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Paradis, Carita

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LUND UNIVERSITY

PO Box 117
221 00 Lund
+46 46-222 00 00

Reinforcing adjectives: a cognitive semantic perspective on grammaticalization*

Carita Paradis
Department of English
Lund university
Sweden
Email: carita.paradis@englund.lu.se

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1 Introduction

With the birth of cognitive semantics, new ideas from the field of theoretical semantics have found their way to the study of meaning changes, and that should not come as a surprise: since one of the major things cognitive semantics is interested in is polysemy – and polysemy is, roughly, the synchronic reflection of diachronic semantic change. (Geeraerts 1997: 6)

This passage sparked off the idea of a study where I could combine my general interest in both cognitive semantics and grammaticalization theory with a more specific interest in the lexemes in the domain of degree (Paradis 1997, forthc). I was intrigued by what happens semantically when lexemes are recruited to the domain of degree and hence grammaticalized. In other words, what is grammaticalization in lexical semantic terms?

This paper is a case study of ten lexemes with a reinforcing reading. They are:

<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

In these phrases the adjectives are specifiers of degree at the same time as they convey an evaluation of the reliability of the proposition, i.e. they are epistemic markers. They are expressive in nature rather than descriptive of the nouns they apply to. However, both historically and in contemporary language they have applications at both ends of the developmental cline, in that they have propositional readings, e.g. *an absolute measure*, *an awful sight*, or they can be applied as markers of degree, expressiveness and subjectivity, e.g. *absolute bliss*, *an awful mess*.¹

This paper is devoted to the polysemy of the above adjectives, i.e. to the constraints associated with their propositional and reinforcing readings.² More precisely, my aim is to account for their well-formedness and their interpretability in lexical semantic terms, both as descriptive adjectives and as grammaticalized

* Thanks to Olof Ekedahl, Jean Hudson and Beatrice Warren for valuable comments.

¹ *Utter* is an exception to this. I have only found instances of reinforcing *utter* in my contemporary material.

² My synchronic material is from the spoken part of BNC, which consists of 10 million words altogether. Some 2,000 phrases with these adjectives were extracted from the corpus. For more information about BNC, see Aston and Burnard (1998); Crowdy (1995), and <http://info.ox.ac.uk/bnc/>.

reinforcers. Three questions are at the heart of this study:

- What are the semantic properties that these adjectives have in common which make it possible for them to develop a reinforcing reading?
- What are the semantic properties of the nouns they combine with?
- What are the structural constraints for a reinforcing reading?

I argue that the polysemes map on to different onomasiological domains, i.e. to the PROPOSITIONAL X and the EPISTEMIC/DEGREE domains. Different domains require different semantic bindings, and the interpretation and well-formedness of the actual expressions rely on different valence structures (Langacker 1988: 91–125). The noun and the adjective exert semantic pressure on one another. The properties of the noun constrain the interpretation of the adjective, and the properties of the adjective assign a perspective in which the noun is to be viewed. For instance, *measure* in the phrase *an absolute measure* profiles the expression, and the adjective binds a certain property of the noun, i.e. in this case the possibility of measurement to be ‘absolute’ rather than ‘relative’. In the expression *absolute bliss*, *bliss* profiles the expression and *absolute* binds the gradable property of the noun and thus assigns the perspective. The motivation for semantic shifts across domains is to be found in two powerful processes. These are *subjectification* in grammaticalization (Traugott 1995), which is a speaker-oriented process, and *relevance*, which is a hearer-oriented process (Deane 1988; Blakemore 1992; Sperber and Wilson 1995; Nicolle 1998).³

The procedure of the argument is as follows: First I shall set the scene by giving a brief outline of the diachronic development of the adjectives in order to trace their semasiological path of grammaticalization and discuss various contextual constraints on the reinforcing readings. Secondly, the development of these adjectives into grammaticalized reinforcers will be outlined in terms of their mapping on to different onomasiological domains and their forming of paradigms. Finally, I shall analyze the constraints on their reinforcing readings in contrast to their propositional readings within a cognitive semantic framework and conclude by explicating their grammaticalized status semantically.

2 Historical development

According to the *Oxford English Dictionary*, the reinforcing readings of these adjectives are relatively recent developments in the history of the English language. Most of them developed this reading during the Early Modern period. Table 1 lists the earliest known appearances of the reinforcing adjectives.

Table 1: The approximate date of the appearance of the reinforcing adjectives in chronological order

Reinforcing adjectives	Approximate date of appearance
<i>utter</i>	1430
<i>horrible</i>	1460
<i>extreme</i>	1460
<i>absolute</i>	1574
<i>terrible</i>	1600
<i>perfect</i>	1611
<i>complete</i>	1645
<i>total</i>	1647
<i>dreadful</i>	1700
<i>awful</i>	1809

Complete, *perfect*, *total* and *absolute* were originally descriptive of ‘completeness’ and subsequently recruited into the domain of degree and reinforcement. *Complete* comes from ‘having all its parts’, ‘entire’,

³In contrast to the hearer-oriented view of relevance, Traugott (forthcb) suggests a speaker-based view of relevance, “the R-heuristic”. In her view relevance is a pragmatic heuristic assumed to play a part in linguistic change.

‘full’, *perfect* from ‘completed’, ‘accomplished’, *total* from ‘relating to the whole of something’. *Absolute* was originally a participle meaning ‘disengaged from’ (1), or ‘free from imperfection’ (2), which later came to be used in the sense of ‘complete degree’ (3):

- (1) Men sen it vtterly fre and absolut from alle necessite.
(1374, Chaucer Boethius 175; OED s.v. *absolute*, I 1 adj. Obs.)
- (2) A young man so absolute, as yat nothing may be added to his further perfection.
(1579, Lyly Euphues 123, OED s.v. *absolute* II 4)
- (3) The honour of its absolute sufficiency
(1641, Milton Ch Discip. (1851) I 32, OED s.v. *absolute*, II 5a. adj.)

