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# Adjectives and boundedness<sup>1</sup>

Carita Paradis \*

## Abstract

This paper examines the significance of the schematic domain of BOUNDEDNESS in adjectives. It is proposed that boundedness in adjectives is a fundamental characteristic associated with gradability. Cross-categorial correspondences are made to nouns and verbs, where boundedness is a feature of countability and *aktionsart* respectively. Two basic types of gradable adjectives are distinguished: those which are associated with a boundary and those which are not. It is also shown that it is possible to change the configuration of adjectives in terms of boundedness through contextual modulation. Finally, it is demonstrated that the configuration of adjectives in terms of boundaries may dominate their interpretation at the expense of the content proper, and the adjectives become more like function words than content words.

**Keywords:** adjective, boundedness, comparison, gradability, schematicity, construal

## 1. Introduction

Conceptualization according to the presence or absence of boundaries seems to be a pervasive characteristic of human cognition. Boundedness has been discussed in the literature in the context of nouns and verbs (Declerck 1979, Dahl 1981, Langacker 1987a, Talmy 1988, Jackendoff 1991, Frawley 1992, Verkuyl 1993, Depraetere 1995, Brinton 1998). Cross-categorial correspondences have been recognized between count and non-count features in nouns (*car, mistake* vs. *milk, information*), and continuous and non-continuous features in verbs (*know, hate, play* vs. *arrive, die, cough*), in that count nouns and non-continuous verbs are bounded, while non-count nouns and continuous verbs are unbounded. Boundedness in nouns is associated with countability, which is a fundamental feature of nouns as entities or mass (count/non-count). Boundedness in verbs is related to a fundamental property of verbs, i.e. the type of situation expressed by the verb (the *aktionsart*) as states or events (continuous/non-continuous, or telic/non-telic). For both nouns and verbs the dichotomy between boundedness and unboundedness is related to a basic notional characteristic of the categories.

The purpose of the present paper is to extend this correspondence to include adjectives too and more generally to make a statement about the status of boundedness as an integrated part of semantic theory. More precisely, this paper is an inquiry into the significance of boundedness in adjectives. I propose that

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boundedness in adjectives is associated with gradability, which is a basic characteristic of adjectives in a similar way as countability is a basic characteristic of nouns and *aktionsart* of verbs. I will argue that: (i) the property of boundedness is situated in the domain of gradability; (ii) the property of boundedness in adjectives is not fixed but can be changed through contextual modulation (coercion).

The general framework of the study is cognitive in that it seeks correspondences between conceptual structure and linguistic structure. I am following scholars such as Langacker (1987b, 1999), Jackendoff (1991), Pustejovsky (1995), Cruse (1995), Gärdenfors (2000) and Warren (personal communication). These scholars represent different cognitivist schools. What they all have in common is their interest in the relation between language and thought, but they differ with respect to their assumptions regarding the origins of language universals. The cognitive semantic analysis carried out in this paper takes language to be an integral part of human cognition, not an autonomous faculty independent of other cognitive functions.

## **2. Adjectives and the cognitive approach**

The meanings of linguistic expressions arise through the activation of conceptual patterns in the cognitive system. The way we perceive the world is the way we understand it, and we express ourselves accordingly. This does not mean that we perceive the world in just one way. On the contrary, we conceive of the world in many different ways in different situations and for different. There is a direct correspondence between linguistic expressions and conceptual structure. At the highest level, universal knowledge domains and schematic domains govern the thinking and the linguistic expression of all human beings. The meanings of linguistic expressions are perspectival in nature, and semantic contrast, polysemy and indeterminacy emerge as natural consequences of the human ability to think flexibly (Deane 1988:325).

Linguistic items map on to a number of concepts in the cognitive network. This network is built up by conceptual *domains*, which represent any kind of complex cognitive structure. Following Cruse & Toggia (1996: 113f)<sup>2</sup>, I distinguish two types of domains, the *content domain* and the *schematic domain*. Content domains involve meaning proper, while schematic domains provide the conceptual representations for specific configurative frames. Both these domains mirror our perception of the world and both are conceptual in nature. In addition to these domains, there is an operating system consisting of different modes of construal which are imposed on the domains. They are not domains, but ways of structuring domains. They reflect basic cognitive abilities subsumed under five headings: specificity, background, perspective, scope and prominence (Langacker 1999: 5).<sup>3</sup> A linguistic expression typically invokes multiple domains, which characterize various aspects of the profiled entity or relation. Semantic contrast is due to the actual domains invoked in a particular expression and to the ranking of prominence among the domains (Langacker 1987a: 57, e.g. *roe* and *caviar*, *come* and *go*, *half empty* and *half full*, *explode* and *explosion*, *tree* and *eucalyptus*).

