language. For the orientation of the reader, let me briefly elaborate on how this table is arranged: The first column numbers the concept of measurement under consideration, the second one then specifies the gradable predicates checked for, and the six ensuing ones list the average results obtained for sentences containing an MPC formed on the basis of the respective adjective and also indicate the corresponding acceptability status, first for the predicative use of this MPC, second for its attributive use and third for its occurrence as a differential in a comparative construction, that is the three syntactic environments tested. And from the ninth column onwards, this pattern ultimately starts anew.

(4/8) The (un-)availability of direct MPCs in English:

	<u>grad. predicate</u>	<u>pMP</u>		<u>aMP</u>		<u>diff</u>			<u>grad. predicate</u>	<u>pMP</u>	*	<u>aMP</u>	*	<u>diff</u>	*
1	<i>tall</i>	1.0	ok	1.2	ok	1.0	ok	16	<i>thick</i>	3.8	*	4.0	*	3.8	*
	<i>short</i>	3.6	*	2.2	?	1.0	ok		<i>thin</i>	3.6	*	3.0	*	2.8	?
2	<i>large</i>	2.2	?	2.2	?	1.0	ok		<i>fat</i>	3.2	*	3.2	*	2.6	?
	<i>small</i>	3.2	*	2.6	?	1.0	ok		<i>slim</i>	3.4	*	3.2	*	2.4	?
3	<i>long (spatial)</i>	1.0	ok	1.4	ok	1.0	ok	17	<i>bright</i>	1.6	ok	1.8	ok	1.0	ok
	<i>short (spatial)</i>	3.6	*	2.8	?	1.0	ok		<i>dark</i>	3.8	*	3.6	*	1.6	ok
4	<i>deep</i>	1.0	ok	1.0	ok	1.0	ok	18	<i>loud</i>	1.8	ok	2.0	ok	1.0	ok
	<i>flat</i>	3.4	*	3.8	*	3.0	*		<i>quiet</i>	3.4	*	3.0	*	1.0	ok
	<i>shallow</i>	3.4	*	2.8	?	1.0	ok		<i>silent</i>	3.8	*	3.6	*	3.4	*
5	<i>high</i>	1.0	ok	1.0	ok	1.2	ok	19	<i>acute (angle)</i>	2.8	?	2.6	?	1.6	ok
	<i>low</i>	3.4	*	3.2	*	1.4	ok		<i>obtuse (angle)</i>	3.4	*	2.8	?	2.0	ok
6	<i>huge</i>	3.8	*	2.6	?	3.2	*	20	<i>bent</i>	3.4	*	3.2	*	2.0	ok
	<i>tiny</i>	3.0	*	3.0	*	2.2	?		<i>straight</i>	3.4	*	3.4	*	2.0	ok
7	<i>wide</i>	1.0	ok	1.0	ok	1.0	ok		<i>vaulted</i>	3.8	*	3.0	*	1.8	ok
	<i>narrow</i>	2.8	?	2.8	?	1.0	ok	21	<i>strong (electricity)</i>	2.2	?	1.8	ok	1.0	ok
	<i>broad</i>	2.2	?	1.8	ok	2.2	?		<i>weak (electricity)</i>	3.0	*	3.2	*	1.0	ok
8	<i>thick</i>	1.0	ok	1.4	ok	1.0	ok	22	<i>strong (wind)</i>	2.4	?	1.8	ok	1.2	ok
	<i>thin</i>	3.4	*	2.4	?	1.0	ok		<i>weak (wind)</i>	3.2	*	2.8	?	1.2	ok
9	<i>distant</i>	1.8	ok	1.8	ok	1.2	ok		<i>light (wind)</i>	3.2	*	2.2	?	1.8	ok
	<i>remote</i>	2.2	?	2.2	?	1.8	ok	23	<i>expensive</i>	3.8	*	3.6	*	1.0	ok
	<i>far</i>	3.6	*	3.4	*	1.2	ok		<i>cheap</i>	3.2	*	3.2	*	1.0	ok
	<i>away</i>	1.0	ok	2.8	?	3.2	*	24	<i>rich</i>	2.6	?	3.0	*	1.0	ok
	<i>close</i>	3.0	*	3.6	*	1.0	ok		<i>poor</i>	3.8	*	4.0	*	1.0	ok
	<i>near</i>	3.6	*	3.6	*	1.0	ok		<i>wealthy</i>	3.2	*	3.0	*	1.0	ok
10	<i>long (temporal)</i>	1.8	ok	1.4	ok	1.0	ok	25	<i>strong (number)</i>	2.4	?	1.6	ok	2.8	?
	<i>short (temporal)</i>	3.0	*	3.0	*	1.0	ok		<i>weak (number)</i>	3.6	*	3.4	*	2.4	?

11	<i>old</i>	1.0	ok	1.0	ok	1.0	ok	26	<i>intelligent</i>	3.8	*	3.2	*	1.0	ok
	<i>young</i>	2.6	?	3.0	*	1.0	ok		<i>stupid</i>	3.2	*	3.2	*	1.4	ok
12	<i>late</i>	1.0	ok	1.2	ok	1.0	ok	27	<i>beautiful</i>	3.6	*	2.4	?	1.4	ok
	<i>early</i>	1.0	ok	1.8	ok	1.0	ok		<i>ugly</i>	3.8	*	3.2	*	1.4	ok
13	<i>warm</i>	2.2	?	2.0	ok	1.0	ok	28	<i>good</i>	3.8	*	3.2	*	1.0	ok
	<i>cold</i>	2.8	?	2.4	?	1.0	ok		<i>bad</i>	3.6	*	3.2	*	1.0	ok
	<i>mild</i>	2.6	?	2.4	?	1.2	ok	29	<i>likely</i>	1.2	ok	2.2	?	1.0	ok
	<i>hot</i>	2.2	?	1.6	ok	1.0	ok		<i>unlikely</i>	2.0	ok	2.8	?	1.6	ok
	<i>lukewarm</i>	3.4	*	3.0	*	3.4	*	30	<i>green</i>	2.4	?	2.2	?	2.6	?
14	<i>fast</i>	2.6	?	2.8	?	1.0	ok	31	<i>aggressive</i>	2.2	?	1.2	ok	1.2	ok
	<i>slow</i>	3.0	*	2.8	?	1.0	ok		<i>calm</i>	2.4	?	2.8	?	1.0	ok
15	<i>heavy</i>	2.6	?	3.2	*	1.0	ok	32	<i>progressive</i>	2.2	?	2.6	?	1.4	ok
	<i>light</i>	2.4	?	3.4	*	1.0	ok		<i>reactionary</i>	2.6	?	2.6	?	1.4	ok

(Comprehensive lists of the individual test sentences as well as tables separately displaying the results for the individual informants consulted can be found in subsections A and B of the appendix provided on pages 267ff. for English, German and French, in turn.)

4.2.2.2 Results Gained from the German Study

The following table included in (4/9) below, which is organised in an exactly parallel fashion to the one given for English in (4/8) in the preceding subsection, now shows the results obtained from my study on the distribution of MPCs in German:

(4/9) The (un-)availability of direct MPCs in German:

	<u>grad. predicate</u>	<u>pMP</u>		<u>aMP</u>		<u>diff</u>			<u>grad. predicate</u>	<u>pMP</u>		<u>aMP</u>		<u>diff</u>	
1	<i>groß</i>	1.0	ok	1.0	ok	1.0	ok		<i>fett</i>	2.8	?	2.8	?	2.6	?
	<i>klein</i>	2.6	?	2.0	ok	1.0	ok	16	<i>hell</i>	1.0	ok	1.0	ok	1.2	ok
2	<i>lang</i> (spatial)	1.0	ok	1.0	ok	1.0	ok		<i>dunkel</i>	3.2	*	3.2	*	1.2	ok
	<i>kurz</i> (spatial)	2.2	?	1.8	ok	1.0	ok	17	<i>laut</i>	1.2	ok	1.0	ok	1.0	ok
3	<i>tief</i>	1.0	ok	1.0	ok	1.0	ok		<i>leise</i>	1.4	ok	1.4	ok	1.0	ok
	<i>flach</i>	1.8	ok	1.6	ok	1.0	ok	18	<i>spitz</i> (angle)	2.0	ok	1.6	ok	1.4	ok
	<i>seicht</i>	3.0	*	2.4	?	1.2	ok		<i>stumpf</i> (angle)	1.8	ok	1.6	ok	2.0	ok
4	<i>hoch</i>	1.0	ok	1.0	ok	1.0	ok	19	<i>gebogen</i>	2.4	?	2.8	?	1.6	ok
	<i>niedrig</i>	2.2	?	2.4	?	1.2	ok		<i>gekrümmt</i>	2.4	?	2.4	?	1.6	ok
5	<i>riesig</i>	2.8	?	2.4	?	3.4	*		<i>gewölbt</i>	2.4	?	2.4	?	2.0	ok
	<i>winzig</i>	2.2	?	2.2	?	2.6	?		<i>gerade</i>	3.8	*	4.0	*	3.2	*
6	<i>breit</i>	1.0	ok	1.0	ok	1.0	ok	20	<i>stark</i> (electricity)	1.0	ok	1.0	ok	1.0	ok
	<i>schmal</i>	1.6	ok	1.2	ok	1.0	ok		<i>schwach</i> (electricity)	1.6	ok	1.4	ok	1.2	ok
7	<i>dick</i>	1.0	ok	1.0	ok	1.0	ok	21	<i>stark</i> (wind)	1.4	ok	1.6	ok	1.0	ok
	<i>dünn</i>	1.6	ok	1.6	ok	1.0	ok		<i>schwach</i> (wind)	2.0	ok	2.2	?	1.0	ok
8	<i>weit</i>	2.6	?	1.0	ok	1.0	ok	22	<i>teuer</i>	2.2	?	1.0	ok	1.0	ok
	<i>nah</i>	2.2	?	2.0	ok	1.0	ok		<i>billig</i>	2.6	?	3.2	*	1.0	ok

	<i>entfernt</i>	1.0	ok	1.0	ok	1.0	ok	23	<i>reich</i>	1.8	ok	1.2	ok	1.0	ok
	<i>fern</i>	3.2	*	1.2	ok	1.8	ok		<i>arm</i>	3.6	*	3.2	*	1.4	ok
9	<i>lang</i> (temporal)	1.0	ok	1.0	ok	1.0	ok		<i>vermögend</i>	3.0	*	1.8	ok	1.2	ok
	<i>kurz</i> (temporal)	2.4	?	1.6	ok	1.0	ok	24	<i>stark</i> (number)	1.0	ok	1.0	ok	1.0	ok
10	<i>alt</i>	1.0	ok	1.0	ok	1.0	ok		<i>schwach</i> (number)	2.6	?	2.8	?	2.0	ok
	<i>jung</i>	2.4	?	2.0	ok	1.0	ok	25	<i>intelligent</i>	3.4	*	2.8	?	2.0	ok
11	<i>verspätet</i>	1.0	ok	1.0	ok	2.2	?		<i>dumm</i>	3.4	*	3.0	*	2.4	?
	<i>verfrüht</i>	1.8	ok	3.0	*	3.4	*	26	<i>schön</i>	3.4	*	3.2	*	2.8	?
12	<i>warm</i>	1.0	ok	1.0	ok	1.0	ok		<i>hässlich</i>	4.0	*	4.0	*	3.0	*
	<i>kalt</i>	1.2	ok	1.4	ok	1.0	ok	27	<i>gut</i>	3.6	*	2.8	?	1.0	ok
	<i>heiß</i>	1.2	ok	1.0	ok	1.2	ok		<i>schlecht</i>	2.8	?	2.6	?	1.0	ok
	<i>lau</i>	2.8	?	3.0	*	1.4	ok	28	<i>wahrscheinlich</i>	3.0	*	3.4	*	2.0	ok
13	<i>schnell</i>	1.2	ok	1.0	ok	1.0	ok		<i>unwahrscheinlich</i>	3.6	*	3.8	*	2.0	ok
	<i>langsam</i>	1.4	ok	1.6	ok	1.0	ok	29	<i>grün</i>	3.6	*	3.2	*	3.0	*
14	<i>schwer</i>	1.0	ok	1.2	ok	1.0	ok	30	<i>aggressiv</i>	3.2	*	3.4	*	2.6	?
	<i>leicht</i>	1.4	ok	2.0	ok	1.0	ok		<i>ruhig</i>	3.2	*	3.2	*	2.4	?
15	<i>dick</i>	3.0	*	2.2	?	2.4	?	31	<i>fortschrittlich</i>	3.6	*	3.8	*	2.8	?
	<i>dünn</i>	3.2	*	2.4	?	1.0	ok		<i>rückschrittlich</i>	3.8	*	4.0	*	2.8	?
	<i>schlank</i>	2.6	?	2.4	?	2.4	?								

4.2.2.3 Results Gained from the French Study

The table displayed in (4/11) on the next page lists the results obtained from my study on the (non-)occurrence of MPCs in French. In contrast to the previous tables provided for English and German, this French table does not specify the results for direct MPCs, but those received for prepositional MPCs, instead, a first example of which is supplied in (4/10) below, where the respective MP is introduced by the preposition *de* (*of*):

(4/10) *Ce.tte corde est long.ue de 32 mètre.s.*
 this.feminine rope is long.feminine of 32 metre.plural
 ‘This rope is 32 metres long.’

This move to prepositional MPs is due to the fact that the French language happens to be characterised by a total lack of direct MPCs altogether, as will be discussed at some length in subsection 4.3.1.1 later on, and a corresponding table for direct MPCs in French would therefore merely have featured the judgment “4” throughout. However, the acceptability of prepositional MPs in this language happens to be subject to just about as much variation as that of their direct counterparts in English and German, as will also be seen in more detail in section 4.3 below, where various types of variation MPs give rise to will be dealt with in a systematic fashion.

(4/11) The (un-)availability of prepositional MPCs in French:

	<u>grad. predicate</u>	<u>pMP</u>		<u>aMP</u>		<u>diff</u>			<u>grad. predicate</u>	<u>pMP</u>		<u>aMP</u>		<u>diff</u>	
1	<i>grand</i> (person)	3.0	*	2.2	?	1.2	ok		<i>mince</i>	3.6	*	3.2	*	1.8	ok
	<i>petit</i> (person)	2.6	?	2.2	?	1.0	ok		<i>svelte</i>	3.8	*	3.8	*	2.2	?
2	<i>grand</i> (object)	3.6	*	1.4	ok	1.0	ok		<i>gras</i>	3.6	*	3.8	*	3.8	*
	<i>petit</i> (object)	3.0	*	2.4	?	1.2	ok	17	<i>clair</i>	3.6	*	1.2	ok	1.2	ok
3	<i>long</i> (spatial)	1.4	ok	1.2	ok	1.0	ok		<i>lumineux</i>	3.6	*	1.8	ok	1.0	ok
	<i>court</i> (spatial)	1.8	ok	2.2	?	1.0	ok		<i>sombre</i>	3.6	*	3.8	*	2.4	?
4	<i>profond</i>	1.2	ok	1.0	ok	1.0	ok		<i>obscur</i>	4.0	*	3.6	*	3.0	*
	<i>plat</i>	3.8	*	3.8	*	3.4	*	18	<i>sonore</i>	3.8	*	3.8	*	2.4	?
5	<i>haut</i>	1.2	ok	1.2	ok	1.0	ok		<i>silencieux</i>	3.8	*	2.4	?	1.0	ok
	<i>bas</i>	2.8	?	2.0	ok	1.6	ok	19	<i>aigu</i> (angle)	2.4	?	2.2	?	1.0	ok
	<i>élevé</i>	2.4	?	1.8	ok	1.0	ok		<i>obtus</i> (angle)	1.8	ok	1.8	ok	1.2	ok
6	<i>gigantesque</i>	3.4	*	1.6	ok	3.4	*	20	<i>incliné</i>	1.0	ok	1.0	ok	1.0	ok
	<i>vaste</i>	1.6	ok	1.0	ok	1.4	ok		<i>arqué</i>	3.0	*	2.4	?	1.0	ok
	<i>minuscule</i>	3.8	*	2.6	?	3.0	*		<i>courbé</i>	3.0	*	2.0	ok	1.2	ok
	<i>infime</i>	3.8	*	3.2	*	3.6	*		<i>droit</i>	4.0	*	3.2	*	1.4	ok
7	<i>large</i>	1.0	ok	1.0	ok	1.0	ok	21	<i>fort</i> (electricity)	3.0	*	1.6	ok	1.2	ok
	<i>étroit</i>	1.4	ok	1.0	ok	1.0	ok		<i>faible</i> (electricity)	2.4	?	1.6	ok	1.4	ok
	<i>ample</i>	1.6	ok	1.8	ok	1.2	ok	22	<i>fort</i> (wind)	2.6	?	2.2	?	1.4	ok
8	<i>épais</i>	1.0	ok	1.4	ok	1.0	ok		<i>faible</i> (wind)	3.2	*	2.4	?	1.2	ok
	<i>mince</i>	2.4	?	2.6	?	1.0	ok		<i>doux</i> (wind)	3.6	*	3.0	*	3.6	*
9	<i>loin</i>	4.0	*	adv.		2.2	?	23	<i>cher</i>	3.8	*	3.8	*	1.0	ok
	<i>éloigné</i>	1.0	ok	1.0	ok	1.0	ok		<i>bon marché</i>	4.0	*	3.6	*	1.6	ok
	<i>distant</i>	1.0	ok	1.0	ok	2.2	?	24	<i>riche</i>	1.8	ok	2.2	?	1.8	ok
	<i>proche</i>	2.0	ok	2.4	?	1.2	ok		<i>pauvre</i>	4.0	*	3.4	*	1.0	ok
10	<i>long</i> (temporal)	2.4	?	1.4	ok	1.4	ok		<i>fortuné</i>	3.2	*	3.8	*	2.0	ok
	<i>court</i> (temporal)	3.0	*	2.4	?	1.2	ok	25	<i>nombreux</i> (number)	4.0	*	3.6	*	3.4	*
	<i>bref</i>	3.4	*	2.4	?	2.6	?		<i>faible</i> (number)	4.0	*	4.0	*	3.8	*
11	<i>vieux</i>	2.6	?	1.8	ok	1.6	ok	26	<i>intelligent</i>	3.2	*	2.6	?	1.2	ok
	<i>jeune</i>	3.8	*	3.2	*	1.2	ok		<i>bête</i>	3.4	*	3.2	*	1.6	ok
	<i>âgé</i>	1.0	ok	1.2	ok	1.4	ok	27	<i>beau</i>	3.8	*	3.8	*	2.0	ok
12	<i>retardé</i>	1.0	ok	1.4	ok	3.6	*		<i>laid</i>	3.0	*	2.8	?	1.8	ok
	<i>anticipé</i>	1.8	ok	1.0	ok	3.6	*	28	<i>bon</i>	4.0	*	3.4	*	1.2	ok
13	<i>chaud</i>	3.2	*	3.0	*	1.4	ok		<i>mauvais</i>	3.2	*	3.4	*	1.2	ok
	<i>froid</i>	3.6	*	3.2	*	1.8	ok	29	<i>probable</i>	1.2	ok	1.2	ok	2.2	?
	<i>doux</i>	3.2	*	3.6	*	1.0	ok		<i>improbable</i>	1.4	ok	1.6	ok	2.8	?
	<i>tiède</i>	2.8	?	3.2	*	1.6	ok		<i>vraisemblable</i>	2.0	ok	1.4	ok	2.4	?
14	<i>vite</i>	4.0	*	adv.		1.8	ok		<i>invraisemblable</i>	1.8	ok	2.0	ok	3.0	*
	<i>rapide</i>	4.0	*	3.6	*	1.2	ok	30	<i>rouge</i>	2.8	?	2.6	?	1.4	ok
	<i>lent</i>	3.6	*	3.4	*	1.2	ok	31	<i>agressif</i>	3.8	*	1.8	ok	1.2	ok
15	<i>lourd</i>	2.2	?	2.4	?	1.6	ok		<i>calme</i>	3.4	*	1.8	ok	1.4	ok
	<i>léger</i>	3.0	*	3.2	*	1.0	ok	32	<i>progressiste</i>	3.4	*	3.6	*	1.2	ok
16	<i>gros</i>	3.6	*	2.6	?	1.6	ok		<i>réactionnaire</i>	3.4	*	3.4	*	1.2	ok

Having thus presented the main results from my empirical studies on the distribution of MPCs received for the three languages English, German and French in turn, let me next proceed to a

more detailed investigation of the different types of variation that are attested in these three languages with respect to the (in-)compatibility of a given gradable predicate with an overt MP in the ensuing section 4.3.

4.3 Six Sources of Variation with Direct Measure Phrase Constructions

4.3.1 Three Types of Variation Traditionally Associated with Measure Phrases

4.3.1.1 Universal Variation

A first type of variation in the context of MPCs already discovered in traditional literature on this linguistic phenomenon is what I shall refer to as ‘universal’ variation, here, which is intended to capture the fact that from a universal point of view, languages come with a basic dichotomy in that some of them do in principle allow direct MP modification of an adjective, whereas others do not permit this special type of construction at all. In this respect, the cross-linguistic study in Beck et al. (2009) has for instance shown Bulgarian, Hindi, Hungarian or Thai to belong to the former group of languages, while Guarani (an Amerindian language from Paraguay), Japanese, Mandarin Chinese,¹⁴² Moore (a Gur language), Motu (from Papua New Guinea), Russian, Samoan, Turkish and Yoruba (a Kwa language) count among the latter group, in that these never display direct MPCs (ibid., p. 26). Where do my empirical findings locate English, German and French with respect to this fundamental division line? On the one hand, English and German both permit direct MPCs, as illustrated in an exemplary fashion by the perfectly acceptable status of the English predicative MPC formed on the basis of the adjective *wide* given in (4/12) below and the likewise fully acceptable German attributive one featuring the adjective *tief* (*deep*) in (4/13):¹⁴³

(4/12) *A proper writing desk must be at least six feet wide.*

(4/13) *Für die städtische Kanalisation müssen drei Meter tiefe [deep] Gruben ausgehoben werden.*

¹⁴² As far as Mandarin Chinese is concerned, the empirical situation with regard to the (non-)occurrence of direct MPCs is not entirely clear: Whereas in Beck et al. (2009), MPCs are reported to be absent from this language, in Eckhardt (2011), this particular type of construction is claimed to be attested in Mandarin Chinese. If the latter position indeed turned out to be correct, this language should of course be included within the former rather than the latter group of languages listed in the main text.

¹⁴³ In what follows, I shall once again adopt the practice of not supplying glosses and translations for the German and French test sentences in an attempt at reducing the overall length of this dissertation (cf. footnote 91 in subsection 3.2.2 above). Within square brackets, I shall however always offer a translation of the adjective on the basis of which a given MPC has been built, so that the really decisive element should be comprehensible to readers not familiar with these two languages as well.

On the other hand, it has turned out, though, that the French language lacks this special type of construction altogether, be it in the form of a direct MP used predicatively (cf. (4/14a) below), attributively (4/14b) or as a differential in a comparative (4/14c) and also irrespective of its pre-adjectival or post-adjectival as well as of its pre-nominal or post-nominal positioning, all of which my French native speaker informants judged to be completely unacceptable alike:

- (4/14) a. **Cette corde est trois mètres longue/longue [long] trois mètres.*
 b. **Pour gravir cette montagne, il vous faut une 50 mètres longue corde/une longue 50 mètres corde/une corde 50 mètres longue/longue [long] 50 mètres.*
 c. **Cette corde-ci est dix mètres plus longue/plus longue [long] dix mètres que celle-là.*

What this language has at its disposal, however, are indirect MPCs that are prepositional in nature. With these, the MP is introduced by the preposition *de* (*of*) in the vast majority of cases (cf. for instance the set of examples included in (4/15) below, depicting the entire syntactic paradigm), although there also happens to be a rather limited number of adjectives that come with an MP headed by the preposition *à* (*to*), an example of which is provided in (4/16), including the gradable adjective *probable* (*likely*) in its attributive use:¹⁴⁴

- (4/15) a. *Cette corde est longue [long] de 32 mètres.*
 b. *Pour gravir cette montagne, il vous faut une corde longue [long] de 50 mètres.*
 c. *Cette corde-ci est plus longue [long] de dix mètres que celle-là.*

- (4/16) *Même un échec probable [likely] à 80 % ne pouvait pas l'empêcher d'essayer.*

Thus, whereas English and German do generally allow direct MPCs, French is characterised by a complete absence of these and only displays prepositional MPs, instead.

4.3.1.2 Language Internal Variation

A second kind of variation related to MPCs consists in what I shall call 'language internal' variation in what follows. This type of variation pertains to the fact that there also exists a considerable amount of variation within individual languages per se, in that even in those languages permitting direct MPCs, these do not normally occur across-the-board, but their availability rather happens to be limited to certain gradable adjectives, only (cf. for example Beck (2011), pp. 1378ff.), among many others). This observation is fully corroborated by my

¹⁴⁴ I consider the exact choice of preposition to constitute a purely lexical matter (cf. the lexical entry proposed for French *profond* (*deep*) in (4/57) in subsection 4.5.1 below), which is why I shall simply treat all prepositional French MPCs on a par, which seems to be legitimate for the purposes I am about to pursue, here.

own empirical investigation, which also shows that the (un-)availability of building an MPC is indeed highly dependent on the choice of adjective as such: In this fashion, English *high* can for example easily combine with a direct MP, whereas *expensive* cannot do so, as can be seen from the sharp contrast in acceptability in (4/17a) as opposed to (4/17b) below and similarly, the German adjective *lang* (*long*) does give rise to this particular construction, while *gut* (*good*) does not, as indicated in (4/18a) versus (4/18b):

- (4/17) a. *His company wanted to construct a more than 150-foot-high warehouse in the immediate vicinity of our elementary school.*
 b. **After he successfully passed the driving test, his parents offered him a 10,000-pound-expensive car.*
- (4/18) a. *Er musste ein drei Stunden langes [long] Verhör über sich ergehen lassen.*
 b. **Die diesjährige Syntaxklausur ist im Schnitt 80 Punkte gut [good] ausgefallen.*

Interestingly enough, the same holds for prepositional MPCs in French as well. In this language, MPs cannot be used with all gradable predicates throughout, either, as shown in an exemplary fashion for the adjectives *large* (*wide*) and *froid* (*cold*) in the example sentences (4/19a) and (4/19b) below, respectively:

- (4/19) a. *Selon la législation actuelle, les sorties de secours doivent être larges [wide] de deux mètres au minimum.*
 b. **La dernière nuit qu'il a fallu passer dehors était froide [cold] de moins cinq degrés.*

In total, 23 English adjectives out of 78 tested that could potentially permit direct MP modification have received an average judgment of at least “2” in the predicative or the attributive MPC or both, which corresponds to a ‘success rate’ of approximately 29 %.¹⁴⁵ In German, this ratio has turned out to be 58 % and thus substantially higher (41 adjectives out of 71) and for French, 41 % (34 adjectives out of 82 tested), situating this language in between the other two, albeit of course only for the prepositional variants in the latter language (with direct MPs, the corresponding ratio would obviously straightforwardly amount to 0 % in French). Thus, even in the language most inclined to overt MPCs, that is German, no more than a good half of the adjectives considered do indeed give rise to this special type of construction, the availability of which ultimately always depends on the particular adjective one chooses in all three languages alike.

¹⁴⁵ In presenting these figures, I exclusively focus on predicative and attributive MPCs. Note in passing that with MPs performing the function of an overt differential in a comparative, the corresponding ratios would in fact be considerably higher in all three languages, an issue to which I shall come back in subsection 4.5.2.2 below.

4.3.1.3 Cross-Linguistic Variation

A last sort of variation already established in classical literature on the distribution of MPs is finally constituted by what I shall refer to as ‘cross-linguistic’ variation, here, a type of variation based on the observation that the behaviour of individual adjectives regarding their (in-)compatibility with MPs is not necessarily stable across different languages (cf. for example Beck (2011), pp. 1378ff., still among many others). In the course of my own study, I have frequently encountered this type of variation, too, an example of which is provided by the extremely diverging acceptability statuses of the otherwise largely equivalent examples listed in (4/20a), (4/20b) and (4/20c) below for English, German and French, respectively:

- (4/20) a. *?On his way to Birmingham, he collided with a 100-kilometre-per-hour-fast motorbike.*
b. *Er stieß frontal mit einem 100 Stundenkilometer schnellen [fast] Motorrad zusammen.*
c. **Au moment de leur collision, les deux camions étaient rapides [fast] de 80 kilomètres à l’heure.*

According to the figures I have already introduced at the end of the last subsection, the absolute number of adjectives allowing direct MP modification in German is considerably higher than in English (a total of 41 as opposed to 23 adjectives), so that German clearly disposes of a much greater inventory of gradable predicates permitting this particular type of construction. With 34 adjectives that have generally been accepted, French displays its prepositional MPCs with fewer adjectives than German does its direct counterparts, but with significantly more than English. As we shall see in some detail in section 4.4, it is precisely this cross-linguistic variation that poses especially severe challenges for many of the existing approaches to this linguistic phenomenon, such as for instance the accounts offered in Kennedy (2001), Murphy (1997), Sassoon (2009, 2010a, b) or that in Winter (2005).

4.3.2 Three Newly Discovered Kinds of Variation with Measure Phrases

4.3.2.1 Individual Speaker Variation

A first additional kind of variation in the context of the distribution of MPs that my empirical study has newly revealed is variation in the acceptability of MPCs among individual native speakers, called ‘individual speaker’ variation, here. For as a matter of fact, the (un-)acceptability of a given MPC represents for the most part a graded, rather than an all-or-none phenomenon and in the course of my study, this graded nature has expressed itself as follows:

Some test sentences have indeed happened to be likewise accepted by all my informants throughout, such as for instance the one included in (4/21) below and others have been rejected unanimously, an example of which is given in (4/22):

(4/21) *When finally reaching Birmingham, the train was almost thirty minutes late.*

(4/22) **The bulb we've lately installed in our boxroom is 50 lux dark.*

However, this has actually been the exception rather than the rule and with the majority of sentences, I have found that judgments vary considerably from one speaker to the next and funnily enough, this variation in acceptability across individual speakers goes even so far that a number of sentences have attracted all four possible judgments alike, so that for certain informants, these examples have been perfectly acceptable, whereas others have judged them to be completely out, and still others have located them somewhere in between these two extremes of the scale. In (4/23) to (4/25) below, I specify exemplary instantiations of this special result for the three languages under consideration, the dimension of which is absolutely astonishing:¹⁴⁶

(4/23) *?A 100-square-metre-large plot of land is too small to build a decent house on.*

(4/24) *?Das mit dem Gewehr anvisierte Ziel ist 200 Meter nah [close].*

(4/25) *?Dans la boulangerie du coin, une miche de pain lourde [heavy] de deux kilos coûte extrêmement cher.*

Let me also stress that this kind of variation has been particularly prominent when I have tested innovative uses of MPs, the acceptability of which turns out to represent an almost idiosyncratic property. In this context, I have confronted informants for instance with a laboratory situation where people are supposed to take part in different experiments and are afterwards judged on a scale ranging from “0” (corresponding to perfectly calm) up to “100” (in turn corresponding to extremely aggressive) according to their behaviour and the reactions they showed, and I have then asked my consultants to rate sentences such as those in (4/26) or (4/27):¹⁴⁷

(4/26) *An 80-point-aggressive behaviour calls for immediate medical treatment.*

¹⁴⁶ To get a concrete idea of the actual dimension of this type of variation, I refer the interested reader to the tables separately displaying my study results for each individual native speaker informant that are provided in section B of the appendix to follow below.

¹⁴⁷ The fact that the test sentence in (4/27) has been judged much worse than that in (4/26), the first receiving an average judgment of no more than 2.8, while the latter attracted one of 1.2, is probably not due to the innovative MPC as such, but rather results from the fact that it features the antonym *calm*, antonyms not normally being able to combine with overt MPs in the English language, as will be seen in the context of ‘antonymic’ variation to be discussed in subsection 4.3.2.2 below.

(4/27) ?A 30-point-calm behaviour is way below the usual standard.

Whereas some native speakers readily accept such sentences, these seem totally impossible for others, which clearly indicates that MPCs constitute a productive pattern only for some, but by far not all of the native speakers consulted. From a cross-linguistic point of view, it can be stated that the overall results I have obtained for innovations are generally lower in German and French than in English, so that the pattern might arguably be considered as somewhat less productive in the former two languages, but obviously, a much more extensive investigation would have to be carried out to fully substantiate this claim.

In my opinion, this newly discovered idiosyncratic variation alongside with the gradedness of the phenomenon have immediate theoretical implications for a potential analysis of MPCs: The high degree of individual speaker variation MPCs are subject to suggests pursuing an approach to these that is at least partly determined by the lexicon, since it is uncontroversial that the lexicon varies from one speaker to the next, anyway, given that we all dispose of a different vocabulary and the like and at the same time, defending such a kind of approach will also permit a greater amount of flexibility when it comes to separately handling individual lexical items that differ exactly in their (in-)compatibility with overt MPs than locating this variation in a different area of grammar, say, in syntax, morphology, the core principles of semantic composition or the like. In section 4.5 below, I shall therefore develop an account of the distribution of MPs, both within and across various languages, that situates vital aspects of the variation this construction gives rise to precisely in the lexicon.

4.3.2.2 Antonymic Variation

Let me next continue this list of novel forms of variation pertaining to MPCs by having a look at what I shall subsume under the term ‘antonymic’ variation in what follows, a type of variation which was perfectly unexpected and that thus came as a complete surprise to me: Traditional, largely English-centred literature on MPs invariably has it that only positive, that is ‘neutral’ or ‘unmarked’ adjectives can be modified by overt MPs, whereas their negative or ‘marked’ counterparts are totally excluded from this type of construction (cf. for example Bierwisch/Lang (1989), p. 503; Kennedy (2001), pp. 37, 40 and 59 to 60; Murphy (2006), p. 80; Sassoon (2009), p. 637; Sassoon (2010a), pp. 154 and 163; Sassoon (2010b), pp. 141 to 143 and 159; Sassoon (2011), pp. 531 and 544; Schwarzschild (2005), pp. 217 to 219; Seuren (1978), p. 337; Svenonius/Kennedy (2006), section 1.3 or Winter (2005), pp. 253ff., among others; cf. also the detailed discussion of some of these that is to follow in section 4.4 of this

dissertation). What I have found, however, is that, among the three languages under consideration here, this restriction is operative in English, only. In this language, MPCs featuring antonyms are indeed judged substantially worse than those formed on the basis of their neutral equivalents, to the effect that the sentence given in (4/28) below, involving the neutral adjective *tall*, has for instance received an average judgment of 1.0, indicating unrestricted acceptability, whereas that specified in (4/29), including *short* and thus the corresponding antonym, has got one of 3.6, thereby approaching the worst result possible:

(4/28) *One of his brothers is at least six feet tall.*

(4/29) **The woman I dated yesterday was five feet short.*

By contrast, in German and French, MPCs on the basis of antonymous adjectives are much less degraded in neutral contexts already (with judgments exceeding their English counterparts by more than one point on average), and if one even chooses a specific context facilitating the antonymous reading,¹⁴⁸ sentences such as those in (4/30) and (4/31) below are even judged to be completely impeccable:

(4/30) *An dieser Stelle der Garage fehlt noch ein drei Zentimeter schmales [narrow] Brett.*

(4/31) *Pour un géant comme lui, il est parfaitement impossible d'entrer par cette fenêtre étroite [narrow] de 40 centimètres.*

In the context of such antonymous MPCs, a little aside seems to be in place: I fully agree with Pieter A. M. Seuren, who has it that it “is not always an easy question [...] to determine which [adjective] is positive and which is negative” (Seuren (1978), p. 337).¹⁴⁹ In this respect, it is for example largely unclear to me whether colour terms like *green* or *red* do indeed represent positive adjectives and if so, what should count as their negative counterparts (if they dispose of any, at all) or how an adjective like *hot* is to be categorised in this regard, if *warm* and *cold* are already taken to form a pair of corresponding antonyms. Likewise, with an adjective such as *expensive*, I am not sure either whether *cheap* or *inexpensive* (or possibly even both) should be taken to constitute its antonym(s). In view of such fundamental classificational difficulties, I have eventually decided not to carry out an exact statistical evaluation of the opposition

¹⁴⁸ As will be argued in subsection 4.5.2.4 below, antonymous MPCs come with an evaluative presupposition, which is why the choice of a particular context guaranteeing that this presupposition is in fact met makes these all the more readily available.

¹⁴⁹ In a similar fashion, it is also pointed out in Bierwisch (1989) that not all positively oriented adjectives come with antonyms and in Sassoon (2010b), the author likewise notes that “when one looks at a broad set of antonym pairs, the data is far from ‘clean’” (ibid., p. 142).

between neutral/positive/unmarked adjectives and antonyms/negative/marked ones. However, I should nevertheless like to stress that the overall contrasts are absolutely striking, as can also be seen right away in diagrams number one to three in section C of the appendix inserted towards the end of this dissertation, in turn displaying a selection of canonical antonyms for the three languages considered and showing a clear-cut difference between English on the one hand and German and French on the other. And just as has been the case with individual speaker variation dealt with in the preceding subsection, this new empirical finding will also have strong theoretical consequences, in particular for the semantic analysis of antonyms, which, at present, represent a set of linguistic expressions the proper treatment of which is still open to debate and that happen to be rather poorly understood on the whole (cf. for instance recent work in Heim (2006a, 2008) or Büring (2007), among others). I shall return to this issue in section 4.5.2.4 below, when I shall be discussing antonymous adjectives at length and where I shall also offer an entirely new proposal with respect to the different semantic contributions these make in English MPs as opposed to German and French ones.

4.3.2.3 Structural Variation

A final additional type of variation my empirical study on the (un-)availability of MPCs has brought to the fore is what I suggest to designate as ‘structural’ variation and by which I intend to capture the fact that in all three languages taken into account here, MPs appearing in an attributive position are generally judged better than those occurring in a predicative slot. The table in (4/32) summarises the exact results in the form of a contrastive overview:

(4/32)

	average judgment of all predicative uses	average judgment of all attributive uses	difference
English	2.72	2.59	0.13
German	2.20	2.04	0.16
French	2.91	2.49	0.42

As these figures indicate, a preference for attributive MPCs is likewise attested in English, German and French throughout, it however being particularly strong in the latter language. This then immediately raises the following question: How can we account for this difference in the acceptability of predicative as opposed to attributive MPs in a plausible fashion?

Let me offer a rather tentative answer to this issue, here: At the moment, it seems fully conceivable to me that this finding is after all not really indicative of profound differences in the syntax of attributively versus predicatively used adjectival phrases or the like, but it might rather simply mirror a phonological effect: Given that all three languages are characterised by a basic subject-verb-object (SVO) word order (at least in main clauses), predicative MPs have typically occurred in sentence final position with the examples I have tested, so that from a phonological point of view, the potential ‘disturbing’ element has usually occupied the most prominent position within the respective sentences (cf. Roach (²1991), p. 103, Hakkarainen (1995), p. 142 and Klein (⁶1982), p. 37 for arguments that this sentence final position is indeed the most prominent one in English, German and French, respectively). In contrast to this, their attributive counterparts have normally been put in sentence initial or sentence medial and thus significantly less prominent syntactic slots, where they are expected to produce less of a degrading effect. Observe that this phonological approach could also provide us with an immediate explanation for the fact that this phenomenon happens to be much stronger in French than in the other two languages taken into consideration: Whereas English and German both display fix word accent, French has no such fix word accent and in this language, only the very last syllable in a so-called “mot phonétique” gets stressed (cf. Klein (⁶1982), p. 37), so that in French, with sentences featuring predicative MPCs, the respective MP has usually been the only stressed element present within the entire clause or sentence tested, as shown in the parallel set of examples in (4/33) below, where underlining is used to indicate stressed syllables:

- (4/33) a. *Right here, lake Constance is exactly 152 feet deep.*
 b. *An dieser Stelle ist der Bodensee 52 Meter tief.*
 c. *A cet endroit le lac de Constance est profond de 52 mètres.*

Whereas stressed elements are thus distributed fairly evenly over the English and German test sentences in (4/33a) and (4/33b), the only main accent in the French counterpart in (4/33c) directly falls on part of the MP and therefore on the decisive expression as such. I suggest that ultimately, it is exactly this crucial difference in basic stress patterns that is responsible for the fact that the French language favours attributive MPs over their predicative equivalents to a greater extent than both, English and German and that in total, the preference for the former attested in all three languages stems from varying prominences associated with the different syntactic positions in which predicative and attributive MPs typically occur. Of course, it would be possible to empirically check the viability of this hypothesis by inserting additional material after the respective predicative MPs, which should neutralise this effect if I am on the right track here, but given that I have not been able to do that yet and that I cannot even tell for sure

whether this effect is really significant in the first place, I must leave matters at this somewhat tentative and sketchy stage for the time being, and I shall therefore neglect this structural variation in the analytical section on MPs to follow in part 4.5 of this dissertation.

4.4 Re-Evaluating Existing Accounts in the Light of the New Data

Having established this extensive empirical database on the (un-)availability of direct MPCs in the three languages English, German and French, this now offers me a beautiful playground for testing the validity of existing approaches to the (non-)occurrence of MPs and for verifying or falsifying these, accordingly. To this end, I shall next review some of the most influential accounts that have been suggested in literature on this linguistic phenomenon so far, taking into account the proposals put forth in Sassoon (2009, 2010a) (subsection 4.4.1), Kennedy (2001) (section 4.4.2), Winter (2005) (4.4.3), Murphy (1997) (4.4.4) and finally Schwarzschild (2005) (4.4.5) and, making use of a crucial ingredient from the latter, I shall then proceed to develop a novel approach to the distribution of MPCs within as well as across individual languages in section 4.5 of this dissertation.

4.4.1 Sassoon (2009, 2010a)

Based on fundamental insights from measurement theory, in Sassoon (2009, 2010a), the conclusion is reached that there are four different types of scales: nominal scales, ordinal scales, interval scales as well as ratio scales. Among these, the author claims that the occurrence of MPCs is exclusively restricted to adjectives that are associated with a ratio scale, that is a scale which does not assign negative values to entities, which is characterised by meaningful ratios (explaining its name) and which, most importantly of all, disposes of an absolute zero point. According to the argumentation in Sassoon (2009, 2010a), this happens to be the case with many positive adjectives, while antonyms are invariably taken to come with an unspecified transformation value, shifting the zero point on the scale to which they give rise and interestingly enough, this is also assumed to be the case with certain positive adjectives, such as for instance *happy* or *warm*. And it is precisely the unspecified nature of this transformation value that is taken to account for the incompatibility of particular adjectives with overt MPs under this approach. Let me illustrate this by contrasting an ordinary comparative with an MPC in what follows: In a comparative featuring the antonym *short* such as that in (4/34) on the next page, this negative adjective crucially gets interpreted twice, to the effect that the transformation value it introduces will automatically cancel out in the course of the semantic computation (cf.