In both their descriptive and reinforcing readings *complete*, *perfect*, *total* and *absolute* are complementary adjectives, i.e. they are associated with a bounded, ‘either-or’ conceptualization (Paradis 1997: 57–58), and they can be limited by for instance *almost*. That is, either something is ‘complete or almost complete’, ‘whole or almost whole’, ‘accomplished or almost accomplished’. In their capacity as reinforcing adjectives, a generalized property of the degree of totality has taken over completely, and they have been recruited as markers of reinforcement by implication.⁴

Utter and *extreme* were originally descriptive of outermost locations in space (4), and for *extreme* also outermost location in time, e.g. *the extreme unction*. This reading then lent itself to a degree reading (5):

- (4) Chichester is in the extream part of the shire.
(1503, Act 19 Hen VII, c 24, OED s.v. *extreme* 1 adj)
- (5) Their adherents made extreme resistens.
(1512, Act 4 Hen VIII, c 20 Pream, OED s.v. *extreme* 4 adj)

The original meanings of *awful*, *dreadful*, *horrible*, *terrible* were ‘awe/dread/horror/terror-causing’ (6). These senses suggest an extreme point on a scale. They are what we might call inherent superlatives (Paradis 1997: 54ff). The negative superlative property that characterizes these adjectives is recruited for reinforcement.

- (6) They reared thence vnto the Saxons such awefulle armies.
(1602, Warner Alb. Eng. Epit. (1612) 360, OED s.v. *awful* 1 adj)
- (7) To what an awful extent the Spanish peasant will consume garlic.
(1845, Ford Handbk. Spain i.28, OED s.v. *awful* 4a. adj.)

Obviously, our ten lexemes are all predisposed to gradability in their propositional readings, albeit in different ways. Some of them are construed according to an ‘either-or’ reading of totality (*absolute*, *total*), while others are conceptualized according to an extreme point on a scale (*extreme*, *terrible*).⁵ Gradability emerges as the semantic feature that all the adjectives have in common. When used descriptively, the adjectives are also configured according to gradable modes of construal. When the adjectives are employed as reinforcers, these gradability modes are made prominent and dominate their interpretation.⁶

⁴My use of ‘implication’ is in accordance with Traugott’s term ‘invited inferencing’ Traugott (1997, 1998, forthcb). I prefer the term implication since these meanings are already coded. Otherwise, I assume that the reinforcing readings come into existence through context-induced associative reasoning, in the first place on the part of the speaker, but obviously successfully negotiated to the hearer and subsequently coded as is suggested in the Invited Inferencing Theory of Semantic Change (IITSC).

⁵Propositional adjectives are either gradable (*long*, *true*) or non-gradable (*classical*, *daily*). Gradable adjectives are adjectives that can take degree modifiers (*perfectly true*, *absolutely excellent*, *very good*) (Paradis 1997: 48–61). Three subgroups of gradable adjectives are distinguished. There are (i) limit adjectives such as *dead*, *true*, *identical*. They are associated with a definite boundary, and they can be reinforced (*completely dead*) or restricted (*almost identical*). There are (ii) scalar adjectives which are unbounded. They can be reinforced (*very good*) or attenuated (*fairly short*). The third category represents a mixture of the first two. It consists of (iii) extreme adjectives which on the one hand are conceptualized according to a scale, but on the other hand indicate the ultimate point of the scale and are in that respect bounded. Extreme adjectives can be reinforced by the same degree modifiers as limit adjectives (*absolutely terrific*, *totally brilliant*). The ten adjectives have arisen from limit (*absolute*, *complete*) and extreme adjectives (*terrible*, *awful*). This is natural since the function of reinforcement is associated with up-grading and completeness. Scalar adjectives as reinforcers do not have much to offer in terms of intensification. They may instead develop into moderators, e.g. *fairly* from *fair* (Paradis 1997: 75).

⁶The emerging foregrounding of the degree readings in examples (3), (5) and (7) is obviously invoked by the gradability of the

3 Grammaticalization: semasiology and onomasiology

There are two opposite approaches to the study of lexemes in historical linguistics: the *semasiological* approach and the *onomasiological* approach (Traugott 1997, *forthca*; Geeraerts 1997; Traugott *forthcb*).

The semasiological approach to the study of the development of lexemes in historical linguistics has the lexeme as its starting-point. It typically asks the question: ‘Given lexeme L, what meanings does it express?’. In the case of *absolute*, we may give the following answer: *absolute* ‘disengaged from’ > ‘free from imperfection’ > ‘total’. A typical subject of semasiology is polysemy.

The onomasiological approach starts from the content side. It typically asks the question: ‘Given concept C, what lexical items can it be expressed with?’. Here the focus is on near-synonyms in conceptual domains, e.g. the domain of EPISTEMIC/DEGREE with members such as *total*, *complete*, *perfect*, *absolute* being functional synonyms. A typical subject of onomasiology is synonymy.⁷

Having traced the semasiological path of our ten adjectives (Section 2), we can state that their original application is propositional. In their development into markers of reinforcement they have undergone a weakening in their propositional meaning. This weakening, however, is compensated for by pragmatic strengthening. In Traugott’s (1995) terminology this is called *subjectification*.⁸ Subjectification follows from a cognitive-communicative motivation on the part of the speaker to be more informative (*ibid.* 49). What is strengthened in *absolute mess* as compared to *an absolute measure* is the subjective stance of the speaker.

