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The order of premodifiers in English nominal phrases

by

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Abstract

The research reported in this thesis sought an explanation for the order of premodifiers in English nominal phrases. It aimed to establish what validity there is in the quite divergent earlier explanations, to find any other valid forms of explanation that might exist, and to integrate them all.

The method was to make a wide survey of as many varieties of current English as possible, by observation; to then analyse the order at all levels (semantics, syntax, and so on); and to check the accuracy of the results against the 100-million-word British National Corpus.

From that research, the thesis asserts that parts of most past approaches can be integrated into a comprehensive explanation; and that there is a new and important element of the full explanation, namely that of words' semantic structure, which is the combination of types and dimensions of meaning that make up the sense of each premodifier.

Other new elements in this treatment of the subject are analysis of long groups of premodifiers (up to 10 words), consideration of why premodifiers regularly occur in different positions in the order, and explanation from the historical development of premodifier order.

After an introductory chapter and a survey of the relevant literature, the thesis argues that the explanation of premodifier order in English nominal phrases is as follows. There are four positions for premodifiers, as in "your (1) actual (2) tinny (3) round (4) percussion instrument" [i.e. a tambourine] (chapter 3). The regular, unmarked order (illustrated in the phrase just quoted) has several elements of explanation: primarily, the semantic structure (chapter 4); secondarily, the syntactic structure (chapter 5). In a second type of order (when two or more words occur in one position), stylistic considerations control the order, not grammatical ones (chapter 7). In a third type of order, a marked one, a premodifier may be put in a position different from the position that the word's usual semantic structure would require, changing its meaning and stylistic effect (chapter 8). Some features of all three types of order are to be explained partly by their historical development - for example, the existence of borderline uses (chapter 9). There are some supporting explanations, from discourse structure and psycholinguistics, for example (chapter 10). The relevance of the previous chapters to wider issues, such as grammaticalisation, is discussed (chapter 11); and conclusions are drawn (chapter 12).
Acknowledgements

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Chapter 1: Introduction

1 Phenomena to be explained

A journalist once described the tambourine as "your actual tinny round percussion instrument".¹ It is generally agreed among linguists and nonspecialist users of language that the order of modifiers in such a phrase cannot be varied freely: we cannot grammatically say "your percussion actual round tinny instrument" for example. There are rules or patterns of some sort, for the order. So the fundamental thing to be explained about the order of premodifiers in English nominal phrases is:

- the nature of the rules or patterns for the normal order.

At the place where tinny occurred in the phrase quoted above, it is possible to use several modifiers together. You could say “your actual tinny, cheap, and generally unpleasant round percussion instrument”; and the order of the words underlined may be varied grammatically: “cheap, tinny, and generally unpleasant”, for example. So a second phenomenon to be explained is:

- why the order can sometimes be varied freely, and the nature of the variations.

A novelist wrote:

(1) “Here was a young, impulsive, over-curious young woman.” ²
That is acceptable and effective English; but most readers will feel intuitively that “over-curious young woman” has young in its normal position, but the first young is in abnormal position. So we must explain:

- the acceptability and effect of such flouting of the rules.

To sum up, we should explain how a single system, the English language, can provide for such variation: how it can have a normal set order, a free order, and an order that breaches the normal order, and what the nature of each order is.

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¹ From a music review; cited in the British National Corpus.

Chapter 1: Introduction

2 Definition of the subject

I have so far assumed that what is meant by “the order of premodifiers in English nominal phrases” is self-evident. In this section, I will set out more precisely what that title covers.

Nominal phrases

Phrases are groups of one or more words which (along with subordinate clauses) function as elements of clause structure (Quirk, Greenbaum, Leech and Svartvik 1985: §2.27). For example, "a splendid silver plastic suitcase" is a phrase; but “a splendid” is not, as it could not function as an element of a clause. Phrases have a head, which is the word that "provides both the semantic and syntactic type of the phrase" (McGlashan 1993: 204); for example, be and helicopter, in "He saw the southbound rescue helicopter", make their phrases nominal phrases, and saw makes its phrase a verb phrase.

"Nominal phrases" are phrases that function as subject, object or complement (and so on) of a clause, as in "He [subject] saw the southbound rescue helicopter [object]" (Quirk et al. 1985: §2.27, on "noun phrases").

Premodifiers

Modifiers are words which depend on the head syntactically. I distinguish them from determiners, which "in general, determine what kind of reference a nominal phrase has: for example, whether it is definite (like the) or indefinite (like a/an), partitive (like some) or universal (like all)" (Quirk et al. 1985: 64; the italics are those of the original). Determiners include predeterminers such as half, both and all, articles such as a and the, and postdeterminers such as first, last and two. Premodifiers, by contrast, "add 'descriptive' information to the head, often restricting the reference of the head" (Quirk et al., 1985: 65), but those semantic generalisations do not define premodifiers. Premodifiers are modifiers which precede the head.

The premodifiers may be “adjectives”; but they may be “adverbs” (“the then prime minister”), “participles” (“running water”), or “nouns” (“noun phrases”). (I use noun, adjective and so on as they are used usually in linguistic studies, and without further definition.)
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English

In studying nominal phrases in English, I am concerned with the resources available in the whole English language: I am not concerned to describe usage in a particular corpus, or in particular genres or varieties. I will draw on some varieties more often than others (for example, advertising, journalism and fiction), but only because they provide more examples of multiple modification, and illustrate its use more fully. I intend the conclusions I reach to apply to English generally.

Order

I take “order” widely, almost equating it with “position”. I will explain that use, and the reason for it, in chapter 3, on zones.

Exclusions from the thesis

I exclude from consideration several kinds of phrasal expression which I deem to be not nominal phrases at all:

- expressions intended to be nominal phrases which the speaker has evidently processed incorrectly; for example, when a man being interviewed described a flintlock rifle as "an old, cruddy old, piece of wood" - I take it that the speaker restarted his phrase after the first old;
- nominalisations which are clauses rather than phrases, as in "He liked hunting wild pigs" - that has the function of a nominal phrase (object of liked) but has its own verb + object structure;
- separate groups of modifiers, as in "Nervous and apprehensive, the man rose" (example from Teyssier 1968:245);
- appositional structures, as in "the poet Wordsworth" - I take that to be two phrases in apposition, “the poet” and “Wordsworth”.

I also generally exclude nominal phrases that have any of the following elements which might be deemed to be premodifiers, but which are sometimes modifiers and sometimes not, or which are controversial in status. I exclude them because considering them seems to lead to no further insight while raising other issues, and so would add needless complication.

- Rank shifted (or "embedded ") phrases and clauses, as in "a run-of-the-mill production", and "that what-do-you call-it thing".

3 I prefer "nominal phrase" to "noun phrase" because sometimes the head is not a noun but a pronoun (etc.).

4 New Zealand Herald, Feb 2, 2006
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- Words that are more like postdeterminers than premodifiers, as in "the very man", the precise reason", and "the particular sport"; they may be regarded as modifiers, but are perhaps intensifiers of the determiner the (Bolinger 1967: 19).
- Expressions with a noun + preposition construction, as in "that idiot of a caretaker".
- Possessives used like determiners, as in "sport's biggest event", and "Steven's life-jacket" (but possessives used descriptively, as in “a women’s magazine”, are included as premodifiers).
- The first element of proper nouns, as in “New York”, "Rodney Hudson".
- Titles, as in “Dr Smith”, and pseudo-titles as in "linguist Chomsky".
- Technical expressions which do not clearly have phrase structure, such as “methyl isobutyl ketone”.

I exclude words that are possibly part of a compound. The explanation is as follows.
- There has been much discussion of the difference between noun + noun phrases (as in "the England team") and noun + noun compounds (or adjective + noun compounds ) as in "the town hall"; much of the discussion depends on the view that compounds (originating in the lexicon) and phrases (originating in syntax) are quite distinct. (Giegerich, 2005, discusses the issues.) There are many issues involved; there seems to be no consensus; and excluding borderline instances does not invalidate my case, I believe. So I have not made and defended a rigorous distinction, but have, as a general rule, simply been careful to avoid nominal expressions that might be thought to be compounds.
- But I include some, where it is clear that the speaker intends the expression to be phrasal, and where the whole phrase provides a useful example. Since the focus of the thesis is syntactic, I apply a syntactic test, following Huddleston and Pullum (2002: 49): the expression is a phrase if, in the context, (a) the putative premodifiers are treated as capable of modifying other heads; or if (b) the putative head is treated as capable of modification by other modifiers. For example, although I take “salt-shaker” as a compound, I take "salt and pepper shakers and grinders" as being phrasal, because salt is treated as modifying shakers and grinders; and shakers is being modified by salt and by pepper. (Usage of noun premodifiers is changing, as chapter 9 will show.)

5 I am deliberately putting aside such nonsyntactic issues as stress pattern, written form, whether the structure is productive, and the psycholinguistic issues of storage and processing.
6 The Shorter Oxford English Dictionary (5th edition, 2002; "SOED", hereafter) gives it a separate entry, as a separate lexical item.
7 Briscoes advertising pamphlet, 2005.
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• However, I do not regard the distinction as very important for my purpose: in borderline instances (as in "horse meat", "horse manure", and even “town hall”), the order and the semantic relation of the elements are the same, whether the expression is analysed as a compound or as a phrase (see section §4.1 of chapter 6 for detail); and it seems clear that even when such expressions are taken as lexical units they are still understood through a modifier-head structure; so my conclusions would be little affected if expressions I treat as phrases were regarded as lexical units. That view is in agreement with that of many recent scholars: some see no strong evidence for a distinction (Bauer, 1998: 85); some see only a fuzzy distinction (Huddleston, 1984: 259); some see a cline or overlap (Biber, Johansson, Leech, Conrad and Finegan, 1999: 589-590; Nevalainen, 1999:408; Kemmer, 2003: 94; Fillmore, Kay and O’Connor, 2003: 243 (1988); Giegerich, 2005: 588-590); and some see compounds as normally having a modifier-head structure (Quirk et al. 1985: 1567).

3 Need for this study

Discussing the order of premodifiers, Cruse wrote (2004: 302): "Various partial explanations have been put forward, but none is comprehensively convincing"; he was right.

Writers on the subject have varied greatly in their views. General explanatory principles have included:

• the structure of thought (Halliday 2004);
• the content of premodifiers (Dixon 1982);
• specificity of meaning or “discriminative function” (Danks and Glucksberg 1971);
• the nature of psycholinguistic processing (Martin 1969b);
• type of adjective (Teyssier 1968);
• transformation from an underlying predication (Vendler (1968).

Other principles, used as partial explanations, include.

• morphology (Bache 1978, 2000);
• grammaticalization (Adamson 2000);
• part of speech (Strang 1962; Biber et al. 1999).
None of those are comprehensive; the few treatments that try to be, such as that of Quirk et al. (1985), are very brief.

In the many approaches to premodifier order, there are, moreover, some striking gaps. As far as I am aware, no thorough treatment has tried to evaluate the different approaches and explanations, and to integrate them. Apparently, no work has studied the historical development of premodifier order as such. None has been based on a detailed understanding of semantics, such as those of Leech (1974) or Cruse (2004). (There have, however, been some short articles that give some consideration to these areas: Adamson 2000 discusses the historical development of the one word *lovely*, with a complex understanding of semantics; Paradis 2000 describes the historical development of reinforcing adjectives - as in “absolute bliss” and “an awful mess” - explaining it partly by the semantic feature of gradability.) We need a general study of premodifiers that will fill those gaps.

Almost all of the previous studies, moreover, have been unaware of the following fundamental facts:

- the same word can occur in different positions in the phrase: for example, *glassy* in the following phrases (which are modifications of attested ones): 8
  - the green sea water
  - the simple glassy arm spines
  - the present disordered glassy state
- the meaning changes with those change in position;
- there is a clear contrast between the set order (as in “splendid silver plastic suitcase”) and free order (“red and white” versus “white and red”);
- the set order may be broken for special effect (as in “a *young*, impulsive, over-curious *young* woman”);
- the order has evolved historically, and appears to be still changing.

We need a study that allows for these crucial facts.

In this study, I will take account of all the explanatory principles that have been proposed; I will include the approaches that have been missed; I will account for the facts that have been ignored.

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8 Longobardi (2001: 577) and Adamson (2000) are aware of this fact and the next, but do not take them far.
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I set out to provide the comprehensively satisfying explanation that Cruse called for.

4 Approach to the subject

My approach to studying the order of premodifiers has been to examine the data - as many different nominal phrases as possible - and to seek an explanation for the order. My approach to explanation has been that of Halliday (2004: 31): "Explaining something consists not of stating how it is structured but in showing how it is related to other things".

For the "other things" that Halliday refers to, I have considered whatever is illuminating. That has included ideas from several different linguistic fields, including both synchronic and historical linguistics and psycholinguistics, as well as semantics and syntax. It has also included the relation of linguistic knowledge to world knowledge. Similarly, I have used concepts from a range of different approaches, treating them as complementary, just as plan and elevation are complementary views of a house; for example, I have felt forced to include some history, because synchronic study leaves some things unexplained.

More specifically, I have followed the approach of Halliday (2004). In particular, I follow him in believing that language is functional in various ways, that utterances and even individual phrases may serve several functions at once, and that those functions use syntax, semantics and phonology as resources to be used flexibly as means to a goal.

In semantics, my approach is a cognitive linguistic one; but it is not specifically that of Langacker (2003, for example). The only work I have found that provides adequate analytical concepts is that of Cruse (2004). That book seems to be little known in linguistics, and used still less; but I rely on its understanding of semantics.

Because I expect those general approaches and particular concepts to justify themselves by their explanatory power, and because those I use are all established in existing studies, I do not attempt to justify them theoretically here. Terms and concepts will be explained as they become relevant; the index will help the reader find the explanations.

5 Methodology
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The first step in my main method of research has been to collect examples of nominal phrases, with all the variations I could find, and as many examples with two or more premodifiers as I could cope with. I have taken them from casual reading, and from material selected as likely to have multiple premodifiers (such as advertising, technical articles, and fiction by writers who apparently like adjectives). I have used constructed examples only rarely - chiefly where I illustrate a point by giving a possible alternative expression.

The second step in my method has been to develop a table, putting words from the phrases into its columns (according to hypothesis, or intuitively). Someone studying clause structure, for example, might put clauses into a table as follows.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Predicator</th>
<th>Complement</th>
<th>Adjunct</th>
</tr>
</thead>
<tbody>
<tr>
<td>The deaths</td>
<td>brought</td>
<td>the casualty total</td>
<td>to ten.</td>
</tr>
<tr>
<td>Riots</td>
<td>erupted</td>
<td></td>
<td>in Tehran.</td>
</tr>
</tbody>
</table>

The table would then suggest “subjects”, “predicators” and so on, and the hypothesis that subjects and predicators are required in English, but complements are not. In using such tables, I am following Hill (1958), Chatman (1960), Carlton (1963), Brown (1965), Bache (1978) Warren (1984), and Quirk et al. (1985). Dixon (1982) and Huddleston and Pullum (2002) follow the same principle, without presenting the results in a table.

The third step has been to formulate hypotheses where necessary, and check them in several ways. I have checked against further examples from my own reading, and from the British National Corpus.9 (I have not sampled the corpus systematically.) I have assessed their coherence with other elements of my whole explanation. In a few circumstances, I have tested a hypothesis by surveying informants informally, to check the acceptability or meaning of phrases.

I have not used informants extensively. As Chomsky says of generative grammar (1965: 8), "any interesting ..... grammar will be dealing, for the most part, with mental processes that are far beyond the level of actual or even potential consciousness; furthermore, it is quite apparent that a speaker’s reports and viewpoints about his behaviour and his competence may be in error". Boas (2003: 12) reports specific problems, such as informants often changing their minds within an hour. (See also Crystal, 1971: 137-138.) In section §4.6.2 of chapter 11, I will illustrate the need to check informants’ and linguists’ intuitions, by contrasting their judgements with evidence from the British National Corpus. I have accordingly followed the evidence of actual use, shown by attested examples, rather than following informants' opinion.

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9 The British National Corpus consists of about 100 million words, representative of British English between 1963 and 1993.
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of what they say, seeking to give an account in which attested data, proposed explanations, and more general linguistic theory cohere with each other.