In the generative approach to lexical semantics, the domains are accounted for by levels of representation (Pustejovsky 1995: 3): *argument structure*, *event structure*, *qualia roles* and *lexical inheritance structure*. The terms *argument structure* and *event structure* are used in a traditional way by Pustejovsky and therefore need no further explanation. *Lexical inheritance* is concerned with word meanings in relation to other word meanings in taxonomic hierarchies, and *qualias* specify various types of background knowledge associated with word meanings, such as purpose, function and mode of creation. What is missing in Pustejovsky's theory, however, is the mode of construal of meanings and its interaction with content proper and schematicity.

Adjectives are content words and as such the content domain is in the foreground. But adjectives are also configured according to the schematic domain. The property of gradability belongs in the schematic domain. It forms the conceptual basis for suitable modes of construal to become operative on the content part of lexical elements. Boundedness is a high-level schematic domain mode, which is abstract in the sense that it configures a wide range of different content domains, but at the same time it is highly concrete in that it is associated with basic experience of countability, aspectuality and gradability. Aspects based on content domains of various kinds have received attention in the linguistic literature (Dixon 1982, Warren 1984, 1988, Taylor 1992, Wetzer 1996) But the configurational aspects have been put at a disadvantage in semantic theorizing in general and in the light of lexical interpretability, flexibility, indeterminacy and change in particular.

### 3. Gradability and boundedness in adjectives

The conceptual pattern that determines the interpretation of adjectives is evoked by the inherent linguistic properties of the adjective itself and by the linguistic and pragmatic context. All adjectives are predisposed for certain properties both in the content domain and the schematic domain. Although the content domains dominate our interpretation of adjectives, the relative importance of the schematic domains becomes obvious in expressions such as *completely dead* and *very long*. The restrictions between degree modifiers and adjectives are predictable from the schematic domain of the combining items. The existence of constraints is clearly drawn out in phrases where the degree modifier and the adjective are construed according to different types of gradability, as in *?very dead* and *?completely long*<sup>4</sup>.

Degree modifiers fall into two main types: scalar modifiers and totality modifiers (Table 1).

**Table 1** The two types of degree modifiers on the basis of boundedness.

SCALAR MODIFIERS (unbounded)	TOTALITY MODIFIERS (bounded)
<i>very good</i>	<i>completely identical</i>
<i>terribly good</i>	<i>absolutely identical</i>
<i>fairly good</i>	<i>almost identical</i>

Scalar modifiers, such as *very*, *terribly* and *fairly*, indicate a range on a scale of the gradable property expressed by the adjectives they modify and are in that

respect unbounded. Totality modifiers, on the other hand, relate to a definite and precise value of the property expressed by the noun and are bounded. It was shown in Paradis (1997: 48-66) that a valence relation between a degree modifier and an adjective is possible just in case the two items are configured as identical to each other in the domain of gradability.<sup>5</sup> Thus, the crucial conceptual overlap of substructures that motivates the valence relation is the type of gradability.

The next step then, is to find out whether there are two types of gradable adjectives too in the same way as there are two types of degree modifier. Various types of adjectives have been tested against two criteria of gradability:

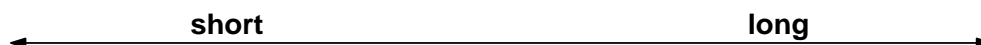
- (i) the type of degree modifier the adjective may combine with
- (ii) the type of oppositeness involved in the conceptualization of the adjective

My motivations for the above criteria are as follows: Firstly, degree modifiers are criterial for the classification of adjectives with respect to their mode of construal, since there has to be a harmonious relationship between a degree modifier and its adjective. Degree modifiers are mainly functional elements. The schematic domain is in the foreground. Their principal *raison d'être* is to modify with respect to degree and thereby explicitly draw out a specific type of construal. It should be noted that criterion (i) presupposes that adjectives are compatible with degree modifiers. This is obviously not always the case. There are both *gradable* and *non-gradable* adjectives. Non-gradable adjectives, such as 'daily newspaper', 'classical ballet' and 'pictorial atlas', are not associated with gradability at all. They are therefore in principle irrelevant to this study. They are typically categorizing and resistant to the main criterion of gradability, i.e. they do not combine with degree modifiers (? 'a *very* daily newspaper', ? 'an *absolutely* daily newspaper', ? 'a *fairly* classical ballet', ? 'a *completely* pictorial atlas'). Non-gradable adjectives will be ignored in the first part of this paper but will be brought to attention again at the end of the paper (Section 4).