Another sign of grammaticalization is that these adjectives have formed two paradigms whose members are functional synonyms. These paradigms are formed by analogy.⁹

TOTALITY	SCALARITY
<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

The development of the adjectives into reinforcers represents a typical case of grammaticalization when defined as the process whereby lexical items in constrained contexts undergo reanalysis and come to serve increasingly pragmatic functions. The well-formedness and interpretability of the new meanings arise through implication induced by contextual constraints and a search for relevance in the communicative situation.

nouns they modify, an observation foreboding the discussion in Section 6. For instance, something is either ‘absolutely sufficient’ or ‘almost sufficient’, as in example (3), and likewise, there can be more or less of the gradable property ‘resists’ and ‘extent’, as in (5) and (7).

⁷Both these approaches are important in the study of semantic change, since it is the task of the researcher to identify paths and regularities for these changes. For an extended tracing of the motivations of grammaticalization of adjectives we need to ask ourselves the following question which presupposes both a semasiological and an onomasiological analysis: ‘Given concept C, what are the conceptual domains some of its members are likely to develop into?’, e.g. PROPOSITIONAL X > MANNER > DEGREE (Peters 1993: 282; Traugott 1995: 44).

⁸Langacker (1990) also uses the term “subjectivity”. Both Langacker and Traugott view subjectivity as a ubiquitous phenomenon, but they use the term somewhat differently. Langacker focuses primarily on subjectivity as degrees of grounding in the situation construed by speakers. I am only going to use subjectification according to Traugott, i.e. the diachronic shift from the physical world to the mental world (Traugott 1999: 187–88).

⁹As pointed out in Section 2 (footnote 4), all the adjectives were originally associated with a bounded conceptualization as their mode of gradability, either in terms of ‘completeness’ or ‘an extreme point’. The ‘completeness’ adjectives, *absolute*, *complete*, *perfect* and *total* represent one type of analogy formation. *Extreme* and *utter* are extreme point adjectives and represent another type of analogy. *Extreme* has lost its extreme application and means ‘very high degree’ (*Oxford English Dictionary*, s.v.; cf. *extremely*, Paradis (1997: 83)). Finally, *awful*, *dreadful*, *horrible* and *terrible* as reinforcers come from the same sort of strongly negative, extreme-point adjectives. All the members of the group of scaling adjectives have lost their inherent superlativity and assumed an upward scaling function. It should be pointed out that not only have the scalar reinforcers gone through a process of subjectification, but they have also become unbounded in their gradability. That is, they have lost their association with the extreme point of the scale to high degree.

4 The cognitive semantic approach

The general theoretical framework of the present study is cognitive, inspired by Lakoff (1987), Langacker (1987*a*, 1988, 1991), Taylor (1992, 1995), Cruse (1995*a,b*) and Cruse and Togia (1996). But I also incorporate ideas and views from the generative approach to lexical semantic theory (Pustejovsky 1995) and from the positivistic approach (Warren 1984, 1988). I assume that the meanings of linguistic expressions arise by the activation of conceptual patterns in the cognitive system. Lexical items map onto certain concepts in a cognitive network. In each case it is the linguistic and pragmatic contexts that evoke the relevant conceptual pattern and determine the interpretation. Meanings are perspectival in nature and polysemy emerges as a natural consequence of the human ability to think flexibly (Deane 1988: 325).

Concepts are built up by domains that are of two kinds (Cruse and Togia 1996: 113–117; Paradis 1997: 48–51, 64–66). There is a content domain and a schematic domain (or mode of construal). Content domains involve propositional meanings that mirror our perception of the world, while the schematic domain imposes a specific configurative frame on the content. Gradability belongs in the schematic domain. The interpretation of reinforcing adjectives is dominated by the schematic domain and the content domain is backgrounded. In their capacity as descriptive adjectives the content domain is in the foreground and their mode of construal is backgrounded¹⁰ As was demonstrated in the previous section, reinforcing adjectives map on to two different modes of construal, one of totality, i.e. the property in question is conceived as bounded and one of scalarity, i.e. the property in question is conceived as unbounded.

Langacker (1987*b*) makes a broad distinction between two kinds of linguistic expressions ('predications'), those that designate entities (i.e. nouns) and those that designate relations (i.e. verbs, adjectives, adverbs, and prepositions). The interpretation of polysemous adjectives is largely determined by the nouns they relate to. Nouns 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 these predications overlap, in the sense that some substructure within the other one is construed as identical to it".

Within a compositional generative framework, Pustejovsky (1995) accounts for the well-formedness and interpretability in terms of three different modes of predication, i.e. *argument structure*, *event structure* and *qualia structure*. Lexical items are strongly typed and the elements involved in an expression have to conform to make well-formed expressions. This part of the model can be described as the stabilizer of the model. Yet, the model is also equipped with generative mechanisms by means of which words can assume a potentially infinite number of senses in context. These mechanisms are responsible for polysemy in language. They allow for the flexibility of language.

The various meanings of a polysemous adjective in context depend on the semantics of the nouns it combines with, in that the adjective is able to make available a selective interpretation of a noun through a mechanism called *selective binding*. The adjective selects and binds a certain quale of the noun. The qualia structure of a noun encode information about particular properties and activities associated with them, such as their constituent parts, purpose, function and mode of creation. Quales are aspects of meaning. For instance, the noun *novel* has the following quales: the constitutive role is NARRATIVE, the formal role is BOOK, the telic role is FOR READING and the agentive role is WRITTEN. It is to the matter of the under-pinnings of well-formedness and interpretability that the rest of this paper will be devoted.