6 Conventions

I have observed the following conventions.

Expression

I sometimes specify “speakers and writers” (or “readers and hearers”), but commonly write “speakers” to include writers, and so on.

Source of quoted phrases

There is a very large number of quoted phrases, most of which seem to be clearly grammatical and clear in meaning; referencing them all would be distracting as well as needless, I believe. Consequently, the source of a phrase is given only when the phrase may seem improbable, or when the context is important for interpretation. (On occasion, I explain or quote the context as well as the phrase.)

Presentation

- Phrases I discuss are set out as numbered examples. Other phrases are set in the text, in quotation marks, with words to be discussed underlined: "most stress proteins".
- I use italics for words I am discussing, and small capitals for conceptual meaning: huge and enormous both express GREAT SIZE.
- Numbers in angle brackets - as in "<2>" - represent the Shorter Oxford English Dictionary’s numbering of its meanings. (“Shorter Oxford English Dictionary” is hereafter “SOED”; I have used the 5th edition, 2002).10
- Words in square brackets - [...] - indicate my explanatory interpolation in quoted material.
- On the whole, I have avoided phrases with submodifiers, but when I do deal with such a phrase I treat a modifier and its submodifier as a single modifier (one modifying phrase), often assuming that the structure is clear. For example, "the normally ordered phrase" has one premodifier, with normally submodifying ordered.
- To indicate the status of phrases, I use the following signs:
  * - for unacceptable expressions, as in: *"those electric old splendid trains";

---

10 I generally use the SOED rather than the Oxford English Dictionary ("OED") because it gives the historical development of word meanings more clearly; for my purpose, its being slightly more out of date than the online OED, in some entries, does not matter.
Chapter 1: Introduction

# - for expressions which I have constructed and regard as grammatically acceptable; as in #"a typical invented example".

7 Outline of the rest of the thesis

Chapter 2 surveys the literature on the subject, giving the thesis its context of scholarship.

Chapter 3 sets out the four "zones" which control the order of premodifiers, naming the words that occupy them “Reinforcers”, “Epithets”, “Descriptors” and “Classifiers”; it notes that the Classifier zone has subzones. It distinguishes three types of order:

- "unmarked order" (the normal order when words from different zones are used, as in "a splendid silver plastic suitcase");
- "free" order (when there are two or more words from within the same zone, for example "a real, human, compelling and enduring character");
- "marked" order (when the unmarked order is broken for some special effect; for example "a young, impulsive, over-curious young woman").

Chapter 3 also notes three points that will recur through the thesis: some words occur in different zones; they have different senses in different zones; some features of the zones characterise them but do not define them. Those orders, and those points, form the basis for the following chapters.

Chapter 4 and 5 give complementary explanations for the unmarked overall order: from semantics, in chapter 4, and from syntax, in chapter 5.

Chapter 6 explains the order of the subzones in the Classifier zone, again from semantics and syntax.

Chapter 7 discusses free order, and chapter 8 discusses marked order.

In chapter 9, the perspective changes from the synchronic to the historical. The chapter explains the development of all three types of order, and explains features not explained by current semantics or syntax.

Chapter 10 gives supporting explanations (from discourse structure and psycholinguistics, for example); they help us understand premodifier order, but do not deal with principles that control it.

Chapter 11 offers discussion of the significance for other areas of linguistics of what has been set out previously - for grammaticalisation studies, for example - and critiques other theories of premodifier order.

Chapter 12 summarises the conclusions reached, and integrates the various explanations.
Chapter 1: Introduction
Chapter 2: Literature review

1 Introduction

Purpose of the chapter

This chapter is intended to set the context for the remainder of the thesis, by reviewing past scholarship on premodifier order, and by noting how the main ideas in the literature will be used. The chapter will argue that the review confirms the need for the thesis, as set out in the previous chapter.

Outline of the chapter

The chapter first reviews relatively early work (section §2), starting with Whorf (1945), and taking American, European and British scholars in turn, since there are commonalities among the scholars in different geographical areas. Then the chapter reviews later work (section §3). The conclusion (section §4) sums up the review, and argues that the need for the thesis is confirmed by the lack of consensus among writers, and by the gaps in what has been done so far.

Use of concepts

Many of the works reviewed did not distinguish between order of “adjectives” and order of “premodifiers”, and some treated premodifying nouns as “adjectives” (as in “old stone houses”). Accordingly, I will not make strict distinctions either.

2 Earlier studies: up to 1984

2.1 American studies

2.1.1 Particular authors

Whorf

Whorf (1945) appears to have been the first linguist to give a theory of the order of premodifiers in nominal phrases. In his very brief treatment of the subject, Whorf said that adjectives "referring to 'inherent' qualities" are placed nearer the noun than others; for example,
"pretty French girl"; (1945; citation from the reprinted version, Whorf 1956: 93). He did not define "inherent", but illustrated it through such qualities as "color, material state (solid, liquid, porous, hard, etc.), provenience, breed, nationality, function, use". Similarly, "noninherent qualities" include "size, shape, position, evaluation". The order could be reversed "to make a balanced contrast", such as "French pretty girl", contrasted with "Spanish pretty girl".

I will in chapter 6 use a concept close to Whorf’s being inherent - namely, being intrinsic - though a semantic concept, not a metaphysical one, as Whorf’s seems to be.

Hill

Hill (1958) analyses nominal phrases as having six positions, with “order classes” that fill them. Two words belong to the same class if one can replace the other “without affecting the structure of the phrase”; being in different classes is primarily a matter of sequence (1958: 176). When two words belong in the same order class, they can occur in either order.

Hill numbers the positions, and illustrates them with the following phrase.

<table>
<thead>
<tr>
<th>VI</th>
<th>V</th>
<th>IV</th>
<th>III</th>
<th>II</th>
<th>I</th>
<th>Noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>all</td>
<td>the</td>
<td>Ten</td>
<td>fine</td>
<td>old</td>
<td>stone</td>
<td>houses</td>
</tr>
</tbody>
</table>

The definition of position is strictly by order, but the classes have some semantic, morphological and derivational characteristics. The order of two classes can be reversed; for example “fine old houses” can be changed to “old, fine houses”, with a change in the phonology as indicated by the comma; Hill does not specify any conditions under which the reversal can occur.

I accept as a starting point Hill’s emphasis that there simply are set positions, which users cannot overrule randomly (see the Zones chapter), and his assertion that words in the same position can occur in either order.

Ziff

Ziff (1960) asserts that the order of adjectives is determined by their "privilege of occurrence" (1960: 205). That is, in "good heavy red table", for example, good comes first because it can occur with more headwords than heavy and red can. The three adjectives in that phrase make three order "ranks"; damn makes a fourth, since it outranks good - as in "damn good". Ziff does not describe the ranks in any other way, nor specify how many there are.

Ziff himself realised that his rule of "privilege of occurrence" does not cover all instances, and suggested that there must be some other factor (connected with natural kinds), which he could not identify.
Chapter 2: Literature review

Chatman

Chatman (1960) analyses nominal phrases much as Hill (1958) did. They have six "positions" in front of the head, with each position being filled by a word of a certain "class". They are illustrated in the expression "even all these many fresh Parker House rolls". A "position" is defined simply by its place relative to all the other positions; "N-1" (e.g. “Parker House”) comes immediately before the head.

Vendler

Vendler (1968) asserts that the order of premodifiers depends on transformations of more basic clausal structures, from which the premodification structure is derived. There are nine main transformations (numbered A1 to A9), and fourteen subtypes of the first class (lettered Aa to Am, with Ax) - twenty-two possible positions. The transformational operations "are applied in a definite order" (1968: 128), which determines the order of the words: any adjectives of type A1 are placed closest to the head, next come A2, A3, and so on. For example, for "fast red car" red is derived, by transformation A1, from “the car is red”, and placed next to the head; then fast is derived, by transformation A3, from “the car whose speed is fast”, and placed in the next position.

I do not incorporate any transformational ideas in my own explanations; however, I include a parallel in the Historical Explanation chapter, where I assert that postposed phrases have historically been “transformed” into premodifiers, as in “business of the school” becoming “school business”.

Brown

In a very brief treatment of syntax, Brown gives "a loose approximation" (1965: 281) to the ordering of premodifiers. The order is “semantic”: characteristic + size + shape + temperature/humidity + age + color + origin + noun + head noun (1965: 281).

I accept that Brown was right to consider semantics (rather than position, syntax or rather metaphysical issues as earlier writers did); but I believe that he and the later authors who developed his approach were wrong to base their explanation on content. I will argue, in chapter 4, that premodifier order depends fundamentally on semantic structure - the types of meaning that make up the word.

Oller and Sales

Oller and Sales (1969) studied the order of adjectives by conducting a series of experiments in which they asked subjects to formulate phrases like "a small red square", from observing charts with various shapes in various colours. From the results, they inferred a
general principle as follows: "modifiers in the English NP are ordered from the least limiting to the most limiting proceeding away from the head noun" (1969: 222). For them, "limiting" means that the word denotes a subclass of the class denoted by the rest of the phrase.

The role of premodifiers in limiting the class denoted by the rest of the phrase will be central to my Syntactic Explanation chapter.

**Martin**

Like Oller and Sales, Martin (1969a, b) works from a psycholinguistic approach, based on experiment. His theory is that there is a "preferred" order, based on "accessibility". An adjective is very "accessible" if it is quite "definite" or "absolute"; that is, if it has a single meaning which it evokes with all the nouns it can be used with; for example, *Chinese* is more accessible than *good* (because it is narrower in meaning), so it would, in “the base”, be selected first and placed first (e.g. “Chinese good product”). The order is reversed as the phrase is prepared for speech or writing: "a good Chinese product". Martin claims that both syntactic and semantic issues are involved, but that psychological factors are crucial.

I will develop the importance of breadth of meaning in the Semantic Explanation chapter. I will also take a psycholinguistic approach, though it will be only in support of the main explanations (in chapter 10).

**Danks and Glucksberg**

Danks and Glucksberg (1971) concluded from a series of experiments that speakers are influenced by both grammaticalness and acceptability, which Danks and Glucksberg believe to be separate issues. Their subjects felt that some noun phrases were acceptable in context even though somewhat ungrammatical. Danks and Glucksberg concluded that people determine adjective order on pragmatic grounds, with the most "discriminative" adjective being placed first in a string of adjectives, depending on the communicative situation. "Thus, if a speaker intends to refer to one of two tables, one of them Swiss, one German, and both red, he would say 'Swiss red table', and not 'red Swiss table' " (1971: 66).

My chapter 8 will develop the idea that an order can be acceptable in context although somewhat ungrammatical (as "marked order"); section §3 of chapter 10 will discuss the pragmatic issues of discriminativeness and communicative intention.

Danks and Glucksberg, like Oller and Sales, Ziff and Whorf, see a gradation through premodifiers, rather than the distinct “positions” of Hill and Chatman. Resolving that opposition will be important in chapter 4.
2.1.2 Conclusion: American studies

These American studies reached no consensus. But while disagreeing thoroughly, they succeeded in raising nearly all of the issues in premodifier order that have been discussed since:

- whether there are distinct positions (e.g. Hill, 1958), or a scale (e.g. Whorf, 1945);
- whether the basis of order is “semantic” - that is, conceptual - (Brown 1965), or syntactic (Oller and Sales 1969).
- whether there is an underlying basis for the semantic and syntactic structure - a psycholinguistic one, for Martin (1969);
- whether the order is based on transformations of a base (Vendler, 1968) or not (most others);
- whether to rely on experiment (Martin 1969, and Danks and Glucksberg 1971), or on a wide survey of usage (Hill 1958);
- whether there is a fixed order (e.g. Chatman, 1960) or a preferred order (Martin 1969), or pragmatic one (e.g. Oller and Sales, 1969).
- whether there is a metaphysical basis - properties being inherent (Whorf, 1945/1956).

For the majority of those issues, I have shown in the preceding sections how they relate to the discussion in the body of the thesis. As to the others:

- I will set out in the next chapter, and develop in the following ones, the view that there are three types of order, approximating roughly to fixed order, preferred order, and pragmatic order.
- As I stated in chapter 1, I have not used experimental methods.

2.2 Continental studies

2.2.1 Particular authors

Svoboda

I discuss the work of Svoboda for the sake of some points he makes, not as a complete treatment of premodifier order.

Like Firbas and others of the “Prague School”, Svoboda (1968) emphasised the function of language - its communicative purpose. Different parts of the communication have different degrees of “Communicative Dynamism”, which are primarily degrees of newness in the discourse. That applies chiefly to clauses, but sometimes to nominal phrases; for example, in "inattentive eyes", the modifier, inattentive, could in context be rhematic (new), and the head, eyes, could be thematic (given). (See 1968: chapter
3). But Svoboda does not take the next step, to say that successive premodifiers differ in
degree of dynamism.

I will take up Svoboda’s concerns in section §3 of chapter 10.

**Teyssier**

Teyssier (1968) sets out three functions for adjectives, corresponding to three positions in
the nominal phrase, illustrated in "the same handsome English person". The word *same*
identifies; that is, it points to an instance, reinforcing the Determinative. *Handsome* describes or
"characterises", by indicating a quality, which is "nonrestrictive". *English* classifies or
"categorises"; that is, it expands the denotation of the noun. The order in the phrase, then, is:
identification + characterisation + categorisation. Categorisation and characterisation are
matters of degree, and functions can overlap.

Teyssier develops several ideas that are not in the earlier works I have surveyed:
premodifiers have alternative uses and functions; adjectives have connotations and emotive
meaning; shifting adjectives’ position, and coordinating them within one position, affects their
function and meaning; stylistic effects (such as inversion for emphasis) are important. I adopt
all those ideas.

**Bache**

Bache (1978) is a monograph devoted exclusively to the order of premodifying
“adjectives”, based on a survey of 4500 nominal phrases with multiple adjectives from several
dozen books and issues of periodicals. “Adjectives” include some words which others rate as
determiners (*only, many, same, three*), and words which others rate as part of a compound as in "a
professional civil servant" (1978: 65) - we cannot say *"civil and non-civil [etc.] servants".*

Bache describes "modification zones". They are like the positional classes described by
other scholars, but they are broader, and depend on the presence of "broken sequences",
which are sequences of adjectives separated by commas or conjunctions. Modification zone I
consists of any adjectives that precede a broken sequence; modification zone II is a broken
sequence; and modification zone III follows a broken sequence. I illustrate them in the
following table. (The examples are from 1978: 28-29.)

<table>
<thead>
<tr>
<th>Determiner</th>
<th>Zone I</th>
<th>Zone II</th>
<th>Zone III</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>the</td>
<td>usual</td>
<td>good, sound</td>
<td>English</td>
<td>stock</td>
</tr>
<tr>
<td>the</td>
<td>same little</td>
<td>unforeseeable, incalculable</td>
<td></td>
<td>circumstances</td>
</tr>
</tbody>
</table>

The order of adjectives within zone II is: emotional + underived + derived; with
underived adjectives ordered as size + length + height + others. Within zone III the order is:
little/old/young + deverbal + time + colour + nationality + locality + denominal + nominal. These orders are "habitual if not obligatory" for zone I (1978: 59), or "often reversible", for zone II (1978: 71), and there are many exceptions of various sorts.

The concept of zones will be fundamental to the thesis, though in a rather different form.

**Warren**

For Warren (1984), the order of premodifiers depends on their function, and is as follows (1984: 104): describing, + identifying or specifying, + classifying. The function varies with context; for example, "black bear" can be either descriptive or classifying (1984: 86).

If there are two or more premodifiers with the same function:

- Describing modifiers may occur in any order (1984: 285).

Warren’s approach is close to mine in emphasising function, and in allowing for information value (as I noted for Svoboda). I develop her distinction between set order (for the functional types) and free order (for multiple describing modifiers) in chapter 7.

**2.2.2 Conclusion: continental studies**

The continental studies laid more emphasis on function than the American studies did, and introduced discourse issues; they developed the concept of zones, as holding several words at once and being more varied (in content, for example) than “positions”. In all those ways, they provide a context for this thesis.