My motivation for the second criterion is that the type of oppositeness is a schematic configurative mode and, in accordance with the discussion so far, it is the mode of construal of the adjective that has to harmonize with the modifier. Based on our two criteria of gradability, gradable adjectives fall into three categories:

- i) Scalar adjectives: *long, good, nasty*
- ii) Extreme adjectives: *terrible, brilliant, disastrous*
- iii) Limit adjectives: *dead, true, identical*

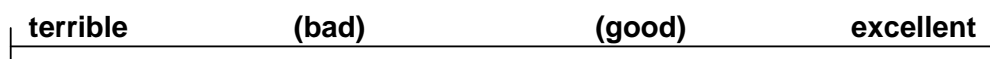
Scalar adjectives combine with scalar degree modifiers (*fairly long, very good, terribly nasty*). The mode of oppositeness that is characteristic of scalar adjectives is antonymy (Figure 1).



**Figure 1** Conceptualization of the antonymic pair *short* and *long*.

Scalar adjectives exhibit all typical features of antonyms as defined by Cruse (1986: 204-220, 1992: 289-306). They are fully gradable, i.e. they occur in the comparative and the superlative. The members of the pair denote some variable property such as length, speed, weight, merit, personality, etc. They do not strictly bisect a domain: there is a range of values of the variable property lying between those covered by the opposite terms which does not apply properly to either of the two. The statement ‘It is neither long nor short’ is *not* paradoxical, since there is a pivotal region on the scale of length which fits this description. Antonyms are conceptualized in terms of ‘more-or-less’. They can be described as implicit comparatives, since when we think of ‘a long skirt’ the notion of ‘short’ is evoked at the same time (Cruse 1986: 216). It is the unbounded construal that is responsible for our interpretation of scalar adjectives as denoting a range on a scale.<sup>6</sup> The scale is open ended. Entities and phenomena cannot be described as ‘completely long’ or ‘completely short’ because there is no definite limit to them. They approach the end of the scale asymptotically (Cruse 1986: 206), i.e. they may tend towards a maximum or a minimum, but they never get there.

Extreme adjectives combine with reinforcing totality modifiers (*absolutely terrible, totally brilliant, utterly disastrous*).<sup>7</sup> Like scalar adjectives, extreme adjectives too are antonymic and conceptualized according to a scale. An example is the scale of merit where the extreme adjectives *terrible* and *excellent* appear at the opposite extremes (Figure 2):



**Figure 2** Conceptualization of the antonymic pair *terrible* and *excellent*, with examples of intermediate scalar items nested in between.

Extreme adjectives differ from scalar adjectives in that they do not represent a range on a scale. They represent the ultimate point of a scale. People’s opinions diverge as to the comparability of extreme adjectives. Some speakers reject comparative and superlative constructions, such as *?more excellent, ?most excellent*, and some people accept them. Bolinger (1967: 4) points out “that comparability is a semantic feature coextensive with ‘having different degrees’ or associated to items which are ‘susceptible to being laid out on a scale’”, but he adds (ibid: 6), “the fondness of exaggeration pulls many of the adjectives representing these extremes off their perches and comparing them (i.e. comparing their non-extreme meaning) then becomes possible”. In the same way as scalar adjectives can be described as implicit comparatives, extreme adjectives can be described as implicit superlatives in that they express a superlative degree of a certain feature. Therefore, extreme adjectives could be said to be gradable bounded adjectives (Paradis 1997: 54 – 57).

Finally, limit adjectives combine with totality modifiers (*completely dead, absolutely true, almost identical*). Limit adjectives are logically different from scalar and extreme adjectives in that they are not associated with a scale but conceptualized in terms of ‘either-or’ (Figure 3):

**dead** | **alive**

**Figure 3** Conceptualization of the limit adjectives *dead* and *alive*

Limit adjectives are complementaries. They do not occur in the comparative or the superlative (*?deader*, *?deadest*). They are absolute and divide some conceptual domain into two distinct parts. They are thus not susceptible to being laid out on a scale. If somebody is alive, it is entailed that she is not dead and vice versa. The statement ‘she is neither dead nor alive’ is paradoxical because we have to commit ourselves to either death or life. Limit adjectives are associated with a definite boundary and a complementary (contradictory) mode of oppositeness. Table 2 serves to summarize the categorization of gradable adjectives based on the two criteria discussed above.