5 The problem of polysemy

Adjectives are intrinsically prone to ambiguity and vagueness in that they are semantically underspecified. They require the presence of a noun for a fully-fledged interpretation.¹¹ Imagine being asked to give a succinct rendering of the adjective *old*. Out of context the answer would probably be 'something that has lasted long'. But in order to fully understand *old* we need to know what the combining noun is. Let us therefore consider *old car*, *old friend* and *old boyfriend*. They are all ambiguous, but they may have default interpretations out of context. The default interpretation of *old* in *an old car* is likely to be 'that the car

¹⁰This accounts for the traditional classification of words into function words and content words.

¹¹Polysemy is a phenomenon which is closely linked to ambiguity and vagueness. For a discussion of these terms, see Warren (1988; forthcoming), Geeraerts (1993), Tuggy (1993).

has been around for a long time, whatever a long time is in the context of cars'. Similarly, the default interpretation of *old* in *an old friend* is also 'somebody who has been around for a long time as a friend', but this friend may very well be quite young. It is the duration of the friendship that is perspectivized. Finally, *an old boyfriend* may neither have been around for a long time nor be old. What *old* means in this phrase is that 'this man is no longer my boyfriend'.¹² Our first rendering 'having long duration of time' applies to *old* in *an old car*. It applies to some degree to *an old friend*, but it does not apply at all to *an old boyfriend*.

A central problem for the study of polysemous adjectives is whether (i) a given lexeme is interpreted as a single inherently vague concept, or (ii) whether the various shades of meaning of a given lexeme are to be attributed to the context. In discussing the goals of lexical semantic theory, Pustejovsky (1995) describes the two views as (i) the *monomorphic* model, which treats ambiguity as multiple listing. Our *old* example would then be treated as having three different meanings. The polysemy is situated in the inherent meaning of the adjective and senses are fixed. This view has been predominant in the Montague school (Montague 1970)

The inverse of the monomorphic model in Pustejovsky's terminology is (ii) the *restricted polymorphic* model which denies the role of fixed senses. Polysemy is pragmatically determined and there are no fixed senses inherent in the language that constrain the meaning of a word in context. This is a view held by Searle (1979).

Obviously, both these accounts of polysemy are uneconomical. Apart from being unable to make generalizations about the senses in a polysemous relation, both models are descriptively and explanatorily inadequate. The main argument against the monomorphic view is that it fails to recognize the sense relations between polysemies, and the main argument against the restricted polymorphic language is that it fails to recognize fixed senses.

Following Pustejovsky, I subscribe to a middle position which seems better suited to solve the polysemy problems. The middle position is (iii) the *weak polymorphic* model.¹³ Adherents of weak polymorphism treat polysemy as in part lexically determined and in part structurally and pragmatically determined. Consequently, I argue that the ten adjectives have inherently determined lexical properties which relate the various polysemous readings (Section 2). Secondly, the semantic properties of the modified nouns and the way they relate to the adjectives are important for the analysis (Sections 6 and 7). Finally, there ought to be structural constraints on their interpretation (Section 8).

6 Reinforcing adjectives and their nouns

In the introduction I stated that the properties of the noun constrain the interpretation of the adjective, and the properties of the adjective assign a perspective from which the noun is to be viewed. In the light of this statement, it seems reasonable to assume that nouns which take reinforcers are degree nouns. The reasoning behind this is that the combining elements have to harmonize for a successful match (Paradis 1997: 158–165). Pretheoretically, the assumption seems to be correct as far as the occurrences in BNC are concerned. Nouns which combine with clear-cut reinforcing adjectives are nouns such as *bargain*, *bastard*, *crap*, *contempt*, *darkness*, *despair*, *disaster*, *disgrace*, *failure*, *fool*, *heat*, *horror*, *idiot*, *mess*, *nonsense*, *poverty*, *purity*, *rubbish*, *shame*, *shit*, *wanker*. An important observation is that nouns that are capable of taking reinforcers correspond to gradable property concepts. They are, in other words, rather more adjective-like than typical nouns.¹⁴ The relationship between a reinforcing adjective and its head is much like the relationship between a degree modifier and its adjectival head (*absolutely pure*, *awfully messy*, *totally contemptuous*, *extremely dark*, *completely disastrous*, *utterly disgraceful* and *terribly boring*). This claim provokes the question: What is gradability in nouns and how can it be tested?

¹²Notice that if you say *my old car* instead of *an old car* the interpretation can be, but is not necessarily similar to the interpretation of *an old boyfriend*, i.e. 'no longer my car'. Contextual effects of this kind will be discussed in Section 8. See Taylor (1992) for a semantic analysis of *old*, and Healey (1997) for the historical development of *old*.

¹³This is the view held by most semanticists, e.g. Warren (1984, 1988); Taylor (1992); Cruse (1995a,b); Kamp and Partee (1995); Jackendoff (1997).

¹⁴See Dixon (1982); Hopper and Thompson (1984); Wierzbicka (1986); Langacker (1987b); Thompson (1988); Wetzter (1996) for discussions on 'adjectivehood' and 'nounhood'.

Firstly, gradability has traditionally been associated with adjectives, and the concept of degree has been dealt with in terms of whether an adjective can undergo comparison or not. This view was challenged by Sapir (1949); Bolinger (1967, 1972); Gnutzmann (1975), who claimed that gradability is not only a feature of adjectives but also of nouns and verbs. What gradable words have in common is a feature which we perceive as variable in intensity and which therefore can be reinforced. Some criteria for a valid characterization of gradability in nouns are thus needed.