**2.3 British studies**

**2.3.1 Introduction**

British work on premodifier order has been fairly independent of both the American concern with structural and transformational theories, and the Continental concern with discourse issues.
2.3.2 Particular authors

Strang

Strang (1962) distinguishes between adjectives that are "inherently placed" (1962: 121), which are "roughly speaking ... the shorter, very common" adjectives (1962: 121), and those that are inherently unplaced. The inherently placed adjectives occur in positional classes: general characterising adjectives, + adjectives of colour, + adjectives of age, + head.

Dixon

In discussing the order of adjectives, Dixon\(^1\) (1982) excludes several groups, such as those that are not "basic" (e.g. noisy, which is a “deep noun”). He notes that there are other premodifiers that follow adjectives; those of “origin/composition” precede those of “purpose/beneficiary”, as in "oatmeal dog food."

For adjectives so defined, there is a "single preferred left-to-right ordering" (1982: 24), with normal stress and a single intonation pattern within the order. It is shown and illustrated in the table below.

<table>
<thead>
<tr>
<th>Value</th>
<th>Dimension</th>
<th>Physical property</th>
<th>Speed</th>
<th>Human propensity</th>
<th>Age</th>
<th>Colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>good</td>
<td>big</td>
<td>hard</td>
<td>fast</td>
<td>jealous</td>
<td>new</td>
<td>black</td>
</tr>
<tr>
<td>perfect</td>
<td>long</td>
<td>hot</td>
<td>quick</td>
<td>happy</td>
<td>young</td>
<td>white</td>
</tr>
<tr>
<td>pure</td>
<td>wide</td>
<td>sour</td>
<td>slow</td>
<td>wicked</td>
<td>old</td>
<td>red</td>
</tr>
</tbody>
</table>

A speaker can change the order if he feels that the qualities denoted form an unusual combination; for example he may say "new slow" (meaning ‘new but slow’), where the normal order is for age words like new to follow speed words like slow. There can be several words within one of the seven groups; there is no preferred ordering for them, and the order varies stylistically.

Dixon follows the conceptual approach of Brown (1965) and Bache (1978), and his order has been accepted widely; for example, by Hetzron (1978, citing an earlier work of Dixon's), Pustejovsky (2000), Adamson (2000); but as noted previously, I do not accept the approach or the order.

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\(^1\) Although he has worked extensively in Australia, I include Dixon in “British” studies, because he has worked in the British linguistic tradition.
Chapter 2: Literature review

3 Recent studies

3.1 Introduction

Recent studies of premodifier order have taken a more eclectic approach than earlier ones, drawing on different schools of linguistic thought. They have differed also in being based on surveys of usage, rather than theory, personal intuition, or experiment.

3.2 Particular authors

Quirk et al.

Quirk et al. (1985) based their account of premodifier order on the results of the Survey of English Usage, a large-scale survey of worldwide English usage in many spoken and written varieties - such as Hill had called for, as far back as 1958.

They set out four positional classes of premodifiers: zone I (precentral); zone II (central); zone III (postcentral), and zone IV (prehead). The zones are illustrated in their table (1985: 1340); part of it is given below.

<table>
<thead>
<tr>
<th>Determinatives</th>
<th>Premodifiers</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>our</td>
<td>Numerous</td>
<td>splendid</td>
</tr>
<tr>
<td>a</td>
<td>Certain</td>
<td>church</td>
</tr>
<tr>
<td>some</td>
<td>intricate</td>
<td>old interlocking</td>
</tr>
<tr>
<td>all the</td>
<td>small</td>
<td>carved</td>
</tr>
</tbody>
</table>

The authors explain the order as one of degrees of subjectivity. The premodifiers closest to the head are those most concerned with "properties which are (relatively) inherent in the head of the noun phrase, visually observable, and objectively recognisable or accessible"; and premodifiers furthest from the head are those most concerned with "what is relatively a matter of opinion, imposed on the head by the observer, not visually observed, and only subjectively assessible [sic]" (1985: 1341). (The principle of subjectivity is from Hetzron 1978).

The zones have further characteristics, some of which are as follows. Zone I has words that function as intensifiers, such as certain, absolute, and feeble. Zone II has adjectives that can be intensified and compared; their function is to describe or characterise; examples include big, intelligent, slow, thick, interesting, angry. Zone III has -ed and -ing participles: e.g. “a retired colonel”,

Chapter 2: Literature review

“a working theory”, "interlocking designs". Zone IV has adjectives (such as American, Gothic, economic, medical, rural), and nouns (as in "Yorkshire women", "college students").

There are tendencies for the order of multiple modifiers within zones. For example, the order in zone II tends to be: nonderived modifiers + deverbal modifiers + denominal modifiers, and the order within the group of nonderived modifiers tends to be: size + length + height + others. A further tendency is for emotive, evaluative, or subjective adjectives to precede others (as in "beautiful warm weather").

The account is comprehensive, integrating syntax, morphology, semantics and discourse functions, and it provides a fairly satisfying explanation for the order of multiple modifiers. The division of premodification into four zones will be the starting point for the body of the thesis, in the next chapter, and most of the points noted will be picked up in later chapters.

Halliday

For Halliday (as in Halliday 2004), there are two structural layers in the order. One is experiential; that is, it expresses our experience of the world. It has two positions for "Epithets" (typically realised by adjectives), and one for a "Classifier" (typically realised by a noun or adjective); the Classifier indicates a subclass of the thing denoted by the headword, and Epithets indicate qualities of the subclass. The other order is a logical one, with each premodifier indicating a subclass of the class denoted by the following word. There is evidently an indefinitely large number of modifiers possible in this order.

Halliday illustrates the experiential order as follows (2004: 312).

<table>
<thead>
<tr>
<th>Deictic</th>
<th>Numerative</th>
<th>Epithet 1</th>
<th>Epithet 2</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>those</td>
<td>two</td>
<td>splendid</td>
<td>old</td>
<td>electric</td>
<td>trains</td>
</tr>
</tbody>
</table>

He illustrates the logical order as follows (2004: 330).

<table>
<thead>
<tr>
<th>η</th>
<th>ξ</th>
<th>ε</th>
<th>δ</th>
<th>γ</th>
<th>β</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>magnificent</td>
<td>ornamental</td>
<td>eighteenth-century</td>
<td>carved</td>
<td>mahogany</td>
<td>mantelpiece</td>
</tr>
</tbody>
</table>

I will follow Halliday’s approach in two respects: I will use the experiential and other functions to refine and explain the zone structure given by Quirk et al. (1985); and I will use the concept of layers - layers of explanation (chiefly from syntax and semantics), and layers of meaning types within each premodifier (as “semantic structure”). I also adopt Halliday’s terms “Epithet” and “Classifier”.

Biber et al.

To Biber et al. (1999), premodifier order is influenced primarily by part of speech; there are three positions in the order. “In general, the following order of premodifiers is preferred: adverb + adjective + color adjective + participle + noun + head noun” (1999: 598). The strength of the preferences is indicated by data from an extensive corpus.
The explanation from part of speech will form a subordinate part of my explanation (in chapter 4).

**Adamson**

Adamson (2000) is primarily a history of the word *lovely*, as an example of historical change in word meaning. There is no full or original account of premodifier order; Adamson takes over the order given in Dixon (1982), and material from Teyssier (1968), and from Quirk et al. (1972). I include the work here for the fresh explanations that it gives.

The approach taken is different from that of all the other work considered in this review, as follows.

- Adamson treats language as a complex interaction between speaker and hearer - extending Halliday's view.
- "Affective or speaker-oriented" meaning (2000: 44) is crucial to understanding order.
- Present Day English is seen as the result of historical change, and change is still under way.
- She treats premodifier order and meaning as changing together, both historically and currently: “change order, change meaning” (2000: 45) and “change meaning, change order” (2000: 50). She notes that grammaticalisation has occurred in the changes.

All of those views will be developed in the thesis, chiefly in the discussion of semantics (chapter 4), and of history (chapter 9). The ideas need to be applied more deeply and widely, because Adamson has considered *lovely* and a few words like it, but has not applied her insights to all types of premodifier, or to premodifier order as a whole.

**Huddleston and Pullum**

To Huddleston and Pullum (2002), there are two types of premodifier order.

- There is a grammatically binding (“rigid”) order, by which “internal modifiers” precede “complements”, as in “...over-rewarded financial advisers...” (2002: 452).
- Within “internal modifiers”, there is a “labile” order of seven content types (2002: 453), as shown in the following table:

<table>
<thead>
<tr>
<th>Evaluative</th>
<th>General property</th>
<th>Age</th>
<th>Colour</th>
<th>Provenance</th>
<th>Manufacture</th>
<th>Type</th>
<th>(Head)</th>
</tr>
</thead>
<tbody>
<tr>
<td>attractive</td>
<td>tight-fitting</td>
<td>brand-new</td>
<td>pink</td>
<td>Italian</td>
<td>lycra</td>
<td>women’s</td>
<td>swimsuit</td>
</tr>
</tbody>
</table>

---

2 The 1972 work is a first edition; the 1985 work revised it, under a changed title.

3 The example is from the text, but the tabular layout is mine.
“Labile” order is the default; it may be varied for “considerations of scope or information packaging” (2002: 452), as when “large black sofa” is varied to “black large sofa”.

The approach here is the conceptual one of Brown (1965) and Dixon (1982).

3.3 Conclusion: recent studies

Some work on premodifiers has continued the transformational approach followed by Vendler (see §2.1.1 above), such as Cinque (1994); but to my knowledge no recent work explains the order simply by transformations.

The recent studies surveyed in this section have added a number of insights that a full account of premodifier order must include, and the richness of their explanations has shown the value of surveying usage widely - a width I have tried to emulate; but the wide-ranging approaches remain unreconciled.

4 Conclusion: literature review

Summary

Views on English premodifier order have varied greatly. They have varied as to whether there are distinct positions for modifiers or a gradience, and as to the degree and nature of variability in position. The explanations have varied also: structural, semantic, transformational, and psycholinguistic. There has been some development in thinking, but there has been no development of a consensus, nor any effective integration of different approaches.

There are important gaps. No full study has considered types of meaning, the correlation of difference in position with difference in meaning, discourse structure within nominal phrases, historical change, or the relevance of language acquisition and of modern psycholinguistic research.

This review of the literature thus demonstrates the accuracy of Cruse’s comment (2004: 302, cited earlier) that “various partial explanations have been put forward”, but that none has been comprehensive and fully convincing. The scholarly context of the thesis, then, is that there are many approaches to be taken up and integrated, and there is some room for new approaches.
Prospect: following chapters

The thesis takes up and seeks to integrate the existing approaches. As noted in chapter 1, it treats most of them as complementary, just as the plan of a building, its front elevation and side elevation are; but it rejects some approaches. It follows some new ones.

It also seeks to transcend the previous approaches, by adopting a better understanding of them (of semantics, especially).

It thus proposes an explanation of premodifier order in English nominal phrases as the comprehensive and convincing one that Cruse implicitly called for.
Chapter 3: zones, and types of order

1 Introduction

Purpose of the chapter

This chapter sets out the basic structure of premodifier order, which the rest of the thesis will explain and discuss.

The argument

The chapter argues:

• that premodifier order is a matter of zones (each containing one word, or several, or none), rather than of individual words;
• that there are four zones;
• that there are three types of order:
  • “unmarked” order, across zones, in which words occur in the grammatically set order of the zones;
  • “marked” order, across zones, in which a user may flout the unmarked order, for certain stylistic purposes;
  • “free” order, within one zone, in which words may grammatically occur in any order.

Those will be assertions, to be treated as working hypotheses; the chapters to follow will substantiate them, by explaining the nature of the zones and their order.

Concepts to be used

The concept of premodification zone will be introduced, and each of the zones will be named. The concepts will be developed through much of the chapter.

Outline of the chapter

The rest of the chapter sets out the nature of the zones (§2), and the types of order (§3). The conclusion (§4) sums up, and looks forward to later chapters.
2 Zones of modification

2.1 Premodification order as an order of zones

2.1.1 Four zones of modification

The zones

I follow Quirk et al. (1985) in asserting that the overall order consists of four zones of premodification, approximately as shown in the following table (after Quirk et al., 1985:1340).

<table>
<thead>
<tr>
<th>Determiners</th>
<th>Zone I: precentral</th>
<th>Zone II: central</th>
<th>Zone III: postcentral</th>
<th>Zone IV: prehead</th>
</tr>
</thead>
<tbody>
<tr>
<td>our</td>
<td>our</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>numerous</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>all this</td>
<td>costly</td>
<td></td>
<td>social</td>
<td>security</td>
</tr>
<tr>
<td>a</td>
<td>church</td>
<td></td>
<td></td>
<td>tower</td>
</tr>
<tr>
<td>these</td>
<td>crumbling grey</td>
<td>Gothic church</td>
<td></td>
<td>towers</td>
</tr>
<tr>
<td>some</td>
<td>intricate</td>
<td>old interlocking</td>
<td>Chinese</td>
<td>designs</td>
</tr>
<tr>
<td>all the</td>
<td>small</td>
<td>carved</td>
<td>Chinese jade</td>
<td>idols</td>
</tr>
<tr>
<td>both the</td>
<td>major</td>
<td></td>
<td>Danish political</td>
<td>parties</td>
</tr>
</tbody>
</table>

However, I qualify their account of zone I ("precentral" modifiers). They describe zone I modifiers as "intensifying adjectives" (1985: 1338), which are also described (1985: 429) as having "a heightening effect on the noun that they modify, or the reverse, a lowering effect"; the examples of intensifying adjectives given (1985: 429) include "pure fabrication", "outright lie", "sheer arrogance", and "complete fool". I accept that description, but assert that some of their examples do not fit it.

- "Numerous attractions": numerous is a quantifying determiner, like many and several (as in “several mistakes” and “too many mistakes” - 1985: 262); it is a determiner, in my judgement.
- Major is a synonym of important, and adds meaning to its head, parties (not intensifying it); it belongs in Zone II.

Those two modifiers do not heighten or intensify the meaning of their head words. By hypothesis, I take that quality to be characteristic of zone I (and will show that to be so, in chapter 4, on semantics); and discount the examples. In the following table, I give words which I consider to be accurate examples of zone I words.
Chapter 3: Zones, and types of order

<table>
<thead>
<tr>
<th>Determinatives</th>
<th>Premodifiers</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone I: precentral</td>
<td>sheer, absolute</td>
<td>necessity</td>
</tr>
<tr>
<td>Zone II: central</td>
<td>desperate, bloody</td>
<td>fool</td>
</tr>
<tr>
<td>Zone III: postcentral</td>
<td>absolute</td>
<td>carnage</td>
</tr>
<tr>
<td>Zone IV: prehead</td>
<td>right</td>
<td>nana</td>
</tr>
</tbody>
</table>

With that qualification, I accept the zone structure given by Quirk et al. (1985). It will be the basis for my account of premodifier order in the rest of the thesis.

Terms for the zones

The zone numbers used by Quirk and other (1985) give no indication of the nature of the zones; so, instead of “zone I” and so on, I will use more descriptive terms, as follows.

- I will use "Reinforcer": for Zone I words (like sheer, complete, absolute, as used in the table just above); they reinforce the sense of the noun they modify; in “absolute idiot”, absolute reinforces the concept IDIOCY in the noun.
- I will use "Epithet": for the expressive zone II words, such as splendid and intricate.
- I will use "Descriptor" for the factually descriptive zone III words, such as crumbling, grey, interlocking.
- I will use "Classifier": for zone IV words, which commonly subclassify the referent of the head word.

I intend the words’ everyday senses to suggest the nature of the zones, and I will characterise the zones in the next two chapters; but I use the words as technical terms to name the zones, not define them. Section §2.1.2 below identifies the zones more fully.

Further illustration of the zones

Since the zones will not be fully defined until I have set out their semantic and syntactic characteristics in the next two chapters, I give further illustration here, to give the reader an intuitive feel for their nature, as an aid for the discussion in the rest of this chapter. (Some examples are repeated from above.)

[Please see the table on the next page.]

---

1 The term comes from Paradis (2000).
2 The term is from Halliday (2004), but applies there to both zones II and III.
3 This term is also from Halliday (2004). A number of authors use classify for the function of such words; for example, Teyssier (1968), Warren (1984), Quirk et al. (1985: 1340), Adamson (2000: 60), Bauer (2004: 13).