**Table 2** Criteria for the division of adjectives into scalar adjectives, extreme adjectives and limit adjectives.

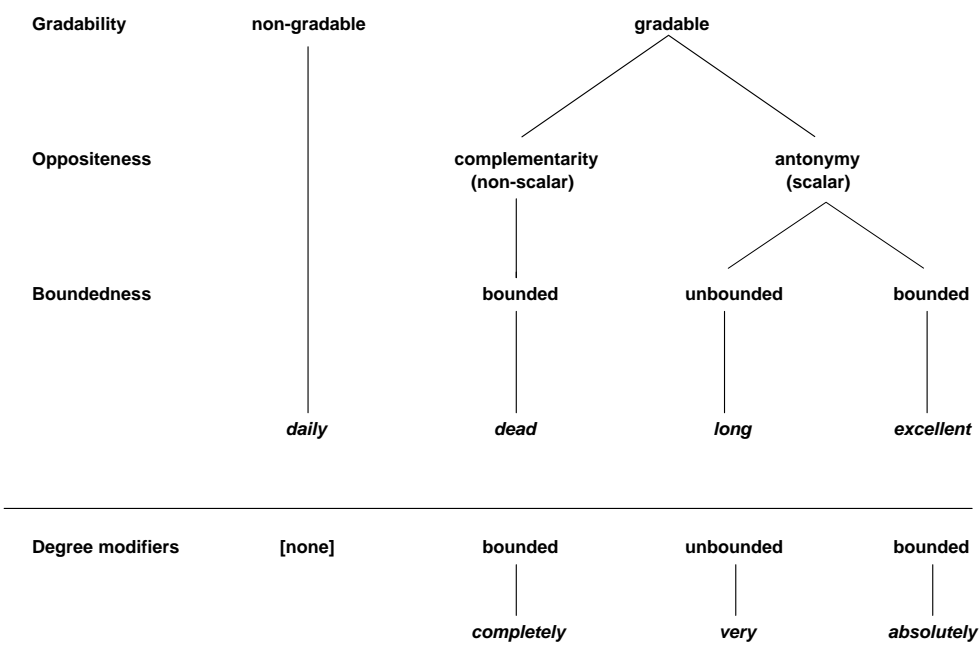
Defining features	Scalar adjectives	Extreme adjectives	Limit adjectives
Degree modifiers	scalar	totality	totality
Oppositeness	antonymy	antonymy	complementarity

As we have seen, degree modifiers represent either a scalar construal or a totality construal. Scalar modifiers harmonize with adjectives that are conceived of as unbounded, and totality modifiers with bounded adjectives, e.g. *very nice* (scalar modifier + scalar adjective), *totally brilliant* (totality modifier + extreme adjective) and *perfectly true* (totality modifier + limit adjective). There is an important difference between adjectives and degree modifiers in that the schematic properties of adjectives are not as salient as they are for degree modifiers. The reason is that adjectives are mainly content words and as such they are conceptualized with the content domain in the foreground and the schematic domain in the background, whereas the relation is the reverse for degree modifiers, whose schematic properties are in the foreground and are thus salient. The content domains of an adjective (and its noun) are more complex than a specification of degree, which foregrounds a specification of a configurational mode only. In the perspective of gradability, oppositeness and boundedness, the pattern that emerges is shown in Figure 4.

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**SCHEMATICITY IN ADJECTIVES**

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**Figure 4** The non-gradable and gradable dichotomy and the three basic types of boundedness.

### 3.1 *The schematic mode of differentiability: explicit comparatives and superlatives*

Comparative and superlative forms of adjectives deserve a special section, since comparison has traditionally been used as the main criterion of gradability. It is true that explicit comparatives and superlatives share characteristics with implicit comparatives (scalar adjectives) and implicit superlatives (extreme adjectives). The main characteristic that they all have in common is that they presuppose a scale. However, it is important to make clear that the scale is exploited in different ways in the differential mode as compared to the gradable mode.

As has already been pointed out, scalar adjectives in the positive are conceived of as occupying a range on a mental scale, and extreme adjectives indicate an extreme point on a scale. They presuppose a frame of reference, indicating a general view as to what is regarded as long rather than short, excellent rather than good, bad, or terrible, with respect to what is considered normal for a certain entity, e.g. Ann's skirt is short. Hannah's skirt is long. Scalar adjectives and extreme adjectives are inherently scalar, and implicitly comparative and superlative respectively.

Explicit comparatives and superlatives differ from their cognate base forms in a number of ways. Even if they represent properties of the same content domain as their cognate base forms, the comparatives and superlatives map on to different schematic domains and employ different modes of construal. Unlike the base forms they do not indicate a range or a point on a scale of a gradable property, but



they locate entities relative to each other based on a certain property. Their function is to compare entities. For instance, the comparative form in your skirt is longer than mine relates a property of one entity to that of another. Longer expresses a converse relationship of mutual entailment to shorter. A is longer than B entails and is entailed by B is shorter than A.<sup>8</sup> Explicit superlatives relate one entity to all other entities in the discourse. The entity referred to is identified as ‘the best’, ‘the longest’, ‘the most important’, i.e. ‘for all X, Y is better/longer/more important than X’. The scale that is presupposed by comparatives is unbounded, while it is bounded in the case of superlatives. There is an obvious correspondence with respect to how the scale is conceived for comparatives and scalar adjectives, and superlatives and extreme adjectives.