One such criterion is the possibility for certain words to be the focus of exclamatory utterances. For nouns then, gradability is drawn out in exclamatory ‘Such x!’ or ‘What x!’ utterances, e.g. *What a bastard!*, *Such rubbish!*, *What a bargain!*, *Such poverty!*. Bolinger (1972: 60) points out that we make a difference between identifying *such* and intensifying *such*. He gives the following examples to illustrate this (italicization and parenthetical additions are mine):

- | | | |
|------|---|-----------------------------|
| (8) | <i>Such a person</i> always frightens me. | [Identifying <i>such</i>] |
| (9) | <i>Such a blunder</i> always frightens me. | [Intensifying <i>such</i>] |
| (10) | <i>Such behaviour</i> always frightens me. | [Identifying <i>such</i>] |
| (11) | <i>Such misbehaviour</i> always frightens me. | [Intensifying <i>such</i>] |

In (8) and (10) *such* refers to the identification of the nouns (‘x identity’) and the nouns are not inherently gradable. In (9) and (11) *such* refers to the intensity of the gradable feature of the noun (‘x intensity’) and the nouns are degree nouns.¹⁵ By the same token degree nouns are capable of invoking reinforcing readings in gradable adjectives such as *absolute*, *complete*, *utter* and *terrible* (*an absolute blunder* and *terrible misbehaviour*).

The critical reader may suggest expressions such as, *Such a person!* and *Such behaviour!* as counter-evidence to the above criterion for degree nouns. It is true that *person* and *behaviour* can serve intensifying functions when they are in the focus of exclamatory *such*. There is a difference, however, between *person* and *behaviour* on the one hand, and *blunder* and *misbehaviour* on the other, in that a gradable adjective has to be inferred and the polarity of that adjective has to be contextually induced (‘*Such a [wonderful/boring] person!*’ and ‘*Such [good/bad] behaviour!*’). The same phenomenon is of course true of ADJECTIVES + NON-DEGREE NOUNS (*a terrible person*) referring to a ‘he is a person who does things that I find terrible’, where *terrible* is evaluative and descriptive, and ADJECTIVES + DEGREE NOUNS (*a terrible fool*) where *terrible* is purely intensifying. The gradable element is inherent in *fool*.¹⁶ This line of thought will be developed further in Section 7.

Another observation is that degree nouns tend to be hyperbolic. They come with an inherent evaluation of either a positive or a negative character (*absolute bliss*, *extreme pleasure*, *complete mess*, *terrible bastard*). Also, reinforcers differ in their preferences regarding the polarity of the degree nouns they combine with. *Awful*, *dreadful*, *horrible* and *terrible* are restricted to negative nouns. *An awful muddle* is natural, while it would be unnatural to talk about *?an awful pleasure*.¹⁷ In the vast majority of cases, the other reinforcers also occur with negative nouns in the examples from BNC, but they are not restricted to negativity. For instance, *absolute bargain*, *complete and utter joy*, *extreme bravery* all match perfectly well.¹⁸ Neutral nouns are either not gradable or gradable only by the addition of an implied evaluative adjective, and hence they are not true degree nouns.

Moreover, degree nouns are non-typical nouns in that they do not conceptualize entities or phenomena.

¹⁵This criterion is comparable to the ‘how x!’ criterion for gradable adjectives (*How excellent!*, *How sad!*) (Paradis 1997: 50). Another criterion for gradable adjectives is ‘how x is it?’ (*How good is it?*, *How old is it?*). Applied to gradable nouns this criterion would be: ‘how much of a(n) x is it?’ (*How much of a blunder is it?*, but not **How much of a person is he?*). There is also an element that can undergo comparison in degree nouns (*This was much more of a blunder than that*, but not **He is much more of a person than you are*).

¹⁶It deserves to be pointed out that degree nouns can be identifying as well as intensifying (cf. Section 8). Identifying nouns however, cannot assume an intensifying reading without the addition of an implicit gradable evaluative adjective.

¹⁷This is not the case for degree adverbs in combination with adjectives, which is probably a sign of their being even more grammaticalized. The related adverbs are not restricted to negative contexts, e.g. *terribly nice* and *awfully good* (Paradis 1997: 76–91).

¹⁸There are 25 tokens of *utter* in my material all of which are reinforcers. Interestingly, 19 of these 25 tokens are coordinations with other adjectives. There are 13 occurrences of *complete and utter* and one occurrence of the following combinations: *utter and total*, *utter and unbelievable*, *utter and absolute*, *total and utter*, *sheer and utter*, *absolute and utter*.

Rather they are property concepts and as such adjective-like. It is important to note that the main function of degree nouns is not to act as identifying elements, but to describe entities and phenomena. Degree nouns are thus relational and underspecified just like descriptive adjectives. Jespersen (1968: 75) puts this very neatly:

on the whole, substantives are more special than adjectives, in the parlance of logicians, the extension of a substantive is less, and its intension is greater than that of an adjective. The adjective indicates and singles out one quality, one distinguishing mark, but each substantive suggests, to whoever understands it, many distinguishing features by which he recognizes the person or the thing in question.

The distinction between nouns and adjectives has to do with how the properties are conceptualized. Nouns designate complex entities or ‘kinds of things’, while adjectives designate properties. As Jespersen points out, nouns tend to involve a large number of properties, whereas adjectives normally designate one property. The prerequisite for well-formedness in phrases containing a reinforcing adjective is that there has to be some kind of overlap first and foremost in the schematic domain, i.e. in terms of gradability. This allows us to conclude that our assumption that nouns that take reinforcers are degree nouns is proven right.

7 Valence

Apart from the lexical content that is inherent both in the adjective and the noun, well-formedness is a result of the way adjectives attach to nouns. Warren (1984: 21–28) discovered that there is a system of relations that underlies the interpretations of classifying and descriptive adjectives. This system is based on a restricted set of covert relators that trigger different types of attachments between adjectives and their nouns. Warren’s relator is on a par with Pustejovsky’s generative mechanism of selective binding, whose function is to bind the appropriate quale of the noun.