(4/35), where “Tran” abbreviates ‘transformation value’, “ $r_{i,w}$ ” is the real number assigned to inch unit-objects and “ d ” is used as a variable for individuals), which saves the derivation from crashing, in that this unspecified transformation value ultimately disappears altogether:

(4/34) *The chicken is thirty inches shorter than the ostrich (is).*
[Sassoon (2009), p. 650; her (30)]

(4/35) $[[(4/34)]_w = 1$ iff
 $\exists r \in \mathfrak{R}, r > 0, f_{\text{short},w} ([[\text{the chicken}]_w) - f_{\text{short},w} ([[\text{the ostrich}]_w) = r = 30 \times r_{i,w}$ iff
 $(\text{Tran}_{\text{short},w} - f_{\text{tall},w} ([[\text{the chicken}]_w) - (\text{Tran}_{\text{short},w} - f_{\text{tall},w} ([[\text{the ostrich}]_w)$
 $= 30 \times r_{i,w}$ iff
 $f_{\text{tall},w} ([[\text{the ostrich}]_w) - f_{\text{tall},w} ([[\text{the chicken}]_w) = 30 \times r_{i,w}$ iff
 $f_{\text{tall},w} (d_2) - f_{\text{tall},w} (d_3) = 30 \times f_{\text{tall},w} (d_1)$ [ibid.]¹⁵⁰

In contrast to this, in an MPC like that included in (4/36), the adjective *short* is assumed to appear just once (both, on the surface as well as at LF), so that the transformation value it introduces is bound to survive (cf. the calculation sketched in (4/37)), which, by virtue of its unspecified nature, inevitably results in an “inherently underdetermined truth value” (ibid., p. 648), to the effect that a sentence such as (4/36) can neither become true nor false, hence its unacceptable status:

(4/36) **The ostrich is sixty inches short.* [ibid., p. 648; her (24)]

(4/37) $[[(4/36)]_w = 1$ iff
 $\forall w \in W_c, [[\text{the ostrich is sixty inches short}]_w = 1$ iff
 $\forall w \in W_c, f_{\text{short},w} ([[\text{the ostrich}]_w) = 60 \times r_{i,w}$
(s.t. $r_{i,w}$ is the real number $f_{\text{short},w}$ assigns to the inch unit-objects) iff
 $\forall w \in W_c, \text{Tran}_{\text{short},w} - f_{\text{tall},w} (d_2) = 60 \times (\text{Tran}_{\text{short},w} - f_{\text{tall},w} (d_1))$ iff
 $\forall w \in W_c, 60 \times f_{\text{tall},w} (d_1) - f_{\text{tall},w} (d_2) = 59 \times \text{Tran}_{\text{short},w}$ [ibid.]
and $[[(4/36)]_w = 0$ iff
 $\forall w \in W_c, [[\text{the ostrich is sixty inches short}]_w = 0$ iff
 $\forall w \in W_c, 60 \times f_{\text{tall},w} (d_1) - f_{\text{tall},w} (d_2) \neq 59 \times \text{Tran}_{\text{short},w}$ [ibid.; her (25)]

In essence, the approach defended in Sassoon (2009, 2010a) thus makes the following predictions with respect to the distribution of MPCs: First, these should be possible whenever direct combination with an overt ratio modifier like for instance *twice* is also possible, because compatibility with such a ratio modifier is argued to provide us with a clear indication of the

¹⁵⁰ In order to account for the acceptability of a comparative featuring an antonym such as (4/34), this double interpretation of the gradable predicate, once in the matrix clause and once in the comparative’s standard term, is indispensable in Sassoon (2009, 2010a). While this seems unproblematic with comparative constructions, it is less obvious to me how this is supposed to work out in the case of antonymous superlatives or the like, where the gradable predicate occurs just once.

availability of a ratio scale for a given adjective. Second, antonymous adjectives should always be banned from MPCs by virtue of the fact that these are assumed to invariably give rise to a transformed interval scale and not to a genuine ratio scale¹⁵¹ and third, among the class of positive adjectives, there happen to be transformed adjectives that cannot be used in MPCs along with non-transformed ones that do indeed permit this special type of construction. As a next step, let me examine these predictions in turn.

First of all, the exact match postulated for the acceptability of ratio modifiers and that of MPs actually seems somewhat doubtful to me, for as matters turn out, these elements often cannot really be treated as being fully on a par. To see this, consider for instance the minimal pair I list in an exemplary fashion in (4/38), where, according to my English native speaker informants, moving from the MPC in (4/38a) to the corresponding equative involving an explicit ratio modifier in (4/38b) leads to a considerable improvement in acceptability:

- (4/38) a. **Dan is 1.57m short.*
b. ?*Dan is twice as short as Sam.*

Secondly, while it is true that antonyms are generally excluded from MPCs in the English language, my empirical investigation has clearly shown that this restriction is neither valid for German, nor for French (cf. the discussion of antonymic variation in subsection 4.3.2.2 above). And thirdly, the last claim made in Sassoon (2009, 2010a) actually happens to be quite unsatisfactory as such: Given that the idea of a ‘transformation’ constitutes the decisive element in accounting for the (non-)occurrence of a given positive adjective with an overt MP under this account, a much more precise specification of the exact circumstances in which adjectives are supposed to come with a scale that happens to be transformed in nature would definitely be required. As it presently stands, however, the analysis advocated in Sassoon (2009, 2010a) does unfortunately not contain any indication of when to expect such a transformation to take place. Also note that from a cross-linguistic point of view, the whole concept of transformation seems fairly dubious right from the outset: In this context, consider for example the results gained from my empirical study for adjectives such as English *heavy* as opposed to its German equivalent *schwer* and English *expensive* versus its German counterpart *teuer* or all adjectives relating to temperatures throughout (cf. concepts 13, 12 and 13 again in the tables provided in (4/8), (4/9) and (4/11) in section 4.2.2 above): If one made an attempt at upholding the approach put forth in Sassoon (2009, 2010a), one would inevitably have to claim that the predicates *heavy*

¹⁵¹ Note in passing that essentially the same line of argumentation preventing antonymous adjectives from occurring in overt MPCs is still maintained in Sassoon (2010b) as well as in Sassoon (2011).

and *expensive* are associated with transformed scales, whereas their German equivalents are not, which is a rather unattractive assumption to make in view of the fact that it seems highly implausible that scales of weights or prices vary across individual languages with respect to their inherent (non-)ratio-like structure. And as far as adjectives pertaining to the domain of temperatures are concerned, this would be tantamount to saying that the temperature scale is transformed in English, non-transformed in German and to be located somewhere in between in French, although it is hardly conceivable that the measurement of temperatures differs in these languages, where even the underlying Celsius scale is arguably exactly the same. Furthermore, it is observed in Sassoon (2010a) that with one-dimensional unit names, “the explicit mention of an adjective in numerical degree constructions [that is, MPs] [...] may [be] unacceptable” (ibid., p. 169). This represents a much weakened version of the account originally proposed in Murphy (1997), which I shall discuss at some length in subsection 4.4.4 below, a weakening which however makes this account lose virtually all of its explanatory power and that results in an almost ‘anything goes’-like situation, given that the vast majority of units of measurement happen to be one-dimensional, anyway (cf. for instance *ton, kilogram; minute, hour, second, day, month, year; volt, ampere; decibel; degree Kelvin, degree Celsius; miles per hour* among many, many others), so that with the whole array of adjectives combining with any of these units, no clear-cut predictions at all are made in Sassoon (2009, 2010a).¹⁵²

For the sake of completeness, let me finally mention that in later work (Sassoon (2010b)), the author speculates about “connecting evaluativity and transformation” (ibid., p. 172), without taking a clear stance on this issue in the end, though. If this connection was indeed established, it would ultimately offer a precise specification of when to expect transformations to occur, namely whenever a given adjective triggers evaluativity. Such an approach would then boil down to saying that the presence of evaluativity blocks the combination of an adjective with an overt MP, an idea that had already been proposed in Krasikova (2009). Importantly observe, however, that such an account is in conflict with my empirical findings, too, in that evaluativity does not generally correlate with the impossibility of modifying an adjective by an MP. In this fashion, in the German and French sentences given in (4/39) and (4/40) below, respectively, the antonyms *schmal* (*narrow*) and *étroit* (*narrow*) retain their evaluative meaning component and nevertheless appear in overt MPCs:

(4/39) *Das noch fehlende Brett muss genau zwei Zentimeter schmal [narrow] sein.*

(4/40) *Le passage entre ces deux roches s’est avéré étroit [narrow] de 35 centimètres.*

¹⁵² This weaker version of Murphy (1997)’s observation reappears again in Sassoon (2010b, p. 155, footnote 14).

And as will be demonstrated in more detail in subsection 4.5.2.4.1 below, this actually represents a general property of antonyms appearing in MPCs in the German and French languages.¹⁵³ In sum, such a modified version of the original approach developed in Sassoon (2009, 2010a) enhanced by considerations of evaluativity is thus clearly not tenable, either.

4.4.2 Kennedy (2001)

Let me continue my re-evaluation of existing approaches to the distribution of MPCs by having a look at the proposal made in Kennedy (2001), next. Drawing on central insights in particular from von Stechow (1984b), this account of the (un-)availability of overt MPCs crucially hinges on the following three fundamental assumptions: First, positive adjectives introduce positive sets of degrees, that is closed, finite intervals ranging from the lower boundary of a scale up to a certain point P on it ($[0 \rightarrow P]$), second, negative adjectives (with the exception of adjectives giving rise to an upper boundary on the scale with which they come; cf. section 3.3.1.2.1 above) are by contrast associated with negative sets of degrees, which is unbound, infinite intervals ranging from a particular point P on a given scale upwards ($[P \rightarrow \infty]$) and third, ordering relations such as “>” for ordinary comparatives, “<” for *less* comparatives or “ \geq ” in the case of equatives are defined only if the degree arguments are of the same sort, so that both either have to be positive or negative in nature. Therefore, an MPC involving a positive adjective, such as that in (4/41) below, is unproblematic under this approach, because here, the positive adjective *tall* combines with a likewise positive set of degrees denoted by the explicit MP *six feet*, the latter automatically counting as positive by virtue of the fact that units of measurement are invariably taken to express inherently positive sets of degrees in that these measure an entity from the zero point of the respective scale upwards and given that numerals are assumed to simply contribute the concatenation of such positive sets of degrees:

(4/41) *Michael is six feet tall.*

Conversely, according to Kennedy (2001), combination of an antonym with an explicit MP, as exemplified in (4/42) on the next page, is ruled out due to the fact that this time, a positive set

¹⁵³ In section 4.5.2.4, I shall develop a special semantics for antonyms occurring in German and French MPCs precisely designed to capture the retention of this evaluative flavour with MPCs based on negative adjectives.

of degrees (*five feet*) cannot felicitously combine with an antonym like *short* that in turn refers to a negative set of degrees.¹⁵⁴

(4/42) **Michael is five feet short.*

When evaluating the account developed in Kennedy (2001) in the light of my newly elicited data on MPs, it soon turns out that many of the points of criticism for the proposal defended in Sassoon (2009, 2010a) discussed in the previous subsection are valid for the former one as well: Once again, antonyms are generally excluded from MPCs, which constitutes a welcome prediction for English only and has been shown to neither hold in German nor in French, beforehand. And once more, the attested cross-linguistic variation is also totally unexpected under such an approach: The only way to explain differences in acceptability with English *expensive* as opposed to German *teuer* (*expensive*) (and the like) would for instance be to claim that the former gradable predicate gives rise to a negative set of degrees, while the latter is to be associated with a positive one, but making such a move seems highly implausible to me and in the end, it thus remains completely unclear why this difference should exist if the analysis put forth in Kennedy (2001) was indeed on the right track. In addition, with this type of approach, a new difficulty arises in that in its current version, it predicts all positively oriented adjectives to be fine with overt MP modification without exception, so that for example an adjective like *heavy* is expected to appear in MPCs. Contrary to expectations, this is however not the case, as can be seen from the unacceptable status of the test sentence shown in (4/43) below:

(4/43) **At the local baker's shop, a two-kilo-heavy loaf of bread is one pound sixty.*

With such an example, the positive set of degrees denoted by the MP *two-kilo* should after all be able to combine with the positive adjective *heavy* and yet, sentence (4/43) has been judged to be definitely out by most of the English native speakers I have consulted. In total, the predictions arrived at in Kennedy (2001) with regard to the (un-)availability of direct MPCs are thus far too strong on the one hand, in that antonyms are generally ruled out from this special type of construction and on the other, they reveal themselves as being too weak at the same

¹⁵⁴ Essentially the same point is also made in Svenonius/Kennedy (2006), where the two authors additionally observe a strong, though not perfect correlation between the (non-)occurrence of direct MPCs and that of “Null Degree Questions” in certain dialects of Norwegian and a particular subform of these in Icelandic (*ibid.*, section 1.3) and where, in a rather casual fashion, the two authors also mention “idiosyncrasies in the system of overt measure phrases” (*ibid.*), without however subsequently elaborating on this issue at all.

time, when it comes to constraining the possibilities of combining positive adjectives with overt MPs.

4.4.3 Winter (2005)

As a next step, I should like to re-examine the analysis offered in Winter (2005). Abstracting away from the intricate details of Vector Space Semantics (the theoretical framework in which this account is set) and also from the precise mechanisms of a general triviality filter along the lines of Barwise/Cooper (1981) the author presumes to underlie his approach, Yoad Winter's account of the distribution of MPCs essentially boils down to the following two main ingredients: Firstly, only unbounded adjectives like for instance *tall* are taken to license modification by an overt MP, whereas bounded ones such as for example *short* are not. At the end of the day, this amounts exactly to a ban on antonyms from MPCs, as has already been observed with Sassoon (2009, 2010a) as well as with Kennedy (2001) and is of course subject to the same counter-evidence as indicated before. Secondly, among the group of unbounded adjectives, only those that are associated with fully exhaustive scales are assumed to appear in MPCs. In this fashion, adjectives like *fast* or *expensive* are for instance excluded from co-occurrence with a direct MP, because, according to Winter (2005), their scale is to be classified as non-exhaustive in that the absolute zero point associated with speeds or prices is not included on the respective scales. This state of affairs is highly reminiscent of the notion of 'transformation' made use of in Sassoon (2009, 2010a) and immediately gives rise to difficulties of a similar nature: As with Sassoon (2009, 2010a), in Winter (2005), it also remains largely unclear which scales should count as exhaustive in this sense and which others should not and once again, it is specifically the type of cross-linguistic variation that poses particular challenges for this kind of approach, as well. For in order to maintain it, one would this time have to postulate that English *expensive* or *heavy* come with non-exhaustive scales in contrast to their German equivalents *teuer* and *schwer* and in a similar fashion, temperature scales would have to be considered as exhaustive in German, non-exhaustive in English and finally as situated somewhere in between in French, which once more constitutes a perfectly implausible assumption to make, given that the workings of temperature measurement and the underlying scales are probably exactly the same in all three languages alike.¹⁵⁵

¹⁵⁵ In my opinion, the idea that positive adjectives such as *tall* completely exhaust their scales in an absolute sense is not unproblematic, either: Taken at face value, sentences such as that included in (i) below should actually be totally legitimate:

(i) ^{??}*Peter is taller than the surface of the floor.*

Moreover, the approach advocated in Winter (2005) even runs into an additional problem, because here, it is argued that there is no such thing as an independent positive operator and that effects of evaluativity stem from the basic lexical entry of a given adjective itself and are afterwards neutralised in comparatives or MPCs. However, as has already been noted in section 4.4.1 above and as will be elaborated in more detail in subsection 4.5.2.4 below, it is simply not true that evaluativity is always neutralised in MPCs, which has been shown in an exemplary fashion with sentences (4/39) and (4/40) beforehand, featuring MPs that in fact retain their evaluative meaning component. In sum, the analysis developed in Winter (2005) therefore actually gives rise to more difficulties than the ones previously discussed.

4.4.4 Murphy (1997)

One of the most creative and innovative accounts of the (un-)availability of direct MPCs was proposed in Murphy (1997), where it is claimed that “adjectives occur in MPs just in those cases where ambiguity is a problem (because the same unit of measurement can occur in different dimensions [...])” (ibid.). Under such an approach, an adjective is thus taken to primarily perform a disambiguating function when appearing in an MPC. This explains for instance neatly why we get examples like the one given in (4/44) below:

(4/44) *The parcel is fifteen inches long.*

Here, the unit of measurement *inch(es)* is indeed highly ambiguous in that in and by itself, it could specify the parcel’s length, but also its extension in any of the two other spatial dimensions, that is its height or its depth, so that fully in line with Murphy (1997), the adjective *long* is added for reasons of disambiguation. And in a similar fashion, such an analysis also correctly rules out the second sentence in the minimal pair introduced in (4/45) on the following page, where the unit of measurement *euro* can after all refer to nothing other than a monetary unit, to the effect that the insertion of the adjective *expensive* is completely unnecessary in terms of disambiguation and therefore excluded:¹⁵⁶

This follows from the fact that such a surface happens to have no vertical extension at all, so that its height corresponds to the absolute zero point of the height scale as such, and if this scale was indeed fully exhaustive, it should after all be possible to apply it to entities located on that zero point and yet, sentences like (i) are highly marked to say the very least.

¹⁵⁶ In Murphy (2006), the author substantially altered her proposal for the distribution of MPCs and integrated it into a constructional approach, which unfortunately made it lose almost all of its explanatory potential, however, because (in-)compatibility of a gradable predicate with an overt MP is now simply specified individually for each case, which is tantamount to pursuing an approach in which the (non-)occurrence of a given adjective in an MPC is exclusively determined by the lexicon alone. At the same time, in Murphy (2006), at least a short passage on the

- (4/45) a. *Andrew Radford's latest book on syntax is almost 60 euro.*
 b. **Andrew Radford's latest book on syntax is almost 60 euro expensive.*

These predictions are certainly most welcome, but a closer look at the data immediately reveals that the approach advocated in Murphy (1997) clearly cannot be maintained as it stands. For as a matter of fact, building MPs on the basis of totally unambiguous units of measurement does very often not lead to unacceptability or even any sort of markedness at all, as illustrated by the absolutely impeccable status of the sets of examples listed in (4/46), (4/47) and (4/48) below for the three languages English, German and French, in turn, all of which invariably feature unambiguous units of measurement throughout (indicated by underlining in what follows):

- (4/46) a. *At his second election, the president was already 74 years old.*
 b. *When finally reaching Birmingham, the train was almost 30 minutes late. [= (4/21)]*
 c. *Surprisingly enough, his train had been more than half an hour early.*
- (4/47) a. *Die Lampe in unserem Schlafzimmer ist 100 Lux hell [bright].*
 b. *Beim Start wird ein Düsenjet rund 90 Dezibel laut [loud].*
 c. *Der durch die Anlage fließende Strom ist etwa 100 Ampere stark [strong].*
- (4/48) a. *Son oncle est âgé [old] de 72 ans.*
 b. *L'arrivée de ce train a été anticipée [early] d'un quart d'heure, ce qui a surpris tout le monde.*
 c. *Le départ de son train a été retardé [late] de dix minutes en raison d'un incident technique.*

Exactly as has already been noted for the accounts in Sassoon (2009, 2010a), Kennedy (2001) and Winter (2005) in the preceding subsections, an additional serious problem is furthermore constituted by cross-linguistic variation, as exemplified by the contrasting acceptability of the English example in (4/49a) as opposed to the corresponding German one in (4/49b):

- (4/49) a. **At the local baker's shop, a two-kilo-heavy loaf of bread is one pound sixty.*
 [= (4/43)]
 b. *Ein zwei Kilo schwerer [heavy] Laib Brot kostet bei uns 3,60 Euro.*

Under Murphy (1997)'s approach, such contrasts are totally unexpected, given that the unit of measurement *Kilo* in German is arguably just about as unambiguous as its direct English equivalent *kilo* and obviously, the same also goes for temperature units like *degree Celsius*, so that no cross-linguistic variation can be predicted for these, either. It therefore turns out that in spite of its very innovative and creative character, the account offered in Murphy (1997)

diachronic development of this phenomenon is provided (ibid., pp. 94f.), an issue which, to the best of my knowledge, has never been tackled elsewhere, so far.

eventually fails with a considerable proportion of the empirical data. Still, one part of the generalisation reached, there, can actually be largely confirmed: It is indeed the case that adjectives combining with MPs involving ambiguous units of measurement typically appear in MPCs. In the course of my empirical investigation, I have found that in the three languages under consideration, this holds (at least)¹⁵⁷ for the entire set of adjectives listed in (4/50):

- (4/50) a. English: *deep, high, (spatial) long, tall, thick and wide*
b. German: *breit, dick, entfernt, groß, hoch, (spatial) lang and tief*
c. French: *ample, distant, éloigné, épais, haut, large, (spatial) long, profond and vaste*

The only genuine counterexamples I have happened to come across in my study are the English adjectives *expensive* and *heavy* when combining with the unit of measurement *pound(s)*, which is ambiguous in that it can refer either to a monetary unit or to one of weight and nevertheless, when testing minimal pairs such as that specified in (4/51) below, both variants, the one featuring the gradable predicate *expensive* (4/51a) as well as that including *heavy* (4/51b), have been judged to be totally unacceptable by my English native speakers alike:

- (4/51) a. **They offered him a ten-pound-expensive sack of flour.*
b. **They offered him a ten-pound-heavy sack of flour.*

At this point, I should like to stress, however, that this phenomenon has a very limited scope, because it concerns British English, only, in that this ambiguity does not arise in other English speaking countries, since these make use of monetary units different from the pound, such as for instance dollars in the US or Australia, rands in the case of South Africa, rupees with India, etc., which prevents the emergence of such an ambiguity right from the outset. And even in the former variety of English, this ambiguity is largely confined to the domain of written language in that the slightly colloquial expression *quid* has surely become much more common than *pound(s)* in spoken everyday language. In view of these concomitant factors, the potential disambiguating function of the adjectives *heavy* and *expensive* is therefore highly restricted, and it seems fully plausible to me that this state of affairs can be held responsible for the fact that these two predicates cannot normally be combined with overt MPs. In total, I thus conclude that while it is impossible to stick to the approach proposed in Murphy (1997) in its original version, a weaker variant thereof, according to which adjectives typically co-occurring with

¹⁵⁷ I am cautiously including the term “at least”, here, because, as has been announced at the end of subsection 4.2.1 above, I shall refrain from making any concrete statements about predicates that attracted average ratings located in the grey zone between “2” and “3” on the underlying acceptability scale, which I have deliberately left in view of the rather limited overall number of informants consulted for these studies.

ambiguous units of measurement permit direct MPCs, makes largely correct predictions, instead. In section 4.5.2.3, I shall therefore come back to such a revised version of the account in Murphy (1997), where I shall also offer a formalisation capturing this fundamental generalisation.

4.4.5 Schwarzschild (2005)

To complete this overview of existing approaches to the (un-)availability of direct MPCs, let me finally take a look at the analysis put forth in Schwarzschild (2005). Under this view, overt MPCs based on antonymous adjectives are generally excluded for theoretical reasons right from the start, because for the author, these are associated with scales lacking a lower boundary (*ibid.*, pp. 217 to 219). As we have already seen on several occasions by now, this is true for English, but neither for German nor for French, so that such a theoretical, language-independent claim is evidently far too pervasive. In addition, in Schwarzschild (2005), a “Homonym Rule”, reproduced in (4/52), is formulated (where “A” abbreviates ‘adjective’), and the author provides a specification in the form of a list as to which individual adjectives precisely this Homonym Rule is supposed to apply to, as indicated in (4/53):

- (4/52) Homonym Rule: from degrees to intervals.
 If A has meaning A' that relates individuals to degrees then A has a secondary meaning relating individuals to sets of degrees (intervals).
 The secondary meaning is given by: $\lambda I [\in D_{\langle d, t \rangle}] . \lambda x [\in D_e] . I = \{ d : A' (x, d) \}$
 [Schwarzschild (2005), p. 216; his (31)]
- (4/53) Homonym Rule applies to *tall, wide, deep, thick, old, long, high*. [ibid.; his (32)]

Under this kind of approach, it is thus a basic type mismatch that accounts for the fact that gradable adjectives do not permit overt MPCs across-the-board, given that these open up an argument slot of type $\langle d \rangle$ and that MPs are in turn assumed to denote sets of degrees of semantic type $\langle d, t \rangle$, instead. The lexical rule in (4/53) then picks out particular adjectives, and once the Homonym Rule in (4/52) has applied to these, they are equipped with a specific argument structure ultimately enabling them to directly combine with MPs.

As it turns out, such an account comes with many immediate advantages: First of all, it is now possible to list exactly those adjectives that do indeed allow direct MPs, so that the challenges raised by examples like the ones introduced in (4/46) to (4/48) before are bound to disappear right away. At the same time, with the analysis suggested in Schwarzschild (2005), it is also feasible to specify a different behaviour of adjectives across individual languages

without any further ado, to the effect that the puzzle created by data such as (4/49a) as opposed to (4/49b) for Murphy (1997) can also be solved rather straightforwardly, just as is the case with the difficulties posed by cross-linguistic variation in general (cf. subsections 4.4.1 to 4.4.4 above). In a similar fashion, the proposal in Schwarzschild (2005) moreover directly permits to account for the fact that some languages happen to be characterised by a total lack of direct MPCs altogether (cf. the group of such languages identified in subsection 4.3.1.1 in the context of universal variation), simply by stating that these languages do not include rules along the lines of (4/52) and (4/53) in their lexicon to begin with and what is more, this approach also offers an interesting possibility of explaining the graded nature of the acceptability of MPs, by virtue of the fact that it is largely uncontroversial that the lexicon can vary considerably among individual speakers of a given language, in that these make use of a different vocabulary and the like. Despite these apparent strengths, it must however also be noted that the account suggested in Schwarzschild (2005) comes with a couple of fairly obvious weaknesses, the most prominent of which is undoubtedly constituted by the fact that this approach is highly descriptive in nature and has very little explanatory power.¹⁵⁸ Apart from that, some aspects of the theoretical implementation of this analysis also seem very unattractive to me, in particular the quite unusual semantics proposed for differentials (the details of which I shall not enter, here) as well as the notion of lexical rules per se: In a rule such as that in (4/53) above, for instance, all adjectives of the English language permitting direct MPCs would have to be included, and I am totally unsure whether Roger Schwarzschild actually intended this rule as being truly exhaustive or not. If the former was indeed the case, this rule would evidently be largely incomplete (cf. the table I have provided in (4/8) in subsection 4.2.2.1 above to see that after all, many more English adjectives allow this particular kind of construction) and of course, there happens to be a general risk of omissions with the establishment of this type of rule.

In spite of these shortcomings, the basic idea advocated in Schwarzschild (2005), according to which it is the lexical resolution of a fundamental mismatch in semantic types what is at stake with the (in-)compatibility of a given predicate with an overt MP, seems quite convincing to me and in the ensuing section 4.5, I shall therefore take precisely this idea as a starting point for a novel cross-linguistic approach to the distribution of overt MPCs that is intended to offer improvements on the various deficiencies the original analysis in Schwarzschild (2005) gives rise to: To this end, I shall suggest a completely different semantics

¹⁵⁸ This has led Lynne Murphy so far as to call the analysis in Schwarzschild (2005) a “‘brute force’ approach to the problem” (Murphy (2006), p. 90), but later on, she has to admit that her own account “provides no explanation for why some adjectives and not others occur in it [that is, an MPC]” (ibid., p. 94), so that in the end, the approach she develops herself for the distribution of MPCs does not really fare any better in this respect.

for differentials and instead of postulating lexical rules, I shall propose directly modifying the lexical entries of the respective adjectives as such. Furthermore, I shall also elaborate four different generalisations underlying the (non-)occurrence of a given predicate with an explicit MP that will substantially enhance the explanatory potential of the account. Additionally, I shall make radically different claims about the possibilities of overtly combining antonymous adjectives with MPs, which are excluded from MPCs in Schwarzschild (2005) altogether (except for MPs used as differentials in comparatives), in order to finally be able to adequately handle not only the English, but also the German and the French data.

4.5 A Cross-Linguistic Approach to the Distribution of Measure Phrases

In the course of this section, I shall develop a new approach to direct MPCs that is designed to appropriately capture both, their (non-)occurrence within a given language as well as that across individual languages. Doing so, I shall start out by presenting the basic model I have in mind (section 4.5.1), before going into specific details and adding four different types of generalisations that govern the (un-)availability of MPCs and that pertain to innovations (subsection 4.5.2.1), differentials (section 4.5.2.2), ambiguous units of measurement (4.5.2.3) and ultimately to antonymous adjectives (4.5.2.4), respectively. In the latter subsection, I shall moreover propose an entirely novel semantics for antonyms appearing in German and French MPCs (subsection 4.5.2.4.2), an issue which, as far as I am aware of, has never been addressed in linguistic literature up to now and in addition, I shall also investigate the consequences this approach has for the potential decomposition of antonymous adjectives at a syntactic level (section 4.5.2.4.3) as well as the various predictions it makes with regard to effects of evaluativity (4.5.2.4.4), as a result of which a completely new classification of gradable adjectives will eventually come into existence.

4.5.1 The Basic Account and a Model for Variation across Languages

The account of the distribution of direct MPs I am about to elaborate, here, primarily rests on the following two simple and straightforward basic assumptions: Firstly, gradable predicates are taken to denote relations between individuals and degrees and secondly, MPs are claimed not to merely express degrees of type <d>, but entire sets of degrees of semantic type <d,t>, instead. As a matter of fact, there is nothing special about the first of these two assumptions that by contrast happens to be quite widespread and which I have been adopting in sections 2 and 3 of this dissertation, already (cf. for instance the lexical entries for the Turkish

adjective *uzun* (*tall*) specified in (2/51) in section 2.2.3.2 above, that for the Turkish adverb *hızlı* (*fast*) given in (2/91) in section 2.3.2 or finally that provided for English *good* (in an intensional framework) in (3/42) in section 3.3.2.2). The crucial idea with the second is (exactly as in Schwarzschild (2005); cf. the discussion in subsection 4.4.5 above) that MPs cannot just denote degrees, because under this view, there would be no blocking effect any more, and all gradable adjectives would wrongly be predicted to be fully compatible with MPs throughout. Of course, one might also consider the option of ascribing an alternative denotation to MPs. In this fashion, application of a type of Montague-shift to degrees would for instance result in MPs being elements of type $\langle\langle d, t \rangle, t \rangle$. While it is in principle not totally impossible to endorse this latter option, I am going for the $\langle d, t \rangle$ -variant, here and this mainly for the following three reasons: First of all, this is the less complex type, simplicity surely being a desirable goal as such. Secondly, the idea that MPs denote sets of degrees has already quite often been independently defended in the literature (apart from Schwarzschild (2005), cf. for instance Kennedy (2001) or Morzycki (2009), among many others).¹⁵⁹ And thirdly, processing studies by Martin Hackl and colleagues (cf. in particular Breakstone/Cremers/Fox/Hackl (2011)) have additionally shown that a differential in a comparative is not scopally active, which would incorrectly be expected from assigning differentials a basic entry of semantic type $\langle\langle d, t \rangle, t \rangle$. Under the approach I am developing here, MPs are therefore not considered as ‘basic’, but they require a type-shifted variant of the gradable predicate they co-occur with, which must in turn be licensed explicitly in the lexicon. In (4/54) and (4/55) below, I provide lexical entries for the English adjective *deep* and its German equivalent *tief*, respectively, the (a)-versions of which are intended for ‘ordinary’ usages of these expressions,¹⁶⁰ whereas the corresponding (b)-variants specify shifted entries for these that are intended exclusively for their occurrence in overt MPCs:

- (4/54) a. $[[deep_1]] = \lambda d \in D_d. \lambda x \in D_e. \text{depth}(x) \geq d$
 b. $[[deep_2]] = \lambda D \in D_{\langle d, t \rangle}. \lambda x \in D_e. \text{depth}(x) \geq \max(D)$
- (4/55) a. $[[tief_1]] = \lambda d \in D_d. \lambda x \in D_e. \text{depth}(x) \geq d$
 b. $[[tief_2]] = \lambda D \in D_{\langle d, t \rangle}. \lambda x \in D_e. \text{depth}(x) \geq \max(D)$

¹⁵⁹ Among the rare exceptions in this respect counts Heim (2006b), where the author settles for the alternative option, stating that degree phrases “should be viewed as generalized quantifiers over degrees of one sort or another” (ibid., section 2) and proposing denotations of type $\langle\langle d, t \rangle, t \rangle$ for these, Beck (2012b) following suit.

¹⁶⁰ In the terminology adopted here, an ‘ordinary’ usage of an adjective contrasts with one in an overt MPC. Note that this is different from what I have been doing in section 3 of this dissertation, where I opposed ‘ordinary’ uses of gradable predicates to ‘propositional’ ones, the latter not being relevant in the context of MPCs.

Let me also introduce a notational convention, here, to which I shall stick in the remainder of the whole of section 4.5: I shall refer to adjectives in their ordinary use, that is in all types of linguistic configurations other than MPCs proper, as ‘type1’-adjectives and to their counterparts appearing in the latter as ‘type2’-adjectives, which I have also meant to indicate by the little subscripts in the entries supplied in (4/54) and (4/55) above. In general, observe that type2-adjectives can be systematically derived from their underlying type1-equivalents by simply applying the type-shifting rule specified in (4/56) below:¹⁶¹

$$(4/56) \quad [[\textit{adjective}_2]] = \lambda D \in D_{\langle d, t \rangle}. \lambda x \in D_e. [[\textit{adjective}_1]] (\max (D)) (x)$$

In the French language, where only prepositional MPCs are allowed, whereas direct ones are completely unattested, I furthermore assume that the obligatory presence of a preposition (*de* (*of*) in the vast majority of cases; cf. subsection 4.3.1.1 above) constitutes the visible reflex of precisely this type-shifting operation taking place, and the lexical entries for French *profond* (*deep*) would thus look as shown in (4/57a) for its ordinary use as a type1-adjective and in (4/57b) for the special usage of this adjective in explicit MPCs, respectively:

$$(4/57) \text{ a. } [[\textit{profond}_1]] = \lambda d \in D_d. \lambda x \in D_e. \text{depth} (x) \geq d$$

$$\text{ b. } [[\textit{profond}_2 (de)]] = \lambda D \in D_{\langle d, t \rangle}. \lambda x \in D_e. \text{depth} (x) \geq \max (D)$$

Alternatively, it is also conceivable that in French, the overt presence of a preposition might shift its complement MP from type $\langle d, t \rangle$ to $\langle d \rangle$. Crucially observe, however, that it would then be totally unclear why it is not generally possible to insert such a type-shifting preposition with any gradable adjective, and it would thus remain a complete mystery why the particular choice of adjective matters, instead. Note in passing that essentially the same problem also arises in approaches where the adjective happens to be an argument of the MP itself, which is for instance the case in Kennedy (2009) (including the following entry for the MP *10cm*: $[[10cm]] = \lambda g \in D_{\langle d, \langle e, t \rangle \rangle}. \lambda x [\in D_e]. \max \{d \mid g (d) (x) = 1\} = 10cm$ (ibid.), p. 160; his (57)). In contrast to this, I am approaching matters exactly the other way around here, in assuming that MPs constitute arguments of the respective adjectives, which has the advantage of allowing me to directly restrict their occurrence to particular adjectives, only.¹⁶²

¹⁶¹ Interestingly enough, application of the type-shifting rule in (4/56) results in the derivation of gradable adjectives of type $\langle \langle d, t \rangle, \langle e, t \rangle \rangle$, which is exactly the same semantic type that is generally attributed to all gradable predicates in Heim (2006b)’s approach, as can be seen in an exemplary fashion from the author’s lexical entry for the adjective *long* reproduced in (i) below:

(i) $[[\textit{long}]] = \lambda D [\in D_{\langle d, t \rangle}]. \lambda x [\in D_e]. x\text{’s length} \in D$ [ibid., section 3; her (13)]

¹⁶² What is possible though is that the French preposition *de* simply represents a semantically vacuous element rather than the immediate reflex of a type-shift as suggested in the main text and that it still depends on the adjective whether the lexicon also specifies a type2-variant for it alongside with its basic type1-entry.

Having these basic ingredients of my analysis in place, let me next go on to have a look at the derivation of a couple of concrete examples. To get things started, consider sentence (4/58), featuring a canonical English predicative MPC based on the adjective *tall*:

(4/58) *Mary is 1.80m tall.*

On the assumptions that the MP *1.80m* denotes the interval stretching from the zero point of the height scale with which the gradable predicate *tall* is associated up to the degree corresponding to 1.80m, as indicated by its denotation included in (4/59) below and that the lexicon contains a shifted type2-variant of the adjective *tall* such as that specified in (4/60), the statement in (4/58) will ultimately be predicted to come out true if and only if Mary's height reaches or exceeds 1.80m, as its truth conditions shown in (4/61) below require, which is as desired, given that this corresponds exactly to what sentence (4/58) arguably means:

(4/59) $[[1.80m]] = \lambda d \in D_d. 0 \leq d \leq 1.80m$

(4/60) $[[tall_2]] = \lambda D \in D_{\langle d, t \rangle}. \lambda x \in D_e. \text{height}(x) \geq \max(D)$

(4/61) $[[(4/58)]] = 1$ iff $\text{height}(Mary) \geq 1.80m$

Given that the derivation of an example involving an attributive MPC would obviously proceed in an absolutely parallel fashion, I shall skip this step and immediately press on to that of the differential MPC given in (4/62) below:

(4/62) *Mary is two inches taller than Peter.*

On the basis of the differential comparison operator displayed in (4/63) below, sentence (4/62) will then be associated with the truth conditions spelt out in (4/64), which once again yields precisely the desired result in view of the fact that for this sentence to be considered true, Mary has indeed to be at least two inches taller than Peter:

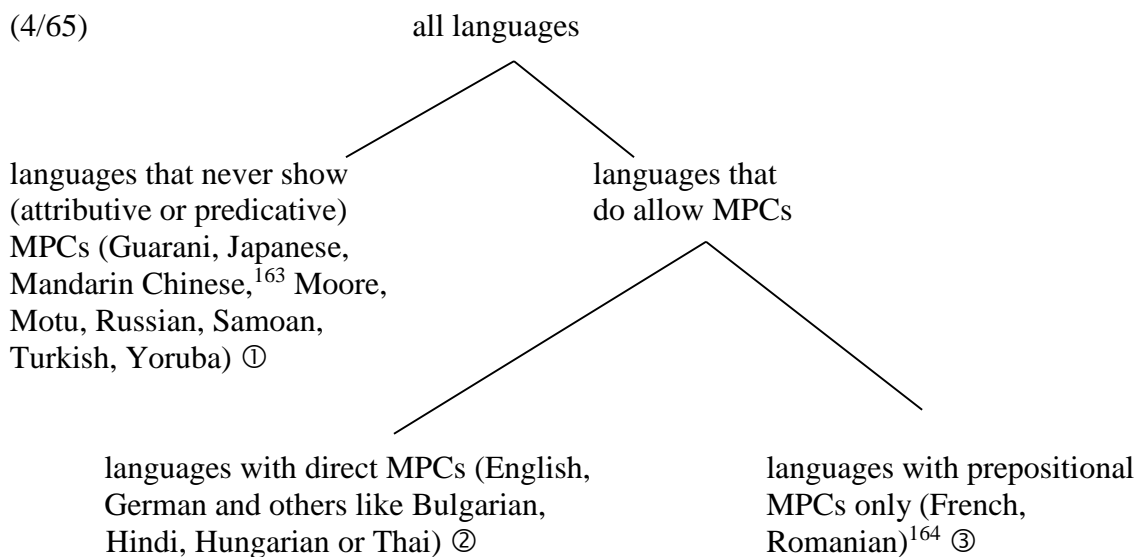
(4/63) $[[-er_{diff}]] = \lambda D_1 \in D_{\langle d, t \rangle}. \lambda D_2 \in D_{\langle d, t \rangle}. \lambda D_3 \in D_{\langle d, t \rangle}. \max(D_3) \geq \max(D_2) + \max(D_1)$

(4/64) $[[(4/62)]] = 1$ iff $\max(\lambda d. \text{height}(Mary) \geq d) \geq \max(\lambda d. \text{height}(Peter) \geq d) + \text{two inches} = \text{height}(Mary) \geq \text{height}(Peter) + \text{two inches}$

Note in passing that the assumption that differentials denote entire sets of degrees rather than simple degrees automatically leads to the perfectly symmetrical lexical entry for the differential clausal comparison operator in (4/63), in that this operator now combines with three arguments of exactly the same semantic type, which undoubtedly constitutes a most welcome side effect

of the analysis I am pursuing here. In contrast to this, its corresponding variant in which differentials are taken to denote degrees that had been introduced in (2/100) in subsection 2.3.3.3 above did not display such a symmetry.

As a next step in the development of my proposal, I should like to suggest the following cross-linguistic pattern for the (non-)occurrence of direct MPCs across languages based on two fundamental dichotomies, which is given in (4/65) and makes use of the classification of languages arrived at in Beck et al. (2009) that I have introduced in section 4.3.1.1:



With the languages included in group ① in this overview, the lexicon does not specify any gradable predicate as a type2-adjective compatible with overt MPs at all and consists of type1-predicates only, which immediately accounts for the attested universal variation described in subsection 4.3.1.1 before. As far as languages belonging to classes ② and ③ are concerned, on

¹⁶³ As noted before (cf. footnote 142 in section 4.3.1.1 above), the status of Mandarin Chinese is not quite clear in this respect and if the data given in Eckhardt (2011) are correct, this language should actually count among the second rather than the first group of languages. I shall return to this issue once more in subsection 4.5.2.4.4.

¹⁶⁴ It is interesting to observe that French and Romanian are not to be put exactly on a par, although insertion of a preposition can license otherwise illicit MPCs in these languages alike. However, in the latter language, this sort of last resort operation is also available with other degree constructions, such as for instance degree questions or subcomparatives (Gergel (2010)), whereas adding the respective preposition *de* (*of*) in French does not help to improve matters in this regard, degree questions for example always being ungrammatical in this language, irrespective of whether these include the preposition *de* or not, as demonstrated in (ia) and (ib), which are likewise bad:

- (i) a. **Combien* *haut* *est* *ce* *bâtiment ?*
 how_much high is this building
 b. **Combien* *de* *haut* *est* *ce* *bâtiment ?*
 how_much of high is this building
 both intended as: ‘How high is this building?’

At the same time, Spanish and thus yet another Romance language is reported not to allow MPCs at all (Beck (2011), p. 1378 and Bosque (1999), in contrast to Beck et al. (2009), the former position probably being correct), which shows that this group of languages diverges widely in terms of the (non-)occurrence of direct MPCs. In my opinion, a comparative study of this phenomenon across Romance languages would therefore be a most rewarding task, but unfortunately, I must leave this project for future research.

the other hand, the availability of direct or prepositional MPCs varies in several respects: first of all from language to language, explaining cross-linguistic variation (cf. subsection 4.3.1.3 above), secondly from one adjective to the next, which is responsible for language internal variation (cf. subsection 4.3.1.2) and thirdly also in so far as individual speakers of a given language may dispose of a different lexicon, ultimately liable for individual speaker variation (cf. subsection 4.3.2.1). As it turns out, the distribution of MPCs is however not totally accidental with languages counting among groups ② and ③, given that a couple of generalisations on their (non-)occurrence can in fact be drawn from my empirical study, to which I shall turn next in the ensuing subsection 4.5.2.

4.5.2 Four Generalisations on the Distribution of Measure Phrases with Languages Allowing these

4.5.2.1 Generalisation INNO

A first generalisation on the distribution of direct MPCs with languages in which these are indeed attested, that is languages belonging to groups ② and ③ identified in (4/65) in the previous subsection, concerns innovative uses of MPs, which I why I shall refer to this generalisation as ‘Generalisation INNO’ in what follows. As a matter of fact, at least in terms of synchronic productivity, differential MPs happen to be much more ‘basic’ than their equivalents appearing in predicative or attributive MPCs. For while the acceptability of MPs with ad hoc scales in innovative usages is generally subject to a considerable amount of variation across individual speakers (cf. subsection 4.3.2.1 above), comparatives featuring these as overt differentials are usually accepted much more readily in all three languages under consideration alike, as can be seen right away from diagrams number four to six in section C of the appendix to follow below for a particular choice of adjectives and which I illustrate here in an exemplary fashion by the clear-cut differences in acceptability with the sentences given in (4/66a), (4/67a) and (4/68a) below as opposed to those introduced in the corresponding (b)-variants for English, German and French, respectively:¹⁶⁵

- (4/66) a. *After completing his therapy, he was even ten points more aggressive than before.* [differential MPC]
 b. *[?]His behaviour was classified as 73 points aggressive.* [predicative MPC]

¹⁶⁵ As can be seen from the German example provided in (4/67a) in the main text, this does not necessarily mean that differential uses of innovative MPs are totally felicitous per se. All I am saying is that such differential MPCs are judged substantially better than their predicative or attributive equivalents, which is also valid for the pair of German examples in (4/67), where the differential MP in (4/67a) has attracted an average judgment of 2.6 versus one of 3.2 received for the predicative counterpart in (4/67b).