Furthermore, explicit comparatives and superlatives cannot undergo comparison. There is no ?more better, ?most better, ?more best or ?most best. Nor can they be compared for equality, e.g. ?This car is as better as that car or ?This car is as best as that car. Yet, it is possible to ask about a more specific measurement of a comparative by adding much to the question, e.g. How much longer is it?. Comparatives are not inherently gradable but can be externally graded. This grading has to be explicitly marked and it does not affect the conceptualization of the adjective in the comparative, whose function is to locate entities on a scale. The reinforcing modifiers which are applicable to comparatives ((very) much, a lot, a great deal) do not apply to adjectives in the positive. The attenuating modifiers (slightly, somewhat, a bit, a little) are, however, applicable to scalar modifiers in the positive too. Comparatives can thus be moved along a scale by means of a restricted set of degree modifiers which apply to all adjectives in the comparative, e.g. somewhat better, much better, very much better. It should be noted that there are no subtle collocational preferences similar to the ones between degree modifiers and adjectives in the positive, e.g. slightly difficult but not slightly easy; slightly more difficult and slightly easier (Paradis 1997: 76-95).<sup>9</sup>

Explicit superlatives are not modifiable by scalar modifiers nor by totality modifiers. For instance, ?*He is the very most attractive man I know*, ?*This is the completely heaviest suitcase I have ever carried*. In a few exceptional cases when the superlative is formed by the suffix *-est*, modification by means of *very* is possible, e.g. *This is the very best film I ever saw*, *This is the very cheapest car in the showroom*. But we cannot apply *very* to all superlative adjectives ending with the suffix *-est* in this way. (?*He is the very kindest person I know*?, ?*This is the very smallest picture in the museum*). I have no explanation for these exceptions.

Moreover, phrases with an adjective and a differential modifier of another kind (‘long *enough*’, ‘too long’) are similar to comparatives and superlatives. The addition of *enough* and *too* does not elaborate on the value of ‘long’ *per se*. The differential configuration is associated with an overlaid norm. All the differential modifiers (*enough*, *too*, *more*, *most*, *less*, *least*, *-er*, *-est*) can be further modified by a set of scalar degree modifiers, some of which are not applicable to adjectives in the positive (cf. comparatives). These are *far*, *much*, *a lot*, *marginally*, as in, for instance, ‘nearly big *enough*’, *far too* long, *much more* important’. This two-level grading is a sign that the grading is external to the conceptualization of the adjective. Adjectives that are inherently associated with a specific type of

boundedness may be modified by a degree modifier of the same type (*absolutely true, very good*), but these phrases cannot be further modified for degree (*?far very good, ?a lot very good, ?nearly absolutely true*).

Clausner & Croft (1999:19) point out that the schematic domain of SCALE supports both locational and configurational concepts. “Locational concepts as *more/less* can be analyzed in terms of a shifting deictic reference point. Thus, two very fundamental image schematic concepts – gradability and quantity – can be analyzed as locational and configurational concepts respectively, profiled in a single image schematic domain of SCALE”. This description suggests the difference between a range on a mental scale and location. What these writers do not mention is the difference between construals inherent in the conceptualization of scalar adjectives and the overlaid scale that is characteristic of differentiability and of quantification of nouns and verbs. The difference is revealed in that there is no need for an added quantifier in inherently scalar adjectives. Compare: ‘How big is it?’ with ‘How *much* bigger is it?’, ‘How *much* snow is there?’ and ‘How *much* do you read?’.

Section 3 has provided us with an outline of the schematic domains that underlie our conceptualization of gradable adjectives, both the absolute system (gradable adjectives in the positive) and the externally gradable relative system (comparison of scalar adjectives). It was pointed out that adjectives are content words, which are conceptualized by the foregrounding of some content domain and by the schematic domain in the background. However, the less salient schematic domain of gradability is important for the combinatorial possibilities of degree modifiers and adjectives which are predictable from the type they represent. These ideas, fundamental as they are, drive our subsequent inquiry into aspects of flexibility and possible change invoked by the schematic domain.

#### **4. Contextual modulation and coercion**

This section is concerned with my second argument which is that the property of boundedness is not fixed but can be changed through contextual modulation. Three issues are central to this argument:

- i) How is boundedness linked to the content domain of the adjective?
- ii) How can boundedness be used as a flexibility device?
- iii) How can boundedness eventually take over the interpretation of adjectives?