Warren states that in order to uncover the nature of the adjective, we must be familiar with both the denotation of the adjective and with its relation to the noun it qualifies. Her semantic analysis involves two components, ‘referential content’ and ‘relator’. Consider Figure 1.

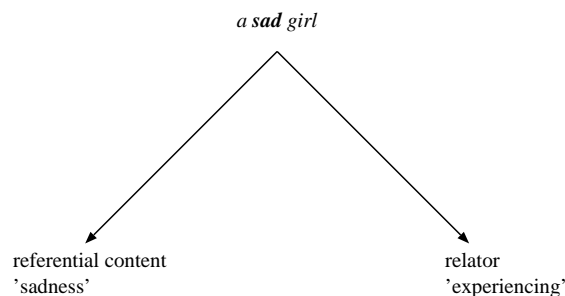


Figure 1: Warren’s (1984) model of the semantic structure of an adjective

The meaning of *sad* in *a sad girl*, is analyzed in two components and glossed ‘x experiences sadness’. There is thus an opaque relation, which the language user at some level has to be aware of in order to fully interpret the phrase.¹⁹

Warren’s model is thus weakly polymorphic in that it is partly lexically determined through the overt content part and it is contextually defined by means of a set of connecting relations providing for the

¹⁹Warren’s model of the meaning of adjectives involves a paraphrase of the noun phrase in question, whereby two semantic elements are revealed, one overt referential (‘sadness’) and one covert relational (‘experiencing’). She finds that there is a limited number of recurring covert relations, all of which may occur with classifying adjectives, but a more limited number of them with descriptive adjectives. In cognitive semantic terms, Warren’s referential content involves mappings on to both the content proper domain and the gradability domain discussed in Section 4. The relator is the exponent of the valence relation, i.e. the type of match between the adjective and the noun.

compositional interpretation of adjectives and nouns. Warren’s relators selectively bind the appropriate quale of the noun. Consider the polysemy of *nervous* in *a nervous breakdown* and *a nervous man* in Figure 2.

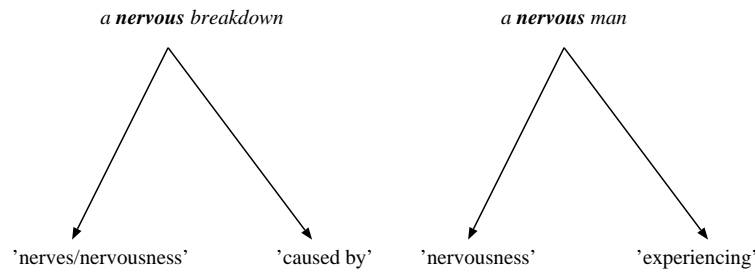


Figure 2: The semantic elements of *nervous*

A nervous breakdown can be glossed ‘x is caused by nerves’, and *a nervous man* ‘x experiences nervousness’. *Nervous* in *nervous breakdown* is one type of breakdown. The quale that *nervous* binds in *breakdown* has to do with mental phenomena. *Nervous* in *a nervous man* binds the quale of *man* as an experiencer. Polysemy in an adjective can be said to be due to differences in at least one of the two main semantic parts of adjectives, i.e. in the referential content and/or in the relator.

I shall now apply Warren’s model to three of the adjectives under discussion, both in their propositional capacity and as reinforcers:

PROPOSITIONAL READING	REINFORCING READING
<i>a complete</i> sentence	<i>complete</i> nonsense
<i>a perfect</i> body	<i>a perfect</i> idiot
<i>a terrible</i> nightmare	<i>a terrible</i> bore

As has already been pointed out, Warren’s study was aimed at propositional readings of adjectives in the first place. By applying her model on grammaticalized readings of adjectives we may be able to display what the systematic semantic differences between these two onomasiological domains are. Figures 3, 4 and 5 show the decomposition of the overt and covert parts of the three lexemes:

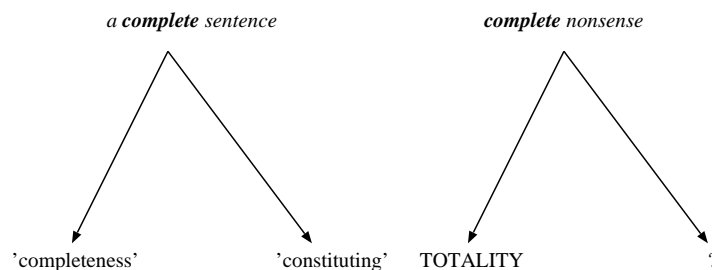


Figure 3: The semantic elements of *complete*

The meaning of *a complete sentence* is decomposed into its two parts and can be glossed ‘x constitutes completeness’. There is the overt referential content of the adjective, ‘completeness’, a concept which maps on to a content proper domain and a schematic domain. *Complete* in *a complete sentence* is dominated by the content proper domain. It is the content proper that makes the basis for the valence relation. The relator is ‘constituting’. The quale bound by the adjective is the propensity for a sentence to be complete or not. The foregrounded content part of ‘completeness’ maps on to the formal and constitutive quales of *sentence* as something consisting of parts and rules for their arrangement. This is the common ground where the

two predications meet in a well-formed valence relation.