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Chapter 3: Zones, and types of order

<table>
<thead>
<tr>
<th>Determiner</th>
<th>Premodifiers</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>your</td>
<td>Actual</td>
<td>tinny round percussion instrument</td>
</tr>
<tr>
<td>a</td>
<td>Mere</td>
<td>useless gibbering stop-the-war-at-any-price pacifist 4</td>
</tr>
<tr>
<td>Sheer</td>
<td>desperate</td>
<td>necessity</td>
</tr>
<tr>
<td>a</td>
<td>complete</td>
<td>bloody</td>
</tr>
<tr>
<td></td>
<td>little</td>
<td>black iron fences</td>
</tr>
<tr>
<td>a</td>
<td>shabby</td>
<td>dark city suit</td>
</tr>
<tr>
<td>a</td>
<td>lissome</td>
<td>young TVNZ reporter</td>
</tr>
<tr>
<td>some</td>
<td>gangbuster</td>
<td>new McKinsey idea</td>
</tr>
<tr>
<td>the</td>
<td>beautiful</td>
<td>sunny winter weather</td>
</tr>
<tr>
<td>the</td>
<td>huge</td>
<td>annual ram sales</td>
</tr>
<tr>
<td></td>
<td>ugly</td>
<td>trailing overhead wires</td>
</tr>
<tr>
<td></td>
<td>smooth</td>
<td>panning camera movements</td>
</tr>
<tr>
<td>her</td>
<td>lacy</td>
<td>tin-roofed row house</td>
</tr>
<tr>
<td>a</td>
<td>distinctive</td>
<td>checked baseball cap</td>
</tr>
<tr>
<td>the</td>
<td>filthy</td>
<td>colonial military compounds</td>
</tr>
<tr>
<td></td>
<td>traditional</td>
<td>creamy vanilla ice-cream</td>
</tr>
</tbody>
</table>

(There are few phrases which combine Reinforcers with other premodifiers - and extremely few with all four zones filled - for reasons that will be made clear in chapter 5.)

2.1.2 Nature of modification zones

Introductory note: insertion of words into attested phrases

It is important for the argument that we can be confident which zone the word being discussed belongs in, since I use the examples as evidence for what I am asserting about the zones. Once I have demonstrated the semantic nature of the zones (in chapter 4), I can show what zone any word belongs in from its semantic structure, even if it occurs as the only premodifier. Until then, I am reliant on showing its position relative to other words.

In “a mere useless gibbering stop-the-war-at-any-price pacifist” (just above), the assignation of words to zones is clear: four premodifiers in four zones. In “little black iron fences”, it is fairly clear: "little" cannot be a Reinforcer, since it is, to our intuition, not of the reinforcing type (e.g. sheer, absolute, mere); so the three modifiers must spread across the other three zones, as shown above. However, in the attested phrase, “the smart blue bonnet” (to be discussed below), smart and blue could be thought to belong in either of two columns (smart being intuitively not a Reinforcer):

4 Cited in Fries (2000: 312).
Chapter 3: Zones, and types of order

<table>
<thead>
<tr>
<th>Det.</th>
<th>Premodifiers</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reinf.</td>
<td>Epithet</td>
</tr>
<tr>
<td>possible analysis</td>
<td>the</td>
<td>smart</td>
</tr>
<tr>
<td>possible analysis</td>
<td>a</td>
<td>smart</td>
</tr>
</tbody>
</table>

But if we add *silk* to the phrase, it must be the last premodifier, since normal use is, "smart blue *silk* bonnet", not **"silk smart blue bonnet" or "smart silk blue bonnet"; so the assignment of *smart* and *blue* to zones becomes clear:

<table>
<thead>
<tr>
<th>Det.</th>
<th>Premodifiers</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reinf.</td>
<td>Epithet</td>
</tr>
<tr>
<td>the</td>
<td>smart</td>
<td>blue</td>
</tr>
</tbody>
</table>

That relies, of course, on the reader’s accepting that the amended phrase is idiomatic English, and that **"smart silk blue bonnet" etc., are not.

In some of the tables hereafter, I accordingly insert words into attested examples, marking the insertion by square brackets, to make clear which zones words belong in.

**Premodification zones form a grammatically set order**

The order of premodifier zones in English nominal phrases is set grammatically, for most premodifier combinations; for example, "a heavy trundling sound" must occur in that order; it cannot grammatically be *"a trundling heavy sound"; “lifelong eating habits” cannot be *"eating lifelong habits"*. For that assertion, I appeal primarily to the reader’s intuition, but also to the judgement of most of the writers surveyed in the last chapter.

An exception to order across zones being grammatically set will be outlined in section §3 of this chapter (“Types of order”), and explained in chapter 3, on “marked order”.

**Zones may contain more than one word**

Nominal phrases often have more than one word in the same zone, as shown by several of the phrases in Quirk and others’ table: “crumbling, grey” in their zone III, and “Chinese jade” in their zone IV.

Further examples, within one zone, are as follows.

- Reinforcers: *true, pure villa*.
- Epithets: “a real, human, compelling and enduring character”.
- Descriptors: “the pink and green and blue and silver houses”.
- Classifiers: "computer, software, consumer-electronics, telecoms, cable and internet companies".

Phrases with multiple zones occupied, and with two or more words in one zone, are as follows:
Order is variable within a zone

In each of these phrases, the order of the words within a zone may be changed, and remain grammatical. For example, one could say “pure, true villa”, instead of “true, pure villa”. Instead of “a real, human, compelling, and enduring character”, one could say “a real, compelling, human, and enduring character”, or “a real, enduring, human, and compelling character”, and so on.

Chapter 7, on “free order”, will discuss that stylistic variation of order within a zone.

Zones affect modification structure

As shown in the examples in the last two subsections, words within one zone are usually coordinated: in writing, by a comma or by a conjunction such as “and”, “or” or “but”, and in speech by a pause and appropriate intonation contour. (I discuss exceptions in section §2.2.1, below.) Coordination occurs within all zones; and may not occur across zones.

Examples follow. (The first is attested; the others are constructed.)

<table>
<thead>
<tr>
<th>Determiner</th>
<th>Premodifiers</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>the first</td>
<td>major</td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>hazy, out-of-focus, 3-dimensional</td>
<td></td>
</tr>
<tr>
<td></td>
<td>black and white</td>
<td></td>
</tr>
<tr>
<td></td>
<td>tv</td>
<td>image</td>
</tr>
</tbody>
</table>

We could thus say “a modern, desirable red and brown weather-board and tile villa”; but the coordination cannot be changed to “a modern desirable and red brown and weather-board tile villa”. The coordination is grammatically set.

Being coordinated, words within the same zone modify the head independently (in a “multi-branching” structure); for example, “her [[white], [sagging] face]”, in which the face is represented as both white and sagging, rather than as a sagging face which is white. The difference in structure becomes important when part of the phrase (e.g. "sagging face") represents Given information, and other parts represent New information (e.g. "white); see chapter 10, §3, for explanation.
Chapter 3: Zones, and types of order

By contrast, words in different zones modify the following part of the nominal phrase (forming a "right-branching" structure) - just as determiners do, as in “a [real character]”. For example, “a [black [oilskin coat]]"; or to take a more complex example (with both structures), "the [first [major [[machine-readable], [corpus-based] [lexical project]]]]". The earlier premodifiers are syntactically subordinate to the following part of the phrase.

Those assertions on modification structure have sometimes been denied (see, for example, the discussion in Chomsky, 1965: 196 - 197), so I will support them more fully.

• The contrast between the use of conjunctions, commas and pauses (for coordination within zones) and their absence between zones shows clearly that there is some such difference.

• There is an exact parallel between this distinction and the distinction between independent or “paratactic” clauses and dependent or “hypotactic” clauses: independent (multi-branching) clauses are coordinated with commas, or “and”, but” or “or”; dependent clauses (in a right- or left-branching structure) are linked by special subordinating conjunctions or run on without commas (for restrictive relative clauses).

• Some examples will show the contrast between coordinated and subordinated structures.

• That premodifiers are normally right-branching is seen in the unexpected comma in the following.


(1) "My first, disastrous marriage". 6

Written with a comma, the phrase asserts that this marriage was his first, and was disastrous; the modifiers apply equally and separately to marriage: "my [first] [disastrous] marriage]".

Without a comma, "my first disastrous marriage" would imply that there were other disastrous marriages: "first" is modifying "disastrous marriage"; it is right-branching: "my [first [disastrous marriage]]".

• The next example illustrates the multi-branching structure, where premodifiers are coordinated:

(2) "A black and green rucksack".

The adjectives are syntactically coordinate - "a [[black] and [green] rucksack]" - because different parts of the rucksack are of different colours; "a [black [green rucksack]]" would be a green rucksack that was black - which is absurd.

---

5 Subordinate" is used here to contrast with "coordinate"; no connection with subordinate clauses is intended.

6 From Radford (1993: 82).
Further evidence of right-branching structure is provided by how premodifying phrases are interpreted. Byrne (1979) asked subjects in his experiment to interpret phrases like "a slow fast dog". Typically, they linked the noun and the adjective closest to it into a generic term (“fast dog”), and interpreted the other adjective as modifying that term: "a slow fast dog" was interpreted as meaning ‘an ageing greyhound’. That is, they interpreted the phrases as right branching: "a [slow [fast dog]]".

Finally, there are a number of authorities to support this analysis of premodification structure: Adamson (2000), Biber et al. (1999), Bouchard (2002), Chatman (1960), Fischer (2007), Halliday (2004), Huddleston and Pullum (2002), Quirk et al. (1985), Ziff (1960).

The same word may occur in different zones

The same word may occur in different zones. For example, “smart” may be an Epithet, a Descriptor, or a Classifier:

<table>
<thead>
<tr>
<th>Det.</th>
<th>Premodifiers</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reinf.</td>
<td>Epithet</td>
</tr>
<tr>
<td>the</td>
<td></td>
<td>smart</td>
</tr>
<tr>
<td>a</td>
<td></td>
<td>tight</td>
</tr>
<tr>
<td>the</td>
<td></td>
<td>[successful]</td>
</tr>
</tbody>
</table>

It is very important to note that when a word occurs in a different zone, it occurs in a different sense (though it may have two or more senses within one zone). In the examples just given the different senses are as follows. (The definitions are from SOED.)

<table>
<thead>
<tr>
<th>Det.</th>
<th>Premodifiers</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Epithet</td>
<td>Descriptor</td>
</tr>
<tr>
<td>A</td>
<td>smart</td>
<td>blue</td>
</tr>
<tr>
<td></td>
<td>“fashionable”</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>tight</td>
<td>smart</td>
</tr>
<tr>
<td></td>
<td>“quick, active”</td>
<td></td>
</tr>
<tr>
<td>the</td>
<td>[successful]</td>
<td>[new]</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The same two modifiers may be reversed in order, with one or both words changing their zone and their sense: we can say "red silken cloth" and “silken red cloth”.

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<table>
<thead>
<tr>
<th>Det.</th>
<th>Premodifiers</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>[attractive] red silken</td>
<td>cloth</td>
</tr>
<tr>
<td>a</td>
<td>silken, [attractive] red [nylon]</td>
<td>cloth</td>
</tr>
</tbody>
</table>

The possibility of occurrence in different zones can result in ambiguity. For example, "a big baby" can mean 'very babyish' (Quirk et al. 1985: 430) - '#That guy's just a big baby!’, we might say scornfully, with the following structure:

<table>
<thead>
<tr>
<th>Determiners</th>
<th>Premodifiers</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>big baby</td>
<td></td>
</tr>
</tbody>
</table>

"A big baby" can also mean 'a baby large for its age', as follows:

<table>
<thead>
<tr>
<th>Determiner</th>
<th>Premodifiers</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>big baby</td>
<td></td>
</tr>
</tbody>
</table>

The phrase "a big baby" is therefore ambiguous; and the ambiguity is both as to the meaning of big, and as to its zone.

A word can even occur twice in the same phrase, in different zones. Thus we have, “He’s got very high high notes”,7 “in my young young days”.8

<table>
<thead>
<tr>
<th>Det.</th>
<th>Premodifiers</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>my</td>
<td>young</td>
<td>days</td>
</tr>
</tbody>
</table>

**Zone order is an order of word uses**

In all of the examples in the last section (smart, silken, big, and so on), the word occurring in different zones is used in different ways. That is, it is used in a different sense (for example, smart as Epithet means 'fashionable', but smart as Descriptor means 'quick, active'); or it is used with a different function (for example, big as Reinforcer strengthens the meaning of another

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7 From the British National Corpus.

8 From the British National Corpus. The context indicates that ‘immature’ was intended.
Chapter 3: Zones, and types of order

word, *baby*, but as Epithet, it conveys meaning of its own. We thus reach a very important conclusion: the zone order is an order of word uses, rather than an order of words. That fact will be fundamental to the thesis. (That fact, and the relationship between the word’s zone and its meaning and function will be explored fully in the next two chapters.)

**Zone order constitutes premodifier order**

The presence of gaps in some lines of the tables above indicates that those zones are empty (just as object position in a clause may be empty), and that word uses belong in a zone, irrespective of other premodifiers in the phrase. If that is so, then order is not simply a sequence of word uses; nor can it be simply a matter of modification structure (since the gaps are meaningless for modification structure). The fundamental issue, then, is the nature of the zones: the order of premodifiers consists of the order of the zones in which they occur.

(As a consequence, I will from here on refer to “order”, “position” or “zone” almost interchangeably, as suits the context.)

**Support**

Support for premodification zones comes from Halliday (2004), whose description is very close to that of Quirk et al.; and from Bache (1978, 2000), although that work posits only three zones, and of a somewhat different nature. Works such as Strang (1962: 123) acknowledge that one “position” may have several premodifiers, coordinated.

### 2.2 Discussion of zones

#### 2.2.1 Determining what zone a modifier is in

I have asserted that every premodifier is in a zone, even if it is the only modifier in the phrase. Since I have identified zones so far only by sequence and an intuitive grouping (placing words in the same column), the reader may have difficulty in accepting my allocation of words to zones. This section discusses that problem, pending the semantic definition to be reached in the next chapter.

I give some positive indicators, and some negative “distractors”.

**Indicators**

Coordination. Since premodifiers in the same zone are coordinated and those in different zones are subordinated, the presence of a comma or conjunction indicates fairly reliably that
two modifiers belong in the same zone; conversely their absence indicates that the modifiers belong in different zones.

(The next chapter will show why our intuitive judgements are fairly reliable, by showing their semantic basis - such judgements as that highly descriptive adjectives like babyish are Epithets, and that "plain" or "basic" adjectives like red are Descriptors.)

**Distractors**

Just as there are helpful features, so are there several features which can confuse our perception of a modifier’s zone.

(a) Submodifiers. Just as a nominal phrase may consist of one word or several (forming one constituent of the clause), so a premodifier may consist of one word or several, as a single constituent of the nominal phrase. That is fairly clear with phrases like “a very old woman” and “painfully brilliant vertical streaks”; but particular care is needed in analysing phrases with words that can be either a modifier or a submodifier. For example (i) "Her [dark red] hair" (‘of a dark red colour’) has one (submodified) premodifier, but (ii) "her [dark], [red] hair" (‘dark and red’) has two premodifiers.

(b) The prosody of speech, and the punctuation of writing, are not wholly reliable as a guide to coordination and subordination, and therefore to zone membership. First, Epithets are sometimes run on without coordinating pauses or commas:
- when they reinforce each other (as in “tiny little bird”) as “intensificatory tautology”,
- when one acts in part as a submodifier of the next, as in “a nice warm room”; (that form of modification will discussed in section §3.3 of chapter 5.)

Second, there is a marked use of punctuation (i.e. exceptional use or omission of commas), to be explained in section §1.2 of chapter 8. Finally, some speakers and writers use punctuation idiosyncratically or incorrectly.

(c) Classifiers are another potential source of confusion, since the Classifier zone is more complex than I have indicated so far: we find phrases with several Classifiers, sometimes coordinated and sometimes not, as illustrated below.