- (4/67) a. *?Nach der Therapiesitzung war er sogar noch 20 Punkte aggressiver als zuvor.* [differential MPC]
 b. **Sein Verhalten wurde als 73 Punkte aggressiv eingestuft.* [predicative MPC]
- (4/68) a. *Après avoir suivi un traitement, il était même plus agressif de dix points qu'auparavant.* [differential MPC]
 b. **Après plusieurs expériences, il a été classifié comme agressif de 73 points.* [predicative MPC]

This generalisation holds without exception for the entire set of adjectives listed in (4/69), that is for all the adjectives I have used for testing innovative MPCs in my empirical study throughout:

- (4/69) a. English: *aggressive, bad, beautiful, calm, good, progressive, reactionary and ugly*
 b. German: *aggressiv, gut, fortschrittlich, hässlich, rückschrittlich, ruhig, schlecht and schön*
 c. French: *agressif, beau, bon, calme, laid, mauvais, progressiste and réactionnaire*

Interestingly enough, there is independent evidence for analysing differentials as elements of semantic type <d,t> from a completely different linguistic area: When discussing results obtained from a processing study on ambiguities with comparatives featuring modals in combination with *exactly*-differentials (cf. also the discussion of the English example sentences specified in (2/86) and (2/97) and the Turkish one in (2/88) in subsections 2.3.3.3 and 2.3.4.3 above), Breakstone/Cremers/Fox/Hackl (2011) also reach the conclusion that (unmodified) differentials like *two inches* denote sets of degrees.¹⁶⁶ In view of the fact that under the current analysis of MPs defended here, an argument of semantic type <d,t> is exactly what is at stake in overt MPCs, it is of course no longer particularly surprising that MPs that cannot serve as differentials in comparatives are not licensed in the corresponding predicative or attributive MPCs either, so that ultimately, their usage as differentials is more basic and bound to precede their occurrence in predicative or attributive MPCs as far as productivity is concerned, which I have tested with the help of innovative uses of MPCs in the present empirical investigation. What is additionally of specific interest in this respect is that this fundamental direction line is not only operative in the case of innovations as such, but immediately reappears in the context of adjectives that combine with standard instead of ad hoc scales of measurement and that could thus potentially give rise to established rather than innovative MPCs, which is precisely what the next generalisation that I shall describe in subsection 4.5.2.2 is intended to address.

¹⁶⁶ I should like to thank Sigrid Beck for first drawing my attention to this absolutely striking parallel in analyses.

4.5.2.2 Generalisation DIFF

The second generalisation on the (non-)occurrence of overt MPCs I should like to introduce, here, is what I shall call the ‘Generalisation DIFF’, in that it is primarily related to the (un-)acceptability of MPs performing the function of explicit differentials in comparatives and the implications thereof for their compatibility with predicatively or attributively used MPCs. For as things turn out, the permissibility of a given MP as a differential in a comparative represents a necessary condition for its appearance in an attributive or predicative MPC. This observation is valid at least (cf. footnote 157 in subsection 4.4.4 above) for the English, German and French adjectives listed in (4/70a) to (4/70c) below, with all of which a bad result for the differential usage invariably correlates with likewise bad judgments for their uses in predicative and attributive MPCs (cf. also the diagrams number seven to nine supplied in section C of the appendix below for an initial overview comprising a selected number of adjectives and for the exact results, cf. the figures displayed in columns seven and fifteen as opposed to those listed in columns three, five, eleven and thirteen in the tables provided in (4/8), (4/9) and (4/11) in subsections 4.2.1 to 4.2.3 above for the three languages in turn):

- (4/70) a. English: *fat, flat, green, huge, lukewarm, silent, slim, thick* (with people), *thin, tiny* and *weak* (in number)
b. German: *aggressiv, dick* (with people), *dumm, fett, fortschrittlich, gerade, grün, hässlich, riesig, rückschrittlich, ruhig, schlank, schön, wahrscheinlich, winzig* and *unwahrscheinlich*
c. French: *bref, doux, faible* (in number), *gras, infime, loin, minuscule, nombreux, obscur, plat, sombre, sonore* and *svelte*

At the same time, observe however, that this constitutes only a necessary, but not a sufficient condition on the well-formedness of MPCs, because an impeccable use of a given MP as a differential does not in and by itself guarantee a similarly acceptable use as an attributive or predicative MPC at all, as illustrated on the basis of the English, German and French sets of examples indicated in (4/71), (4/72) and (4/73) below, respectively, where a fully acceptable differential MP in the (a)-sentences invariably co-occurs with predicative and attributive usages in the (b)-versions and the (c)-variants that by contrast are totally excluded:

- (4/71) a. *In this part of the plant, the current is about 200 amperes weaker than everywhere else.* [differential MPC]
b. **The electric current generated by such a largely useless device is about ten amperes weak.* [predicative MPC]
c. **A five-ampere-weak electric current is largely sufficient for making that wire glow.* [attributive MPC]

- (4/72) a. *Die momentane Glühbirne ist 20 Lux dunkler [dark] als die bisherige.*
[differential MPC]
- b. **Die Glühbirne in unserer Abstellkammer ist 40 Lux dunkel [dark].*
[predicative MPC]
- c. **Der Einbau einer 40 Lux dunklen [dark] Lampe hat die Beleuchtung in unserer Küche nicht spürbar verbessert.*
[attributive MPC]
- (4/73) a. *Le modèle actuel est plus cher [expensive] d'environ 40 euros que l'ancien, qui n'est plus en vente.*
[differential MPC]
- b. **Le livre de syntaxe dont nous avons besoin pour ce cours s'est avéré cher [expensive] de 60 euros.*
[predicative MPC]
- c. **Ses parents lui ont offert une voiture chère [expensive] de 17 000 euros après qu'il avait passé son examen de permis de conduire.*
[attributive MPC]

Thus, MPCs based on adjectives that yield unacceptable differentials in comparatives always result in infelicitous predicative and attributive MPCs as well, while the reverse is crucially not true in that it cannot be taken for granted that an adjective which can indeed be used in a differential MPC is also compatible with one that is attributive or predicative in nature.

Moreover, it is interesting to observe that the adjectives that are subject to this Generalisation DIFF can actually be subdivided into two separate classes, by virtue of the fact that some of these are not really gradable to begin with, whereas others in fact are. Let me first elaborate on the former of these two subclasses of adjectives, here: In the three languages considered, it contains those adjectives included for English in (4/74a), for German in (4/74b) and for French in (4/74c), respectively, as shown by the degraded status of the corresponding comparative forms I have added in round brackets for the individual adjectives in turn:¹⁶⁷

- (4/74) a. English: *green, huge, lukewarm and tiny* (cf. **greener/more green; *huger/more huge; *lukewarmer/more lukewarm; *tinier/more tiny*)
- b. German: *gerade, grün, riesig, verfrüht, verspätet and winzig* (cf. **gerader, *grüner, *riesiger, *verfrühter, *verspäteter, *winziger*)
- c. French: *infime and minuscule* (cf. **plus infime, *plus minuscule*)

For obvious reasons, adjectives that are not gradable to begin with lack a degree argument slot per se (in that they denote simple properties of semantic type $\langle e, t \rangle$), to the effect that the general type-shifting rule I have specified in (4/56) in subsection 4.5.1 above cannot be successfully applied to such adjectives, which immediately accounts for the impossibility of deriving shifted

¹⁶⁷ Note in passing that adjectives which are primarily non-gradable sometimes permit uses in which they occur in a metaphorically transformed sense, where they do indeed give rise to gradability, as illustrated for the adjective *dead* in (i) below, featuring an instantiation of this adjective in a comparative construction:

(i) *Three minutes into the second-half the non-League's obligatory fireman, Mottashed, instead of shooting himself in the foot, set fire to himself with a jittery own goal and Loram shortly made it 3-1, deader than dead.* [The Guardian.; accessed via the British National Corpus]

Observe, however, that this constitutes a rather special usage which happens to be largely irrelevant for the present discussion, where I intend to exclusively focus on adjectives in their original, that is non-transformed, meanings.

type2-variants thereof that would indeed be susceptible to modification by an overt MP. In this context, also notice that the pattern described here with respect to different adjectives in individual languages has a direct reflex on a larger, cross-linguistic dimension as well: In a language that has a negative setting of the so-called “Degree Semantics Parameter” such as for instance Motu, all adjectives are uniformly classified as being non-gradable right from the outset, in that they lack an argument slot of type <d> altogether (Beck et al. (2009), pp. 18ff.), as can be seen from the entries for the Motu equivalents of the adjectives *tall* and *short* that I reproduce in (4/75), where no degree argument happens to be included and where the letter “c” is used as an abbreviation of ‘context’, the latter ultimately being held responsible for determining the positive and negative extension of a given adjective under their account (cf. also the discussion of this issue in section 3.3.2.3.1 before):¹⁶⁸

- (4/75) a. $[[tall_{Motu}]] = [\lambda c. \lambda x [\in D_e]. x \text{ counts as tall in } c]$ [Beck et al. (2009), p. 20; their (66’a)]
 b. $[[short_{Motu}]] = [\lambda c. \lambda x [\in D_e]. x \text{ counts as short in } c]$ [ibid.; their (66’b)]

Therefore, it does not come as much of a surprise that a language like Motu never allows direct MP modification, because there is simply no suitable input for the general type-shifting rule introduced in (4/56) to apply to. In the end, the first group of languages identified in the overall classification shown in (4/65) in section 4.5.1 above can thus be divided into two individual subcategories: On the one hand, there are languages that display no MPCs by virtue of the fact that they lack genuinely gradable predicates in general and on the other hand, there exist languages that do dispose of such predicates, but which are nevertheless characterised by the absence of MPCs, because they do not have a type-shifting rule along the lines of (4/56), so that their lexicon consists of type1-adjectives only, instead. With the latter, a good case in point is for instance constituted by Turkish, to which much room has been dedicated in this dissertation, a language which happens to have genuinely gradable predicates at its disposal (as can be seen from the lexical entries of the adjective *uzun* (*tall*) or that of the adverb *hızlı* (*fast*) given in (2/51) in subsection 2.2.3.2 and (2/91) in section 2.3.2 before), and where attributive or

¹⁶⁸ Interestingly enough, there is also a direct correlation between what is being done here and yet another parameter identified in Beck et al. (2009) and that is their “Degree Phrase Parameter”, which I include in (i) below:
 (i) Degree Phrase Parameter (DegPP): The degree argument position of a gradable predicate {may/may not} be overtly filled. [ibid., p. 24; their (86)]

A negative setting of this parameter corresponds to a language where the general type-shifting rule specified in (2/56) does not apply and where the lexicon thus contains no type2-entries, whereas it does with languages displaying a positive setting thereof, so that eventually, the different settings of the “Degree Phrase Parameter” are tantamount to the absence and presence of such a general type-shifting rule, respectively. Obviously, if my analysis is on the right track, this also means that the workings of this “Degree Phrase Parameter” have to be located within a language’s lexicon.

predicative MPCs are unattested all the same, as indicated in an exemplary fashion by the infelicitous examples given in (2/17a) and (2/18a), repeated from the empirical section 2.1.2 on Turkish comparison constructions:

(2/17) a. **Maria bir metre yetmiş uzun.*
 Mary one/a metre seventy tall
 intended as: ‘Mary is 1.70m tall.’

(2/18) a. **Ekmek bir buçuk kilo ağır.*
 bread one/a half kilo heavy
 intended as: ‘*The bread is 1.5 kilos heavy.’

In contrast to this, the second subclass of adjectives affected by my Generalisation DIFF, that is all those included in the list provided in (4/70) but not reappearing in that in (4/74), contains adjectives that are in principle gradable, as can for instance be seen from the impeccable paradigm *fat, fatter, the fattest*, but given that the differential use of an MPC formed on the basis of these adjectives yields bad results, already, we are facing a situation with these that is highly reminiscent of the one described for innovative uses of adjectives in MPCs in section 4.5.2.1, and the reason for their incompatibility with non-differential MPs is exactly the same as stated before: Unavailability of a given MP as a differential shows that it is not a suitable argument of semantic type $\langle d, t \rangle$, which, however, represents an absolutely indispensable requirement for its occurrence in a predicative or attributive MPC.

In total, the acceptability of a given MPC as an explicit differential in a comparative thus represents a prerequisite for its occurrence in an attributive or predicative MPC, even though the former does not automatically guarantee the latter. At the same time, four different possible sources of the non-occurrence of attributive or predicative MPCs have been identified: Languages like Motu are characterised by an overall absence of gradable predicates as such, so that an application of a type-shifting rule producing type2-adjectives suitable for MP modification systematically fails in that it lacks an appropriate input. Languages such as Turkish do dispose of truly gradable predicates and yet, they never display (attributive or predicative) MPCs in that with these, the necessary type-shifting rule seems to be missing in their lexical inventory and with languages like English, German and French, some adjectives such as for instance *huge* or *lukewarm* are not genuinely gradable to the effect that the type-shifting rule once again has no appropriate input structure to apply to and with others such as for example *fat*, gradability in fact obtains, but its use in a differential MPC is ruled out, showing that such an MP is not an argument of type $\langle d, t \rangle$ after all, which would be required in the proper formation of attributive or predicative MPCs, though.

4.5.2.3 Generalisation MURPHY'

Let me continue with 'Generalisation MURPHY'', which I suggest to call such given that this generalisation represents a weakened version of an observation that is originally due to Murphy (1997). As has already been argued in subsection 4.4.4 above, this generalisation is intended to account for the fact that adjectives which combine with MPs featuring ambiguous units of measurement typically give rise to overt MPCs, in which the respective adjective is then taken to perform a disambiguating function, and my empirical investigation on the distribution of direct MPCs has shown it to cover (at least) all of the adjectives specified in (4/50), repeated from there:

- (4/50) a. English: *deep, high, (spatial) long, tall, thick and wide*
- b. German: *breit, dick, entfernt, groß, hoch, (spatial) lang and tief*
- c. French: *ample, distant, éloigné, épais, haut, large, (spatial) long, profond and vaste*

As a next step, I shall make an attempt at capturing this Generalisation MURPHY' in a principled fashion. In order to achieve this, I propose introducing the following definedness condition on the interpretation of MPs that I have formulated in (4/76) below:¹⁶⁹

- (4/76) definedness condition on MPs:
If α is an MP, then $[[\dots\alpha\dots]]$ is defined only if a unique dimension of measurement can be identified (and undefined otherwise).

Let me now examine how this definedness condition is supposed to work out in practice by going through a couple of basic configurations, in which this condition is met and violated, respectively and doing so, I shall start out with the former constellation, first. To this end, consider an example such as that given in (4/77a), featuring the gradable predicate *long* in combination with the ambiguous unit of measurement *20 inches*, that, if occurring entirely on its own, could specify the entity in question's extension in all three spatial dimensions alike, that is its height, its length as well as its depth:

- (4/77) a. *The parcel is 20 inches long.*

Given the presence of the adjective *long*, this potential ambiguity is however resolved right away, in that among the three possible dimensions, that of physical length gets selected, so that the definedness condition on MPs in (4/76) is indeed fulfilled, and sentence (4/77a) is thus

¹⁶⁹ Alternatively, Generalisation MURPHY' could also be stated in terms of a presupposition that ambiguous units of measurement generally trigger, which I consider as merely a technical variant of the proposal made here.

correctly predicted to be impeccable in this respect. By contrast, the example specified in (4/78a) below contains no such adjective:

(4/78) a. *Peter is 32 years of age.*

Nonetheless, the derivation of this example does not crash, either, because this time, the unidimensional unit of measurement *years of age* has been chosen, guaranteeing by itself that the definedness condition associated with the interpretation of MPs will in fact be satisfied in the end. Of course, it is also possible to combine both, a unidimensional unit of measurement and a likewise unidimensional adjective, as has been done in the modified variant of (4/78a) shown in (4/78b) below, where the unit of measurement *year(s)* happens to be just about as unambiguous as the gradable predicate *old* as such:

(4/78) b. *Peter is 32 years old.*

And apart from these three basic configurations, it is ultimately also fully conceivable that the definedness condition in (4/76) is successfully complied with in the case of a unit of measurement that permits the identification of a unique dimension of measurement either simply on the basis of the surrounding context or from general world knowledge per se, which holds for instance with yet another version of sentence (4/78a) as introduced in (4/78c):

(4/78) c. *Peter is 32.*

Uttered in a context where people's ages are discussed, the example in (4/78c) certainly constitutes a perfectly well-formed statement, in that this state of affairs will be sufficient for picking age as the relevant dimension being talked about, and the fact that other measures typically associated with persons, such as for instance height, usually give rise to figures very different from the number 32 appearing in (4/78c) (at least with adults), surely makes identifying the age scale as the one at stake with the interpretation of this sentence all the more easily achievable. In contrast to the cases taken into account so far, a sentence involving a multidimensional unit of measurement without the simultaneous presence of a clarifying adjective results in a violation of the definedness condition on the interpretation of MPs, an example of which is given in (4/77b), displaying a variant form of sentence (4/77a) discussed above with the difference that this time, the disambiguating adjective *long* has been omitted:

(4/77) b. *?The parcel is 15 inches.*

Unless said in a highly specific situation where just one particular spatial dimension (height, length or depth) is salient enough, such a sentence will inevitably fail to meet the definedness condition introduced in (4/76) and, rather than being plainly ungrammatical as such, sentence (4/77b) appears to be inappropriate or unacceptable in a scenario where no such salient dimension can be identified, exactly as is to be expected from the violation of a condition on its definedness. For good measure, finally consider a case where the dimensions encoded in the unit of measurement and the adjective itself explicitly diverge, as exemplified with the unit of measurement *year(s)* and the gradable predicate *high* in example (4/77c):

(4/77) c. **The parcel is 15 years high.*

Here, the effect is even stronger than with (4/77b) in that selecting a specific context will not improve matters any more, given that the two dimensions involved happen to be mutually exclusive, so that in this sentence, the definedness condition on MPs can never be fulfilled, which eventually results in a completely infelicitous output. In sum, it is therefore no longer very surprising that gradable predicates frequently co-occurring with ambiguous units of measurement usually display direct MPCs, because with these predicates, insertion of an adjective immediately makes this ambiguity disappear and thus plays a crucial role in satisfying the definedness condition expressions including MPs are inherently subject to.

4.5.2.4 Generalisation ANTO

4.5.2.4.1 A Generalisation on the Distribution of Antonymous Measure Phrase Constructions

As a last generalisation on the (non-)occurrence of direct MPCs let me finally introduce what I shall subsume under the term ‘Generalisation ANTO’ in the following, a term I have chosen because this fourth generalisation pertains to the (in-)compatibility of antonymous adjectives with overt MPs. In the course of this subsection 4.5.2.4.1, I shall first of all familiarise my reader with the basic idea underlying this Generalisation ANTO, before I shall afterwards examine several aspects directly related to this generalisation at some length in the ensuing sections 4.5.2.4.2 to 4.5.2.4.4, which I consider a task that is absolutely worthwhile, given that to the best of my knowledge, up to now, MPCs based on antonymous adjectives have never been taken into account in linguistic literature at all. In essence, this Generalisation ANTO is supposed to account for the fact that languages vary in that some of them, including English, never allow antonyms to combine with MPs, whereas others, such as German and French, do

in principle permit antonymous MPCs, as has been shown in subsection 4.3.2.2 above and as can also be seen right away from the diagrams number one to three displaying the results obtained from my empirical study for a selected number of adjectives that are provided in section C of the appendix. What is more, MPCs based on antonyms additionally are of particular interest because these come with a special meaning in that they usually retain evaluativity, as will become clear, shortly. In what follows, I shall now go about the various components of this Generalisation ANTO in a systematic fashion, first discussing languages like English that are characterised by a lack of such antonymous MPCs and then addressing others like German and French, where this linguistic phenomenon is indeed attested.

As a matter of fact, in English, antonymous adjectives lead to infelicitous MPCs without exception, a situation which usually results in a striking contrast between MPCs formed on the basis of the positive adjective in a corresponding pair of adjectives as opposed to those that are based on its antonym, as shown in an exemplary fashion with the attributive MPCs in (4/79) below:

- (4/79) a. *Yesterday, I bumped into a six-foot-tall woman.*
 b. **A five-foot-short man doesn't make a good basketball player.*

Here, the sentence in (4/79a) featuring an MPC built from the positive adjective *tall* has been judged to be absolutely impeccable, whereas that involving its negative counterpart *short* in (4/79b) has been ruled out as unacceptable by my English native speaker informants. In the course of my empirical study, it has turned out that this ban on antonymous MPCs operative in the English language covers (at least) all of the adjectives listed in (4/80) below and in the course of my investigation, I have not come across a single genuine exception to this rule:

- (4/80) *close, dark, flat, low, narrow, near, poor, quiet, (temporal) short, silent, ugly, weak (with currents), weak (in number) and young; predicative light (with winds), shallow, short (in its spatial use), small, thin and weak (with electricity); attributive calm*

In view of these facts, I should like to argue that the general type-shifting rule that was specified in (4/56) in subsection 4.5.1 above never applies to English antonyms and that these only come with a type1-denotation, instead, as shown for example by the lexical entry of the negative adjective *short* provided in (4/81) (note that the lexical entries for antonyms that will be introduced in the whole of this subsection should merely be regarded as a first approximation to matters and that these will be substantially revised later on in subsection 4.5.2.4.2 below, in particular with respect to the ordering relation involved):

(4/81) $[[short_1]] = \lambda d \in D_d. \lambda x \in D_e. height(x) \geq d$

Moreover, I assume that it is precisely this total absence of antonymous MPCs in the English language that has made linguists working on the distribution of MPs unanimously claim MPCs built from antonymous adjectives to be generally impossible, given that their work happened to be mainly English-centred (cf. the discussion in sections 4.3.2.2 and 4.4 above).

In sharp contrast to this, in German and French, MPCs based on antonyms are often judged no worse than their positively oriented counterparts, as illustrated in an exemplary fashion for the German adjectives *breit* (*wide*) and *schmal* (*narrow*) and their French equivalents *large* and *étroit* in (4/82a) and (4/82b) as well as in (4/83a) and (4/83b) below, respectively:

- (4/82) a. *An dieser Stelle soll ein zehn Zentimeter breites [wide] Brett eingefügt werden.*
b. *An dieser Stelle der Garage fehlt noch ein drei Zentimeter schmales [narrow] Brett.* [= (4/30)]
- (4/83) a. *Pour finir de construire cette étagère, il nous faut encore une planche large [wide] de 25 centimètres.*
b. *Pour un géant comme lui, il est parfaitement impossible d'entrer par cette fenêtre étroite [narrow] de 40 centimètres.* [= (4/31)]

Crucially note, however, that in these two languages, MPCs constructed on the basis of positive and negative adjectives are not simply synonymous, but that the latter give rise to an evaluative meaning component that is entirely absent from the former:¹⁷⁰ In this fashion, the MPCs in (4/82b) and (4/83b) require for instance that the plank and the window in question count as comparatively narrow in a given context, whereas no such requirement exists with the (a)-variants of these sentences that feature a neutral adjective, to the effect that the plank and the window under discussion can in fact be of any width whatsoever.¹⁷¹ To enter the details of this additional meaning component emerging with antonymous MPCs, let us next consider the much simpler German example of the predicative antonymous MPC indicated in (4/84a) on the next page, which I also provide with glosses and an English translation:

¹⁷⁰ As in section 2.2.4 above, the type of evaluativity I shall be concerned with, here, is not that of expressing a subjective value judgment (as is for instance the case with an adverb such as *unfortunately*), but the special kind of evaluativity arising in certain comparison constructions, where a standard of the compared entity needs to be exceeded, as discussed for example in Rett (2008), Krasikova (2009) or Sassoon (2011) (under the term ‘norm-relatedness’ in the latter two), among many others.

¹⁷¹ In subsection 4.5.2.4.4 below, this claim will eventually be weakened somewhat for French, in that in this language, all adjectives give rise to ‘weak evaluativity’, a concept to be introduced there, alike.

- e. *Vielleicht ist dies.es Brett drei Zentimeter schmal.*
 maybe is this.neuter plank three centimetre(s) narrow
 ‘*Maybe this plank is three centimetres narrow.’
 [embedding under a possibility operator]
- f. *Wenn dies.es Brett drei Zentimeter schmal ist,*
 if this.neuter plank three centimetre(s) narrow is
pass.t es problemlos in dies.e Lücke.
 fit.3singular it without_difficulty in this.feminine gap
 ‘*If this plank is three centimetres narrow, it will fit into this gap without difficulty.’
 [antecedent of a conditional]

I therefore propose that in German (and also in French), the lexicon specifies two separate entries for an antonym like *schmal* (*narrow*), a first one in terms of an ordinary type1-adjective and a second in the form of a shifted type2-adjective that is compatible with an overt MP and that presupposes the attested evaluative meaning component, as shown in (4/85a) and (4/85b), respectively, where underlining is used to indicate presuppositional material:¹⁷²

- (4/85) a. $[[schmal_1]] = \lambda d \in D_d. \lambda x \in D_e. \text{width}(x) \geq d$
 b. $[[schmal_2]] = \lambda D \in D_{\langle d,t \rangle}. \lambda x \in D_e. \underline{\max(D)} \leq s_c. \text{width}(x) \geq \max(D)$,
 where “ s_c ” corresponds to a contextually specified standard for width

As far as German and French are concerned, my empirical investigation has revealed that a fairly impressive number of negative adjectives follow this pattern and that there exists only a very limited number of exceptions in this regard, which can be seen from the lists of adjectives affected given in (4/86) below, where the few exceptions I did in fact encounter are also indicated:

- (4/86) a. German: *dünn, flach, langsam, leicht, leise, schmal* and *schwach* (with electricity); attributive *klein* as well as spatial and temporal *kurz*; predicative *jung, nah* and *schwach* (with winds); exception: *dunkel*
- b. French: *étroit, improbable* and *invraisemblable*; attributive *bas* and *faible* (with electricity); predicative (spatial) *court* as well as *proche*; exceptions: *jeune, léger, lent* and *pauvre*

In total, the shift of an antonym like *schmal* (*narrow*) from a type1-adjective to a type2-one thus not only requires shifting the type of its degree argument, as is generally the case with positive adjectives in order to enable these to combine with an overt MP (cf. (4/54b), (4/55b) and (4/57b) in subsection 4.5.1 above for the three languages, respectively), but also the

¹⁷² Note in passing that in her work on Navajo, Elizabeth Bogal-Allbritten also ascribes evaluativity (outside the positive construction proper) the status of a presupposition (Bogal-Allbritten (to appear), section 5.1), in contrast to which Jessica Rett, primarily discussing English data, posits a morpheme she refers to as “EVAL” that is assertional in nature (Rett (2008), pp. 80ff.). As argued for in the main text, adopting the former position seems clearly more appropriate to me in the context of evaluativity with antonymous MPCs.

obligatory introduction of an extra presupposition, which represents an additional step that I assume in principle to be possible in German and French, yet not in English, which ultimately accounts for the presence of antonymous predicative and attributive MPCs in the former two languages as well as for their overall absence from the latter. Having these fundamental ingredients of my analysis of antonymous MPCs and the attested cross-linguistic variation in this respect in place, I shall now continue with a necessary refinement of this analysis, because, as we shall presently see, the ordering relation involved in the lexical entries for antonyms as specified in (4/81) and (4/85a, b) cannot be maintained in its present form.

4.5.2.4.2 Identifying an Appropriate Ordering Relation for Antonyms in Measure Phrase Constructions

So far, I have been assuming throughout this entire dissertation that gradable predicates denote relations between individuals on the one hand and degrees (or sets of degrees) on the other and that the ordering relation these give rise to is one of “ \geq ”, as can for instance be seen from the lexical entries proposed for the English adjective *deep* in both of its usages as a type1-predicate and a type2-one in (4/54a) and (4/54b) in subsection 4.5.1 above, and that I repeat below:

- (4/54) a. $[[deep_1]] = \lambda d \in D_d. \lambda x \in D_e. \text{depth}(x) \geq d$
 b. $[[deep_2]] = \lambda D \in D_{\langle d, t \rangle}. \lambda x \in D_e. \text{depth}(x) \geq \max(D)$

It might therefore seem most natural to directly transfer this ordering relation to antonymous type2-adjectives occurring in overt MPCs, as I have already done in a rather tentative fashion in (4/85b) above for the German adjective *schmal* (*narrow*), which I also reproduce below:

- (4/85) b. $[[schmal_2]] = \lambda D \in D_{\langle d, t \rangle}. \lambda x \in D_e: \underline{\max(D)} \leq s_c. \text{width}(x) \geq \max(D)$,
 where “ s_c ” corresponds to a contextually specified standard for width

As matters turn out, though, suggesting such a semantics for antonymous shifted type2-adjectives is clearly not tenable. To see this, consider a concrete context with a plank measuring four centimetres in width and where the contextual standard for width happens to be five centimetres. If someone now uttered sentence (4/84a), still repeated from above, the truth conditions for which are indicated in (4/87) on the following page, this sentence would inevitably have to be judged as true in the given scenario:

(4/84) a. *Dies.es Brett ist drei Zentimeter schmal.*
 this.neuter plank is three centimetre(s) narrow
 ‘This plank is three centimetres wide.’; intended as: ‘*This plank is three centimetres narrow.’

(4/87) $[[\text{(4/84a)}]] = 1$ iff the width (the unique plank) ≥ 3 centimetres;
 provided the presupposition according to which the
 width of the plank ≤ 5 centimetres is met

This follows necessarily from our current semantics, for on the one hand, the presupposition triggered by the adjective on the basis of which the MPC has been formed is in fact met, given that four centimetres is indeed smaller than or equal to five centimetres, as required and on the other hand, the assertion sentence (4/84a) makes also holds by virtue of the fact that the width of the plank under discussion happens to be four centimetres, which is after all larger than or equal to three centimetres, once again as required. As a result, sentence (4/84a) will thus be expected to come out true in the situation at hand, contrary to what all of my German native speakers report, for whom this sentence does not adequately describe this scenario, so that in the end, the “ \geq ”-relation leads to the specification of truth conditions that are far too weak.¹⁷³

In Heim (2006a), the suggestion is made that rather than giving rise to a “ \geq ”-relation, antonyms should be associated with an ordering relation of the “ $<$ ”-type, as can be seen from the lexical entry the author offers for the adjective *slow* that I reproduce in (4/88):

(4/88) $[[\textit{slow}]] = \lambda d [\in D_d]. \lambda x [\in D_e]. \text{speed}(x) < d$ [Heim (2006a), p. 56; her (49)]

In view of data such as that introduced in (4/89) below, where Ida, the niece in question, can either weigh 52 kilograms as well or less than that (which, in fact, she does) to make the first part of the response true, it is proposed in Beck (2012a) that equality of degrees should actually be included, and the author suggests using a “ \leq ”-relation instead of a simple “ $<$ ”-one, which would disallow Ida from also weighing 52 kilograms:

(4/89) Sonja: The group needs someone who weighs maximally 52kg.
 SB: My niece weighs that little. Ida even only weighs 50kg.
 [Beck (2012a), section 3.1.1; her (23b)]

While this example involves the element *little* rather than an antonym as such, in Beck (2012a), this behaviour is taken to also carry over to the latter group of expressions and indeed, in (4/90b) and (4/90c) (where (4/90a) serves as the basic context), it is actually sufficient for Peter to measure 4 feet 20 as well, rather than him necessarily having to be shorter than that in order for

¹⁷³ Also observe that replacing the “ \geq ”-relation by a simple “ $>$ ”-one would fail for exactly parallel reasons.

the sentences in (4/90b) and in (4/90c) to come out true, as we would wrongly expect from an ordering relation of the “<”-kind:

- (4/90) a. *Mary is four feet twenty.*
 b. *Peter is also that short.*
 c. *Peter is that short, too.*

In an exemplary fashion, in (4/91) below, I next provide a lexical entry for the antonymous predicate *short* that takes this insight into account:

$$(4/91) \quad [[short]] = \lambda d \in D_d. \lambda x \in D_e. \text{height}(x) \leq d$$

While I am generally very sympathetic towards this idea (cf. the entry specified for German *schmal* (*narrow*) in (4/98) below), it unfortunately will not really do the trick for antonymous adjectives appearing in MPCs, either, because the resulting truth conditions once more turn out to be far too weak: The corresponding lexical entry for the adjective *schmal* (*narrow*) would now look as in (4/92) and in a context where our plank happened to be three centimetres wide and the relevant standard for width was still at five centimetres, the sentence given in (4/93), the truth conditions of which are spelt out in (4/94) below, would as before incorrectly be judged true:

$$(4/92) \quad [[schmal_2]]_{rev.} = \lambda D \in D_{\langle d, t \rangle}. \lambda x \in D_e. \max(D) \leq s_c. \text{width}(x) \leq \max(D),$$

where “ s_c ” is a contextually specified standard for width

- (4/93) *Dies.es* *Brett ist vier Zentimeter schmal.*
 this.neuter plank is four centimetre(s) narrow
 ‘This plank is four centimetres wide.’; intended as: ‘*This plank is four centimetres narrow.’

$$(4/94) \quad [[(4/93)]] = 1 \text{ iff} \quad \begin{array}{l} \text{the width (the unique plank)} \leq 4 \text{ centimetres;} \\ \text{provided the presupposition according to which the} \\ \text{width of the plank} \leq 5 \text{ centimetres is met} \end{array}$$

This time, the presupposition triggered by the gradable predicate is satisfied given that three centimetres are smaller than or equal to five centimetres, as required and the actual assertion holds, too, because three centimetres are in fact smaller than or equal to four centimetres, also as necessary. All of the German native speakers I have consulted on this issue have agreed, though, that in the scenario under consideration, sentence (4/93) cannot be uttered felicitously.¹⁷⁴ At the same time, observe that even ridiculously narrow planks would also

¹⁷⁴ In practice, I tested this matter by confronting my consultants with a garden fence displaying a four-centimetre-wide gap that is supposed to be filled by adding a plank with an appropriate width. A plank that is three centimetres

invariably make a sentence such as that in (4/93) true, because even if the zero option could be ruled out for trivial reasons (a plank that is zero inches in width might have no horizontal extension at all and could therefore no longer be identifiable and count as a plank in the first place) and a certain granularity was respected on the dense scale of width (excluding for instance planks that are 0.0000001 or 0.0000002 centimetres in width and thus hardly discernible in the first place), planks that are 0.1 centimetres, 0.2 centimetres, 0.3 centimetres etc. wide would still suffice to make such a sentence true, which constitutes a most unwelcome result.¹⁷⁵ In sum, it thus turns out that ultimately, postulating a “ \leq ”-relation with negative adjectives will not allow us to make the correct kind of predictions for antonymous MPCs, either, the respective truth conditions involved clearly revealing themselves once more as not being strong enough.¹⁷⁶

The only option that will eventually make the right sort of predictions with regard to antonymous MPCs is therefore the introduction of a relation of strict identity for shifted type2-antonyms, as illustrated in an exemplary fashion on the basis of the lexical entry for the German adjective *schmal* (*narrow*) in its final version given in (4/95) below:

$$(4/95) \quad [[schmal_2]]_{final} = \lambda D \in D_{<d,t>}. \lambda x \in D_e: \max(D) \leq_{s_c} \text{width}(x) = \max(D),$$

where “ s_c ” is a contextually specified standard for width

Under this view, the example sentence from (4/93) above will then be associated with the truth conditions indicated in (4/96), stating that for this sentence to be judged true, it is actually necessary that the plank in question measures exactly four centimetres:

$$(4/96) \quad [[(4/93)]] = 1 \text{ iff} \quad \begin{array}{l} \text{the width (the unique plank) = 4 centimetres;} \\ \text{provided the presupposition according to which the} \\ \text{width of the plank } \leq 5 \text{ centimetres is met} \end{array}$$

wide would thus fulfil this requirement in certainly being narrow enough to fully fit into this gap (and the fact that it would not entirely fill it up is surely unproblematic as well, given that it is quite normal that with such garden fences, the individual planks are not directly adjacent) and yet, according to all of the German native speakers I have interviewed, sentence (4/93) is unacceptable in this context, because for them, it expresses that the plank in question has to be exactly four centimetres in width and is not allowed to be any longer or shorter than that, which corresponds to the ‘exactly’-reading for antonymous MPCs that I shall ultimately assume for these later on in this subsection.

¹⁷⁵ The difficulty that arises here is highly reminiscent of the discussion in Rett (2010), where equatives such as that included in (i) below are dealt with:

(i) *The waves reached as high as 6ft before nightfall.* [Rett (2010), p. 365; her (2d)]
 Under the approach the author develops for these, it is also generally the case that truth conditions are established that are much too weak in nature, in that incredibly low waves would actually be fully sufficient in order for the sentence in (i) to come out true, without her however seeming to be aware of this deficiency.

¹⁷⁶ Once again, notice for the sake of completeness of the argument that a substitution of the “ \leq ”-symbol by a simple “ $<$ ”-sign, as was the case in the original proposal in Heim (2006a), would not enable us to adequately account for sentences involving antonymous MPCs either, for reasons that should have become obvious by now.

This finally supplies us with truth conditions that are strong enough in that they predict such a sentence to be true only if the extension of the entity in question corresponds precisely to that specified by (the maximum of) the MP. As a consequence, this entity is neither permitted to be any larger, nor any smaller, than that, so that for sentence (4/93) to be considered true, the plank under discussion must in the end measure exactly four centimetres, which corresponds precisely to what all of my German native speakers have unanimously reported about such a sentence containing an antonymous MPC. All in all, postulating a relation of strict equality thus allows us to correctly capture the meaning of a sentence like (4/93): It presupposes that the plank at issue counts as narrow in the given context, and it asserts that it measures exactly four centimetres in width.¹⁷⁷ I therefore conclude that strict identity is the relation that is at stake with shifted type2-antonyms in German and French.¹⁷⁸

Let me next consider two immediate consequences of assuming an “=”-relation with antonymous MPCs: the facts that making such a move inevitably boils down to dispensing with monotonicity and that under this approach, denotations of antonymous adjectives appearing in MPCs, that is their type2-variants, can no longer be derived via an application of a general type-shifting rule along the lines of that introduced in (4/56) in subsection 4.5.1 above, given that this would necessarily lead to a configuration in which type1-adjectives and their type2-counterparts gave rise to one and the same relation. I shall therefore briefly have a look at these two potential drawbacks in turn, starting with the former issue. In this context, I should however like to stress right from the outset that pursuing such an approach does after all not mean that the concept of monotonicity has to be given up in general, because this special meaning is restricted to MPCs formed on the basis of antonymous adjectives, only. In view of the fact that in English, these are nonexistent to begin with, monotonicity can be maintained in this language, throughout. And even in German and French, monotonicity also largely persists,

¹⁷⁷ Interestingly enough, this might be tantamount to what Regine Eckhardt has in mind when she discusses the Udmurt MP in (i) that is based on the negative adjective *lapeg* (*small*), claiming that “the measure phrase gives the absolute measure of the subject, with a presupposition that ‘1 m’ is a small size” (Eckhardt (2011), p. 143):

(i) *Ad’ami metr.ly lapeg.*
 man metre.dative small
 ‘The man is (only) one metre tall.’

[Eckhardt (2011), p. 143.; part of her (6)]

Unfortunately, Regine Eckhardt however neither formalises these ideas, nor does she consider any other MPs from this language, so that eventually, it remains somewhat unclear whether Udmurt antonymous MPCs generally parallel the behaviour of their German and French counterparts in this respect or not.

¹⁷⁸ In order to maintain a “≤”-ordering relation with antonymous type2-adjectives, one might also consider an alternative option, ascribing the empirical facts described in this paragraph as well as those to follow in the next to the effect of a very strong scalar implicature (cf. for instance exclusive interpretations of disjuncts or *exactly*-readings of numerals as discussed in Horn (1972), Gazdar (1979), Ladusaw (1980) or more recently in Sauerland (2004) and Spector (2007), among many others). I shall not pursue this option here, though and in order to finally settle this issue, more empirical research would undoubtedly be required (cf. also footnote 180 below), which I shall leave for future work within this linguistic domain.

because in all configurations other than direct MPCs (such as comparatives, superlatives, positives, equatives, etc.), the type1-adjective gets used which fully retains monotonicity properties, as can be seen from the lexical entries supplied for German *breit* (*wide*) and the corresponding antonym *schmal* (*narrow*) in (4/97) and (4/98), respectively:

(4/97) $[[breit_1]] = \lambda d \in D_d. \lambda x \in D_e. \text{width}(x) \geq d$

(4/98) $[[schmal_1]] = \lambda d \in D_d. \lambda x \in D_e. \text{width}(x) \leq d$

Moreover, with MPCs, merely those formed on the basis of an antonymous adjective will eventually receive the revised denotation involving strict identity, whereas all others are bound to fully preserve monotonicity properties as well, as shown in an exemplary fashion with the shifted type2-version of the German adjective *breit* (*wide*) in (4/99) below:

(4/99) $[[breit_2]] = \lambda D \in D_{\langle d, t \rangle}. \lambda x \in D_e. \text{width}(x) \geq \max(D)$

It is therefore only in the case of antonymous MPCs that the necessity of positing an unusually strict relation that is unique to this very construction will make monotonicity disappear.¹⁷⁹ And as things turn out, rather than constituting a drawback, from an empirical point of view, abandoning monotonicity with this special type of construction in fact seems to make the right kind of predictions for its behaviour:¹⁸⁰ Out of five German informants interviewed on the set of sentences to follow in (4/100a) to (4/100c), featuring extended versions of sentence (4/93) in which the antonymous MPC is overtly modified by the adverbs *genau* (*exactly*), *höchstens* (*at most*) and *mindestens* (*at least*), respectively, four have plainly rejected these.¹⁸¹

¹⁷⁹ Notice in this context that Hotze Rullmann, who proposed a relation of strict identity with gradable adjectives throughout (Rullmann (1995)), has been heavily criticised for that (cf. for instance Heim (2006a), pp. 45f., among many others). At the same time, the idea of postulating a relation of strict identity with particular subclasses of adjectives alone, as I am suggesting here, is however not without precedent in the relevant literature, either: When discussing what has largely become known as ‘Rullmann ambiguities’ (cf. for instance *Lucinda was driving less fast than allowed.*), in Beck (2013) as well, the conclusion is reached that certain adjectives such as for example *high* (with frequencies of tones), *warm* or *cold* “have a non-monotonic semantics” (ibid., section 4.2) and for the former adjective, the author proposes for example the lexical entry reproduced in (i) below, where “Freq” abbreviates ‘frequency’:

(i) $[[high_{\text{Freq}}]] = [\lambda d [\in D_d]. \lambda x [\in D_e]. \text{Freq}(x) = d]$ [Beck (2013), section 4.2; her (95b)]
 Observe, though, that the latter approach largely deals with positive adjectives, whereas I am exclusively associating antonyms with this special type of relation, here.

¹⁸⁰ Admittedly, the scope of the initial empirical investigation I am presenting in this paragraph is rather limited in that I have consulted no more than five native speaker informants. In order to fully substantiate these empirical findings, it would therefore be highly desirable to increase this number, but, unfortunately, I have not yet managed to do so. Nevertheless, I take these first results to be very insightful all the same.

¹⁸¹ A fifth informant disagreed in that for him, the set of examples listed in (4/100) was actually quite fine.

- (4/100) a. **Dies.es* *Brett ist genau vier Zentimeter schmal.*
 this.neuter plank is exactly four centimetre(s) narrow
 intended as: ‘*This plank is exactly four centimetres narrow.’
- b. **Dies.es* *Brett ist höchstens vier Zentimeter schmal.*
 this.neuter plank is at_most four centimetre(s) narrow
 intended as: ‘*This plank is at most four centimetres narrow.’
- c. **Dies.es* *Brett ist mindestens vier Zentimeter schmal.*
 this.neuter plank is at_least four centimetre(s) narrow
 intended as: ‘*This plank is at least four centimetres narrow.’