The meaning of *complete* in *complete nonsense* is not decomposable in the way *complete* in *a complete sentence* is. First of all, there is loss of content proper in the referential content part of its semantic structure. The application of *complete* is abstracted away from its foundation in the content domain and has assumed a function as a marker of degree and epistemic modality. The semantic loss is compensated for by pragmatic enrichment. What has happened in the referential content part is that the schematic domain is foregrounded, while the content proper is hovering in the background. The propositional loss is the reason for the inability of *complete* to bind a particular quale in the noun. What *complete* can identify and bind is gradability. Furthermore, *complete nonsense* can be glossed ‘x that is characterized by being nonsensical to the degree of totality’. This glossing makes it clear that a referent is described by *nonsense*. In the paraphrase of *a complete sentence*, i.e. ‘x constitutes completeness’, the referent is specified by the modified noun. Now consider *perfect* in Figure 4.

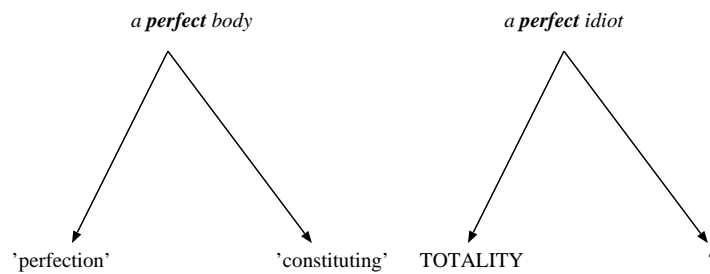


Figure 4: The semantic elements of *perfect*

The same pattern is repeated for *perfect*. *A perfect body* can be decomposed into a referential content part ‘perfection’ and a relator ‘constituting’, and the phrase can be glossed ‘x constituting perfection’. In *a perfect idiot* the content component is weakened and *perfect* is employed at an abstract level of reinforcement, and consequently there is a breakdown in the relator. The only link that can be picked up by *perfect* and made compatible with *idiot* in an overlapping substructure is the gradability of the property of ‘idiocy’.

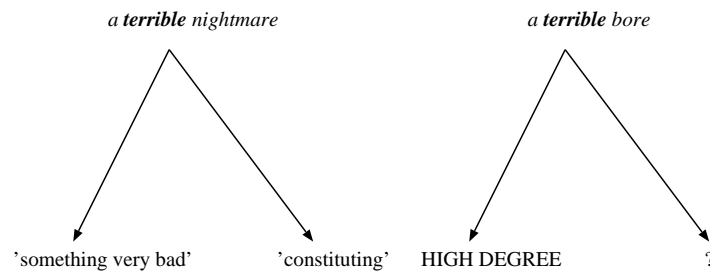


Figure 5: The semantic elements of *terrible*

In *a terrible nightmare* the content component is weakened from ‘terror’ to ‘something very bad’, and the relation is one of ‘constituting’. The phrase can be glossed as ‘x constitutes something very bad’.²⁰ The decomposition of *a terrible bore* is analogous with *complete nonsense* and *perfect idiot* in that the content component is generalized into HIGH DEGREE. Not only has *terrible* become more abstract, but related to this is the loss of the conceptualization of *terrible* as schematically representing the extreme boundary on a scale in the schematic domain.²¹ Again there is no propositional link to the noun *bore*. The interpretability

²⁰There is not always an established noun representing the referential content of an adjective. Another interpretation, which is possible but favoured by fewer of my informants, is that the content component actually is ‘terror’ and the relator is ‘causing’. The gloss would then be ‘x causes terror’. The fact that there are these two readings is however irrelevant to my argument.

²¹This path of development is not uncommon in shifts in the category of degree words (Paradis forthcoming).

and well-formedness lie in the grading potential in both of them and that is where the language user can find relevant overlap and identity of substructures. This goes to show that semantic bleaching, as in ‘a *terrible* nightmare’, is not enough for a breakdown in the relator part, since it is still dominated by the content proper domain and the propositional function, and not by the mode of construal and the expressive function.

Finally, from the point of view of grammaticalization, the reinforcing readings have undergone a process of semantic bleaching and abstraction. This process is not unique to reinforcers. It is a well-established fact that a lexical element can go through a process of semantic bleaching without being grammaticalized, which is shown in *a terrible nightmare*. This analysis explains why bleaching is a necessary but not sufficient condition for an item to undergo grammaticalization.

Thus, grammaticalization in semantic terms means a shift in the content component that is not only a weakening of the content, but also an increase in generality coupled with pragmatic enrichment. Secondly, the covert relators in propositional adjective + noun combinations are no longer to be found. The failure to establish a relator between the reinforcer and its noun is a natural consequence of the fact that their valence relation is not to be found in the propositional element. The reinforcers make the mode of construal prominent and the reading is automatically linked up with scopal properties and speaker attitude. Driven by a unidirectional urge towards subjectification on the part of the speaker and relevance on the part of the hearer, our reinforcers have moved into another onomasiological domain. They have moved along the scale from semantic to more pragmatic meanings, i.e. from the PROPOSITIONAL X domain to the EPISTEMIC/DEGREE domain.