<table>
<thead>
<tr>
<th>Det.</th>
<th>Premodifiers</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Epithet</td>
<td>Descr.</td>
</tr>
<tr>
<td></td>
<td>[interesting]</td>
<td>[recent]</td>
</tr>
<tr>
<td>an</td>
<td>[interesting]</td>
<td>[old]</td>
</tr>
</tbody>
</table>

99 The term and the example are from Huddleston and Pullum (2002: 561).
Chapter 3: Zones, and types of order

In fact, the Classifier zone is quite complex, having alternative structures, each with subzones. (In this section - and in the next two chapters - I give only the main points, leaving the details to a separate chapter on the Classifier zone - chapter 6.) But the examples in the table do conform to the principle given above in section §2.1.2: within the Classifier zone (as across all zones), words in different (sub)zones are subordinate to later ones, and words within a single (sub)zone are coordinated.

**Conclusion: determining a premodifier's zone**

I emphasise that these indicators are temporary guides, until the following two chapters have characterised the zones strictly. (Until then, I give multiple premodifiers in the phrase - to show the zones by the sequence - where the identification of a word’s zone is not obvious but is important.)

### 2.2.2 Whether a premodifier can be on the borderline between zones

There are many nominal phrases with premodifiers that may appear to be on the borderline between zones, or on the borderline between premodifiers and determiners. I deal with the borderlines between zones in the next chapter, but will consider the issue briefly here, to establish one further point about zones.

I take an example from Quirk et al. (1985). Possessives are sometimes determiners, as in "his old friend's cottage" and sometimes modifiers, as in "his old fisherman's cottage" (1985: 1335 - 1336). The structures are shown in the table:

<table>
<thead>
<tr>
<th>Det.</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>his old friend’s</td>
<td></td>
<td>old</td>
<td>fisherman’s</td>
<td>cottage</td>
</tr>
<tr>
<td>his</td>
<td></td>
<td>old</td>
<td>fisherman’s</td>
<td>cottage</td>
</tr>
</tbody>
</table>

Each possessive is either a determiner or a premodifier; it cannot be both, nor on the borderline. Similarly, a premodifier's zone will be apparent if we imagine other premodifiers added to the phrase. For example, as noted previously, *silken* in “silken cloth” could be intended and understood as either Epithet or Classifier; but when another premodifier is added, its zone becomes clear:

<table>
<thead>
<tr>
<th>Det.</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td># [beautiful]</td>
<td>[red]</td>
<td>silken</td>
<td>cloth</td>
<td></td>
</tr>
<tr>
<td># silken</td>
<td>[red]</td>
<td>[Chinese]</td>
<td>cloth</td>
<td></td>
</tr>
</tbody>
</table>
Chapter 3: Zones, and types of order

Silken must follow or precede red so words may be close to the borderline between zones (semantically), but they cannot be on the borderline.

There are some semantic elements that are gradient across the zones (as we will see in the next chapter), but the zones are distinct.

3 Types of order

The discussion so far has implicitly set out two patterns of premodifier order:

- a grammatically prescribed order, where modifiers are in different zones; for example, “small carved Chinese idols”
- a grammatically free order, where modifiers are coordinated within one zone; for example, “political, economic and social comment”.

There is a third pattern, however. I illustrate it from a highly descriptive newspaper report of a woman arriving at court to be tried; the report mentioned the woman's yellow dress (felt to be a little unusual for an accused), and described her hairstyle thus:

(1) "her new, curly, Tina Turner bob".\(^{10}\)

The words in that phrase would normally be arranged and structured as follows. (To make the allocation of words to zones clearer, I add to the zones other words that could occur there, mostly from the table above.)

<table>
<thead>
<tr>
<th>Det.</th>
<th>Reinf.</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>her</td>
<td></td>
<td>curly</td>
<td>new</td>
<td>Tina Turner</td>
<td>bob</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(beautiful, intricate)</td>
<td>(horse-hair, Chinese)</td>
<td></td>
</tr>
</tbody>
</table>

In the phrase as quoted, the journalist has deliberately changed the order and coordinated the three modifiers, to change the meaning of some words and achieve a dramatic stylistic effect: new and Tina Turner are intended to be no longer plain, factual words, but descriptive ones evoking many associations, like curly, to which they are coordinated. The zone structure is as follows:

<table>
<thead>
<tr>
<th>Det.</th>
<th>Reinf.</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>her</td>
<td></td>
<td>new, curly, Tina Turner</td>
<td></td>
<td></td>
<td>bob</td>
</tr>
</tbody>
</table>

It is a marked order - “marked” in the double sense of being a breach of what is normal, and in being used for special effect. (The definition is from Croft, 1991: 57.) This usage is like metaphor: there, the incompatibility of a word’s literal meaning and the context spurs the

\(^{10}\) New Zealand Herald., August 2nd 2005, A3.
Chapter 3: Zones, and types of order

reader to construct a new meaning. Here, the incompatibility of a word’s position in the phrase and the position(s) for which it has established meanings similarly spurs a new reading. This usage is an accepted device in English, just as metaphor is. (The nature of this marked order will be set out fully in chapter 8.)

There are, then, three types of premodiﬁer order in English nominal phrases.

(a) Unmarked order is the usual and grammatically prescribed order (as set out in the tables above); words are used in an established sense, and without special effect.

(b) Free order is the order of words within a zone; speakers may arrange them arbitrarily (although, as we will see later, they often control the order for a stylistic reason); the words retain their sense if the order is changed; the variations are equally grammatical.

(c) In marked order, the unmarked order is broken (but by a device which is an established convention), with a change in the normal sense of words, and often with further special effect.

4 Conclusion: the nature of premodiﬁer order

Summary

This chapter has discussed the two fundamental issues for the order of premodiﬁers in English nominal phrases (modiﬁcation zones, and types of order), and has made a number of assertions.

On modiﬁcation zones, the chapter has asserted the following.

- The broad order of premodiﬁers is grammatically set, not a matter of users’ free choice, or of general tendencies.
- The order is one of zones, rather than of individual words or senses.
- The zones:
  - There are four zones: Reinforcer, Epithet, Descriptor, Classiﬁer.
  - Each is syntactically subordinated to zones that follow.
  - Each may contain no words, or one word, or several words.
  - If there are two or more words, they are coordinate; coordination is normally shown by (a) a pause and intonation in speech, or a comma in writing, or (b) a conjunction.
  - Some words occur in different zones (even in the same phrase).
Chapter 3: Zones, and types of order

- It is word senses rather than words as such, that have zone membership (since a particular word can occur in different zones).

  On types of premodifier order, the chapter has asserted the following.
  - There is an unmarked order - the regular, grammatically set order of successive zones.
  - There is a marked order, which contravenes the grammatical one for a special stylistic purpose, but which is established by usage.
  - There is free order within one zone, to which no grammatical rules apply.

Conclusion

The zones are identified here as observable phenomena (their order and their patterns of coordination and subordination being observable), and as all having what users of the language intuit to be a nature of their own; they are not identified by any linguistic definition of essential qualities. The following chapters set out to explain the intuitions and the phenomena, not to (re)define what has been defined already, which would make the discussion circular; the discussion will confirm the preliminary analysis given in this chapter.

Prospect: the chapters to follow

The concepts established in this chapter will be central to the rest of the thesis.

The two main concepts outlined above (modification zones, and types of order) form a foundation on which the next six chapters build directly.

- The unmarked order of the four zones will be given a semantic explanation in chapter 4 (next), and a syntactic explanation in chapter 5.
- The unmarked order within the Classifier zone will be given both semantic and syntactic explanations in chapter 6.
- The free order will be explained in chapter 7.
- The marked order will be explained in chapter 8.
- A historical explanation of the zones and orders will be given in chapter 9.

There are further important facts about zones yet to be established: chapter 6 will show that the Classifier zone constitutes a grammatical construction (not simply an arrangement of words, but a structure of categories contributing to the phrase a meaning of its own); and the examination of marked order (in chapter 8) will lead to the conclusion that the other zones constitute constructions as well (see section §2 of chapter 11).
Chapter 4: Semantic explanation of unmarked order across the zones

1 Introduction

1.1 Introduction to the chapter

Purpose of the chapter

The purpose of the chapter is to explain English premodifier order semantically.

Starting point

The chapter starts from the last chapter's analysis of nominal phrase order as one of zones.

Argument

The chapter argues that the zone order is of "semantic structure". That is:

- the first words (those in the Reinforcer zone) are those with a purely "grammatical" meaning;
- those that come in the next zone (Epithets) are words with conceptual "descriptive" meaning that is scalar;
- words in the Descriptor zone have perceptual "descriptive" meaning that is not scalar;
- Classifier words have "naming" or "referential" meaning.

(The terms in quotation marks are explained in the next section, §1.2.)

Concepts to be used

Here (and throughout the thesis), "semantic" and "meaning" refer to the significance of words individually. They exclude what might be called "sentence meaning" and "discourse meaning"; the latter is treated separately (in the Discourse Explanation section of chapter 10).

Those concepts will be developed in the next section, §1.2, along with others.

Caution

As I noted in the last chapter, the Classifier zone is complex (having subzones within it), and I accordingly deal with it in a separate chapter. Consequently, the treatment of its semantics in this chapter is slightly simplified; I note in section §2.2 what the simplification amounts to.
Chapter 4: Semantic explanation

Outline of the chapter

In the rest of section §1, I first set out the analysis of meaning which I will use (section §1.2). It is crucial to this chapter (and much of the thesis), and some of the concepts and terms may be unfamiliar to readers; so the section is lengthy. I then give a few phrases as data that suggest the scope and direction of the discussion to follow (section §1.3), and three short word histories that give a perspective that should help the main exposition (section §1.4).

The main sections of the chapter are arranged in the order of zones, from the Classifier zone (section §2) to the Reinforcer zone (section §5); each section gives a detailed analysis of the semantic properties of the senses that occur in that zone. Discussion follows (section §6), and a conclusion (section §7).

1.2 Types and dimensions of meaning

Introductory note

In chapter 1, I said that my approach to the subject is a functional one, and that I regard language as a human activity as well as a structured system. Accordingly, I take meaning broadly, to include some of what might be regarded as function. The meaning of a word is whatever contribution it makes to the hearer’s interpretation of the utterance. Words interact with each other, and suggest the meaning of the utterance, rather than constituting it by giving successive units which may be simply added up. In this section, however, I am dealing with the conventionalised meaning of words (of the sort that dictionaries record, that is), not with their full meaning in context.

I stress that I am dealing primarily with the meaning of individual words; in most contexts, that is equated with “meaning” and “semantics”. Meaning that is expressed by the structure of phrases is distinguished by a more specific expression, such as “constructional meaning”.

I also distinguish meaning, as a part of language, from world knowledge (without drawing the distinction sharply); I treat meaning as the relation between language and the experience, knowledge and intentions behind it. The distinction will be important; I deal with it in my discussion of naming. (Thus the thesis is outside both the philosophical approach that treats meaning as propositional content having truth value, and a certain cognitive-linguistic tradition that equates meaning and knowledge.)

This analysis of meaning is taken almost wholly from Cruse (2004). The structuring of types is a little different, but the approach, the main distinctions, and most terms are his.
Chapter 4: Semantic explanation

The words given as examples in this section will mostly have only one type of meaning, but many premodifiers have several types of meaning at once; that will be important for the rest of the chapter.

1.2.1 Types of meaning

1.2.1.1 Introduction

There are "three ways the speaker aids the hearer in selecting the appropriate referent", which are “describing, naming, and pointing” (Cruse 2004: 329). For words considered individually, I will accordingly distinguish among referential meaning (“naming”), descriptive meaning (“describing”), and deixis (“pointing”); and since we use language expressively (as well as to select referents), I also distinguish expressive and social meaning from the others. Words such as determiners and intensifiers contribute grammatical relations to the hearer's interpretation, so I also distinguish grammatical meaning. This section explains those types of meaning.

1.2.1.2 Naming: referential meaning

The first of the three ways of designating a referent, naming, is used by proper nouns, such as “Auckland”. Their significance for us comes from the social convention that the word will be the referent's name; the significance is (1) the bare mental referent (the concept representing the real-world thing named), and (2) our general world knowledge of the thing (e.g. Auckland's location, population, and so on), varying considerably from person to person. I distinguish that world knowledge from meaning, which is part of the system of language, and which does not vary in essentials from person to person.

Many uses of common nouns are similar to the use of proper nouns. They function as names if they are referentially stable; that is, they would have the same reference even if the concepts that go with them were changed. Cruse (2004: 53) explains it this way: "Suppose one day it was discovered that cats were not animals ...... but highly sophisticated self-replicating robots"; we would still apply the word *cats* to the same things as now, although we would no longer associate with them concepts such as LIVING. The semantic or linguistic meaning of *cat*, then, is the mental content to which we attach those concepts, not the concepts themselves, since it is by world knowledge that we attach to cats the concepts, LIVING, MAMMALIAN, and so on. I regard many premodifying nouns (as in *mountain valley* and *steel bar*) as having this type of meaning, just as proper nouns do. (They may have other types of meaning, as well.) They identify a referent, rather than describe it.
Chapter 4: Semantic explanation

This type of meaning, as “bare” mental referent, is bare of descriptive elements (to be discussed in the next section). It is also bare of shape, size, and discreteness. In English, mass nouns have that quality - unboundedness: with rice, for example, we must use expressions like “a grain of” to give any element of shape, and to make the referent countable. (In some languages, all nouns are unbounded1; the quality will be discussed further in section §3.4 of chapter 10.)

I will call this type of meaning (identifying a mental entity as referent) “referential meaning”. The use does not imply any referent in the external, physical world; and it is distinct from “reference” as the speech act of directing a hearer’s attention to some “real”, external entity.

The distinction I have just made between world knowledge and meaning is much more difficult and controversial for premodifiers other than nouns. My assumptions are that:

- whereas "an Auckland street" relates to world knowledge directly, "warm water" relates to it more distantly and indirectly - through meaning (which is linguistic) and remembered perceptions of warm objects; "a dangerous situation" relates to it still more distantly and indirectly, and "an utter fool" not at all;
- the significance to us of "naming" or "identifying" words (such as "Auckland street") is almost wholly from world knowledge; that of words such as "warm water" is partly world knowledge, and partly linguistic (that is, "meaning"); and that of words like utter is wholly linguistic.

That view is supported more or less directly by Giegerich (2005) and many of the various writers in Peeters (2000); it will become clearer in the following sections. Boas (2003: 168 ff.) gives a useful overview of the issue.

Referential or naming meaning has not usually been regarded as a type of meaning. Works that treat it much as I do include Coates (2000) and Bauer (2004). Cruse (2004) regards it as I do, but does not list it in his types of meaning.

1.2.1.3 Descriptive meaning

Descriptive meaning includes most of what is usually called "meaning". It is the sort of meaning that determines whether a statement can be judged true or false, and whether it can be negated or questioned. It is objective (as opposed to subjective) in being not simply an expression of the speaker's state, and is "displaced" in having relevance outside the immediate

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1 See Rijkhoff (2002: 50 - 51), for example, referring to Maya Yucatec and Thai. My quality, unboundedness, is his feature, “[-Shape]”.

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speech situation. It enables a hearer to make inferences (for example, the meaning of conscious implies LIVING), whereas from referential meaning it is our knowledge of the world that enables inference, as when being “in Auckland” implies being at a certain latitude and longitude. (These points are all from Cruse 2004, 44-45.)

I distinguish two types of descriptive meaning.

(a) Perceptual meaning: meaning that is maximally close to perception, either to sense perception (as in wet, heavy, and red), or to perception of the mind’s own state (as in anger or conscious). “Perceptual” is roughly equivalent to “concrete”. (Perceptual meaning corresponds to Cruse's “basic meaning” and the meaning of "observation vocabulary" - 2004: 50.)

(b) Conceptual meaning: meaning that is general and abstract, being relatively remote from perception, as in elementary, capable, and correct.²

The distinction between perceptual and conceptual meaning is not absolute, since perceptual meaning must be partly conceptualised to be stored mentally, and to be integrated with the rest of meaning. Descriptive meaning thus corresponds to "ception" (Talmy 2001): knowledge that relates perception and conception.