Note that this finding actually follows directly from the analysis I am proposing for MPCs based on antonymous adjectives: Given that their basic lexical entry comes with a relation of strict identity (cf. (4/95) above), modification by *genau* (*exactly*) as in (4/100a) is redundant and thus excluded in that exact equality is already incorporated in that entry itself and likewise, insertion of *höchstens* (*at most*) and *mindestens* (*at least*) in (4/100b) and (4/100c) is also ruled out in that these expressions even contradict the basic relation involved in antonymous type2-adjectives per se. Also observe in passing that since we are only dealing with a redundancy in the first case, but with a genuine contradiction in the other two, this might also explain why sentence (4/100a) sounds slightly less deviant to me than those in (4/100b) and (4/100c), even though I have got to concede that this judgment is not necessarily shared by all other native speakers of German alike. Be that as it may, interestingly enough, three of these consultants have additionally offered virtually the same very insightful comment when confronted with the sentences in (4/100): They have remarked that adding such modifying adverbs is only possible with the corresponding positive adjective, but not with an antonym, so that in the paradigm listed in (4/100) above, the adjective *schmal* (*narrow*) would actually have to be replaced by its unmarked equivalent *breit* (*wide*) in order for these sentences to become fully acceptable. In my opinion, this lends further support to the entries proposed for non-antonymous type2-adjectives beforehand (cf. those given in (4/54b), (4/55b) and (4/57b) in subsection 4.5.1 above for the three languages in turn), because these do not give rise to strict equality, but are associated with a “ \geq ”-ordering relation, instead, so that modification by adverbials like *exactly*, *at most* or *at least* can in fact make a sensible contribution to an MPC containing a neutral adjective. In total, it thus seems that such neutral adjectives come with an ordering relation of the standard “ \geq ”-type when used in MPCs, whereas antonyms are characterised by a relation of strict identity when appearing in this particular linguistic constellation.¹⁸²

¹⁸² An additional testing ground for monotonicity properties of antonyms occurring in MPCs might be constituted by sentences like the one given in (i), where a measure phrase modified by *genau* (*exactly*) and a modal introducing universal quantification are combined:

As far as the second potential drawback pertaining to the fact that type2-denotations for antonyms can no longer be systematically gained from applying the type-shifting rule in (4/56) to their type1-equivalents is concerned, I should like to propose the following: By virtue of the fact that this type-shifting operation is supposed to take place within the lexicon anyway, I suggest that in languages displaying antonymous MPCs such as German or French, the lexicon simply specifies two separate entries for each antonymous adjective permitting this special usage, first a type1-entry involving an ordering relation of the “ \leq ”-kind (cf. (4/91) above) and second a type2-one in turn giving rise to a relation of exact equality (4/95). Observe that while adopting this strategy might seem rather unattractive at first glance in that the intimate relation holding between adjectives of type1 and type2 disappears, at the same time, it actually offers an interesting explanation for the observation that only some, but not all languages showing MPCs also allow these with antonyms, English representing a good case in point: For if type2-adjectives could indeed be systematically derived from their type1-counterparts via application of a general type-shifting rule, it would ultimately remain somewhat mysterious why this rule should just apply to positively oriented adjectives. By contrast, this basic situation gets of course much less mysterious under the assumption that antonymous type2-adjectives require extra entries which the lexicon has to supply individually, which it might do in some languages (such as German or French), but not in others like English.

Finally notice that under the account I am pursuing here, positive adjectives and their antonyms are associated with one and the same scale, so that for instance *wide* and *narrow* are both taken to map their individual type arguments onto the same scale of width. Alternatively, one might of course also consider the option of introducing two separate scales, say one of width and one of narrowness. This would however have the serious disadvantage that equivalences such as for instance that displayed in (4/101) could no longer be explained in a straightforward fashion and would ultimately become unexpected:

(4/101) *Carmen is taller than Alice if and only if Alice is shorter than Carmen.*
 [Kennedy (2001), p. 37; his (5a)]

(i) *Dies.es Brett muss genau drei Zentimeter schmal sein.*
 this.neuter plank must exactly three centimeter(s) narrow be
 intended as: ‘*This plank must be exactly three centimetres narrow.’

In practice, this can however hardly be tested (let alone is it clear to me how potential test results should be interpreted) in view of the fact that modification of an antonymous MPC by such an adverb is already reported to lead to unacceptability as such (cf. sentence (4/100a) in the main text).

Interestingly enough, though, such equivalences are actually much less widespread and systematic than they might appear at first:¹⁸³ To see this, imagine for example someone taking part in the famous *Marathon des Sables*, an annual race taking place in the Sahara desert, where temperatures above 50 degrees Celsius are absolutely normal. Imagine further that yesterday's temperature was at 54°C and that today's is even at 56°C. In such a scenario, a sentence like that introduced in (4/102a) is certainly most appropriate, but the potentially equivalent statement in (4/102b) seems rather awkward, and the concept it is supposed to express is much more naturally captured by something along the lines of (4/102c) below:

- (4/102) a. *Today, it is two degrees warmer than yesterday.*
b. *#Yesterday, it was two degrees colder than today.*
c. *Yesterday, it was two degrees less warm than today.*

In a similar fashion, in Siberia, where temperatures often fall below minus 30 degrees Celsius, uttering the sentences given in (4/103a) and (4/103c) in a situation where temperatures were at -41°C last night and had been at -38°C the night before seems quite normal, whereas the sentence in (4/103b) does certainly not describe this scenario in an adequate fashion:

- (4/103) a. *Last night, it was three degrees colder than it had been the night before.*
b. *#The night before, it had been three degrees warmer than last night.*
c. *The night before, it had been three degrees less cold than last night.*

In my opinion, the lack of expected equivalences in the paradigms in (4/102) and (4/103) should however not be taken as an indication of the need to specify two separate scales, one for warmth and one for coldness, respectively, and I shall provide a different account of the weirdness of examples (4/102b) and (4/103b) in the given contexts that crucially hinges on the notion of 'weak evaluativity' that I shall introduce in subsection 4.5.2.4.4 of this dissertation. Having identified a suitable relation for MPCs based on antonymous adjectives, I shall next investigate the consequences the special kind of semantics I suggest for these has with respect to the much debated question of whether or not antonyms should be decomposed.

4.5.2.4.3 Consequences of the Analysis for the Potential Decomposition of Antonyms

In linguistic literature on antonymous adjectives, there happens to be an ongoing controversy as to whether antonyms should be decomposed in the syntax or whether these

¹⁸³ Note in passing that in Kennedy (2001), it is also observed that "not all adjectives that are intuitively antonyms make [this equivalence] valid" (*ibid.*, p. 37, footnote 5), albeit in a slightly different context.

should rather be provided with a lexical entry of their own. As a concrete example, consider the negative adjective *short*, with which this debate essentially boils down to the following question: Are we to decompose this adjective into its positive counterpart *long* (or *tall*) and an element like *little* in the syntactic derivation of a sentence containing this expression or are we to assume that the lexicon of English supplies us with a separate entry for *short*, instead? In favour of the former position, Daniel Büring has adduced evidence involving what he refers to as “cross-polar nomalies” (Büring (2007)), that is examples such as that reproduced in (4/104), where a comparative’s matrix clause and its standard term both feature overt adjectives and where these show a different inherent orientation in that the first (*short(er)* with (4/104)) is a negative adjective, whereas the second (*high* in the case at hand) is positive in nature:¹⁸⁴

(4/104) *Unfortunately, the ladder was shorter than the house was high.*
 [Büring (2007), p. 38; his (2a)]

In contrast to this, Irene Heim has produced evidence supporting the latter position according to which antonymous adjectives should not be decomposed, because constructions including antonyms are not necessarily synonymous with constructions featuring the corresponding positive adjectives, as shown in an exemplary fashion with the sentences given in (4/105a) and (4/105b) below, for which a precise context is added in (4/106):

(4/105) a. *John needs to drive less fast than Mary needs to drive.*
 b. *John needs to drive more slowly than Mary needs to drive.*
 [Heim (2006a), p. 55; her (46b, c)]

(4/106) *John and Mary both are supposed to be in Boston by 8 p.m. at the latest, and they are both driving there. It is 5.30 p.m., and John is just setting out from Providence RI, whereas Mary is leaving from New Haven CT. [...] New Haven is a longer way from Boston than Providence is [...]* [ibid.]

Crucially observe that in the scenario specified in (4/106), the sentence in (4/105a) will actually come out true, while that in (4/105b) will not, in view of the fact that John only may drive more slowly, but that he is surely not obliged to do so. Moreover, if Christopher Kennedy is right in claiming that comparatives involving two adjectives referring to negative sets of degrees are indeed possible (Kennedy (2001), pp. 36f., 44 and 51; cf. in particular his (23) and (39), there),

¹⁸⁴ In an attempt at keeping things at a fairly simple and straightforward level, here, I shall refrain from going into the rather intricate details of the analysis that is eventually offered for antonymous adjectives in Büring (2007). All I am interested in with respect to my present purposes is that examples like the one provided in (4/104) in the main text have been considered as evidence for favouring a decompositional approach to antonyms over a non-decompositional one. Likewise, I shall omit a second argument that has sometimes been cited for decomposing antonyms, which consists in ambiguities appearing in configurations involving overt modals, by virtue of the fact that this kind of argument is highly dependent on the exact shape of the individual analysis that is pursued.

this will pose an additional difficulty for decompositional analyses that in my view has gone unnoticed so far. To see this, consider the literary example introduced in (4/107) below, containing the adjectives *short(er)* and *low* and thus two negatively oriented gradable predicates or that following in (4/108a), involving *low(er)* alongside with *narrow* and therefore two likewise negatively polar adjectives:

(4/107) *After she swallowed the drink, Alice discovered that she was shorter than the doorway was low.* [Kennedy (2001), p. 37; his (3b)]

(4/108) a. *The table is lower than it is narrow.* [Kennedy (ibid.), p. 45; his (26b)]

If I now apply the decompositional analysis for antonyms proposed in Heim (2008) to sentence (4/108a),¹⁸⁵ this will proceed via the intermediate steps listed in (4/108b) to (4/108d):

(4/108) b. *The table is little high -er than it is little wide.*

c. *The table is little high -er than it is ~~little~~ wide.*

d. *The table is little high -er than it is wide.*

In a first step, the antonymous adjectives *low(er)* and *narrow* are decomposed into their corresponding positive equivalents *high* and *wide*, respectively, as well as the element *little*, as indicated in (4/108b). Next, under this approach, the second instantiation of *little* obligatorily gets deleted, as shown in (4/108c), and the resulting output will consequently look as in (4/108d). This is problematic in so far as in the outcome of this derivation, the antonymous adjective *narrow* has disappeared altogether, only its positive counterpart *wide* surfacing in the standard term of this comparative. It thus turns out that under the decompositional approach developed in Heim (2008), comparatives including two antonyms cannot even be generated to begin with, given that decomposition of these invariably leads to the presence of two occurrences of the term *little*, the second of which always has to undergo ellipsis in a mandatory fashion in the present version of this account.

In total, it therefore appears that there exist viable arguments for both positions alike and what complicates things further is that the empirical side of matters also happens to be anything but settled. For as a matter of fact, the exact status of examples such as those in (4/107) and (4/108a) above is still a matter of controversy: Whereas in Kennedy (2001), it is argued that examples like these are fully acceptable in line with the account defended there, according to which adjectives that are of the same polarity can always be compared to each other, be these

¹⁸⁵ Notice that Irene Heim changed her mind as to how antonymous adjectives should best be accounted for: While in Heim (2006a), cited beforehand, she rejected the syntactic decomposition of inherently negative adjectives, in Heim (2008), she now pleads for the opposite position.

positive or negative in nature, in Bierwisch (1989), equivalent German comparatives featuring two negative adjectives in their matrix clause and their standard term, respectively, such as for instance that shown in (4/109) (which I provide with glosses and an English translation), are classified as marked, instead, Krasikova (2010) following suit:

- (4/109) *Der Tisch ist niedriger als er schmal ist.*
 the(masculine) table is low.-er than he narrow is
 intended as: ‘The table is lower than it is narrow.’
 [Bierwisch (1989), p. 220; his (427a)]

And in a similar fashion, the grammatical status of examples involving a ‘cross-polar anomaly’ in the sense of Büring (2007) is after all also far from being clear-cut: While sentences like the one displayed in (4/104) arguably are fairly uncontroversial, configurations involving exact antonyms are usually judged to be rather bad, as explicitly admitted in Büring (2007) right away, which example (4/110) below is supposed to show, that I reproduce from there:

- (4/110) **Unfortunately, the hose is shorter than the ladder is long.*
 Büring (2007), p. 38; his (4)]

Crucially note, however, that the unacceptable status of example (4/110) does not follow from the account advocated in Büring (2007) in any principled way, so that at the end of the day, this approach highly overgenerates.¹⁸⁶ In sum, the question of whether or not antonyms should be decomposed in the syntax is thus far from being agreed upon, both from a theoretical as well as from an empirical perspective.¹⁸⁷ Let me therefore examine next what kind of conclusions we can draw from the behaviour of antonyms in MPCs for their potential decomposition and see if this can contribute any novel insights to this controversial issue.

First of all, as far as the English language is concerned, decomposing an antonymous adjective such as for example *short* in principle appears to be possible, as indicated in (4/111) on the following page, to the effect that only one lexical entry would be required for *short* and *long*, provided one is willing to abstract away from the different ordering relations involved (a “ \geq ”-relation in the case of the positive adjective *long* and a “ \leq ”-one with its corresponding

¹⁸⁶ Also observe in passing that under standard assumptions, the semantics assumed for decomposed antonyms in Büring (2007) will immediately block compatibility of these with overt MPs, without the author seeming to notice such. While this might represent a most welcome side effect of his analysis for English, it makes wrong predictions for German and French, as was shown at length in sections 4.3.2.2 and 4.5.2.4.1 before.

¹⁸⁷ A completely different type of decompositional analysis for antonymous adjectives essentially in terms of reversed scalarity has recently been proposed in Beck (2012a), the rather complex details of which I shall however not enter, here.

antonym *short*; cf. the lexical entry provided for *deep* in (4/54a) in subsection 4.5.1 and that suggested for *short* in (4/91) in section 4.5.2.4.2 above):¹⁸⁸

(4/111) $[[short_1]] = [[long_1]] = \lambda d \in D_d. \lambda x \in D_e. \text{height}(x) \geq d$, which is then combined with an element like *little* in the syntax

Essentially the same situation also obtains with non-shifted type1-adjectives in German and French, where syntactic decomposition is again conceivable, as shown in an exemplary fashion for the German adjective *schmal* (*narrow*) in (4/112a), as before under the condition that the different underlying ordering relations are generously left out of consideration:

(4/112) a. $[[schmal_1]] = [[breit_1]] = \lambda d \in D_d. \lambda x \in D_e. \text{width}(x) \geq d$, again combined with *little* afterwards

However, matters change radically as soon as one turns to antonymous type2-adjectives in the latter two languages, decomposition of which would have to proceed as illustrated once again for German *narrow* (*schmal*) in (4/112b) below:

(4/112) b. $[[schmal_2]] = [[breit_2]] = \lambda D \in D_{\langle d, t \rangle}. \lambda x \in D_e. \text{width}(x) \geq \max(D)$

One could then define an appropriate meaning for *little* along the lines of (4/113):

(4/113) $[[little]] = \lambda A_2 \in D_{\langle \langle d, t \rangle, \langle e, t \rangle \rangle}. \lambda D \in D_{\langle d, t \rangle}. \lambda x \in D_e: \underline{\max(D)} \leq_{s_c} A_2(D)(x) = \max(D)$, where “ s_c ” is a contextually specified standard for A_2

Note that making such a move is problematic, though, because this time, the denotation required for *little* differs considerably from the meaning this element would have to express in an ordinary comparative featuring an antonymous adjective such as that in (4/114) below:

(4/114)	<i>Das</i>	<i>braun.e</i>	<i>Brett</i>	<i>ist</i>	<i>schmal.er</i>	<i>als</i>
	the(neuter)	brown.nominative_neuter	plank	is	narrow.-er	than
	<i>das</i>	<i>schwarz.e</i>				
	the(neuter)	black.nominative_neuter				
	‘The brown plank is narrower than the black one.’					

Not only do the semantic types (simple degrees with (4/114) versus sets of degrees in (4/113)) as well as the relations involved diverge (“ \leq ” with (4/114) as opposed to strict equality in the case of (4/113)), but in addition, the element *little* as defined in (4/113) contributes the presuppositional meaning component the antonym *schmal* (*narrow*) gives rise to in its use in

¹⁸⁸ In view of the fact that in the end, the results gained from my empirical study on the distribution of direct MPCs will rather speak against decomposing antonymous adjectives, anyway, I shall not bother too much about the question of whether or not this additional step is really legitimate, at this point.

MPCs, an additional component which is however clearly absent in a simple comparative like (4/114), where no statement about the absolute sizes of the two planks at stake is made. Therefore, a kind of *little* completely different from that specified in (4/113) above would be necessary to successfully decompose the antonym *schmal* (*narrow*) in example (4/114), so that in the end, we would need two separate lexical entries for *little*, and this expression would ultimately have to ‘see’ whether it combines with an antonym in an ordinary comparative or in an MPC, which surely constitutes a rather unattractive assumption to make.¹⁸⁹ I therefore conclude that the evaluativity effects antonyms produce in German and French MPCs represent an additional argument against decomposing these into their positive counterpart and a *little*-like element and that instead, it seems more plausible to me to provide antonymous adjectives with a lexical entry of their own, a practice that I have already been adopting up to now.

4.5.2.4.4 Predictions of the Analysis for Evaluativity and a New Classification of Gradable Adjectives

In this subsection, I envisage checking the validity of the approach I am currently developing for MPCs, by having a look at whether or not it makes appropriate predictions with respect to evaluativity. In this context, let me stress right from the outset that my intention here is not to develop a full-fledged account of evaluativity across diverse types of comparison constructions in the three languages under consideration in any comprehensive way. This has actually been done before (cf. in particular Rett (2008), where it is proposed to account for the presence or absence of evaluativity with different kinds of comparison constructions in terms of a rather intricate interplay of a gradable predicate’s polarity and the directionality of the type of comparison construction involved (in addition to a couple of other assumptions, the details of which I cannot enter, here)). I am thus not interested in the effects the choice of a particular construction has on evaluativity, such as that of a degree question or of an equative, for which it has repeatedly been observed that these give rise to evaluative interpretations when featuring an antonymous adjective (cf. for instance Krasikova (2009), p. 294 or Sassoon (2011), p. 531, among many others), but rather in whether or not the basic lexical entries I am proposing for various types of adjectives are actually compatible with the evaluativity effects that are empirically attested.

¹⁸⁹ Alternatively, one might of course also consider the option of ascribing the presuppositional part to the adjective involved rather than to the element *little*. At the end of the day, this will however not do the trick, either, because under such an account, we would not only expect antonymous adjectives, but also their positively oriented counterparts (for instance *breit* (*wide*) in the case of *schmal* (*narrow*)) to trigger a corresponding presupposition, which they clearly do not.

As it presently stands, my analysis makes the following predictions with respect to evaluativity: First of all, antonymous MPCs are inherently evaluative in nature, given that these are derived on the basis of a type2-adjective where I have built evaluativity directly into its lexical entry in the form of a presupposition, as can be seen from the entry for the German adjective *schmal* (*narrow*) I have introduced in (4/95) in section 4.5.2.4.2 and that I repeat below:

$$(4/95) \quad [[schmal_2]]_{final} = \lambda D \in D_{<d,t>}. \lambda x \in D_e: \max(D) \leq s_c. \text{width}(x) = \max(D),$$

where “ s_c ” is a contextually specified standard for width

Secondly, with all other cases, either a type1-adjective or a non-antonymous adjective of the shifted type 2 gets used, both of which do not incorporate evaluativity under the current approach, as shown in an exemplary fashion by the two corresponding entries for the English gradable predicate *deep* given in (4/54a) and (4/54b), respectively, this time repeated from section 4.5.1 above:

$$(4/54) \text{ a. } [[deep_1]] = \lambda d \in D_d. \lambda x \in D_e. \text{depth}(x) \geq d$$

$$\text{ b. } [[deep_2]] = \lambda D \in D_{<d,t>}. \lambda x \in D_e. \text{depth}(x) \geq \max(D)$$

This state of affairs then immediately leads to the expectation that with these, evaluativity should only arise whenever the basic comparison construction itself introduces it and should by contrast be absent, elsewhere. In the course of this subsection, I shall now check this expectation for the following three basic constructions in turn: MPCs, primarily under consideration here as such, comparatives, exemplifying a type of construction that is normally assumed not to give rise to evaluativity and finally positives, which are usually considered as inherently evaluative constructions.

With regard to MPCs, it turns out that everything falls neatly into place: As expected, MPCs built on the basis of positive adjectives are not evaluative, as illustrated in the set of parallel sentences listed in (4/115a) and (4/115b) on the following page for English *tall* and its direct German equivalent *groß*, respectively, both of which do definitely not presuppose that the individuals in question necessarily have to exceed a contextually specified standard for height.¹⁹⁰

¹⁹⁰ The fact that MPCs are not normally evaluative per se is discussed at length in Kennedy (2001), Svenonius/Kennedy (2006) and Winter (2005), among many others, the special behaviour that German and French antonymous MPCs display in this respect of course not being addressed, there.

- (4/115) a. *Mary is 1.78 metre tall.*
 b. *Maria ist 1,78 Meter groß.*
 Mary is 1.78 metre(s) tall
 ‘Mary is 1.78m tall.’

Conversely, MPCs built from antonyms that are totally unattested in the English language, but perfectly licit in German as well as in French, typically show evaluativity effects, as is directly predicted by the lexical entries for antonymous type2-adjectives that I am positing, here (cf. (4/95) above). In this fashion, it comes as no surprise that the German example (4/93), reproduced from section 4.5.2.4.2 above, does indeed give rise to evaluativity:¹⁹¹

- (4/93) *Dies.es Brett ist vier Zentimeter schmal.*
 this.neuter plank is four centimetre(s) narrow
 ‘This plank is four centimetres wide.’; intended as: ‘*This plank is four centimetres narrow.’

As far as comparative constructions are concerned, we expect these to never trigger evaluativity, irrespective of whether these combine with a positively or a negatively oriented gradable predicate. This automatically follows from the facts that the comparison operator does not introduce evaluativity per se, as can be seen from its denotation specified in (2/165), repeated from subsection 2.3.5 above and that this operator is always bound to make use of the non-shifted type1-version of the adjective it co-occurs with, in turn not giving rise to evaluativity either, a prediction which is confirmed by the parallel set of English and German examples supplied in (4/116) and (4/117), respectively, where no statement about the actual sizes of Mary and Peter is made at all in that these two individuals can in fact be relatively short, fairly tall, but also of medium height:

- (2/165) $[[\text{-er}_{\text{clausal}}]] = \lambda D_1 [\in D_{\langle d, t \rangle}]. \lambda D_2 [\in D_{\langle d, t \rangle}]. \max(D_2) > \max(D_1)$
 [Beck (2011), p. 1347; her (35b)]

- (4/116) a. *Mary is taller than Peter.*
 b. *Mary is shorter than Peter.*

- (4/117) a. *Maria ist größ.er als Peter.*
 Mary is tall.-er than Peter
 ‘Mary is taller than Peter.’
 b. *Maria ist klein.er als Peter.*
 Mary is short.-er than Peter
 ‘Mary is shorter than Peter.’

¹⁹¹ For the time being, I shall entirely omit discussion of data from French for reasons that will become clear later on in this section.

And if we ultimately turn to positive constructions, the predictions my analysis makes are once more fully borne out: Given that the positive operator already triggers evaluativity as such (cf. its basic lexical entry spelt out in (4/118) below),¹⁹² it follows without any further ado that positives are indeed intrinsically evaluative in spite of the fact that these combine with type1-adjectives that do not bring about evaluativity themselves, which is corroborated by simple examples such as those included in English (4/119) and German (4/120) below, where Mary must indeed count as comparatively tall and short, respectively, if someone wants to truthfully utter the sentences in (4/119a) and (4/120a) as opposed to those in (4/119b) and (4/120b):

(4/118) $[[\text{POS}]] = \lambda D \in D_{\langle d, t \rangle}. \max(D) \geq s_c$, where “ s_c ” corresponds to a contextually supplied standard

(4/119) a. *Mary is tall.*
 b. *Mary is short.*

(4/120) a. *Maria ist groß.*
 Mary is tall
 ‘Mary is tall.’
 b. *Maria ist klein.*
 Mary is short
 ‘Mary is short.’

So far, my analysis thus seems to make the correct kind of predictions with regard to evaluativity for MPCs, comparatives and positives, alike, but unfortunately, this is not yet the end of the story. In the ensuing paragraph, I shall now move on to take a particular type of comparative into account with which my present analysis fares considerably worse.

To this end, let us next have a close look at the two English comparative constructions introduced in (4/121) and (4/122), that are based on the gradable predicates *intelligent* and *pretty*, respectively:

¹⁹² I am simplifying things slightly here by associating the positive operator with a simple contextual standard rather than an entire neutral zone, which appears legitimate for present purposes, but strictly speaking, the lexical entry for this operator should actually look as in (i) below (cf. the discussion in Beck (2011), making use of insights obtained in von Stechow (2006)):

(i) $[[\text{POS}]] = \lambda D [\in D_{\langle d, t \rangle}]. \forall d [\in D_d] [d \in L_C \rightarrow D(d)]$,
 where “ L_C ” corresponds to the neutral zone supplied by context

[Beck (2011), p. 1352; her (65); = (3/49)]

The introduction of such a neutral zone seems necessary in view of examples such as the one given in (ii) below, which arguably states that Peter’s height is neither included in the positive, nor in the negative extension of the adjective *tall*, but exactly falls into this neutral zone, instead:

(ii) *Peter is neither short nor tall.*

On the precise establishment of this neutral area with positive constructions, additionally cf. the discussion offered in section 3.3.2.3.1 of this dissertation in the context of propositional gradable predicates, and I shall also come back to this issue in the further course of this subsection.

(4/121) *Albert Einstein was more intelligent than Conrad Röntgen.*

(4/122) *Marilyn Monroe was prettier than Janis Joplin.*

As it turns out, uttering these sentences would actually be fairly weird if Albert Einstein and Conrad Röntgen had both been totally daft or if Marilyn Monroe and Janis Joplin had been ugly as sin. It thus appears to be the case that the sentences in (4/121) and (4/122) come with an evaluative flavour that is totally unexpected under my present account. For on the one hand, this flavour cannot stem from the comparative construction as such, as can be seen from the lexical entry for *-er* depicted in (2/146) above as well as from the clearly non-evaluative status of sentences such as those in the paradigms in (4/116) and (4/117) and on the other hand, it cannot be attributed to the adjectives involved, either, because these happen to be type1-predicates not giving rise to evaluativity. In order to remove this obvious deficiency, it might therefore look tempting to propose an account of adjectives like *intelligent* and *pretty* that runs parallel to the one that I have exclusively suggested for antonyms appearing in MPCs, up to now. In this fashion, one might consider assigning these expressions entries along the lines of those specified in (4/123) and (4/124) below, where evaluativity is presupposed in exactly the same way as with antonymous type2-adjectives before:

(4/123) $[[intelligent_1]] = \lambda d \in D_d. \lambda x \in D_e: \underline{d} \geq s_c. \text{intelligence}(x) \geq d$, where “ s_c ” is a contextually specified standard for intelligence

(4/124) $[[pretty_1]] = \lambda d \in D_d. \lambda x \in D_e: \underline{d} \geq s_c. \text{beauty}(x) \geq d$, where “ s_c ” is a contextually specified standard for beauty

However, such an approach runs into trouble right from the start: First of all, from an intuitive point of view, this presupposition appears to be too strong, for the individuals in (4/121), that is Albert Einstein and Conrad Röntgen, do not really have to be smarter than the standard for intelligence corresponding to the average of all people or the like, but it already seems to be enough if they are characterised by a relatively small amount of cleverness and likewise, in (4/122), Marilyn Monroe and Janis Joplin do not necessarily have to be extreme beauties for this comparison to work, either. Secondly, under such an account, we would also expect it to be problematic to use adjectives like *intelligent* or *pretty* in a positive construction, because now, the positive would actually assert what the adjective as such presupposes anyway by virtue of the form in which it is born in the lexicon (cf. the lexical entry for the positive operator that has been introduced in (4/118) above). Yet in clear contrast to this expectation, the corresponding positive constructions are not only fully grammatical, but these even make

perfect sense, in that they are definitely not unacceptable or odd in any respect at all, as shown by their impeccable statuses in (4/125) and (4/126) below:

- (4/125) a. *Albert Einstein was intelligent.*
 b. *Conrad Röntgen was intelligent.*

- (4/126) a. *Marilyn Monroe was pretty.*
 b. *Janis Joplin was pretty.*

Therefore, I should like to abandon this proposal right away and to suggest an alternative approach to this phenomenon, instead, that crucially relies on the presence of two distinct standards: an average standard, which I shall abbreviate as “ $s_{c\text{-average}}$ ” in lexical entries in what follows and a minimum standard, to be abbreviated as “ $s_{c\text{-min}}$ ”. Furthermore, I shall assume that exceeding the former will give rise to what I shall refer to as ‘strong evaluativity’ henceforth, whereas surpassing the latter will only result in what I shall call ‘weak evaluativity’. For the sake of concreteness, let me illustrate how this basic dichotomy is supposed to come about in practice with the help of the adjective *intelligent*, here.¹⁹³ The average standard related to strong evaluativity is located at 100 IQ points, which corresponds to the average intelligence of all people, in contrast to which the minimum standard associated with weak evaluativity is situated at a level of 70 IQ points, only, which is in turn tantamount to the official medical limit for feeble-mindedness.¹⁹⁴ Moreover, I propose that what is at stake with adjectives like *intelligent*, is precisely weak rather than strong evaluativity, as I have wrongly assumed in my first attempt at adequately capturing these, an attempt that was ultimately bound to fail. On the basis of this novel insight, I now suggest revising the lexical entries for *intelligent* and *pretty* accordingly, as has been done in (4/127) and (4/128):

(4/127) $[[\textit{intelligent}_1]] = \lambda d \in D_d. \lambda x \in D_e: \underline{d} \geq s_{c\text{-min}}. \textit{intelligence} (x) \geq d$

(4/128) $[[\textit{pretty}_1]] = \lambda d \in D_d. \lambda x \in D_e: \underline{d} \geq s_{c\text{-min}}. \textit{beauty} (x) \geq d$

Note that the notion of weak evaluativity I am introducing here makes overt use of a contextually given minimum that in fact corresponds exactly to the lower boundary of the neutral zone attested with positive constructions in a von Stechow (2006)/Beck (2011)-style

¹⁹³ I am illustrating this fundamental idea on the basis of this adjective, because there is an official IQ scale that goes with it, which makes it particularly convenient for expository reasons. With an adjective such as *pretty*, the line of argumentation would essentially be the same with the only difference that an ad hoc scale would first have to be established, as is for instance often done explicitly on the occasion of beauty contests or the like.

¹⁹⁴ I extracted these exact figures from the following German website, which I consulted on 30 August 2013: www.de.wikipedia.org/wiki/Geistige_Behinderung.

framework, where a positive operator as specified in (3/49), repeated from section 3.3.2.2 above, is assumed to be at work (cf. also footnote 192):

$$(3/49) \quad [[\text{POS}_{\text{Cord}}]] = \lambda D \in D_{\langle d, t \rangle}. \forall d [\in D_d] [d \in L_C \rightarrow D(d)]$$

(where “ L_C ” corresponds to the neutral zone of the respective scale)

Crucially observe that while this positive operator itself relies on the upper boundary of this neutral area, only, the semantics of adjectives like *intelligent* and *pretty* proposed for these in (4/127) and (4/128) makes direct reference to its lower limitations. Interestingly enough, this might also immediately explain why it has taken much longer to discover this weak evaluativity than its strong counterpart, given that minima generally seem to be less salient than maxima, a situation we have already encountered in section 3.3.1.2.1 above, where the von Stechow (1984a)/Rullmann (1995)-approach also considered maxima alone, until it was noticed in Beck/Rullmann (1996) that some predicates such as for instance *be sufficient* (cf. the example included in (3/18) above) make use of minima, instead. Taking these insights into account, the lexical entries for various types of adjectives could now easily be reformulated by systematically replacing the two different standards distinguished here, that is “ $S_{c-\text{min}}$ ” and “ $S_{c-\text{average}}$ ”, by the minimum and the maximum of this neutral zone “ L_C ”, respectively, which I have done in an exemplary fashion for the weakly evaluative German type1-adjective *warm* (*warm*), the likewise weakly evaluative adjective *reich* (*rich*) in its type2-version and the strongly evaluative adjective *stark* (*strong*) in (4/129) to (4/131) below:

$$(4/129) \text{ a. } [[\text{warm}_1]] = \lambda d \in D_d. \lambda x \in D_e: \underline{d} \geq S_{c-\text{min}}. \text{temperature}(x) \geq d \quad \rightarrow$$

$$\text{ b. } [[\text{warm}_1]] = \lambda d \in D_d. \lambda x \in D_e: \underline{d} \geq \min(L_C). \text{temperature}(x) \geq d$$

$$(4/130) \text{ a. } [[\text{reich}_2]] = \lambda D \in D_{\langle d, t \rangle}. \lambda x \in D_e: \underline{\max(D)} \geq S_{c-\text{min}}. \text{wealth}(x) \geq \max(D) \quad \rightarrow$$

$$\text{ b. } [[\text{reich}_2]] = \lambda D \in D_{\langle d, t \rangle}. \lambda x \in D_e: \underline{\max(D)} \geq \min(L_C). \text{wealth}(x) \geq \max(D)$$

$$(4/131) \text{ a. } [[\text{schmal}_2]] = \lambda D \in D_{\langle d, t \rangle}. \lambda x \in D_e: \underline{\max(D)} \geq S_{c-\text{average}}. \text{width}(x) = \max(D) \quad \rightarrow$$

$$\text{ b. } [[\text{schmal}_2]] = \lambda D \in D_{\langle d, t \rangle}. \lambda x \in D_e: \underline{\max(D)} \geq \max(L_C). \text{width}(x) = \max(D)$$

Assuming a positive semantics along the lines of (3/49) thus directly allows me to do away with the need to postulate two separate and unrelated standards and at the same time, the findings arrived at here in the context of adjectives like *intelligent* or *pretty* also provide additional evidence for the existence of a neutral area as proposed in a semantics for the positive operator in the spirit of von Stechow (2006) or Beck (2011), because the interpretation of such adjectives represents a case in which the lower limitations of this neutral area are explicitly made use of. And in the end, it might also very well turn out that this notion of weak evaluativity directly

reflects an idea that has already been expressed quite frequently in literature on gradable predicates, according to which certain adjectives and adverbs do not permit a very low quantity of the property they describe or even its complete absence, which would correspond to falling below the minimum standard a given gradable predicate is associated with under the account developed, here. In this context, consider for example statements such as the following listed in (4/132):¹⁹⁵

- (4/132) a. “[...] for some adjectives, the set of degrees that comprise the range of the positive forms [...] includes intervals that [...] do not include the zero point of their scale.”
[Kennedy (2001), p. 63]
- b. “Nothing in [my] proposal prevents positive adjectives from being transformed.”
[Sassoon (2010b),
p. 163, where “transformed” corresponds to “having a shifted zero point”]
- c. “[...] *heavy* or *rich*. Richness is often measured by the amount of money one’s possessions are worth. Still, zero richness is not conventionally or intuitively identified with entities having absolutely no possession. Similarly, a lack of a feeling of ‘heaviness’ can occur in things with more than zero weight. The air or feathers are not heavy at all, though they do have some weight.” [ibid., p. 169]¹⁹⁶
- d. “[...] the scales of adjectives such as *fast* and *expensive* do not exhaust all the physically legitimate values.” [Winter (2005), p. 260]¹⁹⁷

In particular, I also assume that the class of adjectives affected by the concept of ‘weak evaluativity’ identified here corresponds largely to the group of “evaluative” adjectives discussed in Bierwisch (1989) and that are opposed to “dimensional” adjectives like *tall*, there, in that the set of weakly evaluative adjectives encountered here gives rise to essentially the same characteristics as the “evaluative” ones picked out in Bierwisch (1989), which I intend to illustrate on the basis of one exemplary case, in what follows: Manfred Bierwisch for instance also observes that in contrast to his “dimensional” adjectives, his “evaluative” ones give rise to evaluativity effects in comparatives, so that sentences such as those given in (4/133a) and (4/133b) on the next page (which I supply with English glosses), featuring the “evaluative”

¹⁹⁵ This state of affairs is vaguely reminiscent of the discussion in Kennedy/McNally (2005) as well, where the authors also observe that there exist different types of adjectives, some of which make reference to a contextually provided minimum, which they however take to be part of the actual assertion (cf. ibid., p. 358, in particular their (34)) rather than attributing it a presuppositional status or that of an implicature, as I am suggesting, here (cf. the entries offered in (4/127) to (4/128) and in (4/129) to (4/131) in the main text and the discussion to follow, there). Also note that in contrast to what is being done here, Kennedy/McNally (2005) largely focusses on a rather special subtype of adjectives such as deverbal ones like for instance *closed*.

¹⁹⁶ In the same article, Galit W. Sassoon talks about an “evaluative implication” when briefly addressing the German adjective *kalt* (*cold*) in a footnote (Sassoon (2010b), p. 166, footnote 17), for which she considers “future research” (ibid.) to be necessary, though.

¹⁹⁷ Strangely enough, in Winter (2005), *fast* is counted among this special kind of adjectives and in Sassoon (2010b), *heavy* is included among them, whereas for these two expressions, my native speakers unanimously agreed on attributing them a clearly non-evaluative status (cf. the list of adjectives classified as evaluative by all native speakers throughout that is to follow in (4/138) below).

adjectives *schön* (pretty) and *hässlich* (ugly; in (4/133b) still spelt according to the rules of the old German orthography in use when published in 1989), respectively, require the two individuals present in turn to be characterised by a fair amount of beauty and ugliness:

- (4/133) a. *Eva ist schön.er als Helga.*
 Eva is pretty.-er than Helga
 ‘Eva is prettier than Helga.’ [Bierwisch (1989), p. 206; his (390a)]
- b. *Helga ist häßlich.er als Eva.*
 Helga is ugly.-er than Eva
 ‘Helga is uglier than Eva.’ [ibid.; his (390b)]

Note that this criterion in Bierwisch (1989) for identifying “evaluative” adjectives is precisely the same as the one used for detecting weak evaluativity here, and it comes therefore as no surprise that the adjectives *schön* (pretty) and *hässlich* (ugly) are indeed affected by weak evaluativity (cf. the list to follow in (4/138b) below). Moreover, it is claimed in Bierwisch (1989) that “evaluative” adjectives give rise to a scale associated with a zero point that depends on contextual information just as I am arguing here that with weakly evaluative predicates, the entities to which such a predicate applies must exceed a contextually supplied minimal standard/the lower boundary of the respective neutral zone (cf. the lexical entries specified in (4/127) to (4/128) and in (4/129) to (4/131) above).¹⁹⁸ As far as I am aware of, these ideas have however never really been formalised up to now, which is exactly what my notion of weak evaluativity is supposed to do, a step which might therefore formally capture thoughts that have already been present in linguistic literature for quite some time.

Another aspect of weak evaluativity that remains to be addressed, here, is its exact nature. In the entries given in (4/127) to (4/128) and in (4/129) to (4/131), I have ascribed a presuppositional status to this special type of evaluativity, which appears to be a valid choice to make. For as a matter of fact, this evaluative meaning component is certainly not part of the assertion proper, which becomes clearest when a sentence such as that in (4/134) below is taken into account:

(4/134) *Anna is prettier than Mary.*

For the sake of the argument, assume now that Anna and Mary both happen to be fairly ugly, but that Anna is slightly less so than Mary. In such a context, my English native speaker

¹⁹⁸ In other respects, the proposal made in Bierwisch (1989) and the one I have elaborated differ, though: First in terms of the empirical foundations (whereas Manfred Bierwisch presents data gained by introspection, my conclusions are based on an empirical study) and secondly in that my analysis offers additional refinements on the one offered in Bierwisch (1989) (cf. for example the distinction between strong and weak evaluativity newly introduced, here).

consultants unanimously considered a sentence like (4/134) as inappropriate rather than as plainly false. The question of whether we are really dealing with a presupposition or rather with an implicature turns out to be somewhat less clear-cut, though. Opinions are split about halfway among my informants as to whether or not cancelling this evaluative meaning component is possible, as indicated with the continuation spelt out in (4/135) below:

(4/135) *?Anna is prettier than Mary, but in fact, neither of them is pretty at all.*

In a similar fashion, the application of standard tests for presuppositions has also resulted in a very mixed response, in that native speakers did for instance not agree on whether the negative statement in (4/136) below can be truthfully uttered about someone who happens to be mentally handicapped or whether this rather constitutes an inappropriate comment given that the predicate *intelligent* cannot even be applied to the individual in question to begin with:

(4/136) *#He is not intelligent.*

Likewise, informants also disagreed as to whether the question in (4/137) should be answered by a plain “No, he isn’t.” in such a scenario, or whether raising that question is already inappropriate as such, so that it actually cannot be answered in an adequate fashion at all:

(4/137) *#Is he intelligent?*

Whereas the former position clearly points in the direction of an implicature, the latter speaks in favour of the presence of a presupposition that projects under negation, in questions and the like. In view of the fact that opinions are divided in about equal proportions among my English native speakers in this respect,¹⁹⁹ I cannot finally settle this issue, and we might eventually be dealing with yet another form of individual speaker variation, here (cf. subsection 4.3.2.1 above): For some speakers, this evaluative effect has the status of a presupposition, whereas for others, it rather represents an implicature, and it is purely for expository reasons that I shall stick to the former option in what follows, which will prevent me from the rather tedious task of always having to specify both options explicitly. In total, this then leaves us with the following inventory of evaluativity effects with different types of triggers: Whereas the positive operator directly asserts strong evaluativity, as can be seen from its entries specified in (4/118) and (3/49) above, antonymous adjectives appearing in overt MPCs presuppose this kind of

¹⁹⁹ I have also checked several other adjectives in this context and additionally, I have tested matters in German as well, neither of which helped to clarify the empirical picture, though, because results have remained mixed throughout.

evaluativity (cf. for instance the lexical entry proposed for the German adjective *schmal* (*narrow*) in (4/95)) and finally, gradable predicates like *intelligent* or *pretty* presuppose (or imply) weak evaluativity.

The introduction of weak evaluativity now allows me to account for the felicity of positive constructions like those in (4/125) and (4/126), one of which I reproduce below:

(4/125) a. *Albert Einstein was intelligent.*

For under my revised analysis, the presuppositional part of the denotation of the adjective *intelligent* and the assertion made by the positive construction per se both make a sensible contribution to the overall meaning of sentence (4/125a): Whereas the gradable predicate as such only presupposes that Albert Einstein's IQ was at least at 70, the positive additionally asserts something much stronger, namely that he even reached an IQ of 100 points or more. And at the same time, the notion of weak evaluativity ultimately also provides me with a principled explanation for the inappropriateness of the potential equivalences that I encountered with the sentences in (4/102b) and (4/103b) in section 4.5.2.4.2 above, which I repeat below:

(4/102) b. *#Yesterday, it was two degrees colder than today.*

(4/103) b. *#The night before, it had been three degrees warmer than last night.*

By virtue of the fact that *cold* and *warm* are also adjectives giving rise to weak evaluativity (cf. the list provided in (4/138a) below), these sentences are out in their respective contexts simply because temperatures above 50°C or below -30°C clearly fall short of the minimum standards associated with these adjectives, in turn, which immediately leads to a presupposition failure that will eventually render the sentences in (4/102b) and (4/103b) unacceptable, yet not ungrammatical, exactly as is indeed attested.