Of course, adjectives cannot be rigidly categorized as exclusively scalar, extreme or limit adjectives, not even as either gradable or non-gradable, because there is a great deal of flexibility in the semantic make-up of adjectives, allowing for modification of meaning due to contextual factors. As has been described, there is a system of various types of gradability. This system constitutes a stable part of our cognitive apparatus. However, language users are not tied down to the system. It is this basic system of conceptual patterning at different levels in combination with the freedom of use that makes language flexible and adaptable to all kinds of intentions. This system of conceptual patterning underlies our capacity to view the world in different ways for different purposes.

Naturally, certain construals suit certain types of features of content better than others. Scalar construals are suitable for evaluative-attributive properties such as judgements of length, merit, size, speed, personality, etc. People may agree about the meaning of adjectives which are predominantly evaluative-attributive but not necessarily on their application. For instance, 'a *long* skirt' in my opinion may very well be 'a *short* skirt' in somebody else's opinion. Something that is *excellent* in one person's opinion may be just *good*, *bad* or even *terrible* in somebody else's opinion. Evaluative features have free reference. They indicate the speaker's judgement and are well suited for a construal that presupposes a scale (Warren 1992:19).

Criterial features, on the other hand, fit nicely together with absolute 'either-or' construals of limit adjectives. Limit adjectives have what Warren calls fixed reference. For instance, in *identical* the feature of 'identity' fixes the application. People agree on both the meaning and the application of adjectives which are predominantly characterized by criterial features.<sup>10</sup> Scalar adjectives and extreme adjectives are predominantly evaluative-attributive in that the speaker determines how they should be applied. It is up to the speaker to apply the adjective to some noun and some situation.

Some adjectives have a strong bias towards certain types of gradability. For instance, it seems very far-fetched to perceive the limit adjective *identical* as anything else but a limit adjective. Obviously, *identical* is not associated with evaluativeness at all. Conversely, *pleasant* is very strongly biased towards evaluativeness. That is why it is difficult to modulate the construal of *pleasant* from scalarity to complementarity. Similarly, *daily* which is a non-gradable adjective is stable in its absence of gradability features. Criterial features predominate in limit adjectives, but there may also be an evaluative element, as in e.g. *true*, *sure*, *sober*, *certain*, *empty*. This leads to my second question concerning boundedness and flexibility.

Based on the above account, it is obvious that most adjectives have some kind of biased reading of gradability. There are adjectives which have a fairly strong bias towards a specific construal, and there are adjectives which are more or less indeterminate between construals. For instance, in most people's view, the biased reading of *true*, *sure*, *sober*, *certain*, *empty* would probably be the 'either-or' reading, i.e. the limit reading, but, even though these words may be said to have a biased reading towards the 'either-or' reading, the gradability can be changed and they may take on a scalar reading. The most obvious sign of this is when these adjectives come with an explicit degree modifier. For instance, both *absolutely true* and *very true* are perfectly possible and acceptable, and so are: *absolutely sure* and *very sure*; *totally clear* and *fairly clear*; *perfectly sober* and *rather sober*; *totally empty* and *very empty* etc. *Quite true*, *quite sure*, *quite sober*, *quite certain*, *quite empty* are all indeterminate between totality and scalarity. In these expressions further contextual clues are required to disambiguate them, since the adjectives involve both criterial and evaluative possibilities. Moreover, even non-gradable adjectives may be coerced into a gradable reading. It is possible to perceive the non-gradable adjective *Swedish* as gradable and scalar in expressions such as *That woman is terribly/very/extremely Swedish*. These

examples clearly show that the content part and the schematic domain collaborate in an intimate and sophisticated manner in contributing to our conceptualization of the various adjectives.

It deserves to be pointed out that there seems to be a general tendency for shifts of construal in the direction of scalar interpretations. This means that it is more common for limit adjectives, like *sober*, *true*, *certain*, *sure* and *empty* to take on a scalar interpretation than vice versa. This directionality is true of non-gradables and extreme adjectives too (Paradis 2000a & b). The phenomenon of bleaching of strongly evaluative adjectives, such as *excellent* and *terrible*, and degree modifiers, such as *quite*, are good examples of that. The indeterminacy among speakers regarding the acceptance of extreme adjectives in the comparative and the superlative is a natural consequence of this.