Some works that distinguish descriptive meaning from others are Leech (1974: 26 - “conceptual meaning”), Lyons (1977: 50 - “descriptive function”). Some other works distinguish perceptual and conceptual meaning within descriptive meaning, as follows: Adamson (1999: 573), distinguishing meaning that is from “physical experience”, and meaning that is “abstract and ideational”); some of the psycholinguistic works to be cited in chapter 10.

(The nature of descriptive meaning is expanded in the section “Dimensions of descriptive meaning”, §1.2.2 below.)

1.2.1.4 Expressive meaning

Expressive meaning is what speakers express about themselves; it is what the hearer understands of the speaker's emotive state. I emphasise "express": bloody, for example, commonly expresses anger, but anger denotes³ to it.

I take expressive meaning to consist of two types:

- emotive meaning - emotions or feelings such as anger, fear and irritation - as in disgusting and horrible,

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² This use is therefore distinct from the broad Cognitive Linguistics use of "conceptual" which covers all meaning.

³ I use "denote", here and later, for symbolising a descriptive meaning.
Chapter 4: Semantic explanation

- attitudinal meaning - attitude of either approval or disapproval: *tight-fisted* and *economical* can be used of the same behaviour to convey disapproving or approving attitude.

Although we make finer distinctions among emotions and attitudes in everyday life, I do not make them here. As argued by Fillenbaum and Rapoport (1971: 209), there are too many possible criteria for the distinctions to be reliable.


1.2.1.5 Social meaning

Social meaning is what a word expresses of the social situation in which it is being used. I distinguish two types.

- dialect meaning, including geographic, historical, and social class variation in language;
- register; including field (the subject of the utterance), mode (spoken or written language), and style (degree of formality, and individually chosen variation in language). (Register is social to the extent that it depends on the relationship that the speaker or writer is setting up with the audience.)

For example, *bach* (‘cottage’) has geographic meaning (‘from New Zealand’); *eftsoons* (‘soon’) has historical meaning. “It runs on the aroma of a textile offcut soaked in petroleum derivative lubricant” ⁴ (‘It runs on the smell of an oily rag’) has formality as part of its meaning.

This sort of meaning is what Cruse (2004) calls “evoked” meaning - a term which is not wholly clear, and which is potentially misleading. It has been less recognised than expressive meaning. Works that acknowledge it include Leech (1974: 26 - “stylistic meaning”); Lyons (1977: 50 - “social meaning”); and Halliday (1977: 200-201).

1.2.1.6 Grammatical meaning

Grammatical meaning is what words convey of how they are to be related to other words. It is in effect an instruction to hearers, guiding them in how to interpret the utterance. (Eckardt, 2006: 249, and Bybee, 2002: 11, describe grammatical meaning similarly.)

At clause level, it includes subject and object relations; in “man bites dog”, grammatical meaning instructs the reader to take the man as the actor. In a prepositional phrase, it requires the hearer to relate the preposition and the following nominal phrase. Since at both levels the

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⁴ A 2006 advertisement for Honda cars.
meaning is carried by a construction, I call that sort of grammatical meaning “constructional meaning”, since a construction is a syntactic structure which itself contributes meaning, in addition to the meanings contributed by the words; see Croft (1999: 64), Goldberg (1995), and Traugott (2006).

At modifier level, grammatical meaning has two lexical (i.e. non-constructional) forms.

- Its main form is illustrated in “clean water”: *clean* instructs the reader to relate the concept **CLEAN** to the referent of the headword *water*; that meaning is entailed in being a modifier - “modificational meaning”.
- Its other common form in modifiers is intensification - an instruction to intensify the concept expressed by another word (just as in “very big”, the submodifier *very* intensifies *big*); for example, “utter fool” instructs the hearer to intensify **FOLLY**.

Since this form will be our main concern, I will usually refer to it simply as “grammatical meaning”, rather than as “lexical grammatical meaning”. (Cruse treats grammatical meaning as an area of semantics, rather than as a type of meaning.)

This grammatical function of words has often not been regarded as “meaning”; but purely grammatical words such as *the* are not meaningless; and the grammatical function is part of the contribution words make to the hearer's interpretation of the utterance. It often escapes notice, because it is generally below the hearer’s full consciousness - as noted by Bybee (2002: 111), for example.

To summarise: in grammatical meaning, we will be concerned with -

- two lexical forms -
- modificational meaning (which all modifiers have);
- intensifying meaning;
- constructional meaning.

1.2.1.7 Discussion

Cruse’s three ways of designating referents form a scale of generality: naming designates specific referents; pointing is very general, since such words, like pointing gestures, can be used for any referent; describing comes between them, being moderately general:

(Most specific) naming ← describing → pointing (most general)

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5 I use "designate" for having referential meaning; it contrasts with expressing and denoting, and also with referring (as a speech act).
I add two other semantic functions to those three:
- the expressive function, which uses social and expressive meaning,
- the reinforcing function, which uses intensifying meaning.

They differ from naming and describing, not on the generality scale, but on an objectivity scale, since they are subjective - dependent on the feeling and opinion of the speaker.

The relationships among the semantic functions and types of meaning may be shown in the semantic map below (diagram 1). It serves two functions: summarising what has been said so far, and forming a basis for development of the argument in the rest of this chapter and in later chapters. (In particular, the horizontal scale - generality - and the vertical scale - subjectivity - anticipate later explanation.) It is to be read as follows.

- The position of the types of meaning (in roman type) relate to the horizontal and vertical scales.
- The meaning types linked by lines may occur together, synchronically; for example, conceptual and intensifying meaning may constitute the sense of a word, but not referential and intensifying meaning (unless linked by perceptual and conceptual meaning).

The italicised labels and the dotted boxes indicate semantic functions (which are carried out by the meaning types).
Chapter 4: Semantic explanation

The map is intended to make explicit and clear the conceptual structure beneath the semantic analysis given in the thesis; the meaning types are essential to the explanations to be given, but the semantic functions and the mapped relationships are not essential. The analysis which the map represents has been documented only from premodification, but the map is presented tentatively as a map for English as a whole, since it builds on Cruse's general analysis (2004).

It will be argued in chapter 9 that historical development follows the lines - usually left to right, and top to bottom; for example, expressive meaning may develop for a word with conceptual meaning, but not for a word with only perceptual meaning.

1.2.2 Dimensions of descriptive meaning

**Intrinsic dimensions**

Intrinsic dimensions of descriptive meaning are those which elements of meaning have in themselves, not as part of their relation to other elements of meaning.

(In this section I will explain terms by illustration rather than by definition.)

(a) Quality: what makes the difference between blue and yellow, big and heavy, honest and intelligent.

(b) Intensity: what makes the difference between small, tiny and minute, and between sore, painful, and excruciating.

(c) Specificity: what makes the difference between collie, dog, and animal, and between chast and virtuous (instances of type specificity); between toe, foot, and leg (part specificity), and between small, tiny and microscopic (specificity of intensity). The opposite of being specific is being general.

(d) Vagueness includes two types, as follows: (1) being ill-defined; (for example, if chair is defined as "seat having legs and a back", then it is ill-defined or vague as to having arms); (2) having lax application; (for example, line is lax in application, or vague, in being applied to an uneven row of people, as well as to a geometric line). The opposite of being vague is being precise.

(e) Basicness: being primary in the mind's system of meaning; a word's meaning is basic if other words are understood by it; children normally learn more basic concepts before less basic ones. DOG is more basic than both COLLIE and ANIMAL; RED is more basic than MAROON. (I emphasise “understood”; how words are defined is a separate issue.) I regard basicness as
Chapter 4: Semantic explanation

being more psycholinguistic than linguistic, however, and will deal with it in that section of chapter 10.

The scale from chair through furniture to object is a variation in both generality and vagueness; the two qualities are correlates, in both being ways in which words apply widely, and in commonly occurring together. I will treat them as two “strata” within one scale. The issue will be important in the discussion of grammaticalisation, in section §3 of chapter 11.

Relative dimensions

Relative dimensions relate different elements of a complex word meaning.

(a) Necessity and expectedness. In the full of meaning of dog, when used descriptively (Cruse 2004: 54):
- ANIMAL is a necessary feature;
- ABLE TO BARK is an expected feature;
- BROWN is a possible feature;
- ABLE TO SING is an unexpected feature;
- OF THE FISH FAMILY is an impossible feature.

These distinctions are also made (in different terms) by Burnley (1992: 466). Schwanenflugel (1991: 246) says that there has been a “general movement” in recent studies towards such a view of meaning.

(b) Sufficiency. For mammalian, ANIMAL is a necessary but not sufficient feature of meaning; the addition of SUCKLING ITS YOUNG would make a sufficient combination.

(c) Salience. Salience is the degree to which the feature of meaning stands out from the mental background, or is “foregrounded”. Elements of meaning are salient if they are contrasted with another element, if they are in focus in some way, or if we are very conscious of them. In “He walked with leaden feet”, lead’s weight is salient, but not its colour; in “under a leaden sky”, it is the colour that is salient.

These dimensions may distinguish among synonyms, among different senses of a word, and among different uses of what a dictionary would regard as the same meaning of a word. I will discuss intrinsic and relative dimensions only in discussing descriptive meaning, although in principle they apply to other types.

6 I regard synonyms as “words whose semantic similarities are more salient than their differences” (Cruse 2004: 154); they are not identical in meaning, and their differences will be important in the thesis.
1.2.3 Conclusion: types of meaning

In summary, I distinguish five types of meaning: referential, descriptive (with perceptual and conceptual subtypes), expressive, social, and grammatical; and I see descriptive meaning as varying along intrinsic and relative dimensions.

Those terms and concepts are fundamental to much of the thesis - to this chapter, the Free Order chapter, the Marked Order chapter, and the Historical Explanation chapter, in particular. Accordingly, I here adumbrate their importance. I will analyse in terms of types and dimensions of meaning -

- the four zones (this chapter);
- different senses of the same word, and different uses of what a dictionary might regard as the same sense (most chapters);
- relations between synonyms (Free Order chapter);
- changes in the meaning of a word (Marked Order, and Historical Explanation chapters).

It will be evident that I do not see words' meaning elements as being units unique to each word, but as parts of a network, each part being shared to some degree by other words: "bounded sense units are not a property of lexical items as such; rather they are construed at the moment of use" (Croft and Cruse 2004: 109). Lamb (1999, 2004), for example, develops that view.

It will be evident also that in discussing semantics I am concerned not so much with word content as with the way in which words go about conveying content and making reference. (I am certainly not concerned with things in the real world that words may be taken to refer to). For example red and green are semantically the same, for my concerns, since they go about relating language to our experience in the same way - by evoking perceptual experience; but “of the colour that mixes yellow and blue” is semantically quite different from “green”, since it works conceptually, not perceptually. I will use the term "semantic structure" accordingly, to refer to the types and dimensions of meaning that make up the meaning of a word.

Thus, for example, synonyms such as tight-fisted and economical differ in semantic structure, as follows. Economical ₁ (a subsense of SOED sense <4>) is a neutral sense, with the descriptive meaning "careful of resources"; economical ₂ (another subsense of SOED <4>, stated there as "thrifty") has the same descriptive meaning, but it has an attitudinal meaning of approval, as well; tight-fisted (SOED "stingy") has the same descriptive meaning, but has an attitudinal meaning of disapproval. The three senses may be represented graphically, in diagram 2 below.
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The types of meaning are labelled on the left, and are represented by the sections of the vertical bars which make up each sense's semantic structure.

Diagram 2: semantic structure

![Diagram 2: semantic structure]

1.3 Data

The rest of this chapter (§2 onwards) begins the discussion of the first issue set for the thesis, in §1 of chapter 1: why there are rules or patterns for the normal order, and what their nature is. This section makes that issue concrete by giving samples of the data to be explained.

Consider the phrases in the following table.

<table>
<thead>
<tr>
<th>Det</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>splendid</td>
<td>silver</td>
<td>plastic</td>
<td>suitcase</td>
</tr>
<tr>
<td>the</td>
<td>corrupt</td>
<td>local</td>
<td>music</td>
<td>scene</td>
</tr>
<tr>
<td>a</td>
<td>mammoth</td>
<td>three-tiered</td>
<td>wedding</td>
<td>cake</td>
</tr>
</tbody>
</table>

What is it about the meaning of splendid, corrupt and mammoth that makes them precede the other premodifiers? Why do silver, local, and three-tiered come next?

In those examples, the words in the different zones have different core meanings; but we must also account for the fact that words occur in different zones with the same core meaning - often in three of the zones, and even in all four zones. The point was made in the last chapter; here are further examples. (The examples rely on words inserted into the attested phrases, as discussed in the last chapter.)

<table>
<thead>
<tr>
<th>Det</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>triangular</td>
<td>yellow</td>
<td>[glass]</td>
<td>bottle</td>
</tr>
<tr>
<td></td>
<td>short</td>
<td>triangular</td>
<td>pelvic</td>
<td>fins</td>
</tr>
<tr>
<td>[strange]</td>
<td>broken</td>
<td>triangular</td>
<td>pediments</td>
<td></td>
</tr>
</tbody>
</table>
Chapter 4: Semantic explanation

<table>
<thead>
<tr>
<th>Det</th>
<th>Reinforcer</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>pure</td>
<td>undiluted</td>
<td>[modern]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>pure</td>
<td>white-skinned</td>
<td>[Irish]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[legitimate]</td>
<td>new and pure</td>
<td>German</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[attractive]</td>
<td>[new]</td>
<td>Shetland</td>
<td>pure</td>
</tr>
</tbody>
</table>

What is it about the different uses of *pure* that makes them occur in different zones?

The examples, and the questions, indicate the scope of this chapter.

1.1 Word histories

Understanding words' historical changes of meaning helps in understanding the semantic relationships between the zones; so, although I devote a chapter later in the thesis to historical explanation, I give some incidental historical explanation in this chapter. I provide a basis for that in this section, by giving three brief word histories that will illustrate the historical connections between the zones, and the main issues. *Byzantine* is given first, as a straightforward and fairly typical history; *bloody* illustrates clearly the development of social and expressive meaning; *positive* illustrates development through all four zones.

**Byzantine**

The first recorded use of *Byzantine* was in the late 18th century. It meant: "<1> Of or pertaining to Byzantium, the Eastern Roman Empire, or the Orthodox Church". It had referential meaning (identifying a referent, Byzantium), and grammatical meaning (that of being a modifier, indicated by "Of or pertaining to"); it had no descriptive meaning. Through frequent application of the word to artistic work, a new sense developed by mid 19th century: <2> “Spec. Characteristic of the artistic (esp. architectural) style developed in the Eastern Roman Empire”; that has descriptive meaning - partly conceptual (expressed by “characteristic” and “style”), but partly perceptual (the physical characteristics concerned). A parallel development occurred from applying the meaning 'of Byzantium' to politics - the first part of sense <3>: "Like Byzantine politics". That was extended and abstracted, to produce (by the mid 20th century) the second and third subsenses of <3>: "...complicated; inflexible"; the meaning is wholly conceptual. The last stage has been the development of a new conceptual element and the addition of expressive meaning (disapproving attitude) in the last subsense of

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77 As noted previously, senses are from SOED, and angled brackets ("<..>") indicate SOED’s sense numbering. I am following SOED rather than OED, because it dates the senses, and sets them out more by historical development and less by logical relationship than OED does.
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<3>: "...underhand". Although the reference to Byzantium survived in sense <2>, it is now lost - and the OED citations from 1965 and 1966 spell the word with a lower case "b".

**Bloody**

The development of bloody is similar to that of Byzantine. Its first sense (in use in Old English; now obsolete) identified a referent - referential meaning: <1> "Of the nature of, ... composed of ... blood"; for example, "bloody drops". Before the end of that period, it had developed a sense which added descriptive meaning: <2> "Covered, smeared, or stained with blood". In Middle English, sense <3> developed: "Accompanied by, or involving bloodshed" - a more complex sense, with conceptual meaning along with the descriptive and referential elements. From these uses, sense <4> developed in Middle English: "Of thoughts, words, etc.: concerned with, portending, or decreeing bloodshed", presumably with a non-salient element of condemnation. By the 16th century, sense <6> had developed - "Bloodthirsty, blood-guilty": the disapproval has become salient, and the sense thus includes expressive meaning. By mid 17th century, a new usage had developed: <8>: "Used vaguely as a strong imprecation or intensive"; being vague, it has lost most of its descriptive meaning ('blood' and 'bloodthirsty' have gone); it has either expressive meaning (as "imprecation") or grammatical meaning of intensification (as "intensive"). By the 18th century, it had social meaning - that of social context: the word was "on a par with obscene language" (SOED, on the adverbial use); it had the social function of establishing that speaker and hearer were lower class equals.