As far as individual adjectives are concerned, testing comparative constructions has revealed that (at least) the following sets of adjectives listed in (4/138a) and (4/138b) are affected by this newly discovered concept of weak evaluativity in English and German:²⁰⁰

²⁰⁰ In practice, I have checked for weak evaluativity by forming comparatives on the basis of the adjective under investigation and then asking my informants whether the resulting sentence is acceptable in a context where the two individuals compared to each other both display the property introduced by this adjective only to a very small extent. With the adjective *intelligent*, I have tested for instance the sentence shown in (i) below and enquired if it is acceptable in a scenario where Mary and Peter both happen to be mentally handicapped and dispose of an IQ of no more than 32 and 30 points, respectively:

(i) *Mary is more intelligent than Peter.*

In the following overview of adjectives triggering weak evaluativity supplied in (4/138) in the main text, I am cautious enough to list merely those adjectives for which my native speaker informants have fully agreed in their judgments and to omit all those for which I have found variation among my consultants, instead. This type of variation is most likely to be regarded as a special subtype of the individual speaker variation I have described in

- (4/138) a. English: *acute, aggressive, bad, beautiful, bent, calm, cheap, close, cold, dark, distant, early, expensive, fat, good, green* (if gradable at all, cf. section 4.5.2.2 above), *hot, huge* (if gradable at all), *intelligent, late, lukewarm* (if gradable at all), *mild, near, obtuse, poor, progressive, quiet, reactionary, remote, rich, shallow, silent, slim, straight, stupid, thick* (with people), *thin* (with people), *tiny* (if gradable at all), *ugly, vaulted, warm, weak* (in number) and *wealthy*
- b. German: *aggressiv, arm, dick* (with people), *dumm, dünn* (with people), *fett, fortschrittlich, gebogen, gekrümmt, gerade* (if gradable at all), *gewölbt, gut, hässlich, heiß, kalt, lau, reich, riesig* (if gradable at all), *rückschrittlich, ruhig, schlank, schlecht, schön, seicht, spitz, stumpf, verfrüht* (if gradable at all), *vermögend, verspätet* (if gradable at all), *warm* and *winzig* (also if gradable at all)

What ultimately needs to be accounted for is the situation in French and interestingly enough, my test on comparatives has displayed weak evaluativity for all French adjectives, alike. I therefore assume that gradable predicates are generally marked by weak evaluativity in this language, even though strictly speaking, this finding could also be due to the presence of a comparative operator that introduces evaluativity itself, an issue which ultimately cannot be settled on purely empirical grounds: In view of the fact that I have not been able to identify any comparison construction as genuinely non-evaluative in this language at all, it seems however more plausible to attribute weak evaluativity to the adjectives as such, the lexical entries of which always remain constant across different types of comparison constructions, rather than presuming that each and every different operator involved in these various constructions separately triggers evaluativity in French. Moreover, adopting this position also has the immediate advantage that identical denotations for these individual comparison operators can be maintained cross-linguistically.²⁰¹ In total, this then leaves us with the following overall picture as summarised in the new classification of gradable adjectives provided in (4/139):

subsection 4.3.2.1 above, just as has been the case with the question of whether weak evaluativity should be ascribed the status of a presupposition or rather that of an implicature, beforehand.

²⁰¹ As noted before (cf. subsections 4.3.1.1 and 4.5.1), in Eckhardt (2011), it is reported that direct MPCs are attested in Mandarin Chinese (in contrast to what is assumed about this language in Beck et al. (2009)). What is of particular interest in this respect is that the author always takes these to be inherently evaluative (ibid., p. 145), to the effect that Chinese MPCs might turn out to show a behaviour that is very similar to that of their French counterparts. Of course, in Eckhardt (2011), no distinction is established between the notions of ‘weak’ as opposed to ‘strong’ evaluativity, so that at the moment, I cannot really tell how far this parallel goes, given that the evaluativity Regime Eckhardt observes for MPCs in Chinese might just as well correspond to strong rather than to weak evaluativity, the latter version of which I have identified to be at stake in French, here (except in the case of antonymous MPCs, where French adjectives display strong evaluativity).

(4/139)

<u>type of adjective</u>		<u>English</u>	<u>German</u>	<u>French</u>
neutral type1-adjective	example	<i>deep</i>	<i>tief</i>	not attested
	denotation	$\lambda d \in D_d. \lambda x \in D_e. \text{depth}(x) \geq d$	$\lambda d \in D_d. \lambda x \in D_e. \text{depth}(x) \geq d$	–
antonymous, neutral type1-adjective	example	<i>narrow</i>	<i>schmal</i>	not attested
	denotation	$\lambda d \in D_d. \lambda x \in D_e. \text{width}(x) \leq d$	$\lambda d \in D_d. \lambda x \in D_e. \text{width}(x) \leq d$	–
weakly evaluative type1-adjective	example	<i>warm</i>	<i>warm</i>	<i>profond</i>
	denotation	$\lambda d \in D_d. \lambda x \in D_e: \underline{d} \geq \min(L_C). \text{temperature}(x) \geq d$	$\lambda d \in D_d. \lambda x \in D_e: \underline{d} \geq \min(L_C). \text{temperature}(x) \geq d$	$\lambda d \in D_d. \lambda x \in D_e: \underline{d} \geq \min(L_C). \text{depth}(x) \geq d$
neutral type2-adjective	example	<i>deep</i>	<i>tief</i>	not attested
	denotation	$\lambda D \in D_{\langle d, t \rangle}. \lambda x \in D_e. \text{depth}(x) \geq \max(D)$	$\lambda D \in D_{\langle d, t \rangle}. \lambda x \in D_e. \text{depth}(x) \geq \max(D)$	–
weakly evaluative type2-adjective	example	<i>distant</i>	<i>reich</i>	<i>profond (de)</i>
	denotation	$\lambda D \in D_{\langle d, t \rangle}. \lambda x \in D_e: \underline{\max(D)} \geq \underline{\min(L_C)}. \text{distance}(x) \geq \max(D)$	$\lambda D \in D_{\langle d, t \rangle}. \lambda x \in D_e: \underline{\max(D)} \geq \underline{\min(L_C)}. \text{wealth}(x) \geq \max(D)$	$\lambda D \in D_{\langle d, t \rangle}. \lambda x \in D_e: \underline{\max(D)} \geq \underline{\min(L_C)}. \text{depth}(x) \geq \max(D)$
strongly evaluative type2-adjective	example	not attested	<i>schmal</i>	<i>étroit (de)</i>
	denotation	–	$\lambda D \in D_{\langle d, t \rangle}. \lambda x \in D_e: \underline{\max(D)} \geq \underline{\max(L_C)}. \text{width}(x) = \max(D)$	$\lambda D \in D_{\langle d, t \rangle}. \lambda x \in D_e: \underline{\max(D)} \geq \underline{\max(L_C)}. \text{width}(x) = \max(D)$

Let me conclude this subsection by having a look at three more consequences of the approach advocated here, first a theoretical one and subsequently two that are empirical in nature.

Firstly, if I am essentially right in postulating various different basic types of adjective meanings (as shown in the table in (4/139) above), this constitutes a serious challenge for accounts such as that defended for instance in Svenonius/Kennedy (2006), where adjectives are

invariably taken to denote simple measure functions of type $\langle e,d \rangle$, as illustrated by the lexical entry proposed for *old*, there, that I reproduce in (4/140) below:²⁰²

(4/140) $[[old]] = \lambda x [\in D_e].$ the degree to which x is old
 [Svenonius/Kennedy (2006), section 3; their (46)]

In order to derive different denotations for entire comparison constructions, some of which are for instance not evaluative, whereas others are (and possibly to different degrees, depending on whether strong or weak evaluativity is involved), the only way out under such a kind of approach would eventually be the introduction of different kinds of comparison operators (some of which trigger (different forms of) evaluativity while others do not), but even then, it would remain highly mysterious why a particular operator should only combine with certain adjectives and not with others. Note that in contrast to this, the analysis I am defending here can handle matters in a much more adequate fashion, in that it places the source of variation with individual types of adjectives right away, thereby directly reflecting the empirical facts in a simple and straightforward fashion.

Secondly, the analysis pursued here might also provide us with a principled account of the rather puzzling facts about evaluativity effects in Russian comparatives, which have led Sveta Krasikova so far as to even partly abandon a scalar approach to comparison altogether and to resort to a vague predicate analysis, instead (Krasikova (2009)). In Russian, analytical comparatives such as the one given in (4/141) below are evaluative, while their synthetically formed counterparts, an example of which is included in (4/142), are not:

(4/141) *она выше чем Сергей.*
 she tall.-er than Sergej
 ‘She is taller than Sergej.’ [Krasikova (2009), p. 295; part of her (8a)]

(4/142) *она более высокая чем Сергей.*
 she more tall than Sergej
 ‘She is taller than Sergej.’ [ibid.; part of her (8b)]

This state of affairs would immediately follow from my present account under the simple assumption that Russian adjectives are generally born as non-evaluative expressions in the lexicon and that the comparison operator at work in analytical comparatives, in contrast to that occurring in synthetic ones, introduces evaluativity.²⁰³ Notice that a very similar pattern can be found at least with some speakers of English, too, in the context of adjectives that allow both,

²⁰² I should like to expressly thank Vera Hohaus for first drawing my attention to this issue.

²⁰³ Whether we are dealing with strong or weak evaluativity in analytical Russian comparatives remains to be properly checked, but probably, strong evaluativity is at play (Polina Berezovskaya, personal communication).

formation of a synthetic as well as of an analytical form of the comparative, as exemplified in the minimal pair in (4/143) below:

- (4/143) a. *The sea was calmer than last time.* [synthetic comparative]
b. *The sea was more calm than last time.* [analytical comparative]

With such sentences, some English native speakers perceive a difference in that the one in (4/143b) requires there to be a fair amount of calmness, which is not the case with that in (4/143a), where it is sufficient if there simply happened to be less turbulences than on the previous occasion, no matter how rough or calm the sea actually was.

And thirdly, my analysis also makes two direct predictions for the distribution of pronominal MPs, both of which seem to be fully borne out: As convincingly argued for in Tiemann/Hohaus/Beck (2012) on the basis of data from language acquisition in English and German, unlike full-fledged MPs (which the authors assume to be of type $\langle\langle d, t \rangle, t \rangle$; cf. footnote 159 in subsection 4.5.1 above), their pronominal counterparts denote simple degrees of semantic type $\langle d \rangle$, as can be seen from the lexical entry they propose for the pronominal MP *that*, which I reproduce in (4/144) below:

- (4/144) $[[that]] = d_c$ (where d_c is the contextually relevant degree)
[Tiemann/Hohaus/Beck (2012), section 4.2; their (41c)]

If this is on the right track, it will follow automatically and without any further ado from the analysis proposed here that these pronominal MPs are expected to show a wider distribution than their ordinary equivalents, given that their semantic type permits them to directly combine with any gradable predicate of type $\langle d, \langle e, t \rangle \rangle$, in that no special type-shifted entry is required. And as a matter of fact, this predicted wider distribution is indeed attested, as shown in an exemplary fashion for the English positive adjective *rich* and its negative equivalent *short* in (4/145) and (4/146) below, respectively (where bracketed material is included as the relevant contexts for the (b)-sentences), both of which expressions are totally excluded from ordinary MPCs and nevertheless yield absolutely impeccable pronominal counterparts:

- (4/145) a. **A 150-million-pound-rich building contractor has recently bought all the remaining sites in our neighbourhood.*
b. (*My uncle owns at least three huge shipping companies.*) *My cousin is that rich too/also that rich.*
- (4/146) a. **The clothesline that the confirmed old bachelor put up in his garden was five feet short.*
b. (*Peter is only five feet tall.*) *Mary is that short too/also that short.*

Furthermore, my account also makes the right kind of predictions about evaluativity with such pronominal MPCs without me having to introduce any further stipulations. Observe, in this context, that a statement like (4/147b) is for instance evaluative in contrast to that given in (4/147a):

- (4/147) a. *Peter is also that tall/that tall too.*
b. *Today, it is also that warm/that warm too.*

These empirical facts follow directly from these adjectives' basic lexical entries I am proposing to be at work, *tall* representing a neutral adjective, *warm* by contrast giving rise to weak evaluativity, so that I do not have to postulate a whole array of different entries for expressions such as *that* or *so*, as has for instance been suggested in Umbach (2009b), the attested evaluativity effects automatically coming about as an immediate consequence of the lexical entries I am assuming for gradable adjectives per se.

In sum, the present analysis thus not only adequately handles the (non-)occurrence of MPCs with individual adjectives both across as well as within different languages, but it also makes the right kind of predictions for effects of evaluativity and comes with a couple of most welcome side effects, such as those that have been observed with respect to analytical as opposed to synthetic comparison or in the context of pronominal MPs.

4.6 Summary

In total, my empirical study on the (un-)availability of direct MPCs in the three languages English, German and French has first of all confirmed the existence of universal, language internal as well as cross-linguistic variation within this linguistic domain. What is more, it has also shown there to be a considerable amount of individual speaker, antonymic and maybe even structural variation as well, which had been neglected in earlier work on this phenomenon. Furthermore, I have developed a comprehensive picture of the cross-linguistic as well as the language-internal distribution of MPs on the basis of the assumption that these denote entire sets of degrees and are therefore elements of semantic type <d,t> rather than simple degrees and for those languages that are not characterised by a total lack of overt MPCs as such, four fundamental generalisations pertaining to innovations, differentials, adjectives typically co-occurring with ambiguous units of measurement and finally antonyms have been worked out. Doing so, I have additionally proposed an entirely novel analysis of MPCs based on antonymous adjectives and at the same time, I have also produced a new kind of argument for the controversial question of whether antonyms should be decomposed in the syntax or not.

Moreover, I have eventually come up with a totally new classification of gradable predicates in terms of neutral adjectives as opposed to adjectives giving rise to strong or weak evaluativity, which has ultimately allowed me to account for the empirical data in an adequate fashion.

5 CONCLUSIONS, OUTLOOK AND A PLEA FOR EMPIRICAL FIELDWORK

5.1 Conclusions and Outlook

In the course of this dissertation, I have primarily aimed at filling a number of gaps in the theory of comparison and gradability, both, from an empirical as well as from a theoretical perspective. To this end, I have first of all presented a fairly exhaustive overview of the most common comparison constructions attested in the Turkish language, a task that had never been tackled in formal semantics before, and I then proceeded to take a closer look at the adverb *daha* sometimes appearing in Turkish comparatives, which I have identified as a purely optional element except for cases that lack an overt standard term and for which I have also provided a novel semantics essentially based on an evaluative presupposition. At the same time, I have investigated a polysemy this particular adverb gives rise to and shown that similar polysemies can be found (at least) in English, German, French and Spanish, too, in which context I have furthermore discussed temporal and spatial expressions that enter the domain of gradability from a more general point of view. Next, it has been argued that standard approaches to phrasal comparison yield rather unsatisfactory results in several respects when directly transferred to comparison in Turkish, as a remedy for which I have suggested a new account of phrasal comparison in terms of the association of individuals with implicit degrees, the consequences of which have been examined in particular with regard to comparatives involving quantificational standard terms, which revealed that this analysis does indeed make the right kind of predictions for Turkish, but not for a language like English. Ultimately, it has however also been demonstrated that even in the latter language, there is good reason to believe that some superficially phrasal comparatives cannot be analysed in a clausal fashion and are thus to be treated as genuinely phrasal comparatives, instead. Subsequently, I have turned to another gap when dealing with Negative Island Effects, where I have shown on the basis of four corpus studies in the languages English, German, French and Spanish that these only arise with ordinary, but not with propositional gradable predicates, because with the latter, an *n*-word in a comparative's standard term automatically happens to be embedded within an entire proposition, eventually preventing the occurrence of a Negative Island Effect. In addition, I have presented various refinements of this basic approach, taking a closer look at how exactly the neutral zone on a scale associated with a gradable adjective is established in the case of propositional as opposed to ordinary predicates and introducing a fundamental distinction between personal propositional adjectives on the one hand and impersonal ones on the other, showing on the way that adopting an inherently superlative semantics for propositional

adjectives and adverbs is bound to fail for empirical reasons and that the choice of mood is irrelevant for the evaluation of the alternatives positive and superlative constructions give rise to. Finally, I have also dealt with the question of what governs complementiser choice in a propositional standard term, where I have suggested a novel account in terms of presupposed factivity, the validity of which has been confirmed by the correct predictions it makes for the combinatory possibilities of propositional arguments with comparatives, for licit and illicit reconstruction patterns in the case of elliptical variants thereof and ultimately also for comparatives not including *n*-words at all. In the end, I have also reconsidered the issue of clausal versus phrasal comparison in the context of Negative Island Effects, in the course of which I have additionally offered a suggestion as to why in French and Spanish, *n*-words appearing in the standard term of a comparative often result in universal readings. I have then addressed yet another gap in linguistic literature on gradability when moving on to measure phrase constructions, the (un-)availability of which I have tested in a large-scale empirical investigation in the three languages English, German and French. On the one hand, this study has confirmed the existence of three types of variation this particular construction is subject to that had already been observed previously, that is universal, language-internal and cross-linguistic variation, but on the other, it has also made me discover three additional kinds of variation, namely individual speaker, antonymic as well as structural variation. The extensive database gained from this study has then allowed me first to re-examine several already existing approaches to this phenomenon and second, to make a novel proposal for the distribution of measure phrases crucially hinging on the assumption that a basic type mismatch prevents these from occurring across-the-board. Moreover, I have developed a model accounting for the attested variation of this phenomenon and in addition, I have presented four different types of generalisations capturing the (non-)occurrence of direct measure phrase constructions in languages that in principle permit these, in the course of which I have also proposed a totally new semantics for antonymous adjectives appearing in measure phrase constructions. On top of that, it has been argued that the behaviour of antonyms combining with measure phrases speaks against decomposing them and that they give rise to a relation of strict equality. As a last step, I have then investigated the predictions my analysis makes with respect to effects of evaluativity, which has ultimately resulted in the establishment of a new classification of gradable predicates.

Although I hope that in total, I have actually been quite successful in filling these gaps, a couple of related aspects still remain to be investigated: As already noted in section 2.3.4.6, I must leave the issue of how precisely one gets from an individual to a degree denotation in the

context of my novel phrasal analysis of comparison developed for Turkish for future research, just like the questions of how and why expressions of a temporal and spatial origin spread to the area of gradability (cf. section 2.2.4.4). Additionally, it would of course be very interesting to further test the (un-)availability of Negative Island Effects in a much broader range of languages, which would for instance allow me to check whether it is indeed in exactly those languages where negation can appear overtly in a comparative's standard term that comparatives featuring *n*-words in this position often result in universal readings, whereas a ban on the occurrence of *n*-words in this syntactic slot correlates with the absence of such readings, as I have been suggesting in subsection 3.3.3. And in a similar fashion, the (non-) occurrence of direct measure phrase constructions should obviously also be examined in a much greater number of languages in order to settle the viability of the different generalisations I have come up with in subsections 4.5.2.1 to 4.5.2.4. More specifically, what I have in mind is taking into account more Germanic and Romance languages, a more detailed investigation of the latter already having been shown to be most rewarding in footnote 164 in section 4.5.1, but also some genetically unrelated languages, ideally to test matters from a universal point of view, Bulgarian, Hindi, Hungarian or Thai for instance being possible candidates in that these do in principle display direct measure phrase constructions (cf. the cross-linguistic overview in (4/65) in section 4.5.1).

5.2 A Plea for Empirical Fieldwork in Formal Semantics

Let me finally seize this opportunity to underline the need to carry out empirical fieldwork as I have done here when collecting data on various Turkish comparison constructions (cf. section 2.1 of this dissertation) or on the (un-)availability of direct measure phrase constructions in English, German and French (cf. section 4.2). For although it is undoubtedly true that such data elicitation is sometimes a rather cumbersome and generally a very time-consuming task, it is nevertheless my firm conviction that it cannot simply be dispensed with: Restricting oneself to data provided by grammar books and dictionaries as has for example been executed in Haspelmath (1993) or in Stassen (1985), where “the major sources of information [...] [were] written grammatical descriptions and texts” (ibid., p. 12),²⁰⁴ or to the consultation of linguistic corpora (the strategy I have used, here, for eliciting data on

²⁰⁴ For reasons of fairness, it must however be admitted that in view of the truly impressive overall number of languages these two authors have taken into account, extensive empirical studies would hardly have been feasible. Yet the aim I have been pursuing, here, has been a fundamentally different one, in that what has mattered most for me has not so much been to deal with a high total number of languages, but rather to offer an in-depth study of a given phenomenon.

the absence of Negative Island Effects; cf. section 3.2) invariably leads to at least three insurmountable difficulties. First of all, these alternative methods commonly fail because once we leave the field of well-studied Indo-European languages such as English or German and turn towards more ‘exotic’ ones, there often exist no dictionaries and/or grammar books to consult, and annotated corpora are not always available, either. As noted in subsection 2.2.4.2 above, problems of this sort arise in a language like Turkish, already, which does not happen to be that ‘exotic’ after all and for which a simple etymological dictionary is nonetheless missing. Second, collecting negative evidence generally poses specific difficulties in that even if one disposes of adequate corpora, it remains highly unclear what conclusion to draw from the absence of a given phenomenon: Is this truly indicative of its non-occurrence in the respective language, are we dealing with a purely accidental gap or else, is this to be taken as a sign of a potential scarcity of the element under scrutiny? Observe in this respect, that the elicitation of negative evidence has played a crucial role at various points throughout this dissertation, such as for instance when excluding the existence of particular types of comparison constructions in Turkish (subcomparatives and the like; cf. subsection 2.1.2 above), when checking for the compatibility of the Turkish adverb *daha* with overt intensifiers in order to establish its exact meaning (cf. section 2.2.2) or when investigating the availability of a given adjective in overt measure phrase constructions in section 4.2. And third, most of the time, discovering ambiguities is also completely impossible in that even if one is lucky enough to find a natural language example that could in principle display the ambiguity one is looking for in a running text, the context alone is usually quite insufficient for disambiguation and in the end, you frequently cannot really tell whether a sentence that is possibly ambiguous gives only rise to the first, just to the second or even to both of two potential readings. However, it is often exactly the presence or absence of such potential ambiguities that has far-reaching theoretical consequences. As an illustration, consider for example sentence (2/88) introduced in section 2.3.2, part of which I repeat below and with which the ambiguity it gives rise to has ultimately made me reject positing a phrasal comparison operator that is not scopally mobile and later on, the attested ambiguity has also provided me with direct evidence against maintaining the Revised Phrasal Analysis (cf. section 2.3.3.3):

(2/88) *Makale müsvedde.den tam beş sayfa uzun olmak zorunda.*
 article draft.ablative exactly five page long is_required
 ‘The article is required to be exactly five pages longer than the draft.’

Crucially notice that all these three obstacles immediately disappear within a framework based on empirical fieldwork: Except for the case of dead languages, there are native speakers for any

language whatsoever one wishes to investigate, no matter how ‘exotic’ it might happen to be, negative evidence can be elicited right away and, making use of different contexts, it is even possible to ask informants about multiple readings of one and the same sentence, as I have for instance done with (2/88) on the basis of the two contexts specified in (2/89), respectively. In the end, I therefore totally agree with Lisa Matthewson, for whom “asking for judgments is an indispensable methodological tool” (Matthewson (2004), p. 376).

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APPENDIX AN EMPIRICAL INVESTIGATION ON THE DISTRIBUTION OF MEASURE PHRASE CONSTRUCTIONS: TEST SENTENCES, INDIVIDUAL RESULTS AND SELECTED DIAGRAMS

This section, intended as an appendix on my empirical investigation on the (non-) occurrence of direct measure phrase constructions, is organised as follows: In subsection A, I shall provide exhaustive lists of all the test sentences underlying this study in the languages English, German and French, in turn. Subsection B will then include tables separately displaying the results obtained with the individual native speakers whom I consulted, again for the three languages in turn. And in subsection C, I shall finally present nine diagrams that are supposed to illustrate several major contrasts among these languages, as has already been indicated on various occasions in the course of section 4 of this dissertation.

A Overview of Individual Test Sentences

A.1 English Test Sentences

- 1 a. 'tall':
- pred. MP: *One of his brothers is at least six feet tall.*
 - attr. MP: *Yesterday, I bumped into a six-foot-tall woman.*
 - diff. MP: *My cousin is at least 20 inches taller than my niece.*
- b. 'short':
- pred. MP: *The woman I dated yesterday was five feet short.*
 - attr. MP: *A five-foot-short man doesn't make a good basketball player.*
 - diff. MP: *On average, the members of her family are at least ten inches shorter than those of mine.*
- 2 a. 'large':
- pred. MP: *His new flat is at least 80 square metres large.*
 - attr. MP: *A 100-square-metre-large plot of land is too small to build a decent house on.*
 - diff. MP: *Their neighbours' property is approximately 30 square metres larger than their own.*
- b. 'small':
- pred. MP: *For the most part, the sites for building that the municipality has been selling lately turned out to be 90 square metres small.*
 - attr. MP: *For quite some time, the municipality has been selling 80-square-metre-small sites that hardly allow you to build multiple dwellings.*
 - diff. MP: *Surprisingly enough, their own estate is considerably smaller than that of their ancestors.*

- 3 a. 'long' (spatial):
- pred. MP: *This rope is almost 60 feet long.*
 - attr. MP: *To climb this mountain, you're highly recommended to take a 50-foot-long rope with you.*
 - diff. MP: *The clothesline on the right is about 20 feet longer than that on the left.*
- b. 'short' (spatial):
- pred. MP: *The clothesline that the confirmed old bachelor put up in his garden was five feet short.*
 - attr. MP: *A ten-foot-short clothesline is enough for a single-person household.*
 - diff. MP: *This rope is at least 20 inches shorter than the other one.*
- 4 a. 'deep':
- pred. MP: *Right here, Lake Constance is exactly 152 feet deep.*
 - attr. MP: *In World War I, it was quite normal to dig six-foot-deep trenches along the front line.*
 - diff. MP: *In most places, the Baltic Sea is at least 100 feet deeper than the North Sea.*
- b. 'flat':
- pred. MP: *The pits for the new sewerage installation are mostly ten inches flat.*
 - attr. MP: *15-inch-flat pits are quite useless for installing a new sewerage system.*
 - diff. MP: *Interestingly enough, the North Sea is considerably flatter than Lake Constance.*
- c. 'shallow':
- pred. MP: *The new pond in our neighbours' garden is about one foot shallow.*
 - attr. MP: *In our backyard, there's a little, about one-foot-shallow pond, where several frogs and ducks live.*
 - diff. MP: *The little pond in our backyard is considerably shallower than the artificial lake near the town centre.*
[*The little pond in our backyard is considerably more shallow than the artificial lake near the town centre.*]
- 5 a. 'high':
- pred. MP: *The mountain next to the hotel where we spent our last summer holidays was more than 3,000 feet high.*
 - attr. MP: *His company wanted to construct a more than 150-foot-high warehouse in the immediate vicinity of our elementary school.*
 - diff. MP: *The Eiffel Tower is at least 300 feet higher than Big Ben.*

- b. 'low':
- pred. MP: *The wooden cabin under the old birch tree happens to be three feet low.*
 - attr. MP: *He's been living for more than six years in a four-foot-low cabin in the midst of the woods.*
 - diff. MP: *Big Ben is actually at least 300 feet lower than the Eiffel Tower.*
- 6 a. 'huge':
- pred. MP: *According to the latest plans, the new high-rise is supposed to be more than 50 yards huge.*
 - attr. MP: *Everyone was quite impressed by the more than 400-foot-huge skyscraper.*
 - diff. MP: *The tower on the right is even 20 feet huger than that on the left.*
[*The tower on the right is even 20 feet more huge than that on the left.*]
- b. 'tiny':
- pred. MP: *Modern computer chips are often several millimetres tiny.*
 - attr. MP: *The use of several-millimetre-tiny chips has considerably reduced the weight of modern computers.*
 - diff. MP: *Modern computer chips tend to be several millimetres tinier than older ones.*
- 7 a. 'wide':
- pred. MP: *A proper writing desk must be at least six feet wide.*
 - attr. MP: *The five-foot-wide cupboard won't fit through our kitchen door.*
 - diff. MP: *Our new refrigerator is at least two inches wider than our old one was.*
- b. 'narrow':
- pred. MP: *The passageway between the two rocks happens to be two feet narrow.*
 - attr. MP: *At this point of our new garage, a ten-inch-narrow plank is still missing.*
 - diff. MP: *The brownish planks are considerably narrower than the grey ones they brought yesterday.*
- c. 'broad':
- pred. MP: *According to official regulations, the emergency exit has to be at least three feet broad.*
 - attr. MP: *Right here, they want to fit in a ten-inch-broad plank.*
 - diff. MP: *Their new property is 50 feet broader than their old one.*
- 8 a. 'thick':
- pred. MP: *According to official regulations, security doors have to be at least three inches thick.*
 - attr. MP: *You can't read a 500-page-thick novel in a few hours' time.*
 - diff. MP: *Modern planks tend to be about half an inch thicker than the ones commonly used in the past.*

- b. 'thin':
- pred. MP: *Due to the use of special materials, modern security doors are often two inches thin.*
 - attr. MP: *A 50-page-thin book is definitely enough for an introductory class.*
 - diff. MP: *Standard planks are about one inch thinner than the special ones required here.*
- 9 a. 'distant':
- pred. MP: *The closest galaxy is about five million light years distant from our solar system.*
 - attr. MP: *In the near future, we won't be able to travel to ten-million-light-year-distant stars.*
 - diff. MP: *Our neighbouring galaxy is approximately two million light years more distant than the closest planet.*
- b. 'remote':
- pred. MP: *The next galaxy is about five million light years remote from our solar system.*
 - attr. MP: *In the next 50 years, we won't be able to travel to ten-million-light-year-remote stars.*
 - diff. MP: *Our neighbouring galaxy is roundabout two million light years more remote than the closest planet.*
- c. 'far':
- pred. MP: *The distance we covered on the second day of the race was about 20 miles far.*
 - attr. MP: *After the 15-mile-far walk, we were all fairly exhausted.*
 - diff. MP: *Yesterday's walk was about three miles farther than today's.*
- d. 'away':
- pred. MP: *The closest galaxy is about five million light years away from our solar system.*
 - attr. MP: *Within the next century, we won't be able to travel to ten-million-light-year-away celestial bodies.*
 - diff. MP: *Our neighbouring galaxy is about two million light years more away than the closest planet.*
- e. 'close':
- pred. MP: *After the latest advance, the target was finally 100 yards close.*
 - attr. MP: *This morning's walk led us to a 300-yard-close vantage point.*
 - diff. MP: *Today's flight destination is about 2,000 kilometres closer to home than yesterday's.*
- f. 'near':
- pred. MP: *After the latest advance, the target was finally 100 yards near.*
 - attr. MP: *This morning's walk led us to a 300-yard-near vantage point.*
 - diff. MP: *Today's flight destination is about 3,000 kilometres nearer to home than yesterday's.*

- 10 a. 'long' (temporal):
- pred. MP: *The questioning by the local police officer was several hours long.*
 - attr. MP: *He had to get through a three-hour-long interrogation before he finally managed to prove his innocence.*
 - diff. MP: *Quite unexpectedly, his driving test was 15 minutes longer than that of his sister.*
- b. 'short' (temporal):
- pred. MP: *The press conference right after the match was about five minutes short, as usual.*
 - attr. MP: *Immediately after the competition, the athlete agreed to give a thirty-second-short interview.*
 - diff. MP: *His driving test was almost 20 minutes shorter than he had expected.*
- 11 a. 'old':
- pred. MP: *At his second election, the president was already 74 years old.*
 - attr. MP: *Peter always particularly enjoys playing with his four-year-old nephew.*
 - diff. MP: *His mother is exactly three days older than her sister.*
- b. 'young':
- pred. MP: *The lucky winner of this year's lottery was 19 years young.*
[*The lucky winner of this week's lottery is 82 years young.*]
 - attr. MP: *A 14-year-young schoolboy took part in the last city marathon.*
[*A 72-year-young lady ran the marathon in less than four hours.*]
 - diff. MP: *Her uncle is almost ten years younger than her father.*
- 12 a. 'late':
- pred. MP: *When finally reaching Birmingham, the train was almost 30 minutes late.*
 - attr. MP: *A 20-minute-late arrival made him miss his connecting train.*
 - diff. MP: *Yesterday, the train had arrived even 30 minutes later than today.*
[*Yesterday, the train had even been 20 minutes more late than today.*]
- b. 'early':
- pred. MP: *Surprisingly enough, his train had been more than half an hour early.*
 - attr. MP: *Because of a one-hour-early arrival in Heathrow, he had to spend quite a long time waiting for his next flight.*
 - diff. MP: *Today, the morning flight from Manchester arrived ten minutes earlier than yesterday.*
[*Today, the morning flight from Manchester was even ten minutes more early than yesterday.*]

- 13 a. 'warm':
- pred. MP: *Yesterday, it was at least 20 degrees warm in most parts of the country.*
 - attr. MP: *For this foot bath, we strongly recommend to use 20-degree-warm water.*
 - diff. MP: *Today, it is five degrees warmer than yesterday at the very least.*
- b. 'cold':
- pred. MP: *The last night we had to spend in the mountains was minus five degrees cold.*
 - attr. MP: *To cool the tank wagon properly, the firemen needed thousands of litres of five-degree-cold water.*
 - diff. MP: *After the thunderstorm, it was about ten degrees colder than before.*
- c. 'mild':
- pred. MP: *On average, nights in August tend to be about 15 degrees mild.*
 - attr. MP: *It's a pleasure to spend a 15-degree-mild night outside under the night sky.*
 - diff. MP: *Within the last decade, winters have been about two degrees milder than previously.*
- d. 'hot':
- pred. MP: *Ideally, water for boiling potatoes should be exactly 100 degrees hot.*
 - attr. MP: *To remove these stains, you'll definitely need washing soap and at least 90-degree-hot water.*
 - diff. MP: *In tropical regions, summers are usually 20 degrees hotter than in mainland Europe.*
- e. 'lukewarm':
- pred. MP: *The water doctors use for cleaning wounds should ideally be 15 degrees lukewarm.*
 - attr. MP: *Sick people should not use more than 15-degree-lukewarm water when taking a shower.*
 - diff. MP: *The water in the bowl on the right hand side is about five degrees more lukewarm than that in the bowl on the left.*
- 14 a. 'fast':
- pred. MP: *In Switzerland, you're allowed to drive 120 kilometres per hour fast on a standard motorway.*
 - attr. MP: *On his way to Birmingham, he collided with a 100-kilometre-per-hour-fast motorbike.*
 - diff. MP: *Nowadays, the earth is turning about one millisecond faster than 200,000 years ago.*
- b. 'slow':
- pred. MP: *If you're in a hurry, a tractor that is 20 kilometres per hour slow can be a real nuisance.*
 - attr. MP: *He got a ticket for driving too close behind a 15-kilometre-per-hour-slow tractor.*
 - diff. MP: *After the turbocharger had broken, the car was about 20 kilometres per hour slower than normally.*

- 15 a. 'heavy':
- pred. MP: *The professor's huge suitcase was more than 25 kilos heavy.*
 - attr. MP: *At the local baker's shop, a two-kilo-heavy loaf of bread is one pound sixty.*
 - diff. MP: *This sack of flour is almost 30 kilos heavier than the one over there.*
- b. 'light':
- pred. MP: *Modern tennis racquets are normally about 12 ounces light.*
 - attr. MP: *All he's ever caught since he arrived two days ago is a two-ounce-light trout.*
 - diff. MP: *This bag of potatoes is at the very least ten kilos lighter than the other one.*
- 16 a. 'thick' (with people):
- pred. MP: *The man standing right in front of us is more than 150 kilos thick.*
 - attr. MP: *We couldn't really see much because of that 150-kilo-thick man.*
 - diff. MP: *Today, Peter is about 30 kilos thicker than 20 years ago.*
- b. 'thin' (with people):
- pred. MP: *The woman next to us is about 50 kilos thin.*
 - attr. MP: *We hardly managed to spot the 40-kilo-thin woman in that huge crowd.*
 - diff. MP: *Two years ago, Peter was about 15 kilos thinner than today.*
- c. 'fat':
- pred. MP: *The man standing right in front of us is almost 200 kilos fat.*
 - attr. MP: *The standard bed in the hospital turned out to be completely unsuitable for the 250-kilo-fat patient.*
 - diff. MP: *Before his doctor put him on a diet, he had been almost 150 kilos fatter than today.*
- d. 'slim':
- pred. MP: *The woman to our left is about 40 kilos slim.*
 - attr. MP: *This wooden hook is surely sufficient for a 50-kilo-slim woman.*
 - diff. MP: *After his doctor had put him on a diet, he was 50 kilos slimmer than before.*
- 17 a. 'bright':
- pred. MP: *The bulb in our living room is 900 lux bright.*
 - attr. MP: *Putting an 800-lux-bright lamp on my writing desk has made work much easier for me.*
 - diff. MP: *The bulb in our living room is at least 200 lux brighter than the one in our kitchen.*

- b. 'dark':
- pred. MP: *The bulb we've lately installed in our boxroom is 50 lux dark.*
 - attr. MP: *The 70-lux-dark bulb in our kitchen doesn't allow us to read the newspaper there.*
 - diff. MP: *The bulb we installed in the bedroom is more than 500 lux darker than that in our living room.*
- 18 a. 'loud':
- pred. MP: *When taking off, jet planes are usually about 90 decibels loud.*
 - attr. MP: *The ban on night flights at Frankfurt airport concerns only more than 100-decibel-loud planes.*
 - diff. MP: *A Boeing 747 is around 20 decibels louder than an Airbus A 330.*
- b. 'quiet':
- pred. MP: *Even in capacity utilisation, this new drill remains five decibels quiet.*
 - attr. MP: *The company is particularly proud of their ten-decibel-quiet electric engines.*
 - diff. MP: *An Airbus A 330 is about 20 decibels quieter than a Boeing 747.*
[*An Airbus A 330 is around 20 decibels more quiet than a Boeing 747.*]
- c. 'silent':
- pred. MP: *Even in capacity utilisation, this new drill remains five decibels silent.*
 - attr. MP: *The company is particularly proud of their ten-decibel-silent electric engines.*
 - diff. MP: *An Airbus A 330 is about 20 decibels more silent than a Boeing 747.*
- 19 a. 'acute' (with angles):
- pred. MP: *In this triangle, the leftmost angle is 20 degrees acute.*
 - attr. MP: *There's a 30-degree-acute angle at the very left of this outline.*
 - diff. MP: *The bottom angle is about 30 degrees more acute than the two other ones.*
- b. 'obtuse' (with angles):
- pred. MP: *In this triangle, the rightmost angle is 95 degrees obtuse.*
 - attr. MP: *There's a 120-degree-obtuse angle at the very left of this outline.*
 - diff. MP: *The angle at the top is about ten degrees more obtuse than the two other ones.*

- 20 a. 'bent':
- pred. MP: *The main aerial on our roof is 30 degrees bent. [Normally, ultraviolet waves are 20 degrees bent.]*
 - attr. MP: *A ten-degree-bent aerial allows you to receive considerably more television channels. [20-degree-bent ultraviolet waves increase refraction.]*
 - diff. MP: *The aerial on our roof is 15 degrees more bent than the one on our neighbour's. [Ultraviolet waves are 20 degrees more bent than infrared ones.]*
- b. 'straight':
- pred. MP: *To avoid interferences, the main aerial on the roof has to be zero degrees straight.*
 - attr. MP: *The zero-degree-straight aerial on our roof hardly presents a target for the wind.*
 - diff. MP: *The aerial on our neighbour's house is ten degrees straighter than our own. [The aerial on our neighbour's house is ten degrees more straight than our own.]*
- c. 'vaulted':
- pred. MP: *The triumphal arch in Paris is 30 degrees vaulted.*
 - attr. MP: *The double-decker bus couldn't pass through the 20-degree-vaulted archway.*
 - diff. MP: *The triumphal arch in Paris is ten degrees more vaulted than an ordinary semicircle.*
- 21 a. 'strong' (with electricity):
- pred. MP: *The electric current that this device generates is exactly 100 amperes strong.*
 - attr. MP: *A 20-ampere-strong electric current is definitely enough to make this piece of wire glow.*
 - diff. MP: *The electric current generated by the battery on the right hand side is five amperes stronger than the one produced by that on the left.*
- b. 'weak' (with electricity):
- pred. MP: *The electric current generated by such a largely useless device is about ten amperes weak.*
 - attr. MP: *A five-ampere-weak electric current is largely sufficient for making that wire glow.*
 - diff. MP: *In this part of the plant, the electric current is about 200 amperes weaker than everywhere else.*

- 22 a. 'strong' (with winds):
- pred. MP: *When the thunderstorm reached its peak, the wind was more than 120 kilometres per hour strong.*
 - attr. MP: *The entire country was completely devastated by more than 150-kilometre-per-hour-strong winds.*
 - diff. MP: *During the last thunderstorm, the wind had even been 20 kilometres per hour stronger than yesterday.*
- b. 'weak' (with winds):
- pred. MP: *On average, the wind was 20 kilometres per hour weak during all of our sailing regatta.*
 - attr. MP: *Ten-kilometre-per-hour-weak winds virtually made a fair sailing regatta impossible.*
 - diff. MP: *Today, the wind is only ten kilometres per hour weaker than it was during that terrible storm last spring.*
- c. 'light' (with winds):
- pred. MP: *On average, the wind was 20 kilometres per hour light during the entire sailing regatta.*
 - attr. MP: *Ten-kilometre-per-hour-light winds virtually made a fair sailing regatta impossible.*
 - diff. MP: *Today, the wind is only ten kilometres per hour lighter than it was during that terrible storm last autumn.*
- 23 a. 'expensive':
- pred. MP: *Andrew Radford's latest book on syntax is about 60 pounds expensive.*
 - attr. MP: *After he successfully passed the driving test, his parents offered him a 10,000-pound-expensive car.*
 - diff. MP: *The follow-up model is about 50 pounds more expensive than the original one.*
- b. 'cheap':
- pred. MP: *Surprisingly enough, Irene Heim's introductory book on semantics was ten pounds cheap.*
 - attr. MP: *For his 18th birthday, his granny bought him a 500-pound-cheap second-hand car.*
 - diff. MP: *In Poland, cigarettes are normally about 40 per cent cheaper than in Germany.*
- 24 a. 'rich':
- pred. MP: *Famous inventors are often several million pounds rich.*
 - attr. MP: *A 150-million-pound-rich building contractor has recently bought all the remaining sites in our neighbourhood.*
 - diff. MP: *After winning this year's special prize, Peter was almost 10,000 pounds richer than before.*

- b. 'poor':
- pred. MP: *Our new lodger is several hundred pounds poor.*
 - attr. MP: *Everyone fell silent when a several-hundred-pound-poor jobless man entered the room.*
 - diff. MP: *As a result of several highly speculative investments, he is now more than 250,000 pounds poorer than before.*
- c. 'wealthy':
- pred. MP: *The highly conservative foundation is more than two million pounds wealthy.*
 - attr. MP: *An approximately one-million-pound-wealthy landlord is interested in buying this property.*
 - diff. MP: *Since he came into an inheritance, Peter is now about 300,000 pounds wealthier than he used to be.*
- 25 a. 'strong' (in number):
- pred. MP: *This special crime unit is 35 men strong.*
 - attr. MP: *A five-man-strong gang has repeatedly been robbing banks in the greater London area.*
 - diff. MP: *The new committee is five men stronger than the previous one.*
- b. 'weak' (in number):
- pred. MP: *Unfortunately, this special crime unit happens to be four men weak.*
 - attr. MP: *A three-man-weak investigating committee cannot really achieve much.*
 - diff. MP: *The present commission is two members weaker than the old one.*
- 26 a. 'intelligent':
- pred. MP: *The first applicant turned out to be 120 IQ points intelligent.*
 - attr. MP: *A 100-IQ-point-intelligent person of average ability surely cannot cope with such a demanding task.*
 - diff. MP: *Peter is more than 20 IQ points more intelligent than his sister.*
- b. 'stupid':
- pred. MP: *Most of the people applying for this job turned out to be about 70 IQ points stupid.*
 - attr. MP: *A 60-IQ-point-stupid person surely won't manage to complete such a complex task.*
 - diff. MP: *Peter's sister happens to be 20 IQ points more stupid than we expected in the beginning.*
- 27 a. 'beautiful':
- pred. MP: *The first candidate's face was nine points beautiful.*
 - attr. MP: *A nine-point-beautiful face was not enough to win the beauty contest.*
 - diff. MP: *The second candidate's body was two points more beautiful than that of the first candidate.*