Furthermore, the types of coercion by contextual modulation described above normally take place within monosemy. A shift in the mode of construal is not enough for an expression to transgress the limits for antagonistic readings. The conceptualization of truth or certainty is not destroyed or made indeterminate because of the fact that a scalar construal is applied to the content. These adjectives may apply to the same nouns and situations with only minor signs of coercion. Consider for example: *I'm absolutely certain that he is lying - very, very certain.*

Since coercion of construal from one to the other takes place within monosemy, it follows that polysemy and contextual modulation are not mutually exclusive. An adjective can very well be both polysemous and contextually modulated in their construal. For the sake of argument, let us consider the adjective *sober*. *Sober* is polysemous in the following expressions: *A sober man* may mean either 'somebody who is not drunk' or 'somebody who is serious and thoughtful'. These two interpretations profile *sober* in two different ways and evoke two different conceptual scenarios. The interpretation 'not drunk' is associated with an 'either-or' conceptualization. It is biased towards a limit reading. Nevertheless, it can be contextually modulated into a scalar reading as in 'The next day my guests were all *rather* sober'. The degree modifier *rather* explicitly confirms the scalar construal.

The other *sober* meaning 'somebody is serious and thoughtful' is an inherently scalar adjective, conceptualized in terms of 'more-or-less'. From this it follows that 'a *very* sober man' is ambiguous between 'very thoughtful' and a jocular scalar reading of the 'not drunk' meaning of *sober* (which on top of this might be interpreted as an understatement meaning 'very drunk'). These examples illustrate how boundedness is employed and also how it can be used as a flexibility device.

Finally, in answer to the third question, it may be the case that the schematic domain of adjectives takes over their interpretation completely. This does not only lead to polysemy, but also to the development of certain adjectives from content words to function words. In cognitive terms the difference is situated in the relative prominence of the content domain and the schematic domain. There is a set of adjectives which have undergone grammaticalization from content words to

markers of degree and reinforcement (Paradis 2000b). These adjectives form two paradigms:

TOTALITY (bounded)	SCALARITY (unbounded)
<i>absolute</i> bliss	an <i>awful</i> mess
a <i>complete</i> bitch	a <i>dreadful</i> coward
a <i>perfect</i> idiot	a <i>horrible</i> muddle
<i>total</i> crap	a <i>terrible</i> bore
<i>utter</i> nonsense	<i>extreme</i> pleasure

Different interpretations of polysemous adjectives are due to the semantics of the various nouns they combine with. Adjectives are semantically underspecified and require the presence of a noun for a fully-fledged interpretation. Adjectives are able to make available a selective interpretation of the noun through the way they are conceptualized against the noun. Both historically and in contemporary language the above adjectives have applications as content words as well as function words (reinforcing adjectives). For instance, in ‘an *absolute* measure’, ‘an *awful* sight’, the adjectives are mainly content words, while in ‘*absolute* bliss’ and ‘an *awful* mess’ they are markers of degree. Compare also the readings of *perfect* in (i) and (ii):

- (i) Bill is a *perfect* husband.
- (ii) Bill is a *perfect* idiot.

The content proper of *perfect* in ‘Bill is a perfect husband’ is associated with the notion of ‘perfection’, i.e. Bill, as a husband, is perfect. *Perfect* in ‘Bill is a perfect idiot’ is not associated with ‘perfection’. ?‘Bill, as an idiot, is perfect’ does not make sense with reference to ‘perfection’. The bounded construal is employed for reinforcement and the content component ‘perfection’ is pushed into the background. The interpretation is bleached as far as the content is concerned. *Perfect* has acquired a reinforcing totality function by implication. This bounded mode of gradability maps onto the degree noun *idiot*. The overlapping substructure that makes the phrase well-formed is situated in the gradability of the property of ‘idiocy’. *Perfect* in (i) and (ii) are polysemous. Two antagonistic senses are evoked when the nouns are co-ordinated: ?‘He is a perfect husband and idiot’.

In all the above expressions (*absolute bliss*, *terrible bore*, *total crap*, etc.) the construal into either a bounded or an unbounded mode dominates the interpretation. This process of grammaticalization of content words into function words is a result of a difference in foregrounding and backgrounding of the configurative domain and the content domain. Moreover, the nouns that combine with reinforcing adjectives are more like adjectives in that they express a singular gradable value and they typically occur in indefinite constructions which promote a descriptive function.<sup>11</sup>

The shift in domain prominence outlined in this paper is generally neglected in the linguistic literature. For instance, it is not accounted for in Pustejovsky’s (1995) generative lexicon. Pustejovsky aims at a strongly typed model of various

aspects of meaning. However, it is lacking in explanatory power and descriptive adequacy when it comes to aspects in the schematic domain of abstract construals such as boundedness in adjectives. In other words, Pustejovsky's model fails to account for the schematic elements of meaning and consequently also for the more functional or grammatical elements in language such as degree modifiers.

## **5. Conclusion**

This paper has shown that it is possible to extend the notion of boundedness in nouns and verbs to adjectives. There is a cross-categorical correspondence in the schematic domains of countability and aspectuality fundamental to nouns and verbs, and gradability which is fundamental to adjectives.