**Positive**

Positive has been similar in acquiring abstract and expressive meaning elements (though different in developing a number of technical senses); I include it to illustrate the development of a grammatical sense. By the 17th century, it had developed a quite abstract sense <5a>: "Having no relation to or comparison with other things; not relative; absolute....". By the early 19th century, that had led to <5b>, "That is absolutely what is expressed by the noun; ...downright, out-and-out", which SOED illustrates by "a positive eyesore". That has predominantly grammatical meaning (intensification).

**Conclusion to word histories**

In those histories, there are regularities and irregularities in patterns of change, and very gradual changes in meaning. Similarly, in studying the semantic nature of the premodification zones, we should expect to meet both regularities and irregularities in patterns of meaning, and both fine distinctions and great differences in the various uses of the same word, and senses that are close to the border between zones.
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Keeping this historical perspective in mind should aid the following discussion.

1.5 Conclusion to the introduction

In this long introduction, I have set out the concepts I will use in this semantic explanation, some data that provide a challenge and stimulus to explanation, and the historical perspective, which will be a useful background.

I now turn to the semantic explanation itself, taking the zones in turn, and beginning with the Classifier zone.

The discussion will be a little discursive, because it will be used in later chapters, as well as for the immediate purpose of explaining order semantically.

2 Semantic structure of Classifiers

2.1 Introduction

This section explains the semantic structure of Classifiers. Some examples of phrases with Classifiers follow.

<table>
<thead>
<tr>
<th>Determiner</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holland's</td>
<td>premium</td>
<td>white</td>
<td>clover</td>
<td>honey</td>
</tr>
<tr>
<td>a</td>
<td></td>
<td></td>
<td>British Pakistani</td>
<td>taxi-driver</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>110 cm stainless</td>
<td>range</td>
</tr>
</tbody>
</table>

The argument of this section is as follows.

- Classifiers as individual words have referential meaning; they name a bare mental referent, a single concept.
- In use in a phrase, Classifiers evoke a constructional grammatical meaning, which relates that concept to the head.
- They have no descriptive meaning.
- The combination of bare reference and implicit grammatical meaning makes the Classifier zone semantically unique.

In most sections of the chapter, I follow the order of meaning types used in the introduction; but it will help the exposition to begin with grammatical meaning here.
2.2 Grammatical meaning, in Classifiers

Non-constructional grammatical meaning

Classifiers have the grammatical meaning of modification: in effect, they instruct the hearer to relate the entity denoted to the meaning of the head word: in “clover honey”, clover instructs the reader to relate the concept CLOVER to the referent of the headword, honey.

Constructional meaning

Classifiers also have the other type of grammatical meaning explained in the introduction to the chapter, constructional meaning: an implicit relation between modifier and head. Examples are as follows.

- “Clover honey”: honey MADE FROM clover.
- “British ... taxi-driver”: taxi-driver OF British NATIONALITY.
- “Pakistani... taxi-driver”: taxidriver OF Pakistani ETHNICITY.
- “110 cm ... range”: range 110 cm IN SIZE.

(To simplify exposition, I will in this chapter generalise those relations as TYPE - clover honey will be a type of honey, a 110 cm. range will be a type of range. I will return to the distinctions in the Classifiers chapter.)

This implicit relation is not part of the meaning of the modifier itself; the hearer takes it from the construction of the phrase (aided by world knowledge). That can be seen clearly from phrases like -

1. "a British Pakistani taxi-driver".
   British identifies his place of residence and Pakistani classifies him ethnically; residence and ethnicity would be reversed if the Classifiers were reversed (in #“a Pakistani British taxi-driver”; so the relationship to the head depends on the position of the word. Similarly:

2. “French teacher”.

   The phrase is ambiguous between referring to a teacher of French and a teacher from France, until we have an order to show us the construction: #“English French teacher” denotes a teacher of French, but #“French English teacher” denotes a teacher from France. The constructional meaning derives from the position or order, not from the word itself.

   The nature of the constructional meaning can be seen also from the usual unacceptability of using these premodifiers predicatively. We cannot say *"The honey is clover", or (for "a criminal lawyer"), *"The lawyer is criminal". We must add the constructional meaning, and say "The honey is OF THE clover TYPE", and "The lawyer is OF THE criminal-LAW TYPE". To
function as premodifiers, words must denote some quality which can be ascribed to a head.\footnote{As we will see later, Reinforcers (§5) and modal premodifiers (chapter 5, §4) are exceptions to that generalisation.} Classifiers as individual words do not denote qualities, but constructional meaning and referential meaning combine to provide them: OF THE CLOVER TYPE is a property, parallel to OF RED COLOUR (for red). (Some Classifiers, such as English, are borderline in acceptability in predictive use; and usage is changing, I believe, toward accepting expressions like “The range is 110 cm”.)

2.3 Referential meaning, in Classifiers

The meaning is a mental referent, without descriptive content

Classifiers serve the naming function, rather than carrying any qualitative meaning. That is quite clear for some Classifiers, which are arbitrary; for example, “\textit{gamma} rays”. Others may have some knowledge associated with them, for a few hearers, but not to most, I believe; for example “\textit{F16} fighter”, and “\textit{kumbuk} leaves”. Others are words or names of people with some associations from their origin; for example “the \textit{orange} revolution”, “a \textit{Friday} mosque”, “the \textit{Hawthorn} effect”, “a \textit{Potemkin} village”, “\textit{Ross River} fever”. Others are words whose usual meaning elements are irrelevant or even misleading in this use; for example, “\textit{top} quark”, “\textit{naked} singularity”, “\textit{crescent} spanner”. Classifiers are like personal names such as Joe in ”\textit{Joe Bloggs}”, which functions as a submodifier of the head, Bloggs, serving to name or identify the individual member of the family, without having any descriptive elements as part of their necessary meaning - although many have association as part of their possible meaning. (Please see §1.2.2 of chapter 4 for that distinction.) I am asserting, then, that Classifiers as a group are names, in much the same way: they identify an individual entity or type of entity, without having descriptive elements in their necessary meaning.

That can be seen in several other ways.

- It is apparent from the importance of referential stability (as explained in the introduction on types of meaning). That is, words such as \textit{clover} and \textit{cat} (as Classifiers, in ”\textit{clover} honey” and ”\textit{cat} door”), would retain their meaning in the phrase, and their use would still be valid, if our understanding of the qualities of clover changed, or if the door was used by other pets.

“\textit{Passport} photo” denotes simply a type of photo, not its dimensions and so on (though many people will have an image associated with the word, and know the dimensions).
The role of referential meaning in Classifiers is reflected in the structure of dictionary entries. The SOED, for example, gives Classifier senses by the formula "Of or pertaining to...". In "Byzantine streets", for example, Byzantine means <1> "Of or pertaining to Byzantium. The phrase "Of or pertaining to" expresses grammatical meaning - 'Relate this entity to the head, streets'; it does not express any qualitative meaning. Oil as a Classifier is <1> “Of, pertaining to...oil". (As a Descriptor, it is <2> “Smeared or covered with oil...")

Classifiers frequently become head of the phrase (standing on their own, in the place of Classifier + head): “cashew nuts” becomes “cashews”; “a television set” becomes “a television”, and so on. That indicates that the head is felt to be redundant, having the same meaning as the Classifier, which is referential, just as the head is.

Classifiers cannot be used predicatively: we cannot say, *"The nut is cashew", *"The photo is passport", *"The paralysis is juvenile", or *"The hospital is mental".

My emphasis on the naming function of Classifiers and their lack of descriptive meaning is supported indirectly by Bolinger (1986: 103), who makes a distinction between using nouns to state qualities (for example, “It’s enough to make a saint swear”) and to identify an entity (“It was the saint”); that is equivalent to my distinction between descriptive and referential meaning. It is also closely parallel to the standard distinction between restrictive and nonrestrictive (or “descriptive”) use of premodifiers (see Quirk et al. 1985: 1239). I am asserting, then, that nouns and premodifiers have two uses:

- stating qualities, being descriptive, and being nonrestrictive;
- identifying an entity, being referential, and being restrictive.

I am asserting further that whereas nouns as heads may have either use, nouns as premodifiers occur almost always in the identifying, referential use.10

This emphasis is also supported by Anderson (1997), who sees naming as the quintessential function of nouns, and by Coates (2000). Coates argues that expressions referring to unique entities (such as "the west bank" - of a certain river) have the reference mediated by word meaning, without having that meaning constitute the meaning of the expression: the words name, and are empty of their usual descriptive meaning. The psycholinguistic research cited in section §2 of chapter 10 will support these points further.

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9° Compare the use of "thingummy" and "what's-his-name", for identification without description.

10° Possible exceptions will be discussed below, in section §2.4.5.
The meaning lacks boundedness and discreteness

Abstract and generic nouns used as Classifiers fairly obviously do not denote discrete entities; but even concrete noun Classifiers, I suggest, are not understood as denoting discrete entities, delimited in space and time; they are unbounded (section §1.2.1.2). They are like mass nouns in English, and like all nouns in Thai and Yucatec Maya, as discussed by Rijkhoff (2002: 50-51): on their own, such nouns denote a substance rather than an individual entity; they become bounded and discrete (and therefore countable, for instance) only when used with a classifier. Similarly, count nouns as Classifiers are generic. In “a student centre” and "a cat door", the Classifiers do not evoke in our minds any individuals, or any shape, or any countable number of entities - and are morphologically singular, accordingly. “A play station” identifies an activity, but evokes no time or duration. That unboundedness reinforces the fact that Classifiers' meaning is a bare concept.

2.4 Descriptive meaning, in Classifiers

2.4.1 Perceptual meaning

As implied in the previous section, Classifiers have no descriptive elements as necessary meaning, either perceptual or conceptual. For example, *orange*, *top*, and *crescent* commonly denote perceptual qualities (colour, position, shape), but do not do so as Classifiers: "the orange revolution", “top quark”, and “crescent spanner”.

The simple, bare nature of that meaning can be further illustrated by several contrasts - beginning with *silver*, and *black*.

<table>
<thead>
<tr>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td># tarnished, old</td>
<td>silver</td>
<td>plastic</td>
<td>ring</td>
</tr>
<tr>
<td>splendid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>amusing</td>
<td></td>
<td>black</td>
<td>comedy</td>
</tr>
<tr>
<td>full-length</td>
<td></td>
<td>leather</td>
<td>coat</td>
</tr>
</tbody>
</table>

* Silver: The meaning of the Classifier *silver*, in "a tarnished... silver ring", is only the reference to the substance; it does not denote the perceptual qualities of colour and shininess as the Descriptor *silver* does in “splendid silver plastic suitcase”.

11 I return to the issue of unboundedness in the Supporting Explanations chapter, §3.4.
2.4.2 Conceptual meaning

Classifiers do not denote conceptual qualities, just as they do not denote perceptual ones. That can be seen in several ways, as follows.

- The word *silver*, in "a *silver* ring" (discussed above), does not denote the abstract qualities by which SOED explains it: malleability, ductility, and atomic number 47.
- Words that have conceptual meaning in other uses lose it when they are used as Classifiers. The original meaning has been lost from the Classifiers in "wisdom teeth" and “canine teeth”, just as *molars* no longer means “grinders”. (The fact that some users may associate conceptual qualities with such words will be discussed below.)
- Often, a Classifier + head combination has a single word as an alternative. For example, we can say “canines” for “canine teeth”, and "mobile phone" or “mobile”. In each case, the Classifier denotes a subtype of the type of entity denoted by its head, and the single noun denotes that subclass directly; neither denotes the quality of being dog-like, or movable.
- Descriptive meaning enables the hearer to make inferences (Cruse 2004: 45). That is, the descriptive meaning of "a *mountainous* region" (with an Epithet), for example, enables the hearer to infer that the slopes are steep, and so on. Classifiers do not enable inferences from meaning (only from our general knowledge); we cannot infer the country of origin or other qualities of “a *French* window” from its meaning.
- People often do not in fact know the apparent descriptive meaning of Classifiers: people questioned about “*Rice Krispies*” did not know they are made from rice (Wray, 2002: 3).

2.4.2 Intensity dimension: gradability

Classifiers cannot be graded.

We cannot say *"a very Ford sedan"*, *“a very Auckland suburb”*, and so on - since those Classifiers denote entities.
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But even words that in other uses denote gradable concepts cannot be graded when used as Classifiers. We cannot say *"the most mobile phone". As Huddleston (1984: 259) points out, it is acceptable to say "extremely pornographic [Epithet] Swedish films, but not to say *"Swedish extremely pornographic [Classifier] films". Similarly, Giegerich (2005: 574) points out that we cannot modify feline, equine or bovine in literal use, though we can do so in figurative use: in literal use, they are Classifiers, but in figurative use, they are Epithets.

<table>
<thead>
<tr>
<th>Gradable</th>
<th>Epithet</th>
<th>Desc.</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>extremely pornographic</td>
<td>[new]</td>
<td>Swedish</td>
<td>films</td>
</tr>
<tr>
<td>a</td>
<td>most blank and bovine</td>
<td>[old]</td>
<td>[English]</td>
<td>nurse</td>
</tr>
<tr>
<td>Not gradable</td>
<td>* Swedish extremely pornographic</td>
<td>[new]</td>
<td>films</td>
<td></td>
</tr>
<tr>
<td></td>
<td>* rather bovine</td>
<td>[old]</td>
<td>animals</td>
<td></td>
</tr>
</tbody>
</table>

Bauer (2004: 13) and Adamson (2000: 57) make the point also. The non-gradability of these uses comes from their denoting entities - just as Ford and Auckland do - types of entity, that is. (Note that we are dealing with what the language treats as entities, not with metaphysical entities.)

The impossibility of grading Classifiers reinforces the conclusion reached just above, that they do not bear descriptive meaning; but the issue (generalised as scalarity) will be more important for its role in distinguishing between Descriptors and Epithets.

2.4.4 Other dimensions

On the specificity dimension, Classifiers are specific, denoting particular things or classes, not general ones. That is obvious for Classifiers like Ford, Auckland, Byzantine; but it is also true for Classifiers like “mobile phone”, “bovine animals” “canine teeth”. Even closely related senses are commonly expressed by separate words, as in ferric, ferrous, and ferrosoferric; Classifiers for SHINING include fluorescent, phosphorescent, luminescent, and luminiferous. When one word does have different Classifier senses, they are quite different, not expressing shades of meaning: perfect means <13> “Physics: “....obeying mathematical laws exactly”; <14> “Printing: ..... printed on both sides”; <15> “Mycology: ...in the sexual state.” Those senses of perfect are as different in meaning as the homonyms bank (of a river) and bank (financial institution).

On the vagueness dimension, Classifiers are precise, as illustrated by the examples just given. (Classifiers can seem to be vague: concrete perhaps appears vague in its relation to its head - as in “concrete nail” and “concrete block”; but the Classifiers chapter will show that those
two phrases represent separate constructions, each with a specific meaning: those uses are ambiguous, not vague.)

2.4.5 Discussion of descriptive meaning of Classifiers

Classifiers' lack of descriptive meaning

I am asserting that Classifiers lack descriptive meaning. That needs further explanation, since commonly the words appear to have content meaning. There are three elements in the explanation.

(a) Much of the apparent content is the constructional meaning discussed above.
(b) Nearly all of the rest of the apparent content comes from world knowledge - from experience of life and from education - rather than from meaning that is part of the linguistic system. As hearers, we use that knowledge in two ways.
   ▪ We use it to determine the implicit relation referred to in (a) above - whether silver will invoke MADE OF (as in “silver plate”), or FOR THE PURPOSE OF as with “silver polish”).
   ▪ We draw on it for the details about the thing denoted - the apparent content - as in “silver plate”, as malleable and ductile - and perhaps as having atomic number 47.