- b. 'ugly':
- pred. MP: *The body of the second candidate was two points ugly.*
 - attr. MP: *A three-point-ugly face won't keep her from taking part in another beauty contest.*
 - diff. MP: *The third candidate's face was three points uglier than that of the second candidate.*
- 28 a. 'good':
- pred. MP: *With this year's syntax exam, the average result was 80 points good.*
 - attr. MP: *A 60-point-good exam won't be enough to pass this class.*
 - diff. MP: *When he took the class for the second time, his exam results were 20 points better than before.*
- b. 'bad':
- pred. MP: *With last year's exam on semantics, the average result turned out to be 20 points bad.*
 - attr. MP: *With a 15-point-bad final exam, you should definitely take this course again.*
 - diff. MP: *When taking this class for the first time, his results were about 30 points worse than at the second try.*
- 29 a. 'likely':
- pred. MP: *With this type of project, a success is about 30 per cent likely.*
 - attr. MP: *Even a 90-per-cent-likely failure did not prevent him from giving things a try.*
 - diff. MP: *Today, rain is about 30 per cent likelier than yesterday.*
[*Today, rain is about 30 per cent more likely than yesterday.*]
- b. 'unlikely':
- pred. MP: *With such a complex task, a successful completion is about 80 per cent unlikely.*
 - attr. MP: *80-per-cent-unlikely chances of succeeding surely won't increase the participants' motivation.*
 - diff. MP: *Yesterday, rain was about 20 per cent more unlikely than the day before.*
- 30 'green':
- pred. MP: *The colour we want to use for our new website is 280 pixels green.*
 - attr. MP: *A 250-pixel-green background colour makes a very bad contrast.*
 - diff. MP: *Now, the basic colour is about 20 pixels greener than before.*
[*Now, the basic colour is about 20 pixels more green than before.*]

- 31 a. 'aggressive':
- pred. MP: *His behaviour was classified as 73 points aggressive.*
 - attr. MP: *An 80-point-aggressive behaviour calls for immediate medical treatment.*
 - diff. MP: *After completing his therapy, he was even ten points more aggressive than before.*
- b. 'calm':
- pred. MP: *After the first couple of experiments, they classified him as 20 points calm.*
 - attr. MP: *A 30-point-calm behaviour is way below the usual standard.*
 - diff. MP: *After her therapy, she was about ten points calmer than she had ever been before.
[After her therapy, she was about ten points more calm than she had ever been before.]*
- 32 a. 'progressive':
- pred. MP: *The bill put forth by the FDP was classified as 70 points progressive.*
 - attr. MP: *The committee promptly rejected an 80-point-progressive proposal.*
 - diff. MP: *After some minor changes, the proposal was ten points more progressive than before.*
- b. 'reactionary':
- pred. MP: *The new party programme was considered to be 20 points reactionary.*
 - attr. MP: *The ten-point-reactionary bill was immediately rejected.*
 - diff. MP: *After some changes, the proposal was even ten points more reactionary than before.*

pronominal measure phrases:

- *Mary is five feet tall. Sandra is also that tall.*
- *On average, the North Sea is 50 feet deep. The Baltic Sea is that deep, too.*
- *His granny just turned 92. Not everyone gets that old.*
- *Yesterday, we had 32 degrees. Today, it is gonna be that warm again.*
- *Peter is racing along the motorway at a speed of more than 250 kilometres per hour. I should never drive that fast.*
- *Albert Einstein had an IQ of 138. None of us is that intelligent.*

degree questions:

- *How tall is his sister?*
- *How deep is Lake Constance right here?*
- *How old do you have to be to become eligible for political office?*
- *How fast are you allowed to drive on an ordinary road?*
- *How intelligent is the average Englishman?*

A.2 German Test Sentences

- 1 a. 'groß':
- pred. MP: *Meine Tante ist 1,82 Meter groß.*
 - attr. MP: *Ich habe gestern einen 1,92 Meter großen Mann gesehen.*
 - diff. MP: *Die Wohnung seines Bruders ist 20 Quadratmeter größer als seine eigene.*
- b. 'klein':
- pred. MP: *Mein Onkel ist 1,59 Meter klein.*
 - attr. MP: *Ich habe gestern eine 1,54 Meter kleine Frau gesehen.*
 - diff. MP: *Die Wohnung seiner Schwester ist mindestens zehn Quadratmeter kleiner als seine eigene.*
- 2 a. 'lang' (spatial):
- pred. MP: *Dieses Seil ist 32 Meter lang.*
 - attr. MP: *Für diese Klettertour wird die Mitnahme eines 30 Meter langen Seils empfohlen.*
 - diff. MP: *Das eine Seil ist genau fünf Meter länger als das andere.*
- b. 'kurz' (spatial):
- pred. MP: *Diese Leine ist drei Meter kurz.*
 - attr. MP: *Für diese Klettertour empfiehlt sich deshalb ein zehn Meter kurzes Seil.*
 - diff. MP: *Die eine Leine ist genau zwei Meter kürzer als die andere.*
- 3 a. 'tief':
- pred. MP: *An dieser Stelle ist der Bodensee 52 Meter tief.*
 - attr. MP: *Für die Neuverlegung der städtischen Kanalisation müssen drei Meter tiefe Gruben ausgehoben werden.*
 - diff. MP: *In dieser Region liegt der Grundwasserspiegel zwei Meter tiefer als in Deutschland allgemein üblich.*
- b. 'flach':
- pred. MP: *An jener Stelle ist der Bodensee zehn Meter flach.*
 - attr. MP: *Für die Neuverlegung der städtischen Wasserversorgung müssen 20 Zentimeter flache Gruben ausgehoben werden.*
 - diff. MP: *Die Nordsee ist im Durchschnitt über 100 Meter flacher als der Bodensee.*
- c. 'seicht':
- pred. MP: *An jener Stelle ist der Bodensee zwei Meter seicht.*
 - attr. MP: *In unserem Garten befindet sich ein 20 Zentimeter seichter Tümpel mit Fröschen.*
 - diff. MP: *Der Teich hinter unserem Haus ist wesentlich seichter als der nahegelegene Baggersee.*

- 4 a. 'hoch':
- pred. MP: *Dieser Berg ist 785 Meter hoch.*
 - attr. MP: *Hier soll eine 150 Meter hohe Lagerhalle errichtet werden.*
 - diff. MP: *Der Eiffelturm ist mindestens 30 Meter höher als der Schiefe Turm von Pisa.*
- b. 'niedrig':
- pred. MP: *Dieser Hügel ist sieben Meter niedrig.*
 - attr. MP: *Mitten im Wald steht eine ein Meter fünfzig niedrige Hütte.*
 - diff. MP: *Der Schiefe Turm von Pisa ist circa 30 Meter niedriger als der Eiffelturm.*
- 5 a. 'riesig':
- pred. MP: *Das neue Hochhaus soll über 500 Meter riesig werden.*
 - attr. MP: *Von dem über 400 Meter riesigen Wolkenkratzer waren alle sichtlich beeindruckt.*
 - diff. MP: *Der rechte Turm ist noch 20 Meter riesiger als der auf der linken Seite.*
- b. 'winzig':
- pred. MP: *Die neueste Generation Computerchips ist mehrere Millimeter winzig.*
 - attr. MP: *Die Verwendung mehrere Millimeter winziger Chips verringerte die Gesamtgröße der Apparatur erheblich.*
 - diff. MP: *Moderne Computerchips sind mehrere Millimeter winziger als ihre Vorgänger.*
- 6 a. 'breit':
- pred. MP: *Laut geltenden Feuerschutzbestimmungen muss diese Fluchttür zwei Meter breit sein.*
 - attr. MP: *An dieser Stelle soll ein zehn Zentimeter breites Brett eingefügt werden.*
 - diff. MP: *Das neue Grundstück ist genau acht Meter breiter als das alte.*
- b. 'schmal':
- pred. MP: *Das noch fehlende Brett muss zwei Zentimeter schmal sein.*
 - attr. MP: *An dieser Stelle der Garage fehlt noch ein drei Zentimeter schmales Brett.*
 - diff. MP: *Die dunkelbraunen Bretter sind deutlich schmaler als die in einem hellen Branton gehaltenen.*
- 7 a. 'dick':
- pred. MP: *Eine Sicherheitswand muss mehrere Zentimeter dick sein.*
 - attr. MP: *Ein mehrere hundert Seiten dickes Buch liest sich nicht in wenigen Stunden.*
 - diff. MP: *Heutige Bodenbretter sind mindestens zwei Zentimeter dicker als die früher üblichen.*

- b. 'dünn':
- pred. MP: *Wegen des Einsatzes neuer Materialien sind Sicherheitswände jetzt häufig zwei Zentimeter dünn.*
 - attr. MP: *Ein 50 Seiten dünnes Buch reicht für die Einführungsveranstaltung völlig aus.*
 - diff. MP: *Heutige Holzpaneelen sind rund einen halben Zentimeter dünner als die früheren.*
- 8 a. 'weit':
- pred. MP: *Die geplante Wanderstrecke ist 15 Kilometer weit.*
 - attr. MP: *Wir haben gestern eine 20 Kilometer weite Wanderung unternommen.*
 - diff. MP: *Die gestrige Wanderstrecke war fünf Kilometer weiter als die heutige.*
- b. 'nah':
- pred. MP: *Das mit dem Gewehr anvisierte Ziel ist 200 Meter nah.*
 - attr. MP: *Wir haben einen 600 Meter nahen Aussichtspunkt besucht.*
 - diff. MP: *Das heutige Wanderziel liegt etwa zwei Kilometer näher als das gestrige.*
- c. 'entfernt':
- pred. MP: *Dieses Galaxiensystem ist etwa fünf Millionen Lichtjahre von unserem Sonnensystem entfernt.*
 - attr. MP: *Auf absehbare Zeit wird es nicht möglich sein, zu zehn Millionen Lichtjahre entfernten Himmelskörpern zu reisen.*
 - diff. MP: *Unsere Nachbargalaxie ist zwei Millionen Lichtjahre weiter entfernt als unser nächster Planet.
[Unsere Nachbargalaxie ist zwei Millionen Lichtjahre entfernter als unser nächster Planet.]*
- d. 'fern':
- pred. MP: *Diese Galaxie ist etwa fünf Millionen Lichtjahre von unserem Sonnensystem fern.*
 - attr. MP: *Auf absehbare Zeit wird es nicht möglich sein, zu zehn Millionen Lichtjahre fernen Himmelskörpern zu reisen.*
 - diff. MP: *Unsere Nachbargalaxie ist zwei Millionen Lichtjahre ferner als unser nächster Planet.*
- 9 a. 'lang' (temporal):
- pred. MP: *Die Befragung durch den örtlichen Polizeibeamten dauerte mehrere Stunden lang.*
 - attr. MP: *Er musste ein drei Stunden langes Verhör über sich ergehen lassen.*
 - diff. MP: *Seine praktische Fahrprüfung dauerte zehn Minuten länger als ihre.*

- b. 'kurz' (temporal):
- pred. MP: *Die Befragung durch den zuständigen Beamten war fünf Minuten kurz.*
 - attr. MP: *Er musste ein fünf Minuten kurzes Interview bestreiten.*
 - diff. MP: *Ihre praktische Fahrprüfung war zehn Minuten kürzer als seine.*
- 10 a. 'alt':
- pred. MP: *Dieser Säugling ist gerade einmal vier Stunden alt.*
 - attr. MP: *Peter hat sich einen drei Jahre alten Gebrauchtwagen gekauft.*
 - diff. MP: *Seine Mutter ist drei Jahre älter als deren Schwester.*
- b. 'jung':
- pred. MP: *Die glückliche Gewinnerin war 80 Jahre jung.*
 - attr. MP: *Eine 80 Jahre junge Frau hat am diesjährigen Marathonlauf teilgenommen.*
 - diff. MP: *Ihr Onkel ist zwei Jahre jünger als ihre Tante.*
- 11 a. 'verspätet':
- pred. MP: *Bei seiner Ankunft war der ICE über zehn Minuten verspätet.*
 - attr. MP: *Nach der über 20 Minuten verspäteten Ankunft war der Anschlusszug bereits abgefahren.*
 - diff. MP: *Gestern war der Zug noch zehn Minuten stärker verspätet als heute.
[Gestern war der Zug noch zehn Minuten verspäteter als heute.]*
- b. 'verfrüht':
- pred. MP: *Erstaunlicherweise war der Zug bei seiner Ankunft in Hameln rund 15 Minuten verfrüht.*
 - attr. MP: *Ein 20 Minuten verfrühtes Eintreffen führte zu einer langen Wartezeit auf dem Bahnhof.*
 - diff. MP: *Heute traf der Regionalexpress noch zehn Minuten stärker verfrüht ein als gestern.
[Heute traf der Regionalexpress noch zehn Minuten verfrühter ein als gestern.]*
- 12 a. 'warm':
- pred. MP: *Gestern war es im Markgräfler Land mindestens 20 Grad warm.*
 - attr. MP: *Zur Durchführung dieses Fußbads wird 20 Grad warmes Wasser empfohlen.*
 - diff. MP: *Heute ist es mindestens fünf Grad wärmer als gestern.*
- b. 'kalt':
- pred. MP: *Die vergangene Nacht war minus fünf Grad kalt.*
 - attr. MP: *Zur Kühlung der Tankanlage wird fünf Grad kaltes Wasser benötigt.*
 - diff. MP: *Nach dem Temperatursturz war es etwa zehn Grad kälter als zuvor.*

- c. 'heiß':
- pred. MP: *Das Nudelwasser ist exakt 100 Grad heiß.*
 - attr. MP: *Zum Entfernen dieser Flecken sind Kernseife und 60 Grad heißes Wasser erforderlich.*
 - diff. MP: *In den Tropen ist es im Sommer durchschnittlich 20 Grad heißer als bei uns.*
- d. 'lau':
- pred. MP: *In der ersten Augushälfte waren die Nächte im Schnitt 15 Grad lau.*
 - attr. MP: *15 Grad laues Wasser kann helfen, die Entzündung zu lindern.*
 - diff. MP: *Die kommende Nacht wird bereits fünf Grad lauer als die letzte.*
- 13 a. 'schnell':
- pred. MP: *LKWs auf der Autobahn sind normalerweise 90 Stundenkilometer schnell.*
 - attr. MP: *Er stieß frontal mit einem 100 Stundenkilometer schnellen Motorrad zusammen.*
 - diff. MP: *Die Erde dreht sich heute etwa eine Millisekunde schneller als noch vor 100 Jahren.*
- b. 'langsam':
- pred. MP: *Der Traktor vor mir auf der Straße war 20 Stundenkilometer langsam.*
 - attr. MP: *Er fuhr auf einen 20 Stundenkilometer langsamen Traktor auf.*
 - diff. MP: *Nach dem Ausfall des Turboladers war das Auto etwa 20 Stundenkilometer langsamer als sonst.*
- 14 a. 'schwer':
- pred. MP: *Tennisschläger sind etwa 800 Gramm schwer.*
 - attr. MP: *Ein zwei Kilo schwerer Laib Brot kostet bei uns 3,60 Euro.*
 - diff. MP: *Dieser Sack Kartoffeln ist wenigstens fünf Kilo schwerer als der andere.*
- b. 'leicht':
- pred. MP: *Heutige Tennisschläger sind 600 Gramm leicht.*
 - attr. MP: *Er hat heute Nachmittag einen 200 Gramm leichten Fisch geangelt.*
 - diff. MP: *Dieser Sack Mehl ist wenigstens zehn Kilo leichter als der dort drüben.*
- 15 a. 'dick' (with people):
- pred. MP: *Der direkt vor uns stehende Mann ist über 140 Kilo dick.*
 - attr. MP: *Ein rund 150 Kilo dicker Mann versperrte uns die Sicht auf das Geschehen.*
 - diff. MP: *Heute ist Peter fast 30 Kilo dicker als noch vor zwei Jahren.*

- b. 'dünn' (with people):
- pred. MP: *Die neben uns stehende Frau ist rund 50 Kilo dünn.*
 - attr. MP: *Die 40 Kilo dünne Frau war im Gemenge leicht zu übersehen.*
 - diff. MP: *Wäre Maria noch 10 Kilo dünner, müsste man sie als magersüchtig einstufen.*
- c. 'schlank'
- pred. MP: *Die rechts neben uns stehende Frau ist 40 Kilo schlank.*
 - attr. MP: *Für die 40 Kilo schlanke Frau reicht diese Hakensicherung auf jeden Fall aus.*
 - diff. MP: *Nach erfolgreicher Beendigung der Diät war er über 20 Kilo schlanker als zu Beginn.*
- d. 'fett':
- pred. MP: *Der vor uns stehende Mann ist beinahe 200 Kilo fett.*
 - attr. MP: *Für den über 200 Kilo fetten Mann war das Standardbett im Krankenhaus völlig ungeeignet.*
 - diff. MP: *Vor Beginn der Diät war er 50 Kilo fatter als heute.*
- 16 a. 'hell':
- pred. MP: *Die Lampe in unserem Schlafzimmer ist 100 Lux hell.*
 - attr. MP: *Seit dem Einbau einer 100 Lux hellen Lampe fällt mir die Konzentration wesentlich leichter.*
 - diff. MP: *Die jetzige Glühbirne leuchtet 20 Lux heller als die alte.*
- b. 'dunkel':
- pred. MP: *Die Glühbirne in unserer Abstellkammer ist 40 Lux dunkel.*
 - attr. MP: *Der Einbau einer 40 Lux dunklen Lampe hat die Beleuchtung in unserer Küche nicht spürbar verbessert.*
 - diff. MP: *Die momentane Glühbirne ist 20 Lux dunkler als die bisherige.*
- 17 a. 'laut':
- pred. MP: *Beim Start wird ein Düsenjet rund 90 Dezibel laut.*
 - attr. MP: *Das Nachtflugverbot gilt ausschließlich für über 100 Dezibel laute Maschinen.*
 - diff. MP: *Eine Boeing 747 ist circa 20 Dezibel lauter als ein Airbus A 330.*
- b. 'leise':
- pred. MP: *Die neue Bohrmaschine ist selbst bei voller Auslastung fünf Dezibel leise.*
 - attr. MP: *Besonders stolz ist die Firma auf ihr zehn Dezibel leises neues Pumpensystem.*
 - diff. MP: *Ein Airbus A 330 ist rund 20 Dezibel leiser als eine Boeing 747.*

- 18 a. 'spitz' (with angles):
- pred. MP: *Der Winkel an der unteren Kathete ist 20 Grad spitz.*
 - attr. MP: *Das Dreieck weist rechts einen zehn Grad spitzen Winkel auf.*
 - diff. MP: *Der untere Winkel ist 20 Grad spitzer als die beiden anderen Winkel des Dreiecks.*
- b. 'stumpf' (with angles):
- pred. MP: *Der Winkel gegenüber der Hypotenuse ist 120 Grad stumpf.*
 - attr. MP: *Das Dreieck weist auf der linken Seite einen 100 Grad stumpfen Winkel auf.*
 - diff. MP: *Der obere Winkel ist 30 Grad stumpfer als die beiden anderen Winkel des Dreiecks.*
- 19 a. 'gebogen':
- pred. MP: *Die Hauptantenne auf dem Dach ist 30 Grad gebogen.*
 - attr. MP: *Eine 20 Grad gebogene Dachantenne ermöglicht einen störungsfreien Empfang.*
 - diff. MP: *Die rechte Antenne ist 20 Grad stärker gebogen als die linke.*
[Die rechte Antenne ist 20 Grad gebogener als die linke.]
- b. 'gekrümmt':
- pred. MP: *Wellen im ultravioletten Bereich sind durchschnittlich 20 Grad gekrümmt.*
 - attr. MP: *20 Grad gekrümmte UV-Wellen vergrößern die Lichtbrechung.*
 - diff. MP: *Ultraviolette Wellen sind 20 Grad stärker gekrümmt als infrarote.*
[Ultraviolette Wellen sind 20 Grad gekrümmter als infrarote.]
- c. 'gewölbt':
- pred. MP: *Der Pariser Triumphbogen ist 40 Grad gewölbt.*
 - attr. MP: *Ein 40 Grad gewölbter Torbogen machte die Durchfahrt für Schwertransporter unpassierbar.*
 - diff. MP: *Der Triumphbogen ist zehn Grad stärker gewölbt als ein normaler Halbkreis.*
[Der Triumphbogen ist zehn Grad gewölbter als ein normaler Halbkreis.]
- d. 'gerade':
- pred. MP: *Die Hauptantenne auf dem Dach ist null Grad gerade.*
 - attr. MP: *Die null Grad gerade Dachantenne bietet dem Wind kaum Angriffsflächen.*
 - diff. MP: *Die linke Antenne ist zehn Grad gerader als die rechte.*

- 20 a. 'stark' (with electricity):
- pred. MP: *Der durch die Anlage fließende Strom ist etwa 100 Ampere stark.*
 - attr. MP: *Ein 50 Ampere starker Strom genügt, um die Glühbirne zum Leuchten zu bringen.*
 - diff. MP: *In dieser Leitung ist der Strom fünf Ampere stärker als in der anderen.*
- b. 'schwach' (with electricity):
- pred. MP: *Der durch die Apparatur fließende Strom ist drei Ampere schwach.*
 - attr. MP: *Ein fünf Ampere schwacher Strom genügt, um die Glühbirne zum Leuchten zu bringen.*
 - diff. MP: *In diesem Teil der Anlage ist der Strom 20 Ampere schwächer als in den übrigen Bereichen.*
- 21 a. 'stark' (with winds):
- pred. MP: *Als der Orkan seinen Höhepunkt erreichte, war der Wind über 110 Stundenkilometer stark.*
 - attr. MP: *Beim letzten Herbststurm fegte ein über 110 Stundenkilometer starker Wind über das mittelamerikanische Land hinweg.*
 - diff. MP: *Beim letzten Orkan war der Wind sogar noch 20 Stundenkilometer stärker als heute.*
- b. 'schwach' (with winds):
- pred. MP: *Während des zweitägigen Segelwettbewerbs war der Wind 15 Stundenkilometer schwach.*
 - attr. MP: *Bei der letztjährigen Segelregatta herrschte ein 15 Stundenkilometer schwacher Wind.*
 - diff. MP: *Heute ist der Wind nur zehn Stundenkilometer schwächer als beim letzten Herbststurm.*
- 22 a. 'teuer':
- pred. MP: *Das neue Syntaxbuch Andrew Radfords ist 60 Euro teuer.*
 - attr. MP: *Zur bestandenen Führerscheinprüfung bekam er ein 20.000 Euro teures Auto geschenkt.*
 - diff. MP: *Das Nachfolgemodell ist im Schnitt 500 Euro teurer als sein Vorgänger.*
- b. 'billig':
- pred. MP: *Das neue Semantikbuch Irene Heims war 20 Euro billig.*
 - attr. MP: *Zur bestandenen Führerscheinprüfung bekam er einen 2.000 Euro billigen Gebrauchtwagen geschenkt.*
 - diff. MP: *Das bisherige Modell war rund 500 Euro billiger als das neue.*

- 23 a. 'reich':
- pred. MP: *Unser neuer Nachbar ist über eine Million Euro reich.*
 - attr. MP: *Ein mehrere Millionen Euro reicher Bauunternehmer ist dabei, sämtliche Grundstücke der Umgebung aufzukaufen.*
 - diff. MP: *Nach dem Gewinn des diesjährigen Sonderpreises war er 10.000 Euro reicher als zuvor.*
- b. 'arm':
- pred. MP: *Unser neuer Untermieter ist wenige hundert Euro arm.*
 - attr. MP: *Ein wenige hundert Euro armes Mütterlein betrat die Suppenküche.*
 - diff. MP: *Nach den hochspekulativen Anlagen der vergangenen Jahre ist er nun fast 500.000 Euro ärmer als zuvor.*
- c. 'vermögend':
- pred. MP: *Die erzkonservative Stiftung ist rund 10 Millionen Euro vermögend.*
 - attr. MP: *Eine rund zwei Millionen Euro vermögende Studienstiftung interessiert sich für den Erwerb des Grundstücks.*
 - diff. MP: *Nach der Erbschaft von einer Großtante ist Peter jetzt 300.000 Euro vermögender als bisher.*
- 24 a. 'stark' (in number):
- pred. MP: *Die dafür eigens gebildete Sonderkommission ist 32 Mann stark.*
 - attr. MP: *Eine fünf Mann starke Bande raubte wiederholt Banken im Ruhrgebiet aus.*
 - diff. MP: *Der neue Ausschuss ist fünf Mitglieder stärker als der alte.*
- b. 'schwach' (in number):
- pred. MP: *Die eingesetzte Sonderkommission ist vier Mann schwach.*
 - attr. MP: *Eine drei Mann schwache Untersuchungskommission vermag nur wenig auszurichten.*
 - diff. MP: *Der jetzige Ausschuss ist zwei Mitglieder schwächer als der bisherige.*
- 25 a. 'intelligent':
- pred. MP: *Der erste der vier Stellenbewerber war 120 IQ-Punkte intelligent.*
 - attr. MP: *Ein 100 IQ-Punkte intelligenter Durchschnittsmensch kann eine solche Mammutaufgabe nicht bewältigen.*
 - diff. MP: *Peter ist zehn IQ-Punkte intelligenter als seine Schwester.*

- b. 'dumm':
- pred. MP: *Der erste Kandidat war 70 IQ-Punkte dumm.*
 - attr. MP: *Ein 60 IQ-Punkte dummer Mensch vermag diese Aufgabe nicht zu lösen.*
 - diff. MP: *Peters Schwester ist genau zehn IQ-Punkte dümmer als er selbst.*
- 26 a. 'schön':
- pred. MP: *Obwohl ihr Gesicht neun Punkte schön war, reichte dies nicht zum Gewinnen des Schönheitswettbewerbs.*
 - attr. MP: *Die Kandidatin hat ein neun Punkte schönes Gesicht.*
 - diff. MP: *Der Körper der ersten Kandidatin war zwei Punkte schöner als der der zweiten.*
- b. 'hässlich':
- pred. MP: *Das Gesicht der dritten Kandidatin war drei Punkte hässlich.*
 - attr. MP: *Ein drei Punkte hässliches Gesicht hielt sie nicht von einer weiteren Teilnahme am Schönheitswettbewerb ab.*
 - diff. MP: *Die Frisur der zweiten Kandidatin war vier Punkte hässlicher als die der ersten.*
- 27 a. 'gut':
- pred. MP: *Die diesjährige Syntaxklausur ist im Schnitt 80 Punkte gut ausgefallen.*
 - attr. MP: *Eine 80 Punkte gute Abschlussklausur reicht nicht zum Bestehen des Kurses.*
 - diff. MP: *Bei der Wiederholung des Kurses schnitt er in den Tests jeweils 20 Punkte besser ab als zuvor.*
- b. 'schlecht':
- pred. MP: *Die letztjährige Semantik Klausur fiel durchschnittlich 20 Punkte schlecht aus.*
 - attr. MP: *Im Fall einer 20 Punkte schlechten Abschlussklausur muss der Kurs wiederholt werden.*
 - diff. MP: *Bei der Erstbelegung des Kurses schnitt er zehn Punkte schlechter ab als beim zweiten Mal.*
- 28 a. 'wahrscheinlich':
- pred. MP: *Ein Scheitern des geplanten Unternehmens ist etwa 20 Prozentpunkte wahrscheinlich.*
 - attr. MP: *Auch ein 90 Prozentpunkte wahrscheinliches Scheitern konnte ihn nicht von einem neuerlichen Versuch abhalten.*
 - diff. MP: *Regenfälle sind heute rund zehn Prozentpunkte wahrscheinlicher als gestern.*

- b. ‘unwahrscheinlich’:
- pred. MP: *Ein erfolgreicher Abschluss dieses Großprojekts ist 80 Prozentpunkte unwahrscheinlich.*
 - attr. MP: *80 Prozentpunkte unwahrscheinliche Erfolgsaussichten wirken sich wenig förderlich auf die Motivation der Teilnehmer aus.*
 - diff. MP: *Gestern waren Regenfälle fast 30 Prozentpunkte unwahrscheinlicher als heute.*
- 29 ‘grün’:
- pred. MP: *Der Hintergrund der neuen Homepage ist 280 Pixel grün.*
 - attr. MP: *Ein 280 Pixel grüner Hintergrund bildet einen schlechten Kontrast.*
 - diff. MP: *Jetzt ist die Grundfarbe 20 Pixel grüner als zuvor.*
- 30 a. ‘aggressiv’:
- pred. MP: *Sein Verhalten wurde als 73 Punkte aggressiv eingestuft.*
 - attr. MP: *Ein 78 Punkte aggressives Grundverhalten bedarf einer dringenden medizinischen Behandlung.*
 - diff. MP: *Nach der Therapiesitzung war er sogar noch 20 Punkte aggressiver als zuvor.*
- b. ‘ruhig’:
- pred. MP: *Zu Beginn der Behandlung wurde er als 50 Punkte ruhig eingestuft.*
 - attr. MP: *Ein 50 Punkte ruhiges Verhalten liegt deutlich über dem üblichen Wert.*
 - diff. MP: *Nach Abschluss der Therapie war er etwa 30 Punkte ruhiger als noch zu Beginn.*
- 31 a. ‘fortschrittlich’:
- pred. MP: *Der Gesetzentwurf der FDP wurde als 70 Punkte fortschrittlich bewertet.*
 - attr. MP: *Ein 80 Punkte fortschrittlicher Antrag wurde von dem Gremium umgehend abgelehnt.*
 - diff. MP: *Nach dem Vornehmen einiger Änderungen war der Vorstoß etwa zehn Punkte fortschrittlicher als zuvor.*
- b. ‘rückschrittlich’:
- pred. MP: *Das neue Parteiprogramm der Linken wurde als zehn Punkte rückschrittlich eingestuft.*
 - attr. MP: *Der zehn Punkte rückschrittliche Gesetzentwurf wurde umgehend wieder verworfen.*
 - diff. MP: *Nach einigen Änderungen war der Entwurf sogar noch fünf Punkte rückschrittlicher als zuvor.*

pronominal measure phrases:

- *Albert Einstein hatte einen IQ von 138. So intelligent ist von uns keiner.*
- *Peter brauste mit über 250 Stundenkilometern über die Autobahn. So schnell würde ich nie fahren.*
- *Gestern hatten wir hier 32 Grad. So warm wird es auch heute wieder.*
- *Sein Großvater ist gerade 92 geworden. So alt wird nicht jeder.*
- *Die Ostsee ist durchschnittlich 50 Meter tief. So tief ist auch die Nordsee.*
- *Maria ist 1,78 Meter groß. Peter ist auch so groß.*

degree questions:

- *Wie groß ist seine Schwester?*
- *Wie tief ist der See an dieser Stelle?*
- *Wie alt muss man sein, um wählen zu dürfen?*
- *Wie warm war es hier gestern?*
- *Wie schnell darf man auf Landstraßen fahren?*
- *Wie intelligent ist der Durchschnittsdeutsche?*

A.3 French Test Sentences

- 1 a. 'grand' (with people):
- pred. MP: *Un de mes frères est grand d'un mètre quatre-vingt-dix.*
 - attr. MP: *Hier, j'ai rencontré un athlète grand de deux mètres cinq.*
 - diff. MP: *Mon cousin est plus grand de 20 centimètres que ma nièce.*
- b. 'petit' (with people):
- pred. MP: *La femme que j'ai rencontrée était petite d'un mètre cinquante-deux.*
 - attr. MP: *Le basket n'est certainement pas le sport idéal pour un homme petit d'un mètre cinquante.*
 - diff. MP: *En moyenne, les Italiens sont plus petits de cinq centimètres que les Français.*
- 2 a. 'grand' (with objects):
- pred. MP: *Son nouvel appartement est grand de 85 mètres carrés.*
 - attr. MP: *Un terrain à bâtir grand de cent mètres carrés est trop petit pour construire une maison pour plusieurs familles.*
 - diff. MP: *La propriété de leurs voisins est plus grande d'à peu près 30 mètres carrés que leur propriété.*

- b. 'petit' (with objects):
- pred. MP: *La plupart des terrains à bâtir vendus par la municipalité se sont avérés petits de 70 mètres carrés.*
 - attr. MP: *Récemment, la municipalité a vendu des terrains à bâtir petits de 80 mètres carrés qui ne vous permettent guère de construire des maisons pour plusieurs familles.*
 - diff. MP: *En fait, leur propriété est 100 mètres carrés plus petite que celle de leurs ancêtres.*
- 3 a. 'long' (spatial):
- pred. MP: *Cette corde est longue de 32 mètres.*
 - attr. MP: *Pour gravir cette montagne, il vous faut une corde longue de 50 mètres.*
 - diff. MP: *Cette corde-ci est plus longue de dix mètres que celle-là.*
- b. 'court' (spatial):
- pred. MP: *La corde à linge de ce célibataire est courte de deux mètres cinquante.*
 - attr. MP: *Une corde à linge courte de trois mètres suffit largement pour notre grand-père qui habite tout seul.*
 - diff. MP: *La corde à votre droite est plus courte d'au moins cinq mètres que celle à votre gauche.*
- 4 a. 'profond':
- pred. MP: *À cet endroit le lac de Constance est profond de 52 mètres.*
 - attr. MP: *Pendant la Première Guerre mondiale, les soldats creusaient des tranchées profondes de deux mètres tout le long du front.*
 - diff. MP: *La mer Baltique est plus profonde d'au moins 50 mètres que la mer du Nord.*
- b. 'plat':
- pred. MP: *Juste à côté de ce port, le lac de Constance est plat de deux mètres.*
 - attr. MP: *Des fossés plats de 20 centimètres sont tout à fait inutiles pour installer un nouveau réseau d'égouts.*
 - diff. MP: *L'étang dans notre jardin est plus plat de 50 centimètres que le lac artificiel non loin du bord de la forêt.*
- 5 a. 'haut':
- pred. MP: *La montagne où nous avons passé nos dernières vacances est haute de 4 263 mètres.*
 - attr. MP: *Son entreprise veut construire un entrepôt de marchandises haut de plus de 150 mètres tout près de notre école élémentaire.*
 - diff. MP: *La tour Eiffel est plus haute d'au moins une trentaine de mètres que Notre-Dame de Paris.*

- b. 'bas':
- pred. MP: *La petite cabane au milieu de la forêt est basse d'un mètre vingt.*
 - attr. MP: *Pendant presque dix ans, il a vécu tout seul dans une cabane basse d'un mètre quarante dans les bois.*
 - diff. MP: *En fait, Notre-Dame de Paris est plus basse d'au moins 30 mètres que la tour Eiffel.*
- c. 'élevé':
- pred. MP: *Le mont juste à côté de l'auberge de jeunesse est élevé de 3 000 mètres.*
 - attr. MP: *Il est assez facile de faire l'ascension d'un mont élevé de moins de 2 000 mètres.*
 - diff. MP: *Le bâtiment à notre gauche est plus élevé d'une dizaine de mètres que celui à notre droite.*
- 6 a. 'gigantesque':
- pred. MP: *Selon notre guide, cette tour est gigantesque de 300 mètres.*
 - attr. MP: *Tout le monde était impressionné par ce gratte-ciel gigantesque de 250 mètres.*
 - diff. MP: *La tour à notre gauche est plus gigantesque d'exactly 45 mètres que celle à notre droite.*
- b. 'vaste':
- pred. MP: *Ce désert est vaste de 10 000 kilomètres carrés.*
 - attr. MP: *Il est très dangereux de se perdre dans un désert vaste de plusieurs milliers de kilomètres carrés.*
 - diff. MP: *Cette zone industrielle est encore plus vaste de 30 kilomètres carrés que l'autre.*
- c. 'minuscule':
- pred. MP: *Les puces des ordinateurs modernes sont souvent minuscules de deux millimètres.*
 - attr. MP: *L'emploi de puces minuscules de trois millimètres a considérablement réduit le poids des ordinateurs modernes.*
 - diff. MP: *En moyenne, les puces modernes sont plus minuscules de quatre millimètres que les anciennes.*
- d. 'infime':
- pred. MP: *Les puces des ordinateurs modernes sont souvent infimes de deux millimètres.*
 - attr. MP: *L'emploi de puces infimes de trois millimètres a réduit le poids des ordinateurs modernes de façon considérable.*
 - diff. MP: *En moyenne, les puces modernes sont plus infimes de quatre millimètres que les anciennes.*

- 7 a. 'large':
- pred. MP: *Selon la législation actuelle, les sorties de secours doivent être larges de deux mètres au minimum.*
 - attr. MP: *Pour finir de construire cette étagère, il nous faut encore une planche large de 25 centimètres.*
 - diff. MP: *Notre nouveau réfrigérateur est plus large de deux centimètres que l'ancien.*
- b. 'étroit':
- pred. MP: *Le passage entre ces deux roches s'est avéré étroit de 35 centimètres.*
 - attr. MP: *Pour un géant comme lui, il est parfaitement impossible d'entrer par cette fenêtre étroite de 40 centimètres.*
 - diff. MP: *Les planches brunes sont plus étroites de deux centimètres que les noires.*
- c. 'ample':
- pred. MP: *Les manches de ce manteau sont amples d'environ 20 centimètres.*
 - attr. MP: *Si je mets des pantalons amples de 20 centimètres, je passe pour un vieillard.*
 - diff. MP: *Les manches de cette chemise sont plus amples de trois centimètres que celles de l'autre.*
- 8 a. 'épais':
- pred. MP: *Selon le règlement administratif, cette porte de secours doit être épaisse de sept centimètres.*
 - attr. MP: *Il est impossible de lire un livre épais de 500 pages en deux heures.*
 - diff. MP: *Les planches modernes sont plus épaisses d'à peu près deux centimètres que celles des années 70.*
- b. 'mince':
- pred. MP: *Grâce à l'emploi de matériaux spéciaux, les ceintures de sécurité modernes sont souvent minces de trois millimètres.*
 - attr. MP: *Un livre mince d'une cinquantaine de pages suffit largement pour ce cours d'introduction.*
 - diff. MP: *Les planches standard sont plus minces de cinq millimètres que celles dont on a besoin ici.*
- 9 a. 'loin':
- adverbial use: *Dans les années à venir, il sera parfaitement impossible de voler loin de trois millions d'années-lumière.*
 - diff. MP: *Dans les années à venir, nous saurons voler 5 000 kilomètres plus loin qu'aujourd'hui.*

- b. 'éloigné':
- pred. MP: *La galaxie la plus proche est éloignée de cinq millions d'années-lumière de notre planète.*
 - attr. MP: *Dans les 100 ans qui viennent, il sera complètement impossible d'explorer les étoiles éloignées de dix millions d'années-lumière.*
 - diff. MP: *La galaxie la plus proche de nous est plus éloignée de dix millions d'années-lumière que la planète la plus proche de la terre.*
- c. 'distant':
- pred. MP: *Les galaxies les plus proches sont distantes de dix millions d'années-lumière de la terre.*
 - attr. MP: *Dans les 50 prochaines années, il ne nous sera pas possible d'explorer les planètes distantes de plus de quatre millions d'années-lumière de nous.*
 - diff. MP: *La galaxie qui nous est voisine est plus distante de nous de onze millions d'années-lumière que la planète la plus proche.*
- d. 'proche':
- pred. MP: *Après l'avance de ce matin, la troupe de légionnaires est proche de 200 mètres.*
 - attr. MP: *La promenade de demain nous mènera à un point de vue proche de 700 mètres.*
 - diff. MP: *Aujourd'hui, notre excursion nous mènera à un endroit qui est plus proche de trois kilomètres que celui d'hier.*
- 10 a. 'long' (temporal):
- pred. MP: *Son interrogation par la police a été longue de plusieurs heures.*
 - attr. MP: *Souvent, les interrogations des témoins longues de deux heures ne servent pas à grand-chose.*
 - diff. MP: *En fin de compte, son examen de permis de conduire était presque plus long de quinze minutes que celui de sa sœur.*
- b. 'court' (temporal):
- pred. MP: *Comme d'habitude, la conférence de presse juste après le match a été courte de trois minutes.*
 - attr. MP: *Juste après le match, ce joueur de foot a accordé aux journalistes une interview courte de cinq minutes.*
 - diff. MP: *Son examen de permis de conduire était plus court de dix minutes que celui de son frère, ce qui a surpris tout le monde.*
- c. 'bref':
- pred. MP: *Comme d'habitude, la conférence de presse juste après le match a été brève de trois minutes.*
 - attr. MP: *Juste après le match, ce joueur de tennis a accordé aux journalistes une interview brève de trois minutes.*
 - diff. MP: *Son examen de permis de conduire était plus bref de douze minutes que celui d'Alexandre.*

- 11 a. 'vieux':
- pred. MP: *Sa grand-mère est vieille de 87 ans.*
 - attr. MP: *Tous les lundis, il rend visite à son grand-père vieux de 75 ans.*
 - diff. MP: *Lorsqu'il mourut, il était plus vieux de presque dix ans que ses médecins l'avaient prédit.*
- b. 'jeune':
- pred. MP: *La femme qui a gagné un million d'euros à la loterie est jeune de 19 ans.*
[*La femme qui a gagné un million d'euros à la loterie est jeune de 82 ans.*]
 - attr. MP: *L'année dernière, un élève jeune de 14 ans a participé à notre marathon.*
[*L'année dernière, une dame jeune de 80 ans a participé à notre marathon.*]
 - diff. MP: *Son oncle est plus jeune de presque dix ans que son père.*
- c. 'âgé':
- pred. MP: *Son oncle est âgé de 72 ans.*
 - attr. MP: *Ça lui fait un plaisir énorme de jouer avec sa nièce âgée de quatre ans.*
 - diff. MP: *Lors de son élection, le président était plus âgé de dix ans que son prédécesseur.*
- 12 a. 'retardé':
- pred. MP: *Le départ de son train a été retardé de dix minutes en raison d'un incident technique.*
 - attr. MP: *Le départ de son train retardé de dix minutes lui a fait rater la correspondance pour Nice.*
 - diff. MP: *Hier, notre train pour Nancy a été plus retardé de 20 minutes que lors de notre dernier voyage.*
- b. 'anticipé':
- pred. MP: *L'arrivée de ce train était anticipée d'un quart d'heure, ce qui a surpris tout le monde.*
 - attr. MP: *À cause d'une arrivée anticipée de 50 minutes, il lui a fallu attendre la correspondance pour Lyon.*
 - diff. MP: *Ce matin, le vol en provenance de Bordeaux était plus anticipé de dix minutes que la dernière fois.*
- 13 a. 'chaud':
- pred. MP: *L'eau dans cette marmite est chaude de/à cent degrés.*
 - attr. MP: *Pour ce bain de pieds, il faut utiliser de l'eau chaude de/à 35 degrés.*
 - diff. MP: *Maintenant, l'eau est plus chaude de cinq degrés qu'avant.*
- b. 'froid':
- pred. MP: *La dernière nuit qu'il a fallu passer dehors était froide de moins cinq degrés.*
 - attr. MP: *Pour rafraîchir ce wagon-citerne, les pompiers ont pris de l'eau froide de/à cinq degrés.*
 - diff. MP: *Après cette terrible tempête, il faisait plus froid de dix degrés qu'avant.*