The present analysis highlights the relative importance of the schematic domains that lurk in the background in content words like adjectives. Adjectives represent a class of words in which content domains are more salient than schematic domains. Yet some adjectives have become bleached, i.e. the content domains have been pushed into the background, and their interpretation is dominated by their configuration in terms of grading and boundedness. This is the case with reinforcing adjectives, whose role is to specify a degree of a property of a noun, not to describe a property of a noun. It has been also shown that adjectives in the positive differ from their cognate comparatives and superlatives in the schematic domain. All of them presuppose a mental scale, but they exploit it differently. They map on to different configurative frames. Comparatives and superlatives are both bounded in the schematic mode of differentiability, while their cognate base forms are unbounded in their schematic domain of gradability.

It has been argued that the cognitive apparatus of human beings involves high-level schematic domain modes. Boundedness is an example of such a configuration. Either we perceive a property as bounded or not. This property is a stable part of our cognitive set-up. Some content types fit more or less well with either bounded or unbounded configurations, and these goodness-of-matches exert constraints on combinations of degree modifiers and adjectives. It is, however, always possible to manipulate boundedness for various reasons. Boundedness is not completely fixed to certain content domains but can be changed through contextual modulation. There are adjectives which are more or less indeterminate between different configuration and there are others that are stable in their conceptualization, and coercion into another reading is hardly possible. Generally speaking, bounded adjectives are more susceptible to being coerced into unbounded readings than vice versa.

Finally, the role of schematic domains and modes of construal, as well as their interaction with content domains, is of significant importance for a coherent theory of lexical semantics. Schematic domains are important for well-formedness and interpretability of expressions, not only for expressions that foreground schematic domains but also for expressions with content domains in the foreground. Different configurative frames are used for different purposes and they are all symptomatic of different conceptions of a situation. An understanding of schematic domains provides explanations for why certain combinations of expressions in language are harmonious, while others are not. Schematic domains

are also powerful factors in explaining lexical change. The schematic aspect of language and cognition is underresearched. Hopefully, this paper is a contributions to the field in its attempt at making an integrated statement about the status of schematic domains in cognitive semantics.

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## Notes

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<sup>2</sup> See also Paradis (1997: 48).

<sup>3</sup> Langacker's dimensional domains as well as his locational and configurational domains are subsumed under the schematic domain (1987:150-154). I am using *construal* and *mode of construal* for the actual process of employing schematic domains and cognitive abilities.

<sup>4</sup> I am using question marks consistently through this paper to indicate that expressions are strange or unacceptable. I refrain from using asterisks and thereby also refrain from making decision about borderline cases.

<sup>5</sup> Degree modifiers and adjectives combine and form more complex units. The mechanism which combines two elements and makes them well-formed and possible to interpret is *valence*. According to Langacker (1988: 102) "a valence relation between two predications is possible just in case the predications overlap, in the sense that some substructure within the other one is construed as identical to it". In the case of degree modifiers and adjectives this substructure is the mode of construal of the schematic domain.

<sup>6</sup> I will not go into detail about different interpretations here, but it should be pointed out that *long* differs from *short* in that it can be interpreted outside the mode of antonymy. It is then associated with 'length' and impartial to polarity and oppositeness, as opposed to 'longness'. When *long* is within antonymy, it is an implicit comparative associated with 'longness' (Paradis 1997: 51-53). *Short* can only be conceptualized within antonymy. *Short* is always an implicit comparative associated with 'shortness'.

<sup>7</sup> It should be noted that extreme adjectives only combine with maximizing totality modifiers such as *absolutely* and *totally*, not with approximators, such as *almost* (Paradis 1997: 63).

<sup>8</sup> *Longer* and *shorter* represent an impartial type of comparatives. In the case of the pair *better* and *worse*, *better* is impartial whereas *worse* is partial. For instance, it is awkward to say *?This film is good, but it is worse than that one*, whereas *This film is bad, but it is better than that one* is natural (Cruse 1986: 206-214). Aspects of this kind will not be further developed here.

<sup>9</sup> When the diminishers combine with adjectives in the positive there is an implied standard that is contextually inferable. *Slightly difficult* implies that something is *slightly too difficult*. This is true of the whole set, e.g. *slightly difficult*, *somewhat cold*, *a bit tired* ('slightly too difficult for something', 'somewhat too cold for something', 'a bit too tired for something').

<sup>10</sup> The terms 'evaluative-attributive' and 'criterial', as well as their definitions, are Warren's (1992: 19-20). It should be pointed out, however, that she does not connect these features with various types of gradability.

<sup>11</sup> This is discussed in more detail in Paradis (2000b), where I also account for the semantic difference between the content readings and the reinforcing readings of these lexical items.