8 Structural constraints

The interpretation of adjectives and their nouns cannot be separated from the structure they are embedded in, a view held by both cognitivists and generativists. One restriction on the use of these reinforcers is that they occur in premodifier position only. The validity of this statement can be demonstrated by entailment, where the semantic interaction between the adjective and the noun and the positional constraints are made manifest at the same time. Consider first the set of propositional readings of *complete*, *perfect* and *terrible*, in example (12):

- (12) *It is a complete sentence.* \longleftrightarrow *It is a sentence which is complete*
It is a perfect body \longleftrightarrow *It is a body which is perfect*
It is a terrible nightmare \longleftrightarrow *It is a nightmare which is terrible*

In all three cases the entailment relations hold good. The adjectives and the nouns combine in a summative way. However, these entailment relations become awkward with the reinforcers, as can be seen in example (13):

- (13) *It is complete nonsense* \neq *It is nonsense which is complete*
He is a perfect idiot \neq *He is an idiot who is perfect*
He is a terrible bore \neq *He is a bore who is terrible*

The sentences in example (13) do not exhibit a summation of the meanings of the adjectives and the nouns. The meanings of the composite expressions are interactive. The role of the adjective is to reinforce a gradable property of the noun it applies to. Interactivity of this kind implies scope-taking and scopal elements are normally preposed in English. Ungerer’s (1988) analysis of English adverbials in terms of scopal and propositional syntax is parallel to the propositional and reinforcing readings of adjectives. Firstly, scopal adverbials, like the reinforcers, have developed from propositional elements to grammaticalized scopal elements. Secondly, in this process they have also moved forwards syntactically to slots before the element that they have in their scope.

Apart from their prenominal position, it is obvious that degree nouns favour indefinite contexts (‘it’s *total nonsense*’ or ‘he’s *a dreadful coward*’). Consequently, almost all of the reinforcers in BNC occur in indefinite environments. This is natural since both *nonsense* and *coward* are property concepts used for descriptive purposes and not for identification. Yet, it should be pointed out that degree nouns are of course

possible in definite contexts, but in definite contexts too, the descriptive function of degree nouns is the prominent one. Consider example (14):

(14) Mr. Hope was fired, but *the fool* refused to quit

The fool is used for descriptive purposes rather than for identification, and it is coreferential with *Mr. Hope*. Definite applications of degree nouns can be employed in contexts where they have a coreferent. Bolinger (1972: 301) makes the interesting observation that degree nouns are pronominal in character in that they are capable of referring anaphorically or cataphorically to a referent via a referring noun, as in example (14) and (15). In (16) a non-degree noun has been inserted in the same slot as the degree noun and the pronoun and the result is confusion:

(15) Mr. Hope was fired, but *he* refused to quit.

(16) Mr. Hope was fired, but *the lawyer* refused to quit.

Fool and *he* are capable of picking up the link to *Mr. Hope*. Unlike *he*, *fool* adds a description of Mr. Hope. An identifying noun like *lawyer* strongly suggests another referent and we interpret sentences (15) and (16) in two different ways. Again, this goes to show that degree nouns differ quite considerably from typical referential nouns.

9 Conclusion

This paper investigates the semantics of ten grammaticalized adjectives and their propositional cognates. My aim was to identify the systematic differences between these adjectives when they are descriptive of their nouns, as opposed to when they are reinforcers. In other words, I was interested in investigating grammaticalization in cognitive semantic terms.

From the point of view of grammaticalization theory, the development of the ten adjectives into reinforcers exhibits all the essential correlates for grammaticalized elements. That is, they have lost their propositional content and become exponents of an abstract notion of degree. This development involves a shift from one onomasiological domain to another. In other words, they have moved from a PROPOSITIONAL X domain to an EPISTEMIC/DEGREE domain.

In order to identify what this shift means in lexical semantic terms, three questions were posed:

- What are the semantic properties that these adjectives have in common which make it possible for them to develop a reinforcing reading?
- What are the semantic properties of the nouns they combine with?
- What are the structural constraints for a reinforcing reading?

Firstly, the semantic property that these lexemes have in common both as descriptive adjectives and as reinforcers is gradability. As descriptive adjectives they are all bounded, i.e. they are either limit or extreme adjectives. When they are descriptive of their nouns the content domain is in the foreground and the gradable mode of construal is backgrounded. The foregrounded content of the adjective maps on to some substructure of the noun. The link between the substructures is propositional and the valence relation is primarily based in the content domain.

The reinforcing reading, on the other hand, is characterized by a conceptualization where the gradable mode of construal is in the foreground almost to the exclusion of the content domain. This is particularly so for the scalarity adjectives. Originally all the adjectives were associated with a bounded conceptualization. However, the scalarity adjectives have developed into unbounded markers of HIGH DEGREE. The overlapping substructure between the reinforcers and their nouns is to be found in the schematic domain. There is no propositional link that can latch on to the nouns. Consequently, there are two systematic differences between the descriptive adjectives and the reinforcers. These are (i) that there is a complete break-down in the propositional link between the adjective and the noun, and (ii) that the content of the reinforcers has developed into abstract notions of TOTALITY and HIGH DEGREE, a phenomenon which has to be distinguished from semantic weakening.

Secondly, it was demonstrated that the descriptive adjectives draw out one or several defining attributes of the noun that are of a propositional character. The reinforcing adjectives, on the other hand, combine with degree nouns, such as *mess*, *bliss*, *bore*, *joy* and *idiot*, and reinforce the gradable property in them. Degree nouns are rather more like adjectives than typical nouns in that they are property concepts, whose main function is to describe a referent. They might be described as adjectives dressed up as nouns.

Thirdly, reinforcing adjectives only occur pre-nominally. They are scope-taking operators, and the default position for such elements in English is pre-positional. Moreover, the phrases in which reinforcing adjectives occur are typically indefinite, which has to do with the fact that they have a descriptive rather than an identifying function.

The results of the present study allow me to formulate three broad hypotheses for future research as to the prerequisites that an adjective has to possess in order to take on a degree reading:

- only adjectives with a potential degree reading can be recruited as markers of reinforcement
- only degree nouns are capable of invoking this reading in the adjective
- they can only occur in premodifier position.

Obviously, to prove these hypotheses is a tall order, since it involves a scientific dilemma where positive evidence can never be enough. This is, however, an inbuilt theoretical problem with empirical studies which should not deter linguists from approaching the most exciting and enigmatic aspects of language.

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