- c. 'doux':
- pred. MP: *Au mois de juillet, les nuits sont douces de quinze degrés en moyenne.*
 - attr. MP: *C'est un grand plaisir que de passer les nuits douces de quinze degrés dehors sous un ciel étoilé.*
 - diff. MP: *Ces dix dernières années, les hivers ont été plus doux de presque deux degrés qu'autrefois.*
- d. 'tiède':
- pred. MP: *Normalement, l'eau que les médecins utilisent pour nettoyer des plaies est tiède de/à quinze degrés.*
 - attr. MP: *Les gens malades ne doivent utiliser que de l'eau tiède de/à quinze degrés lorsqu'ils prennent une douche.*
 - diff. MP: *L'eau dans la marmite à notre gauche est plus tiède de dix degrés au moins que celle dans la marmite à notre droite.*
- 14 a. 'vite':
- adverbial use: *En Suisse, il est permis de rouler vite de 120 kilomètres à l'heure sur les autoroutes.*
 - diff. MP: *En Allemagne, on peut rouler plus vite sur les grandes routes de 20 kilomètres à l'heure qu'aux États-Unis.*
- b. 'rapide':
- pred. MP: *Au moment de leur collision, les deux camions étaient rapides de 80 kilomètres à l'heure.*
 - attr. MP: *Hier, j'ai acheté une nouvelle voiture rapide de 260 kilomètres à l'heure.*
 - diff. MP: *Les avions modernes sont plus rapides d'à peu près 200 kilomètres à l'heure que les anciens des années 80.*
- c. 'lent':
- pred. MP: *Le tracteur derrière lequel il devait rouler était lent de 25 kilomètres à l'heure.*
 - attr. MP: *Si tu es pressé, un tracteur lent de 30 kilomètres à l'heure peut te faire fâcher.*
 - diff. MP: *Pour des raisons techniques, les trains sont aujourd'hui plus lents d'à peu près 20 kilomètres à l'heure que d'habitude.*
- 15 a. 'lourd':
- pred. MP: *La valise énorme du professeur est lourde d'au moins 35 kilos.*
 - attr. MP: *Dans la boulangerie du coin, une miche de pain lourde de deux kilos coûte extrêmement cher.*
 - diff. MP: *Ce sac de pommes est plus lourd d'à peu près deux kilos que l'autre.*

- b. 'léger':
- pred. MP: *Les raquettes de tennis modernes sont souvent légères de 300 grammes.*
 - attr. MP: *Une truite légère de 50 grammes, c'est tout ce qu'il a pêché pendant une semaine entière.*
 - diff. MP: *Ce sac de farine est plus léger de presque 30 kilos que l'autre là-bas.*
- 16 a. 'gros':
- pred. MP: *La femme juste à côté de nous est grosse de 120 kilos.*
 - attr. MP: *Il nous était complètement impossible de suivre le match à cause de cet homme gros de 150 kilos assis juste devant nous.*
 - diff. MP: *Aujourd'hui, Marie est plus grosse d'une trentaine de kilos qu'avant de se marier.*
- b. 'mince' (with people):
- pred. MP: *La femme assise à notre droite est mince de 55 kilos.*
 - attr. MP: *Dans cette foule, il nous était tout à fait impossible de discerner cet homme mince de 60 kilos.*
 - diff. MP: *Après avoir suivi le régime que son docteur lui avait ordonné, Jean-Luc était plus mince de presque 40 kilos qu'avant.*
- c. 'svelte':
- pred. MP: *L'homme à notre gauche est svelte de 50 kilos.*
 - attr. MP: *On arrivait à peine à discerner cette femme svelte de 50 kilos dans cette foule énorme.*
 - diff. MP: *Avant son mariage, Pierre était plus svelte d'environ quinze kilos qu'aujourd'hui.*
- d. 'gras':
- pred. MP: *Le vieillard juste devant nous est gras de 250 kilos au moins.*
 - attr. MP: *Le lit standard à l'hôpital s'est avéré complètement impropre à l'opération de ce malade gras de 300 kilos.*
 - diff. MP: *Avant que son docteur lui ait ordonné un régime, il avait été plus gras d'exactly 70 kilos qu'aujourd'hui.*
- 17 a. 'clair':
- pred. MP: *L'ampoule dans notre salle de séjour est claire de 700 lux.*
 - attr. MP: *Après avoir installé une ampoule électrique claire de 800 lux dans mon bureau, j'ai pu beaucoup mieux travailler.*
 - diff. MP: *L'ampoule qu'ils ont installée dans leur cuisine est plus claire d'à peu près 200 lux que celle dans leur chambre.*

- b. 'lumineux':
- pred. MP: *L'ampoule dans notre salle de séjour est lumineuse de 800 lux.*
 - attr. MP: *Dès le moment où j'ai installé une ampoule électrique lumineuse de 900 lux dans mon bureau, j'ai pu beaucoup mieux travailler.*
 - diff. MP: *L'ampoule que nous avons installée dans notre salle à manger est plus lumineuse d'environ 400 lux que celle dans notre chambre.*
- c. 'sombre':
- pred. MP: *Les ampoules électriques dans la cave de ce restaurant sont sombres de 100 lux.*
 - attr. MP: *L'ampoule électrique sombre de 300 lux qu'il y a dans cette salle ne permet pas d'y lire le journal.*
 - diff. MP: *L'ampoule qu'il y a dans notre chambre est plus sombre de 200 lux que celle dans notre salle à manger.*
- d. 'obscur':
- pred. MP: *L'ampoule électrique que nous avons installée dans notre garde-manger est obscure de 200 lux.*
 - attr. MP: *L'ampoule obscure de 300 lux dans notre cuisine ne nous permet pas d'y lire le journal.*
 - diff. MP: *L'ampoule électrique qu'il y a dans leur chambre est plus obscure de presque 400 lux que celle dans leur salle de séjour.*
- 18 a. 'sonore':
- pred. MP: *Au moment de leur décollage, les avions commerciaux sont normalement sonores de 90 décibels.*
 - attr. MP: *L'interdiction des vols de nuit à l'aéroport de Francfort ne concerne que les avions sonores de 100 décibels au minimum.*
 - diff. MP: *Un Boeing 747 est plus sonore d'environ 20 décibels qu'un Airbus A 330.*
- b. 'silencieux':
- pred. MP: *Même avec des matériaux durs, cette nouvelle perceuse est silencieuse de dix décibels.*
 - attr. MP: *Les chefs de cette entreprise sont particulièrement fiers de leurs turbines hydrauliques silencieuses de 25 décibels.*
 - diff. MP: *Un Airbus A 330 est plus silencieux d'environ 20 décibels qu'un Boeing 747.*
- 19 a. 'aigu' (with angles):
- pred. MP: *Dans ce triangle-ci, l'angle gauche est aigu de 35 degrés.*
 - attr. MP: *Il y a un nombre énorme d'angles aigus de 60 degrés dans cette esquisse.*
 - diff. MP: *L'angle bas de ce triangle est plus aigu de 30 degrés que ses deux autres angles.*

- b. 'obtus' (with angles):
- pred. MP: *Dans l'autre triangle, deux angles sont obtus de 120 degrés.*
 - attr. MP: *Il n'y a pas un seul angle obtus de 140 degrés dans cette esquisse.*
 - diff. MP: *L'angle gauche de ce triangle est plus obtus de 50 degrés que les deux autres.*
- 20 a. 'incliné':
- pred. MP: *L'antenne principale sur le toit de ce bâtiment est inclinée de/à 20 degrés.*
 - attr. MP: *Une antenne de télévision inclinée de/à quinze degrés nous permet de recevoir beaucoup plus de chaînes.*
 - diff. MP: *Notre antenne de télévision est plus inclinée de 20 degrés que celle de nos parents, qui habitent juste à côté.*
- b. 'arqué':
- pred. MP: *L'Arc de triomphe de Paris est arqué de 45 degrés.*
 - attr. MP: *L'autobus à impériale n'a pas pu passer cet arc arqué de 30 degrés.*
 - diff. MP: *L'Arc de triomphe de Paris est plus arqué de dix degrés qu'un demi-cercle ordinaire.*
- c. 'courbé':
- pred. MP: *En général, les ondes ultraviolettes sont courbées de 25 degrés.*
 - attr. MP: *Les ondes ultraviolettes courbées de quinze degrés augmentent la réfraction de la lumière.*
 - diff. MP: *Les ondes infrarouges sont plus courbées de 30 degrés que les ondes ultraviolettes.*
- d. 'droit':
- pred. MP: *Pour éviter des interférences, cette antenne de télévision doit être droite de zéro degré.*
 - attr. MP: *L'installation d'une antenne droite de zéro degré nous permet de recevoir dix chaînes de télévision de plus.*
 - diff. MP: *L'antenne de télévision de nos voisins est plus droite de dix degrés que la nôtre.*
- 21 a. 'fort' (with electricity):
- pred. MP: *Le courant électrique produit par cet appareil est fort de 110 ampères.*
 - attr. MP: *Un courant fort de 80 ampères suffit pour faire luire ce fil électrique.*
 - diff. MP: *Le courant électrique produit par la batterie à notre gauche est plus fort de cinq ampères que celui produit par celle à notre droite.*

- b. 'faible' (with electricity):
- pred. MP: *Le courant électrique produit par cet appareil largement inutile est faible de quinze ampères.*
 - attr. MP: *Un courant électrique faible de cinq ampères suffit largement pour faire luire ce fil de fer.*
 - diff. MP: *Dans cette partie du moteur, le courant électrique est plus faible d'exactly 20 ampères qu'ailleurs.*
- 22 a. 'fort' (with winds):
- pred. MP: *Pendant toute cette tempête, le vent était fort de 160 kilomètres à l'heure.*
 - attr. MP: *L'année dernière, un vent fort de presque 200 kilomètres à l'heure a dévasté le pays entier.*
 - diff. MP: *Dans cette région, le vent a été encore plus fort de 30 kilomètres à l'heure que dans le reste du pays.*
- b. 'faible' (with winds):
- pred. MP: *En moyenne, le vent était faible de 20 kilomètres à l'heure pendant toutes ces régates à la voile.*
 - attr. MP: *À cause d'un vent faible de quinze kilomètres à l'heure, on a dû interrompre les régates à la voile.*
 - diff. MP: *Aujourd'hui, le vent est seulement plus faible de 20 kilomètres à l'heure que lors de cette terrible tempête l'année dernière.*
- c. 'doux' (with winds):
- pred. MP: *En moyenne, le vent était doux de 20 kilomètres à l'heure pendant toutes ces régates à la voile.*
 - attr. MP: *À cause d'un vent doux de dix kilomètres à l'heure, on a dû interrompre les régates à la voile.*
 - diff. MP: *La semaine dernière, le vent était seulement plus doux de 20 kilomètres à l'heure que lors de cette terrible tempête au mois de juillet.*
- 23 a. 'cher':
- pred. MP: *Le livre de syntaxe dont nous avons besoin pour ce cours s'est avéré cher de 60 euros.*
 - attr. MP: *Ses parents lui ont offert une voiture chère de 17 000 euros après qu'il avait passé son examen de permis de conduire.*
 - diff. MP: *Le modèle actuel est plus cher d'environ 40 euros que l'ancien, qui n'est plus en vente.*
- b. 'bon marché':
- pred. MP: *Ce qui est assez remarquable, c'est que ce livre de sémantique est bon marché de 20 euros.*
 - attr. MP: *Pour son anniversaire, sa grand-mère lui a acheté une voiture d'occasion bon marché de 500 euros.*
 - diff. MP: *En Pologne, les cigarettes sont normalement meilleur marché de 40 pour cent qu'en Allemagne.*

- 24 a. 'riche':
- pred. MP: *Les inventeurs célèbres sont souvent riches de plusieurs millions d'euros.*
 - attr. MP: *Un entrepreneur riche de 150 millions d'euros a récemment acheté tous les terrains à bâtir restant dans notre quartier.*
 - diff. MP: *Après avoir gagné ce prix littéraire, Pierre était plus riche de 100 000 euros qu'auparavant.*
- b. 'pauvre':
- pred. MP: *Notre nouveau sous-locataire est pauvre de quelques cents euros.*
 - attr. MP: *Tout le monde se tut lorsqu'un chômeur pauvre de quelques cents euros entra dans la salle.*
 - diff. MP: *Après avoir effectué des investissements en valeurs spéculatives, il est maintenant plus pauvre de presque 370 000 euros qu'il ne l'était avant.*
- c. 'fortuné':
- pred. MP: *Cette fondation est fortunée d'environ deux millions d'euros.*
 - attr. MP: *Un hôtelier fortuné d'un million d'euros veut acheter cette propriété.*
 - diff. MP: *Après avoir fait cet héritage énorme, Pierre est maintenant plus fortuné d'à peu près 300 000 euros qu'avant.*
- 25 a. 'nombreux' (in number):
- pred. MP: *Cette unité spéciale est nombreuse de 35 agents de police.*
 - attr. MP: *Une bande nombreuse de six personnes est responsable du coup à main armée contre cette banque.*
 - diff. MP: *Le nouveau comité est plus nombreux de trois personnes que l'ancien.*
- b. 'faible' (in number):
- pred. MP: *Malheureusement, cette unité spéciale est faible de quatre membres.*
 - attr. MP: *Une commission d'enquête faible de trois membres ne peut pas atteindre grand-chose.*
 - diff. MP: *À partir de demain, ce comité sera plus faible de deux personnes que maintenant.*
- 26 a. 'intelligent'
- pred. MP: *Le premier postulant s'est avéré intelligent de 120 points Q. I.*
 - attr. MP: *Un homme moyen intelligent de 100 points Q. I. n'est certainement pas capable de résoudre un problème d'une telle complexité.*
 - diff. MP: *Pierre est plus intelligent d'au moins 20 points Q. I. que sa sœur.*

- b. 'bête':
- pred. MP: *La plupart des postulants à cet emploi sont bêtes de moins de 70 points Q. I.*
 - attr. MP: *Une personne bête de 60 points Q. I. ne pourra pas accomplir ce devoir très exigeant.*
 - diff. MP: *Le frère de Pierre s'est révélé plus bête de presque 30 points Q. I. que nous ne l'avions imaginé.*
- 27 a. 'beau':
- pred. MP: *Le visage de la première candidate était beau de neuf points.*
 - attr. MP: *Un visage beau de huit points n'a pas suffi pour gagner ce concours de beauté.*
 - diff. MP: *Le corps de la seconde candidate était plus beau de deux points que celui de la première.*
- b. 'laid':
- pred. MP: *La coiffure de la troisième candidate était laide de trois points.*
 - attr. MP: *Un visage laid de deux points n'a pas pu l'empêcher de participer à un autre concours de beauté.*
 - diff. MP: *Le visage de la deuxième candidate était plus laid de deux points que celui de la troisième.*
- 28 a. 'bon':
- pred. MP: *L'examen de syntaxe de cet étudiant extraordinaire était bon de 95 points.*
 - attr. MP: *Un résultat bon de 40 points ne suffit pas pour être reçu à cet examen.*
 - diff. MP: *Lorsqu'il a suivi ce cours pour la deuxième fois, les résultats de son examen final ont été meilleurs de presque 30 points.*
- b. 'mauvais':
- pred. MP: *Ce semestre d'hiver, les résultats de l'examen final se sont avérés mauvais de 25 points.*
 - attr. MP: *Au cas où vous auriez un examen mauvais de 30 points, il vous faudrait refaire ce cours.*
 - diff. MP: *Lorsqu'il prit ce cours pour la première fois, ses résultats ont été plus mauvais de 20 points qu'à la deuxième fois.*
- 29 a. 'probable':
- pred. MP: *Avec un tel projet, un succès est probable à 90 pour cent.*
 - attr. MP: *Même un échec probable à 80 pour cent ne pouvait pas l'empêcher d'essayer.*
 - diff. MP: *Aujourd'hui, des orages sont plus probables à 30 pour cent qu'hier.*

- b. 'improbable':
- pred. MP: *Avec un projet tellement difficile, un succès est improbable à 99 pour cent.*
 - attr. MP: *Des chances de succès improbables à 80 pour cent n'augmenteront certainement pas la motivation des participants.*
 - diff. MP: *Hier, des orages étaient plus improbables à 20 pour cent qu'aujourd'hui.*
- c. 'vraisemblable':
- pred. MP: *Avec un tel projet, un succès est vraisemblable à 90 pour cent.*
 - attr. MP: *Même un échec vraisemblable à 80 pour cent ne pouvait pas l'empêcher d'essayer.*
 - diff. MP: *Cet été, des orages sont plus vraisemblables à 30 pour cent que l'été dernier.*
- d. 'invraisemblable':
- pred. MP: *Avec un projet tellement difficile, un succès est invraisemblable à 99 pour cent.*
 - attr. MP: *Des chances de succès invraisemblables à 80 pour cent n'augmenteront certainement pas la motivation des participants.*
 - diff. MP: *Hier, des orages étaient plus invraisemblables à 20 pour cent qu'aujourd'hui.*
- 30 'rouge':
- pred. MP: *La couleur que cette entreprise a choisie pour son site internet est rouge de 280 pixels.*
 - attr. MP: *Cette couleur rouge de 250 pixels nous donne un contraste largement insuffisant.*
 - diff. MP: *Maintenant, la couleur du fond est plus rouge de 40 pixels qu'avant.*
- 31 a. 'agressif':
- pred. MP: *Après plusieurs expériences, il a été classifié comme agressif de 73 points.*
 - attr. MP: *Un comportement agressif de 80 points exige un traitement médical immédiat.*
 - diff. MP: *Après avoir suivi un traitement, il était même plus agressif de dix points qu'auparavant.*
- b. 'calme':
- pred. MP: *D'après son comportement, on l'a classifié comme calme de 24 points.*
 - attr. MP: *Un comportement calme de 30 points est assez rare.*
 - diff. MP: *Après avoir suivi un traitement, il était plus calme de presque 20 points qu'avant.*
- 32 a. 'progressiste':
- pred. MP: *On a classifié ce projet de loi élaboré par la FDP comme progressiste de 70 points.*
 - attr. MP: *Le comité va certainement rejeter ce projet de loi progressiste de 85 points.*
 - diff. MP: *Après quelques modifications, cette proposition était plus progressiste de quinze points qu'avant.*

- b. 'réactionnaire':
- pred. MP: *Le programme électoral de ce parti a été classifié comme réactionnaire de 25 points.*
 - attr. MP: *Hier, l'Assemblée nationale a rejeté cette proposition de loi réactionnaire de 30 points.*
 - diff. MP: *Après ces modifications, cette proposition de loi était même plus réactionnaire de dix points qu'auparavant.*

pronominal measure phrases:

- *En moyenne, ces planches-là sont épaisses de cinq centimètres. Cette planche-ci est également si épaisse.*
- *Hier, j'ai rencontré une femme âgée de 95 ans. Je n'avais jamais vu une personne si vieille.*
- *Hier, il faisait 32 degrés. Demain, il fera encore une fois si chaud.*
- *Pierre a roulé à Paris à une vitesse de plus de 250 kilomètres à l'heure. Moi, je ne roulerais jamais si vite !*
- *Albert Einstein avait un Q. I. de 138 points. Parmi nous, personne n'est si intelligent.*

degree questions:

- *Combien (de) haut est ce bâtiment ?*
- *Combien (de) profond est le lac de Constance à cet endroit ?*
- *Combien (d')âgé faut-il être pour avoir le droit de vote ?*
- *Combien (de) vite est-il permis de rouler sur cette route ?*
- *Combien (d')intelligent est l'homme moyen ?*

B Tables Displaying the Results for the Individual Native Speakers Consulted

B.1 Individual Results Gained from the English Study on the (Non-)Occurrence of Direct Measure Phrase Constructions

	adjective	predicative MPC \emptyset							attributive MPC \emptyset					differential comp. \emptyset									
1	a	<i>tall</i>	1	1	1	1	1	1.0	ok	1	1	1	1	2	1.2	ok	1	1	1	1	1	1.0	ok
	b	<i>short</i>	4	3	4	4	3	3.6	*	1	2	4	1	3	2.2	?	1	1	1	1	1	1.0	ok
2	a	<i>large</i>	2	2	4	1	2	2.2	?	1	2	4	3	1	2.2	?	1	1	1	1	1	1.0	ok
	b	<i>small</i>	2	3	4	4	3	3.2	*	1	2	4	3	3	2.6	?	1	1	1	1	1	1.0	ok
3	a	<i>long (spatial)</i>	1	1	1	1	1	1.0	ok	1	2	2	1	1	1.4	ok	1	1	1	1	1	1.0	ok
	b	<i>short (spatial)</i>	4	3	4	4	3	3.6	*	1	2	4	3	4	2.8	?	1	1	1	1	1	1.0	ok
4	a	<i>deep</i>	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	b	<i>flat</i>	3	2	4	4	4	3.4	*	3	4	4	4	4	3.8	*	1	2	4	4	4	3.0	*
	c	<i>shallow</i>	3	3	4	4	3	3.4	*	2	2	4	3	3	2.8	?	1	1	1	1	1	1.0	ok
																	[1	1	1	1	3	1.4	ok]
5	a	<i>high</i>	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	1	1	2	1	1	1.2	ok
	b	<i>low</i>	2	3	4	4	4	3.4	*	2	2	4	4	4	3.2	*	1	2	1	1	2	1.4	ok
6	a	<i>huge</i>	4	3	4	4	4	3.8	*	1	2	4	2	4	2.6	?	1	3	4	4	4	3.2	*
																	[1	3	4	4	4	3.2	*)
	b	<i>tiny</i>	1	2	4	4	4	3.0	*	1	2	4	4	4	3.0	*	1	2	2	3	3	2.2	?
7	a	<i>wide</i>	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	b	<i>narrow</i>	1	2	4	3	4	2.8	?	1	2	4	4	3	2.8	?	1	1	1	1	1	1.0	ok
	c	<i>broad</i>	1	2	3	3	2	2.2	?	1	3	2	2	1	1.8	ok	1	2	3	1	4	2.2	?
8	a	<i>thick</i>	1	1	1	1	1	1.0	ok	1	2	2	1	1	1.4	ok	1	1	1	1	1	1.0	ok
	b	<i>thin</i>	3	3	4	3	4	3.4	*	1	2	4	2	3	2.4	?	1	1	1	1	1	1.0	ok
9	a	<i>distant</i>	1	2	2	1	3	1.8	ok	1	2	1	2	3	1.8	ok	1	2	1	1	1	1.2	ok
	b	<i>remote</i>	1	2	3	1	4	2.2	?	1	2	3	1	4	2.2	?	1	3	1	1	3	1.8	ok
	c	<i>far</i>	4	3	4	4	3	3.6	*	3	3	4	4	3	3.4	*	1	2	1	1	1	1.2	ok
	d	<i>away</i>	1	1	1	1	1	1.0	ok	3	3	3	4	1	2.8	?	4	3	4	2	3	3.2	*
	e	<i>close</i>	1	2	4	4	4	3.0	*	3	3	4	4	4	3.6	*	1	1	1	1	1	1.0	ok
	f	<i>near</i>	4	3	4	4	3	3.6	*	3	3	4	4	4	3.6	*	1	1	1	1	1	1.0	ok
10	a	<i>long (temporal)</i>	1	2	4	1	1	1.8	ok	1	2	2	1	1	1.4	ok	1	1	1	1	1	1.0	ok
	b	<i>short (temporal)</i>	1	3	4	4	3	3.0	*	1	2	4	4	4	3.0	*	1	1	1	1	1	1.0	ok

11	a	<i>old</i>	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	
	b	<i>young</i>	2	3	4	1	3	2.6	?	3	2	4	4	2	3.0	*	1	1	1	1	1	1.0	ok	
			[2	2	4	4	2	2.8	?]	[2	2	4	4	2	2.8	?]								
12	a	<i>late</i>	1	1	1	1	1	1.0	ok	1	2	1	1	1	1.2	ok	1	1	1	1	1	1.0	ok	
			[1	3	1	3	4	2.4	?]															
	b	<i>early</i>	1	1	1	1	1	1.0	ok	1	2	4	1	1	1.8	ok	1	1	1	1	1	1.0	ok	
			[1	3	2	1	4	2.2	?]															
13	a	<i>warm</i>	1	1	4	1	4	2.2	?	2	1	3	3	1	2.0	ok	1	1	1	1	1	1.0	ok	
	b	<i>cold</i>	1	2	4	4	3	2.8	?	1	1	4	2	4	2.4	?	1	1	1	1	1	1.0	ok	
	c	<i>mild</i>	1	3	4	1	4	2.6	?	1	2	3	4	2	2.4	?	1	1	2	1	1	1.2	ok	
	d	<i>hot</i>	1	2	4	1	3	2.2	?	1	2	3	1	1	1.6	ok	1	1	1	1	1	1.0	ok	
	e	<i>lukewarm</i>	2	3	4	4	4	3.4	*	1	2	4	4	4	3.0	*	4	3	3	4	3	3.4	*	
14	a	<i>fast</i>	1	3	4	1	4	2.6	?	1	3	4	3	3	2.8	?	1	1	1	1	1	1.0	ok	
	b	<i>slow</i>	1	2	4	4	4	3.0	*	1	2	3	4	4	2.8	?	1	1	1	1	1	1.0	ok	
15	a	<i>heavy</i>	2	1	3	4	3	2.6	?	2	2	4	4	4	3.2	*	1	1	1	1	1	1.0	ok	
	b	<i>light</i>	1	2	4	2	3	2.4	?	2	3	4	4	4	3.4	*	1	1	1	1	1	1.0	ok	
16	a	<i>thick (with people)</i>	4	3	4	4	4	3.8	*	4	4	4	4	4	4.0	*	4	4	4	4	3	3.8	*	
	b	<i>thin (with people)</i>	2	3	4	4	4	3.6	*	2	2	3	4	4	3.0	*	2	2	3	4	3	2.8	?	
	c	<i>fat</i>	2	2	4	4	4	3.2	*	2	2	4	4	4	3.2	*	2	1	3	4	3	2.6	?	
	d	<i>slim</i>	2	3	4	4	4	3.4	*	2	3	3	4	4	3.2	*	2	3	3	1	3	2.4	?	
17	a	<i>bright</i>	1	1	3	1	2	1.6	ok	1	2	3	1	2	1.8	ok	1	1	1	1	1	1.0	ok	
	b	<i>dark</i>	4	4	4	4	3	3.8	*	3	3	4	4	4	3.6	*	1	1	3	1	2	1.6	ok	
18	a	<i>loud</i>	2	1	3	2	1	1.8	ok	2	2	3	1	2	2.0	ok	1	1	1	1	1	1.0	ok	
	b	<i>quiet</i>	2	3	4	4	4	3.4	*	2	2	4	4	3	3.0	*	1	1	1	1	1	1.0	ok	
			[1	2	1	3	3	2.0	ok]															
	c	<i>silent</i>	3	4	4	4	4	3.8	*	2	4	4	4	4	3.6	*	1	4	4	4	4	3.4	*	
19	a	<i>acute (with angles)</i>	1	1	4	4	4	2.8	?	1	1	3	4	4	2.6	?	1	2	1	1	3	1.6	ok	

	b	<i>obtuse</i> (with angles)	3	2	4	4	4	3.4	*	1	1	4	4	4	2.8	?	1	1	3	1	4	2.0	ok
20	a	<i>bent</i>	2	2	4	1	4	2.6	?	2	3	3	4	4	3.2	*	1	2	4	1	4	2.4	?
			[4	2	3	4	4	3.4	*)	[4	2	3	4	4	3.4	*)	[1	2	1	2	4	2.0	ok]
	b	<i>straight</i>	2	3	4	4	4	3.4	*	2	3	4	4	4	3.4	*	1	2	1	2	4	2.0	ok
																	[1	2	2	2	4	2.2	?)
	c	<i>vaulted</i>	4	3	r	4	4	3.75	*	2	2	r	4	4	3.0	*	1	2	r	1	3	1.75	ok
21	a	<i>strong</i> (with electricity)	1	1	4	3	2	2.2	?	1	2	3	2	1	1.8	ok	1	1	1	1	1	1.0	ok
	b	<i>weak</i> (with electricity)	1	2	4	4	4	3.0	*	1	3	4	4	4	3.2	*	1	1	1	1	1	1.0	ok
22	a	<i>strong</i> (with winds)	3	2	3	1	3	2.4	?	1	2	4	1	1	1.8	ok	1	2	1	1	1	1.2	ok
	b	<i>weak</i> (with winds)	1	3	4	4	4	3.2	*	1	2	4	4	3	2.8	?	1	1	2	1	1	1.2	ok
	c	<i>light</i> (with winds)	2	2	4	4	4	3.2	*	1	2	4	1	3	2.2	?	1	3	2	1	2	1.8	ok
23	a	<i>expensive</i>	4	3	4	4	4	3.8	*	4	2	4	4	4	3.6	*	1	1	1	1	1	1.0	ok
	b	<i>cheap</i>	3	2	4	3	4	3.2	*	3	2	4	3	4	3.2	*	1	1	1	1	1	1.0	ok
24	a	<i>rich</i>	2	2	4	1	4	2.6	?	4	2	4	2	3	3.0	*	1	1	1	1	1	1.0	ok
	b	<i>poor</i>	4	3	4	4	4	3.8	*	4	4	4	4	4	4.0	*	1	1	1	1	1	1.0	ok
	c	<i>wealthy</i>	2	2	4	4	4	3.2	*	1	2	4	4	4	3.0	*	1	1	1	1	1	1.0	ok
25	a	<i>strong</i> (in number)	3	1	4	3	1	2.4	?	1	2	3	1	1	1.6	ok	2	2	4	3	3	2.8	?
	b	<i>weak</i> (in number)	4	2	4	4	4	3.6	*	3	3	4	3	4	3.4	*	1	2	4	1	4	2.4	?
26	a	<i>intelligent</i>	4	3	4	4	4	3.8	*	2	3	4	4	3	3.2	*	1	1	1	1	1	1.0	ok
	b	<i>stupid</i>	1	3	4	4	4	3.2	*	1	3	4	4	4	3.2	*	1	2	1	1	2	1.4	ok
27	a	<i>beautiful</i>	4	3	4	3	4	3.6	*	2	2	3	4	1	2.4	?	1	2	2	1	1	1.4	ok
	b	<i>ugly</i>	4	3	4	4	4	3.8	*	4	3	1	4	4	3.2	*	1	2	2	1	1	1.4	ok
28	a	<i>good</i>	4	3	4	4	4	3.8	*	2	3	4	4	3	3.2	*	1	1	1	1	1	1.0	ok
	b	<i>bad</i>	3	3	4	4	4	3.6	*	1	3	4	4	4	3.2	*	1	1	1	1	1	1.0	ok

29	a	<i>likely</i>	1	1	2	1	1	1.2	ok	1	2	3	3	2	2.2	?	1	1	1	1	4	1.6	ok
	b	<i>unlikely</i>	1	2	4	1	2	2.0	ok	1	4	4	1	4	2.8	?	[1	1	1	1	1	1.0	ok]
30		<i>green</i>	1	2	1	4	4	2.4	?	1	2	1	3	4	2.2	?	1	3	4	1	4	2.6	?
																	[1	2	4	2	4	2.6	?]
31	a	<i>aggressive</i>	1	2	1	4	3	2.2	?	1	2	1	1	1	1.2	ok	1	2	1	1	1	1.2	ok
	b	<i>calm</i>	1	3	1	4	3	2.4	?	1	3	3	4	3	2.8	?	1	1	1	1	1	1.0	ok
																	[1	2	1	2	1	1.4	ok]
32	a	<i>progressive</i>	1	2	1	4	3	2.2	?	1	3	1	4	4	2.6	?	1	2	1	1	2	1.4	ok
	b	<i>reactionary</i>	1	3	1	4	4	2.6	?	1	3	1	4	4	2.6	?	1	2	1	1	2	1.4	ok

B.2 Individual Results Gained from the German Study on the (Non-)Occurrence of Direct Measure Phrase Constructions

		adjective	predicative MPC				\emptyset	attributive MPC				\emptyset	differential comp.				\emptyset						
1	a	<i>groß</i>	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	b	<i>klein</i>	2	2	4	2	3	2.6	?	1	2	3	2	2	2.0	ok	1	1	1	1	1	1.0	ok
2	a	<i>lang</i> (spatial)	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	b	<i>kurz</i> (spatial)	1	2	4	1	3	2.2	?	1	2	4	1	1	1.8	ok	1	1	1	1	1	1.0	ok
3	a	<i>tief</i>	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	b	<i>flach</i>	1	2	3	1	2	1.8	ok	1	2	3	1	1	1.6	ok	1	1	1	1	1	1.0	ok
	c	<i>seicht</i>	4	2	3	3	3	3.0	*	4	2	2	2	2	2.4	?	2	1	1	1	1	1.2	ok
4	a	<i>hoch</i>	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	b	<i>niedrig</i>	1	3	3	3	1	2.2	?	2	2	4	2	2	2.4	?	1	1	2	1	1	1.2	ok
5	a	<i>riesig</i>	1	4	3	3	3	2.8	?	1	3	2	2	4	2.4	?	4	3	4	3	3	3.4	*
	b	<i>winzig</i>	1	3	2	1	4	2.2	?	1	3	3	1	3	2.2	?	1	2	4	2	4	2.6	?
6	a	<i>breit</i>	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	b	<i>schmal</i>	1	2	3	1	1	1.6	ok	1	2	1	1	1	1.2	ok	1	1	1	1	1	1.0	ok
7	a	<i>dick</i>	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	b	<i>dünn</i>	1	1	4	1	1	1.6	ok	1	2	2	2	1	1.6	ok	1	1	1	1	1	1.0	ok

8	a	<i>weit</i>	4	4	1	3	1	2.6	?	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	b	<i>nah</i>	1	2	4	1	3	2.2	?	1	3	3	2	1	2.0	ok	1	1	1	1	1	1.0	ok
	c	<i>entfernt</i>	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	d	<i>fern</i>	4	2	3	3	4	3.2	*	1	1	1	2	1	1.2	ok	1	2	1	2	3	1.8	ok
9	a	<i>lang</i> (temporal)	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	b	<i>kurz</i> (temporal)	2	2	3	2	3	2.4	?	1	2	2	2	1	1.6	ok	1	1	1	1	1	1.0	ok
10	a	<i>alt</i>	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	b	<i>jung</i>	1	2	4	2	3	2.4	?	1	2	4	2	1	2.0	ok	1	1	1	1	1	1.0	ok
11	a	<i>verspätet</i>	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	2	2	3	1	3	2.2	?
	b	<i>verfrüht</i>	1	3	2	2	1	1.8	ok	4	3	2	3	3	3.0	*	4	2	4	3	4	3.4	*
																	[4	3	4	3	4	3.6	*)
12	a	<i>warm</i>	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	b	<i>kalt</i>	1	2	1	1	1	1.2	ok	1	2	2	1	1	1.4	ok	1	1	1	1	1	1.0	ok
	c	<i>heiß</i>	1	2	1	1	1	1.2	ok	1	1	1	1	1	1.0	ok	1	2	1	1	1	1.2	ok
	d	<i>lau</i>	4	2	4	2	2	2.8	?	4	2	4	3	2	3.0	*	1	2	2	1	1	1.4	ok
13	a	<i>schnell</i>	2	1	1	1	1	1.2	ok	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	b	<i>langsam</i>	1	2	2	1	1	1.4	ok	1	2	2	2	1	1.6	ok	1	1	1	1	1	1.0	ok
14	a	<i>schwer</i>	1	1	1	1	1	1.0	ok	1	2	1	1	1	1.2	ok	1	1	1	1	1	1.0	ok
	b	<i>leicht</i>	1	2	2	1	1	1.4	ok	2	1	3	3	1	2.0	ok	1	1	1	1	1	1.0	ok
15	a	<i>dick</i> (with people)	2	2	4	3	4	3.0	*	2	2	3	3	1	2.2	?	3	1	2	3	3	2.4	?
	b	<i>dünn</i> (with people)	3	3	4	3	3	3.2	*	1	2	4	4	1	2.4	?	1	1	1	1	1	1.0	ok
	c	<i>schlank</i>	3	2	3	3	2	2.6	?	3	3	2	3	1	2.4	?	3	2	1	3	3	2.4	?
	d	<i>fett</i>	1	2	4	4	3	2.8	?	2	2	4	3	3	2.8	?	3	2	3	3	2	2.6	?
16	a	<i>hell</i>	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	1	2	1	1	1	1.2	ok
	b	<i>dunkel</i>	3	3	4	2	4	3.2	*	3	3	4	2	4	3.2	*	1	1	1	1	2	1.2	ok
17	a	<i>laut</i>	1	2	1	1	1	1.2	ok	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	b	<i>leise</i>	1	2	2	1	1	1.4	ok	1	2	2	1	1	1.4	ok	1	1	1	1	1	1.0	ok

18	a	<i>spitz</i> (with angles)	1	3	2	2	2	2.0	ok	1	3	2	1	1	1.6	ok	1	1	3	1	1	1.4	ok
	b	<i>stumpf</i> (with angles)	1	2	3	1	2	1.8	ok	1	3	2	1	1	1.6	ok	1	1	4	2	2	2.0	ok
19	a	<i>gebogen</i>	3	3	3	1	2	2.4	?	4	3	3	2	2	2.8	?	2	1	3	1	1	1.6	ok
																[3	1	4	3	4	3.0	*)	
	b	<i>gekrümmt</i>	4	2	4	1	1	2.4	?	4	2	3	1	2	2.4	?	2	1	3	1	1	1.6	ok
																[4	2	4	1	1	2.4	?)	
	c	<i>gewölbt</i>	4	2	3	2	1	2.4	?	4	2	3	1	2	2.4	?	3	1	4	1	1	2.0	ok
																[4	2	4	1	2	2.6	?)	
	d	<i>gerade</i>	4	3	4	4	4	3.8	*	4	4	4	4	4	4.0	*	4	2	4	2	4	3.2	*
20	a	<i>stark</i> (with electricity)	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	b	<i>schwach</i> (with electricity)	1	2	2	2	1	1.6	ok	1	3	1	1	1	1.4	ok	1	1	1	1	2	1.2	ok
21	a	<i>stark</i> (with winds)	1	2	1	1	2	1.4	ok	1	3	1	1	2	1.6	ok	1	1	1	1	1	1.0	ok
	b	<i>schwach</i> (with winds)	2	2	3	1	2	2.0	ok	1	3	4	2	1	2.2	?	1	1	1	1	1	1.0	ok
22	a	<i>teuer</i>	3	2	4	1	1	2.2	?	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	b	<i>billig</i>	2	2	4	3	2	2.6	?	4	3	4	2	3	3.2	*	1	1	1	1	1	1.0	ok
23	a	<i>reich</i>	1	2	2	3	1	1.8	ok	1	2	1	1	1	1.2	ok	1	1	1	1	1	1.0	ok
	b	<i>arm</i>	4	3	3	4	4	3.6	*	4	3	2	3	4	3.2	*	1	1	1	1	3	1.4	ok
	c	<i>vermögend</i>	4	3	2	2	4	3.0	*	1	4	1	1	2	1.8	ok	1	1	2	1	1	1.2	ok
24	a	<i>stark</i> (in number)	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	b	<i>schwach</i> (in number)	3	2	4	2	2	2.6	?	3	3	3	2	3	2.8	?	3	3	1	1	2	2.0	ok
25	a	<i>intelligent</i>	4	3	3	3	4	3.4	*	4	3	2	2	3	2.8	?	4	1	2	2	1	2.0	ok
	b	<i>dumm</i>	4	3	4	3	3	3.4	*	4	3	4	3	1	3.0	*	4	2	2	3	1	2.4	?
26	a	<i>schön</i>	4	3	3	3	4	3.4	*	4	3	2	3	4	3.2	*	4	3	2	3	2	2.8	?
	b	<i>hässlich</i>	4	4	4	4	4	4.0	*	4	4	4	4	4	4.0	*	4	3	2	4	2	3.0	*

27	a	<i>gut</i>	4	3	4	4	3	3.6	*	4	3	4	2	1	2.8	?	1	1	1	1	1	1.0	ok
	b	<i>schlecht</i>	4	3	3	2	2	2.8	?	4	3	3	2	1	2.6	?	1	1	1	1	1	1.0	ok
28	a	<i>wahrscheinlich</i>	4	4	2	3	2	3.0	*	4	3	3	4	3	3.4	*	4	2	2	1	1	2.0	ok
	b	<i>unwahrscheinlich</i>	4	4	3	3	4	3.6	*	4	4	3	4	4	3.8	*	4	2	2	1	1	2.0	ok
29		<i>grün</i>	4	4	4	2	4	3.6	*	4	3	4	3	2	3.2	*	4	3	4	2	2	3.0	*
30	a	<i>aggressiv</i>	4	4	1	3	4	3.2	*	4	4	2	3	4	3.4	*	4	2	1	3	3	2.6	?
	b	<i>ruhig</i>	4	4	2	3	3	3.2	*	4	3	3	3	3	3.2	*	4	2	1	3	2	2.4	?
31	a	<i>fortschrittlich</i>	4	4	3	3	4	3.6	*	4	4	4	3	4	3.8	*	4	3	3	3	1	2.8	?
	b	<i>rückschrittlich</i>	4	4	3	4	4	3.8	*	4	4	4	4	4	4.0	*	4	2	3	4	1	2.8	?

B.3 Individual Results Gained from the French Study on the (Non-)Occurrence of Prepositional Measure Phrase Constructions

		adjective	predicative MPC					∅	attributive MPC					∅	differential comp.					∅			
1	a	<i>grand</i> (with people)	3	3	3	3	3	3.0	*	2	2	1	2	4	2.2	?	1	1	1	1	2	1.2	ok
	b	<i>petit</i> (with people)	3	2	1	3	4	2.6	?	3	1	3	3	1	2.2	?	1	1	1	1	1	1.0	ok
2	a	<i>grand</i> (with objects)	4	3	4	3	4	3.6	*	2	1	1	2	1	1.4	ok	1	1	1	1	1	1.0	ok
	b	<i>petit</i> (with objects)	4	3	1	3	4	3.0	*	2	1	3	3	3	2.4	?	1	1	1	2	1	1.2	ok
3	a	<i>long</i> (spatial)	1	1	1	2	2	1.4	ok	1	1	1	2	1	1.2	ok	1	1	1	1	1	1.0	ok
	b	<i>court</i> (spatial)	1	1	1	3	3	1.8	ok	2	2	1	3	3	2.2	?	1	1	1	1	1	1.0	ok
4	a	<i>profond</i>	1	1	1	1	2	1.2	ok	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	b	<i>plat</i>	3	4	4	4	4	3.8	*	3	4	4	4	4	3.8	*	1	4	4	4	4	3.4	*
5	a	<i>haut</i>	2	1	1	1	1	1.2	ok	1	2	1	1	1	1.2	ok	1	1	1	1	1	1.0	ok
	b	<i>bas</i>	2	2	4	3	3	2.8	?	2	2	1	3	2	2.0	ok	1	4	1	1	1	1.6	ok
	c	<i>élevé</i>	3	3	1	3	2	2.4	?	1	1	1	2	4	1.8	ok	1	1	1	1	1	1.0	ok
6	a	<i>gigantesque</i>	4	4	3	3	3	3.4	*	1	1	1	1	4	1.6	ok	2	4	4	3	4	3.4	*

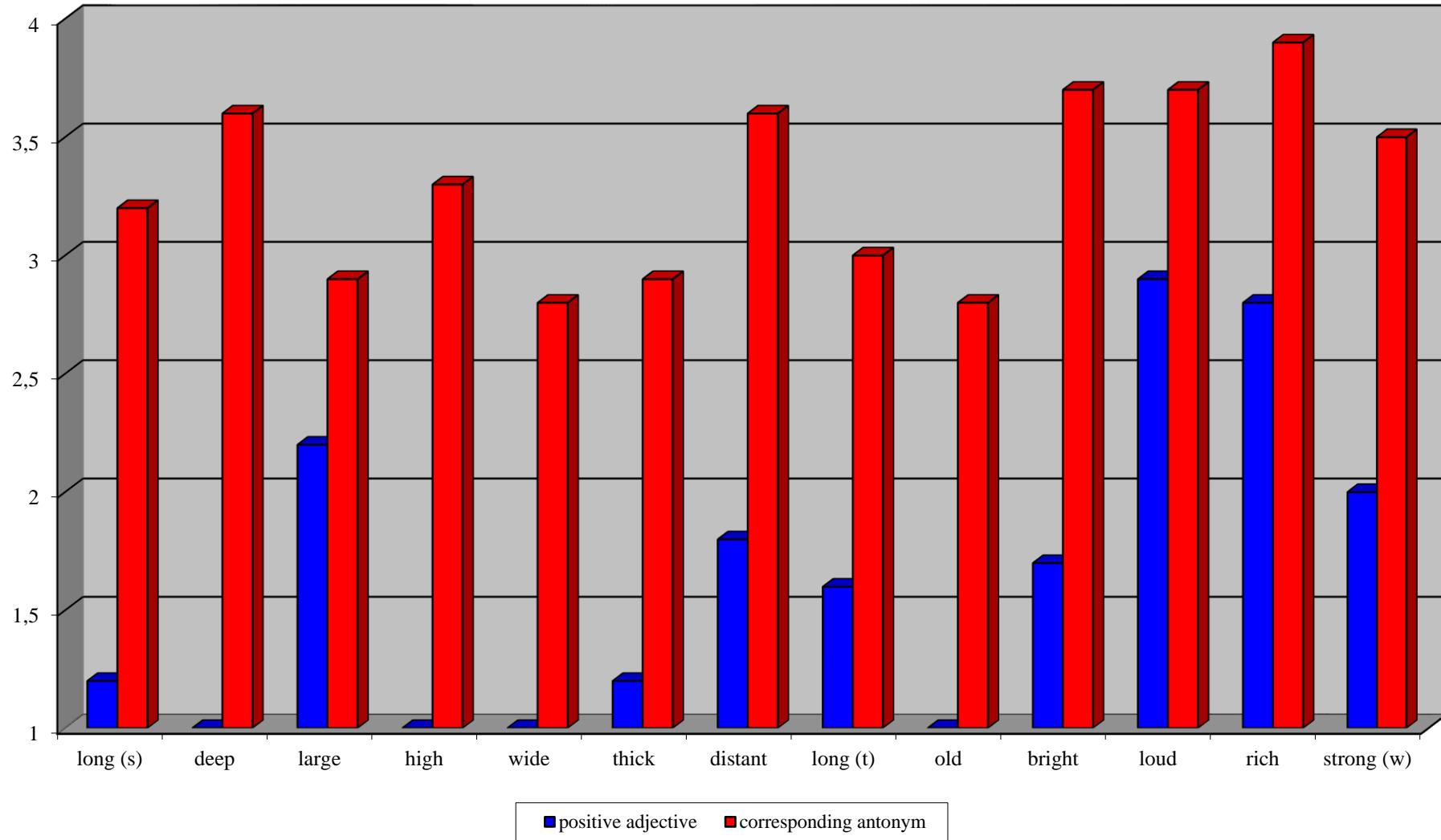
	b	<i>vaste</i>	1	1	1	3	2	1.6	ok	1	1	1	1	1	1.0	ok	1	1	1	2	2	1.4	ok
	c	<i>minuscule</i>	4	4	4	3	4	3.8	*	4	4	1	1	3	2.6	?	1	4	3	3	4	3.0	*
	d	<i>infime</i>	4	4	4	3	4	3.8	*	4	4	3	1	4	3.2	*	3	4	4	3	4	3.6	*
7	a	<i>large</i>	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	b	<i>étroit</i>	1	1	1	2	2	1.4	ok	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	c	<i>ample</i>	3	1	1	2	1	1.6	ok	3	1	1	3	1	1.8	ok	1	1	1	1	2	1.2	ok
8	a	<i>épais</i>	1	1	1	1	1	1.0	ok	2	1	1	2	1	1.4	ok	1	1	1	1	1	1.0	ok
	b	<i>mince</i>	3	1	1	3	4	2.4	?	3	2	2	3	3	2.6	?	1	1	1	1	1	1.0	ok
9	a	<i>loin</i>	4	4	4	4	4	4.0	*	a	d	v	e	r	b	e	4	1	1	1	4	2.2	?
	b	<i>éloigné</i>	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	c	<i>distant</i>	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	1	1	1	4	4	2.2	?
	d	<i>proche</i>	1	1	2	3	3	2.0	ok	1	2	1	4	4	2.4	?	1	1	1	2	1	1.2	ok
10	a	<i>long (temporal)</i>	3	1	4	1	3	2.4	?	1	1	1	1	3	1.4	ok	1	1	1	1	3	1.4	ok
	b	<i>court (temporal)</i>	3	3	2	3	4	3.0	*	3	3	2	1	3	2.4	?	1	1	1	1	2	1.2	ok
	c	<i>bref</i>	3	3	4	3	4	3.4	*	2	3	3	2	2	2.4	?	1	3	4	3	2	2.6	?
11	a	<i>vieux</i>	4	1	1	3	4	2.6	?	3	1	1	1	3	1.8	ok	1	1	1	2	3	1.6	ok
	b	<i>jeune</i>	4	4	4	3	4	3.8	*	3	2	4	3	4	3.2	*	1	1	1	2	1	1.2	ok
			[3	3	4	3	4	3.4	*)	[2	4	4	4	4	3.6	*)							
	c	<i>âgé</i>	1	1	1	1	1	1.0	ok	2	1	1	1	1	1.2	ok	1	1	1	1	3	1.4	ok
12	a	<i>retardé</i>	1	1	1	1	1	1.0	ok	1	1	1	3	1	1.4	ok	3	3	4	4	4	3.6	*
	b	<i>anticipé</i>	1	1	3	1	3	1.8	ok	1	1	1	1	1	1.0	ok	3	3	4	4	4	3.6	*
13	a	<i>chaud</i>	2	4	2	4	4	3.2	*	1	3	3	4	4	3.0	*	1	1	1	3	1	1.4	ok
	b	<i>froid</i>	3	4	4	3	4	3.6	*	1	4	3	4	4	3.2	*	1	1	1	4	2	1.8	ok
	c	<i>doux</i>	3	4	2	3	4	3.2	*	3	4	4	3	4	3.6	*	1	1	1	1	1	1.0	ok
	d	<i>tiède</i>	3	3	1	3	4	2.8	?	2	4	2	4	4	3.2	*	1	3	1	2	1	1.6	ok
14	a	<i>vite</i>	4	4	4	4	4	4.0	*	a	d	v	e	r	b	e	1	1	1	2	4	1.8	ok
	b	<i>rapide</i>	4	4	4	4	4	4.0	*	4	3	4	3	4	3.6	*	1	1	1	2	1	1.2	ok
	c	<i>lent</i>	3	4	4	3	4	3.6	*	3	3	4	3	4	3.4	*	1	1	1	2	1	1.2	ok
15	a	<i>lourd</i>	3	2	1	1	4	2.2	?	1	2	4	1	4	2.4	?	1	1	1	3	2	1.6	ok
	b	<i>léger</i>	3	2	3	3	4	3.0	*	3	2	4	3	4	3.2	*	1	1	1	1	1	1.0	ok
16	a	<i>gros</i>	3	4	4	3	4	3.6	*	3	1	2	3	4	2.6	?	2	1	1	3	1	1.6	ok

	b	<i>mince</i> (with people)	3	4	4	3	4	3.6	*	4	2	4	2	4	3.2	*	1	1	1	2	4	1.8	ok
	c	<i>svelte</i>	4	4	4	3	4	3.8	*	4	4	4	3	4	3.8	*	1	1	4	2	3	2.2	?
	d	<i>gras</i>	4	4	3	3	4	3.6	*	4	4	3	4	4	3.8	*	3	4	4	4	4	3.8	*
17	a	<i>clair</i>	3	4	4	3	4	3.6	*	1	1	1	2	1	1.2	ok	1	1	1	2	1	1.2	ok
	b	<i>lumineux</i>	4	4	4	3	3	3.6	*	3	1	3	1	1	1.8	ok	1	1	1	1	1	1.0	ok
	c	<i>sombre</i>	3	4	4	3	4	3.6	*	4	4	4	3	4	3.8	*	1	4	4	1	2	2.4	?
	d	<i>obscur</i>	4	4	4	4	4	4.0	*	4	4	4	2	4	3.6	*	2	4	4	1	4	3.0	*
18	a	<i>sonore</i>	3	4	4	4	4	3.8	*	4	4	4	4	3	3.8	*	1	3	4	3	1	2.4	?
	b	<i>silencieux</i>	3	4	4	4	4	3.8	*	3	1	1	3	4	2.4	?	1	1	1	1	1	1.0	ok
19	a	<i>aigu</i> (with angles)	3	2	1	3	3	2.4	?	3	4	1	1	2	2.2	?	1	1	1	1	1	1.0	ok
	b	<i>obtus</i> (with angles)	1	4	1	1	2	1.8	ok	1	4	1	1	2	1.8	ok	1	2	1	1	1	1.2	ok
20	a	<i>incliné</i>	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok	1	1	1	1	1	1.0	ok
	b	<i>arqué</i>	4	4	1	2	4	3.0	*	2	3	1	2	4	2.4	?	1	1	1	1	1	1.0	ok
	c	<i>courbé</i>	4	4	1	2	4	3.0	*	2	3	1	1	3	2.0	ok	1	1	1	2	1	1.2	ok
	d	<i>droit</i>	4	4	4	4	4	4.0	*	4	4	1	4	3	3.2	*	1	1	1	1	3	1.4	ok
21	a	<i>fort</i> (with electricity)	2	3	4	3	3	3.0	*	2	1	1	1	3	1.6	ok	1	1	1	1	2	1.2	ok
	b	<i>faible</i> (with electricity)	3	1	1	3	4	2.4	?	1	1	1	2	3	1.6	ok	1	1	1	3	1	1.4	ok
22	a	<i>fort</i> (with winds)	3	2	3	3	2	2.6	?	3	4	1	1	2	2.2	?	1	1	1	2	2	1.4	ok
	b	<i>faible</i> (with winds)	4	4	1	3	4	3.2	*	4	4	1	1	2	2.4	?	1	1	1	2	1	1.2	ok
	c	<i>doux</i> (with winds)	3	4	4	3	4	3.6	*	3	4	1	3	4	3.0	*	3	3	4	4	4	3.6	*
23	a	<i>cher</i>	4	4	4	3	4	3.8	*	3	4	4	4	4	3.8	*	1	1	1	1	1	1.0	ok
	b	<i>bon marché</i>	4	4	4	4	4	4.0	*	4	4	3	3	4	3.6	*	1	1	1	1	4	1.6	ok
24	a	<i>riche</i>	3	1	1	3	1	1.8	ok	3	1	2	2	4	2.2	?	1	1	1	2	4	1.8	ok
	b	<i>pauvre</i>	4	4	4	4	4	4.0	*	4	4	2	3	4	3.4	*	1	1	1	1	1	1.0	ok

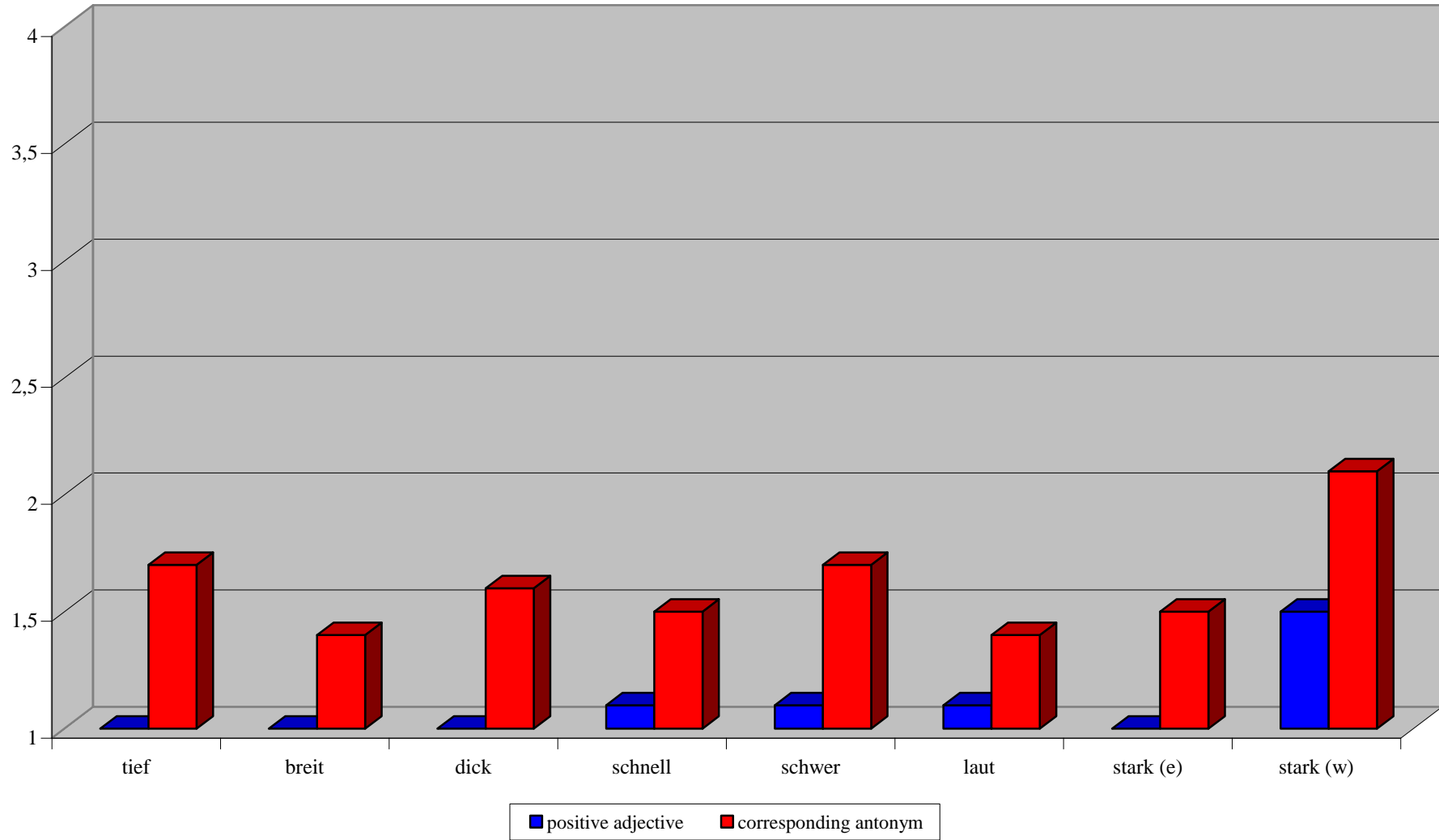
	c	<i>fortuné</i>	4	4	1	3	4	3.2	*	4	4	4	3	4	3.8	*	2	3	1	2	2	2.0	ok
25	a	<i>nombreux</i> (in number)	4	4	4	4	4	4.0	*	4	4	3	3	4	3.6	*	2	4	4	4	3	3.4	*
	b	<i>faible</i> (in number)	4	4	4	4	4	4.0	*	4	4	4	4	4	4.0	*	3	4	4	4	4	3.8	*
26	a	<i>intelligent</i>	3	3	4	3	3	3.2	*	4	2	1	2	4	2.6	?	1	1	1	1	2	1.2	ok
	b	<i>bête</i>	4	4	1	4	4	3.4	*	4	4	1	3	4	3.2	*	2	2	1	2	1	1.6	ok
27	a	<i>beau</i>	4	3	4	4	4	3.8	*	4	4	4	3	4	3.8	*	4	1	1	3	1	2.0	ok
	b	<i>laid</i>	4	4	1	4	2	3.0	*	4	4	1	3	2	2.8	?	4	1	1	1	2	1.8	ok
28	a	<i>bon</i>	4	4	4	4	4	4.0	*	4	3	4	3	3	3.4	*	2	1	1	1	1	1.2	ok
	b	<i>mauvais</i>	4	4	1	3	4	3.2	*	4	4	3	3	3	3.4	*	1	1	1	1	2	1.2	ok
29	a	<i>probable</i>	1	1	1	2	1	1.2	ok	1	1	1	2	1	1.2	ok	1	3	2	3	2	2.2	?
	b	<i>improbable</i>	1	1	1	2	2	1.4	ok	1	1	1	3	2	1.6	ok	1	3	3	3	4	2.8	?
	c	<i>vraisemblable</i>	1	2	3	2	2	2.0	ok	1	1	1	1	3	1.4	ok	1	2	3	3	3	2.4	?
	d	<i>invraisemblable</i>	1	1	1	3	3	1.8	ok	1	1	1	3	4	2.0	ok	1	3	4	3	4	3.0	*
30		<i>rouge</i>	4	4	1	4	1	2.8	?	4	4	1	3	1	2.6	?	3	1	1	1	1	1.4	ok
31	a	<i>agressif</i>	4	4	4	3	4	3.8	*	3	1	1	2	2	1.8	ok	2	1	1	1	1	1.2	ok
	b	<i>calme</i>	4	4	3	4	2	3.4	*	3	1	1	2	2	1.8	ok	1	1	1	2	2	1.4	ok
32	a	<i>progressiste</i>	4	3	4	3	3	3.4	*	4	4	4	4	2	3.6	*	1	1	1	2	1	1.2	ok
	b	<i>réactionnaire</i>	4	4	3	3	3	3.4	*	4	4	3	4	2	3.4	*	2	1	1	1	1	1.2	ok

C Selected Diagrams Illustrating Major Contrasts

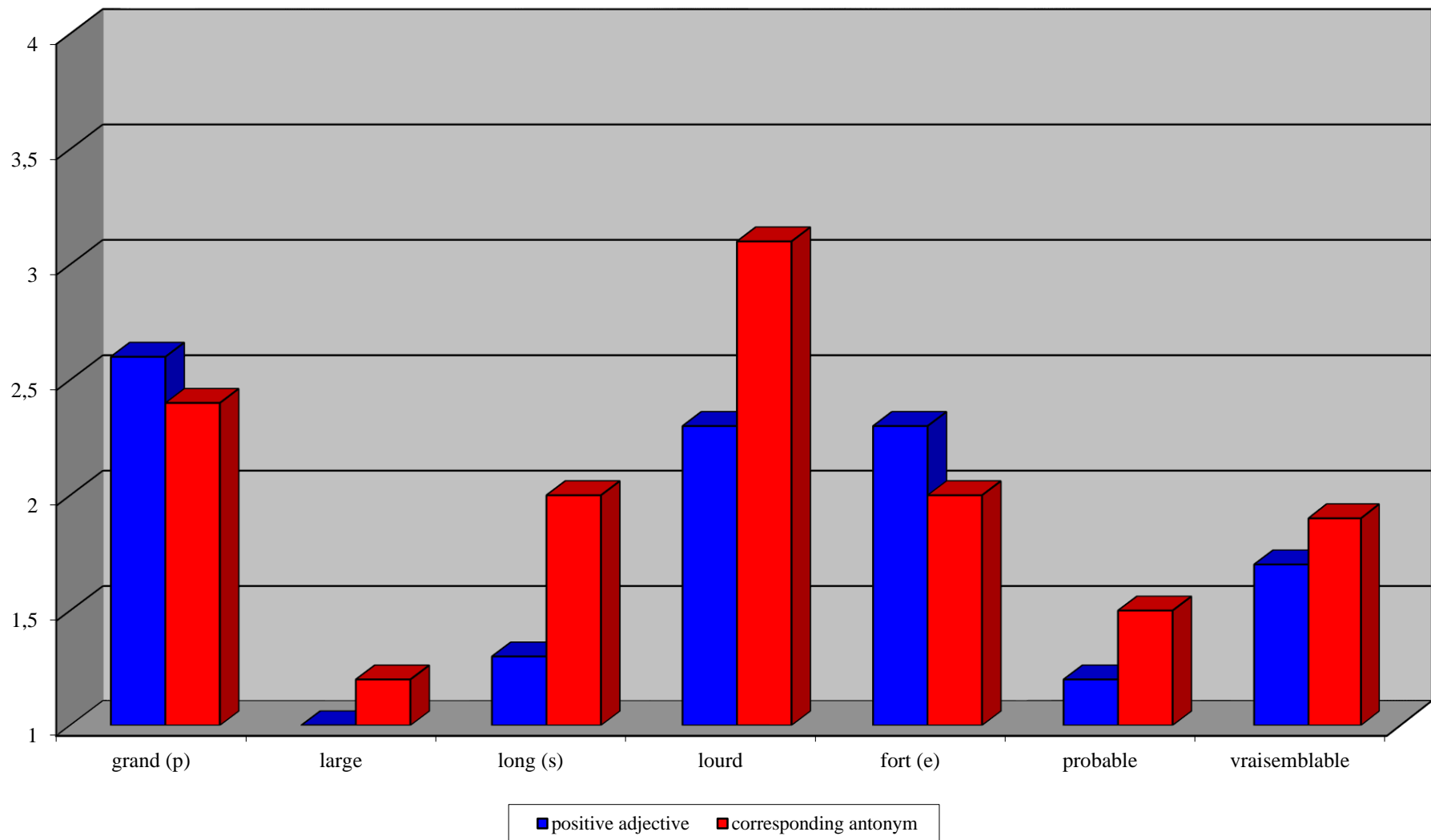
1:
ANTO – English



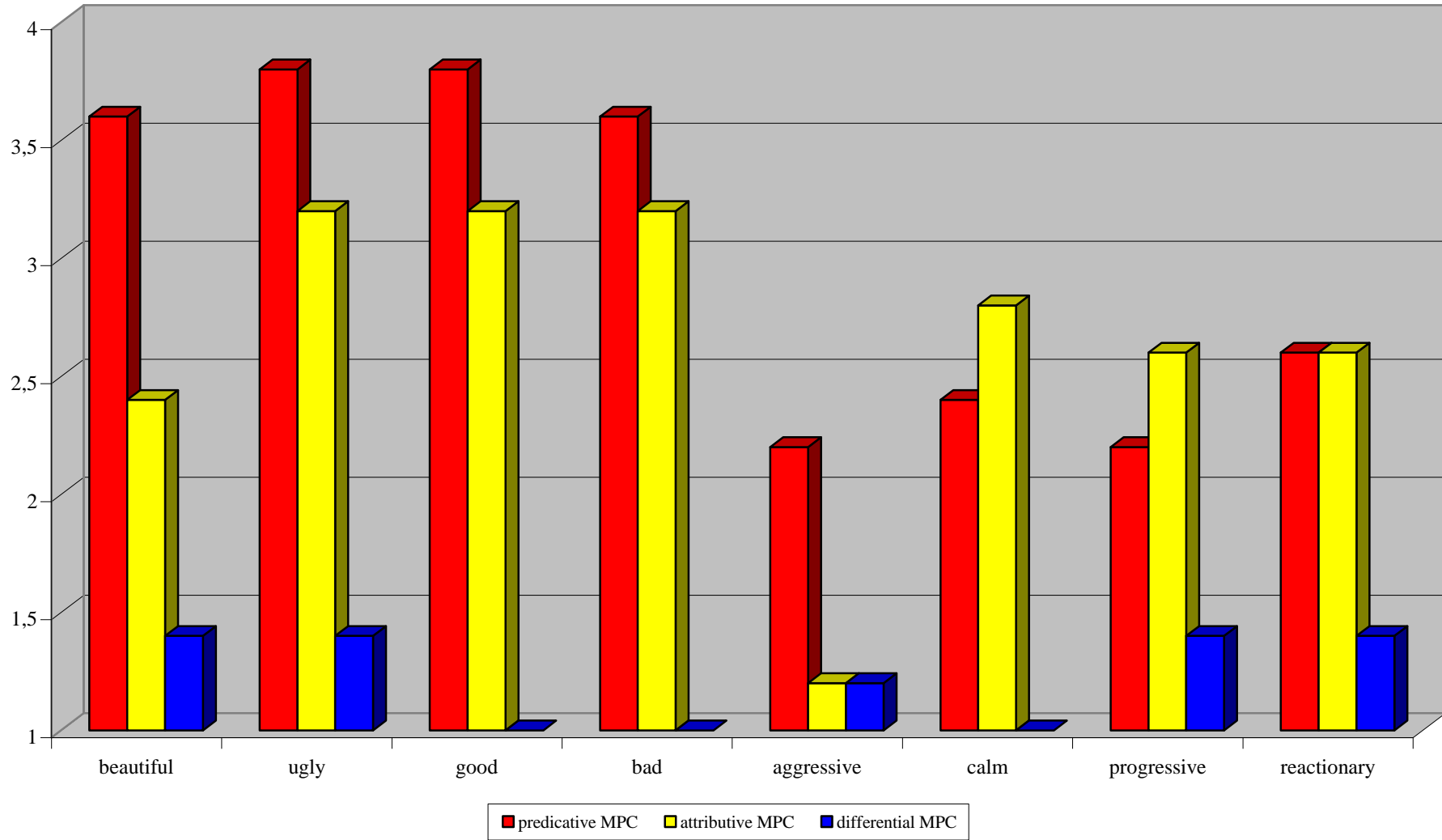
2:
ANTO – German



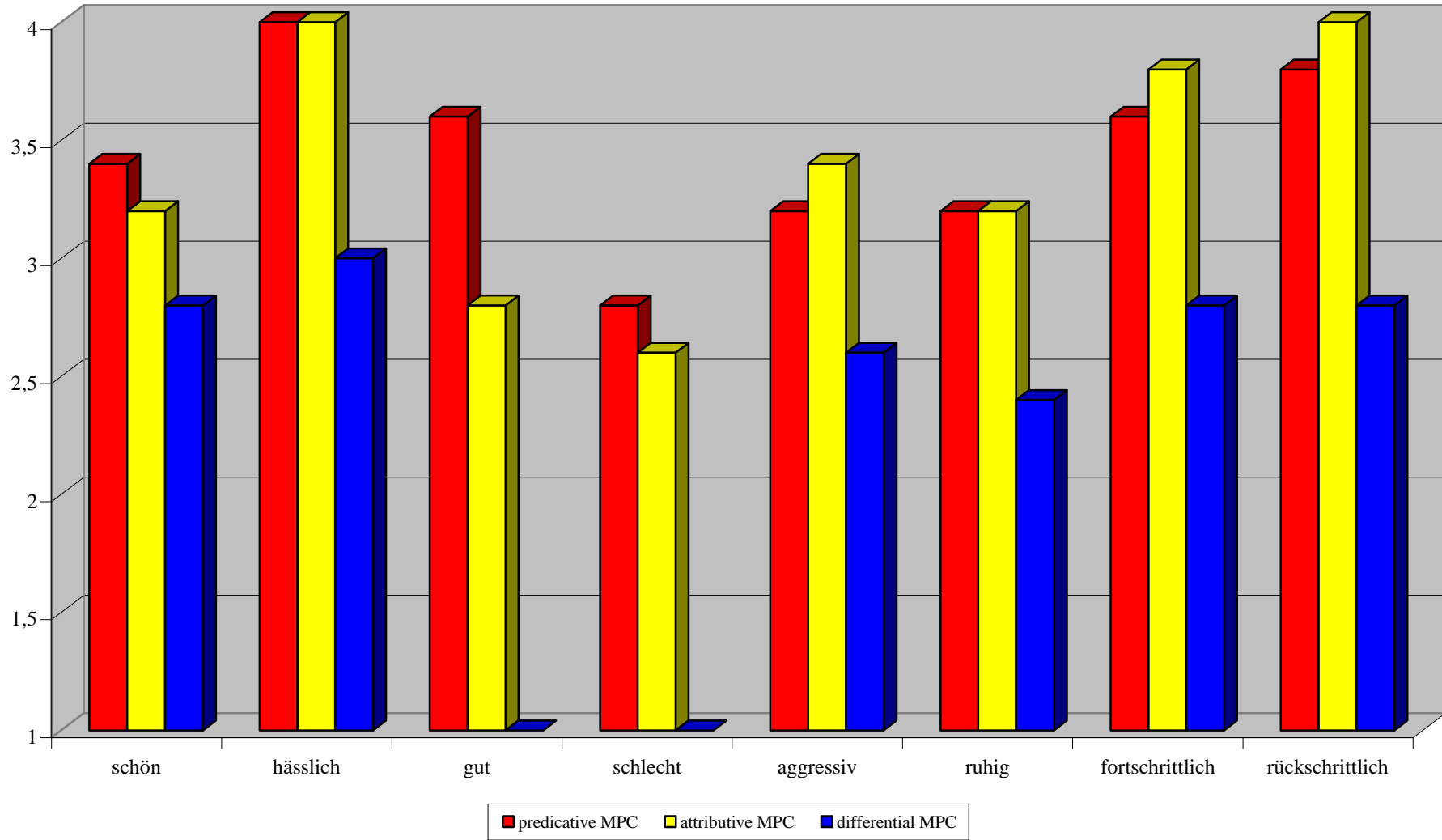
3:
ANTO – French



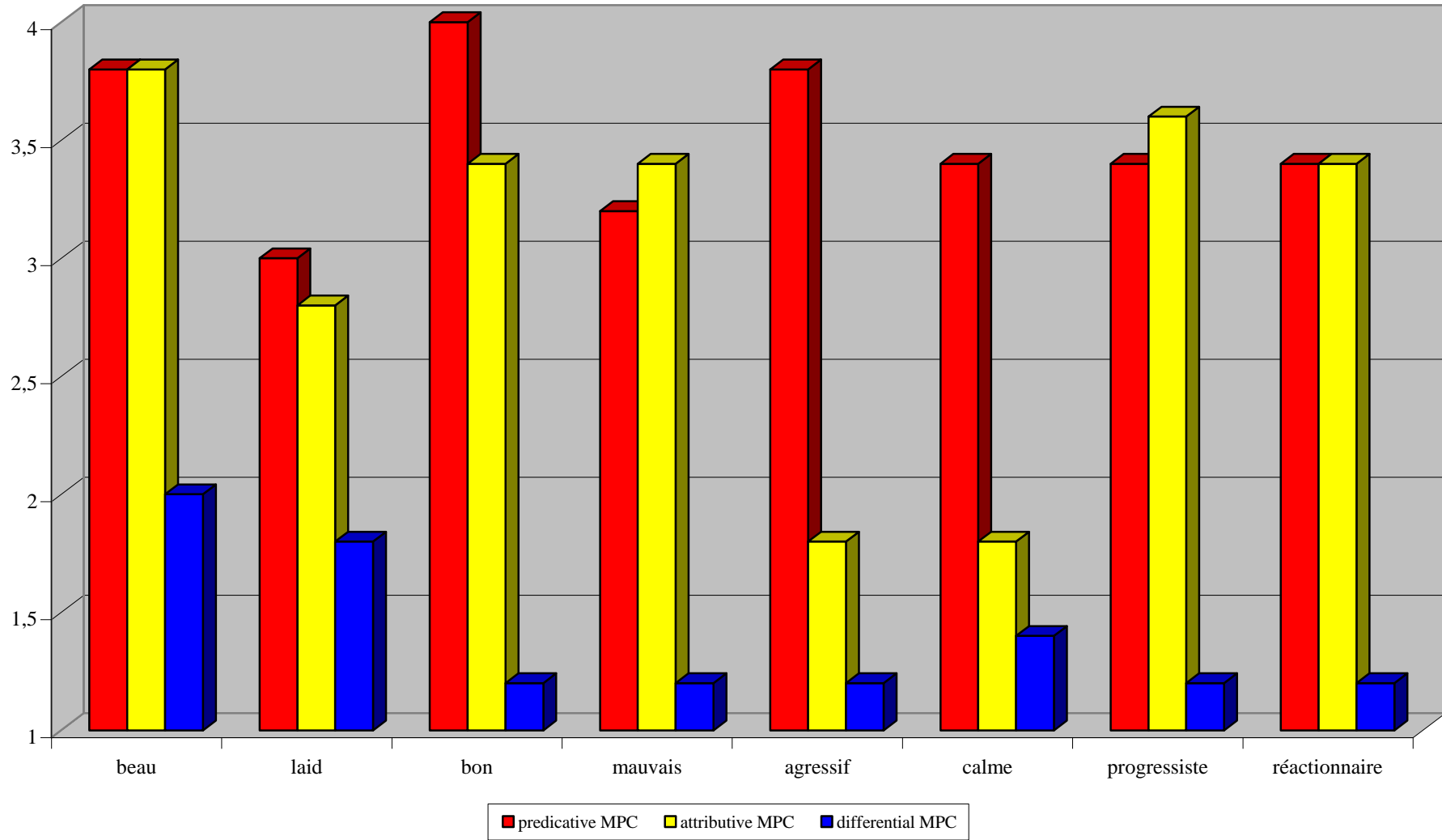
4:
INNO – English



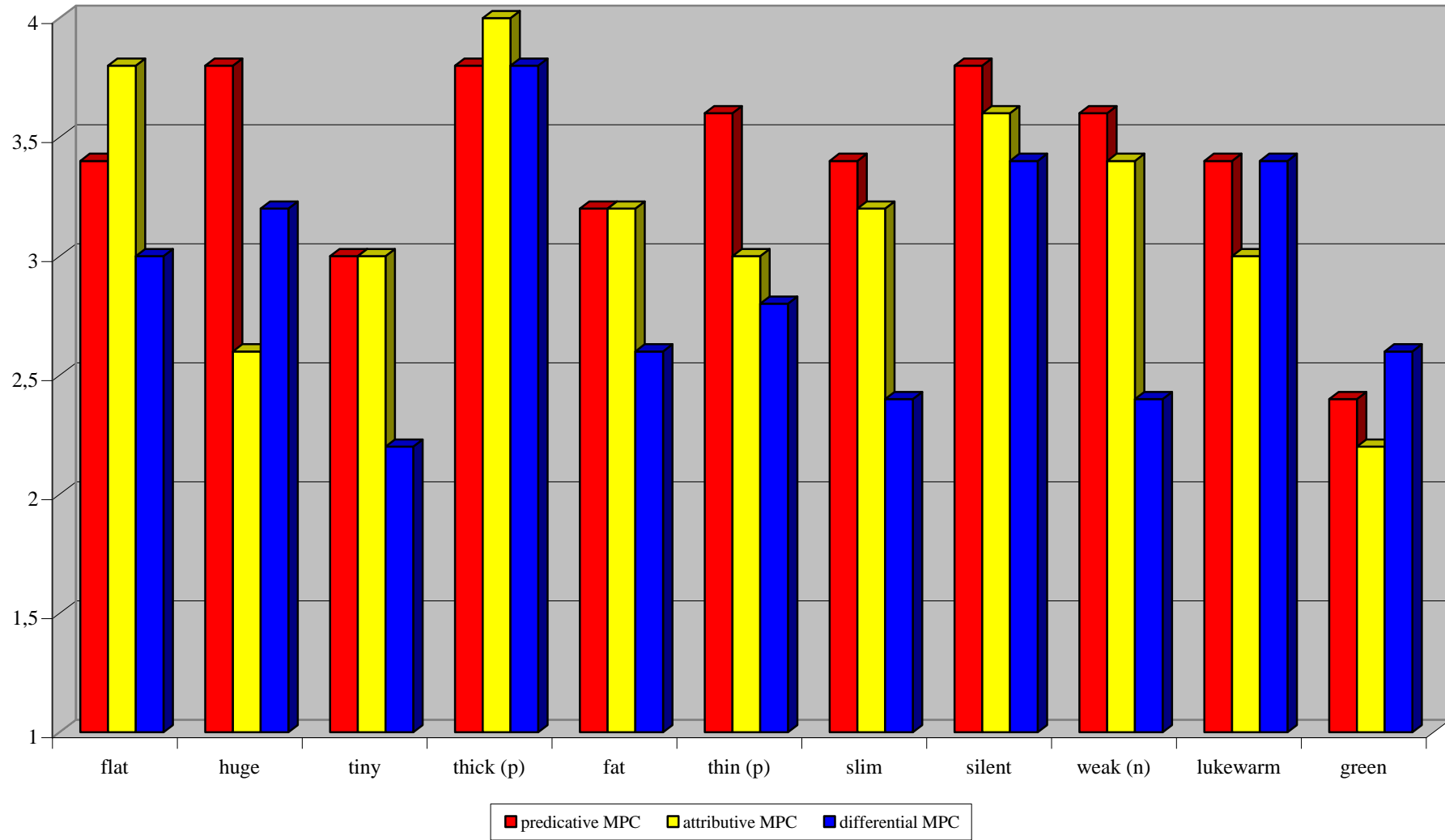
5:
INNO – German



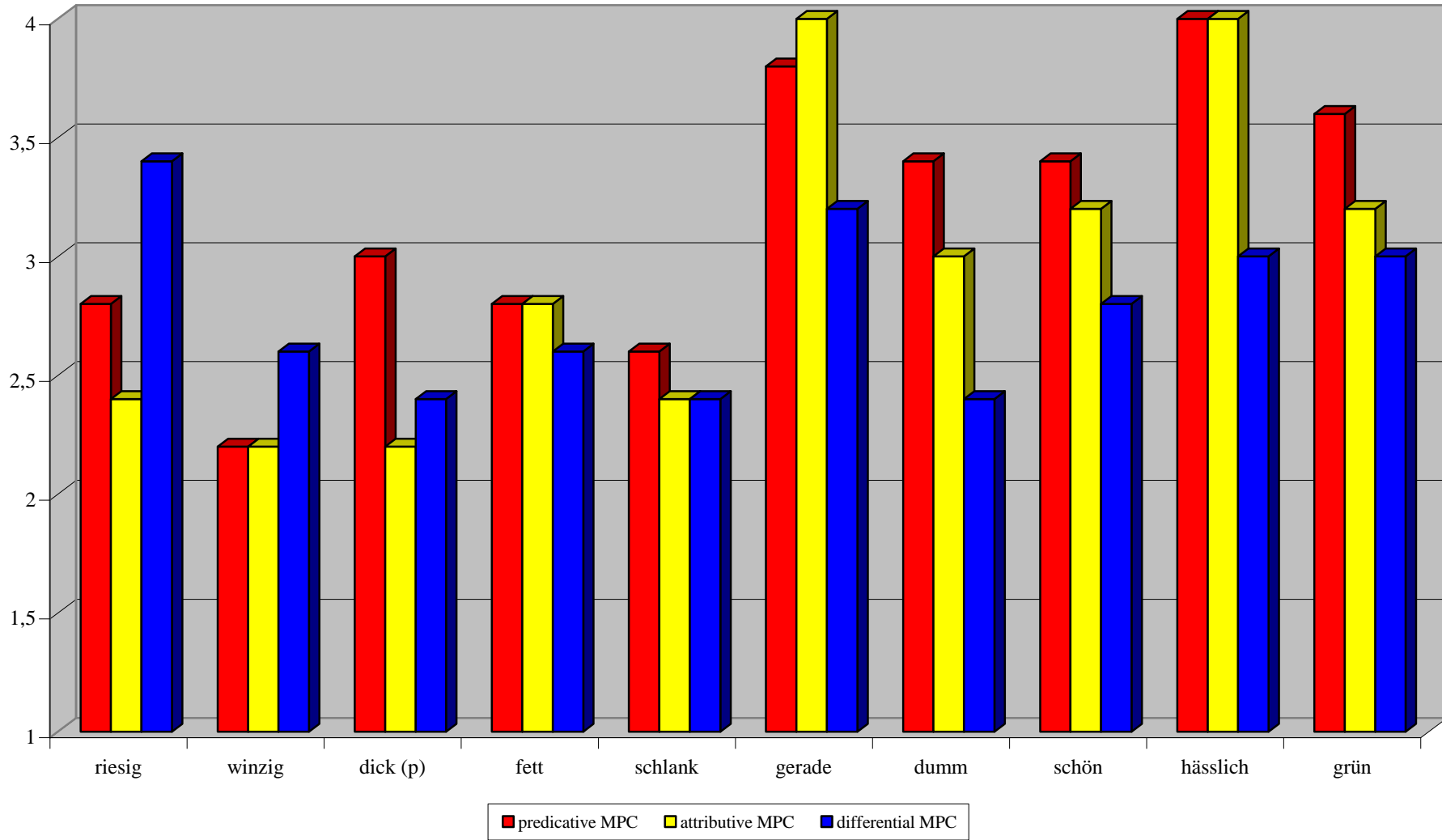
6:
INNO – French



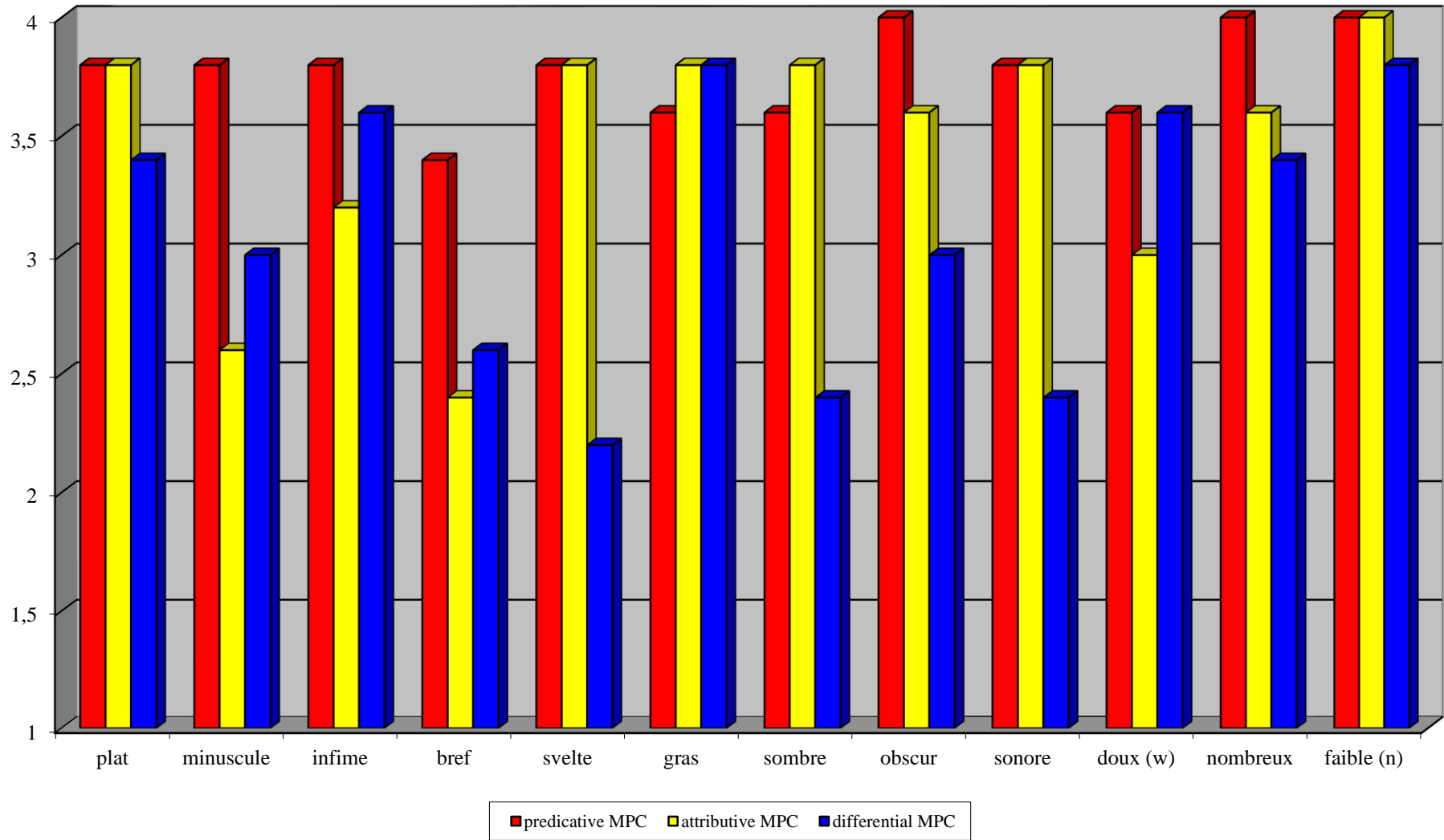
7:
DIFF – English



8:
DIFF – German



9:
DIFF – French



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