This explanation is supported directly by Hawkins (2004). Of phrases like “paper factory”, “paper plate”, and so on, he says (2004: 47): “All that the grammar really encodes here is that ...... paper is the syntactic and semantic modifier. These minimal grammatical specifications are then enriched by language users with whatever meanings match the world (a factory makes paper...)”. Such a meaning is an “inference” (2004: 48). “These constructions can mean whatever the world allows them to mean, as long as this is compatible with their minimally specified conventional meanings.” (2004:48). The explanation is also in line with most of the chapters in Peeters (2000).

(c) Sometimes, part of the apparent content consists of qualities which are part of a word’s meaning in other uses, which we associate with the word when we meet it used as a Classifier. (They are neighbouring elements of the semantic network, as suggested in §1.2 above, varying parts of which are invoked by different uses.) That works in two ways.
   ▪ The qualities are associations from uses of the words as Descriptor or Epithets, or as head nouns. We may use the associations mnemonically, to help us grasp the reference, as in “Breville slow cooker”, or “New Zealand short story”; it may be a long short story, since short
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is referential, not descriptive. (Compare the discussion in Bauer 1983: 142-3 on mnemonic motivation in word-formation where there is little content.)

- The quality has survived the historical change from Descriptor or Epithet to Classifier, or from head to modifier - deliberately invoked in trade names like “the Precision Engineering Company”.

In these ways, we can recognise the rather counterintuitive fact that as Classifiers, premodifiers do not have descriptive linguistic meaning.

2.4.6 Conclusion: descriptive meaning in Classifiers

All these instances show that the descriptive meaning of Classifiers is minimal. They denote percepts - objects of mental perception - which may be concrete, (as in "a silver ring" and “fan heater”), or abstract (as in "anger management" and “intelligence quotient”). They do not denote qualities, either perceptual or conceptual: "a silver ring" does not mean that the ring is silvery; "anger management" does not mean that management (or any individual person) is angry.

The descriptive meaning that they often appear to have is world knowledge, not meaning in the linguistic sense. It is clear that “Potemkin village” and “Ross River fever” rely on world knowledge, not meaning; it also true of “silver ring”, “black comedy”, and so on.

2.5 Expressive and social meaning, in Classifiers

With quite rare exceptions, Classifiers do not have expressive or social meaning. The exceptions occur when words bring to their use as Classifiers some social meaning from their use as nouns in other contexts. For example, in "awesome goodie bags", the Classifier has the informality it gained as a noun, in expressions like "a box of doggie goodies".

Technical words are common among Classifiers; they do not generally carry social meaning, as they do not contrast with a synonymous standard word, as in such sailing terms as "mizzen mast" and "crossjack yard".
2.6 Discussion of Classifier meaning

Parts of speech
Nearly all of my instances of Classifiers have been nouns; but other parts of speech occur. However, they all identify a subtype of the type named by the head, as nouns do:
- Adjectives: "Australian little penguin", "Swedish pornographic films" and "costly social security".
- Verbal forms: "British disabled skiers", "eating apples", and "electric soldering iron".

Sense relations
Classifiers which are proper nouns clearly have no linguistic sense relations, such as hyponymy and synonymy: in "a Ford sedan", it is only by world knowledge that we know the relationship of Ford to Mazda and Toyota, or of Holden to Commodore. The same applies to Byzantine in "a Byzantine street"; it is only as an Epithet that Byzantine has synonyms such as devious. Other noun Classifiers may have sense relations (e.g. hyponymy in “silver ring”, “metal ring”); but in general, Classifiers have few sense relations.

Borderline instances of Classifiers
I showed in section §1.4 that Byzantine, a Classifier at first, gradually became a Descriptor, then an Epithet, gaining descriptive meaning; it must at some time have been close to the borderline between zones. A word which currently seems to be close to that borderline is Miltonic. In expressions like "the Miltonic period", the word is clearly a Classifier, with the phrase meaning 'the period when John Milton lived'; but we meet statements such as the following.

(1) Wordsworth “was able to avoid Miltonic diction and write true ‘conversational’ poems”.12
There, the context requires Miltonic to mean ‘formal’ or ‘literary’, which would make the word a Descriptor. According to SOED, the word has no such established meaning; so I take the word to be ambivalent between the contextual meaning, ‘formal’, and the established meaning, ‘of Milton’s time’. It is thus, loosely speaking, “on the borderline” between the Classifier and Descriptor zones. Strictly, however, it has an established Classifier use, and a not-yet established use as a Descriptor. Moreover, if the writer had coordinated Miltonic with a Classifier (e.g. "Jacobean and Miltonic diction"), it would have been a Classifier; but if he had made it precede a Classifier - without coordination (e.g. "Miltonic Restoration diction"), it would have been a Descriptor or Epithet; and it cannot be in both structures at once. (I will

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12Cited from the British National Corpus.
Chapter 4: Semantic explanation

discuss "borderline" instances in later sections, but I will not repeat the argument that they cannot be on the borderline between zones.

"England team" is now often preferred to "English team"\textsuperscript{13}: English therefore seems to be ambiguous between qualitative meaning (“English in character” - Descriptor use) and referential meaning (“from England” - Classifier use). So uses of “the English team” seem to be "on" the borderline; that is, some users take English there as a Classifier, and some as a Descriptor.

Qualification of the treatment of Classifier semantics

As previously noted, I have deferred full treatment of Classifiers to the separate Classifiers chapter. Accordingly, this section has simplified the semantics, by excluding detail, and by the generalisation that Classifiers denote types.

2.7 Conclusion: the semantic structure of Classifiers

Summary

Classifiers as individual words vary a little in type of meaning, the extreme being proper nouns, which have no linguistic meaning. But Classifiers are all alike in the following ways.

- Their linguistic meaning is referential, denoting entities.
- They represent the entity as a unit; that is, the meaning does not include related details and concepts, or feelings, or social connotations.
- Their apparent descriptive content is either -
  - constructional meaning, or -
  - world knowledge of the entity referred to, or -
  - historical or personal association with other uses of the word.
- Classifiers as individual words are simple in semantic structure, having only a single element, representing the thing denoted, without elements of descriptive meaning.

Apart from that lexical meaning, Classifiers in a phrase invoke a constructional meaning, which relates the meaning of the Classifier itself to the denotation of the head.

The zone thus has a dual semantic structure: simple lexical meaning, and constructional meaning.

\textsuperscript{13} That is shown by the British National Corpus citations for the two words.
3 Semantic structure of Descriptors

3.1 Introduction

This section will discuss the semantic structure of Descriptors, as in the following:

<table>
<thead>
<tr>
<th>Determ.</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>little</td>
<td>black</td>
<td>iron</td>
<td>fences</td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>mammoth</td>
<td>three-tiered</td>
<td>wedding</td>
<td>cake</td>
</tr>
<tr>
<td>a</td>
<td>large</td>
<td>growing</td>
<td>[English] family</td>
<td></td>
</tr>
<tr>
<td>immensely gifted</td>
<td>disabled</td>
<td>Irish writers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>her</td>
<td>long</td>
<td>glittering</td>
<td>crystal</td>
<td>beads</td>
</tr>
<tr>
<td>the</td>
<td>archaic</td>
<td>Byzantine</td>
<td>[architectural] style</td>
<td></td>
</tr>
<tr>
<td>skinny</td>
<td></td>
<td>frilled</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The argument is that Descriptors differ from Classifiers in not being referential words, and in having descriptive meaning (which is largely perceptual, with some conceptual element).

3.2 Referential meaning, in Descriptors

Descriptors contrast with Classifiers, in having no referential meaning; that is, they do not name a referent. (They can be used to help the speech act of referring, by restricting the reference of the head; and they have a connection with external "reality" through their psychological basis in perception; but neither of those constitutes their meaning as considered here.)

Descriptors such as black, growing and disabled clearly are not names. Even Byzantine as a Descriptor is not a naming word. The meaning, as in "the archaic Byzantine [architectural] style" for example, is <2> "Characteristic of the artistic (esp. architectural) style developed in the Eastern Roman Empire". As the definition indicates, the name of the city or empire does not constitute its meaning; the reference to Byzantium is part of its possible meaning, as a readily available association, but it is not a necessary part of its meaning because the style was used in other areas and periods. Compare:

<table>
<thead>
<tr>
<th>Determ.</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>tiny</td>
<td>[old]</td>
<td>Byzantine</td>
<td>coin</td>
</tr>
<tr>
<td>the</td>
<td></td>
<td>Byzantine</td>
<td>[architectural] style</td>
<td></td>
</tr>
</tbody>
</table>
Chapter 4: Semantic explanation

In those examples, “Byzantine coin” necessarily refers to Byzantium, but “Byzantine [architectural] style” does not do so, necessarily.

When silver gained a Descriptor use in Late Middle English, it came to denote a perceptual quality, and became detached from the referent (the metal), and from its world-knowledge associations of 'easily worked' and so on, as in "splendid silver plastic suitcase". Compare:

<table>
<thead>
<tr>
<th>Determiner</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>#a</td>
<td>splendid</td>
<td>old</td>
<td>Spanish silver</td>
<td>ring</td>
</tr>
<tr>
<td>a</td>
<td>splendid</td>
<td>silver</td>
<td>plastic</td>
<td>suitcase</td>
</tr>
</tbody>
</table>

Again in contrast with the referential meaning of Classifiers, Descriptors are bounded: their senses are conceived in relation to space or time. Compare the following pairs of uses.

<table>
<thead>
<tr>
<th>Determiner</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>red</td>
<td>permanent</td>
<td>red</td>
<td>alert</td>
</tr>
<tr>
<td>running</td>
<td>#recent</td>
<td>running</td>
<td>races</td>
</tr>
<tr>
<td>running</td>
<td>running</td>
<td>cold</td>
<td>water</td>
</tr>
</tbody>
</table>

In "permanent red alert", red denotes no area, but in "red silken shirt", we apply it to the area of the shirt. In "running races", running is like athletic in designating only a type (not movement or duration), but in "running cold water" it is conceived with movement in time.

3.3 Descriptive meaning, in Descriptors

3.3.1 Perceptual meaning

Whereas the meaning of Classifiers is an entity, the meaning of Descriptors is a perceptual quality or state, which is being ascribed to an entity. It is commonly a sensory quality or state, as in silver (just cited), "full-length black leather coat", "cold rain showers", "a mammoth three-tiered wedding cake"; but it may be somewhat more abstract as with "my super-duper new pup tent", and “a hard young [British] officer". Descriptors commonly have the "direct connection to the visual perceptual system" described by Lamb (1999: 146); but they grade off to more conceptual words, as in #“a tiny old Byzantine coin”.

The point is seen clearly in the contrast between Descriptor and Classifier uses of the same word. We have already seen that with silver and black. Further examples are given in the following table.
The Classifier uses denote types, as discussed in section §2. As to the Descriptor uses: *short* and *distorted* obviously have perceptual descriptive meaning, I believe; *positive* means "Consisting in ... the presence... of features.. rather than their absence" - the meaning consists of the simple perception of presence (of the enjoyment, in this context); *young* is descriptive - it has a strong conceptual element, but is based on concrete fact that is ultimately perceptual.

### 3.3.2 Conceptual meaning

When words develop a Descriptor sense, some element of their meaning is generalised, and the structure of its intrinsic dimensions changes. As *Byzantine*, for example, developed its descriptive meaning according to the buildings' similarity, the artistic style was generalised, and applied across works from different places; the physical style, which had been merely a possible part of the meaning, became the core, expected meaning - “...distinguished by its use of the round arch.... and rich mosaic ornamentation”. The colour of *silver* was generalised to apply to other substances. There is, then, some conceptual meaning in Descriptors.

The conceptual meaning is quite weak, however. That is demonstrated by the difficulty that dictionaries have in stating the meaning of Descriptors. They commonly resort to pointing, rather than defining: *red* is "Of the colour of blood, a ruby etc".

### 3.3.3 Intensity dimension: gradability

Descriptors are not gradable; we do not place their meaning on a scale. We cannot apply intensifiers such as *very* to "travelling cranes", "silver hair", "smashed chair", *disabled* Irish writers", "little black dress". Some Descriptors appear to be gradable; but it is the Epithet

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14 From the OED definition.
Chapter 4: Semantic explanation

senses of the words that are gradable. Examples follow, with a Descriptor use of the word followed by graded, Epithet uses.

<table>
<thead>
<tr>
<th>Word</th>
<th>Use</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>C.</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>young</td>
<td>Descriptor - ungraded</td>
<td>brilliant</td>
<td>young</td>
<td></td>
<td>player</td>
</tr>
<tr>
<td></td>
<td>Epithet - graded</td>
<td>very young</td>
<td>normal</td>
<td></td>
<td>infants</td>
</tr>
<tr>
<td>black</td>
<td>Descriptor - ungraded</td>
<td>little</td>
<td>black</td>
<td></td>
<td>dress</td>
</tr>
<tr>
<td></td>
<td>Epithet - ungraded</td>
<td>very black and negative</td>
<td>[depressed]</td>
<td></td>
<td>mood</td>
</tr>
<tr>
<td></td>
<td></td>
<td>wonderful, very black, very witty</td>
<td>[new]</td>
<td></td>
<td>book</td>
</tr>
</tbody>
</table>

The non-gradability of Descriptors results from their having perceptual meaning. We do not construe perceptions in degrees; we simply construe the quality (for example RED, PREGNANT, DEPRESSED) as being present, not absent; it is only with greater abstraction that we construe qualities as being present to a certain degree. (This point will be amplified later, in the discussion of gradability in Epithets, in §4.2.3.)

3.3.4 Other dimensions

Descriptors vary considerably in specificity. Most are specific, like black, three-tiered, and glittering; but there is a range from very specific to relatively general in umber, brown, and coloured.

Some Descriptors are like Classifiers in being precise and monosemous, for example cerise, which means 'of a light clear red'. On the other hand, even the apparently precise colour words can be somewhat vague (lax in application). Red, for example, is applied to rather different colours in “red hair”, “a red horse”, and “a red face”. Some Descriptors, such as new, old, and young, are vague in the second sense (only partly defined): young means “not many [unspecified units] in age”.

As we will see in the section on Epithets, that degree of vagueness makes them like Epithets; indeed, those words are often used as Epithets, as shown for young in the last section.

15 Construal is the mental process of meaning construction (Cruse 2004: 262).
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3.3.5 Conclusion: descriptive meaning

There is some conceptual meaning in Descriptors, therefore (in that even perceptual sense elements are generalised across instances); but they are primarily perceptual. In general, they are less precise and specific than Classifiers.

3.4 Expressive and social meaning, in Descriptors

Descriptors do not have expressive meaning. As I will show in section §4.3.3, words must have scalar descriptive meaning to have expressive meaning, and that makes them Epithets.

Social meaning occurs only rarely in Descriptors, if at all. The reason is given in section §4.4. A possible example is in "desiccated coconut", desiccated being a technical or formal equivalent to dried.

3.5 Grammatical meaning, in Descriptors

Descriptors have modificational grammatical meaning as all modifiers do: they direct the hearer to apply the content of the word to the head.

3.6 Discussion of Descriptor meaning

Descriptors' part of speech

Most Descriptors are adjectives: black, red, young, and so on. A few are in the form of nouns, as in "a silver sound" and "copper hair", but denote qualities not entities (hence their being listed as adjectives by SOED).

Many Descriptors, however, are verbal in form (having a participial ending). Any meaning of event or action, however, is treated as describing the head entity, and as equivalent to a quality; examples (from the table in section §3.1) are disabled, glittering, and frilled.

Sense relations

Descriptors form semantic relations with other words to a much greater extent than Classifiers do, in the following ways.

- Hyponymy. Coloured has red and blue as hyponyms; red has scarlet and maroon; but the Descriptors young, cold, grassy, and Byzantine do not appear to have such relationships.
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- Opposition of meaning. Descriptors do not in general have antonyms (in the sense of polar or other gradable opposites, like cold/hot, large/small); but they have a complementary term (the two words divide a conceptual area into mutually exclusive compartments) or other incompatible word. (The distinction is from Cruse 2004: chapter 9.) Examples of complementsaries are working/retired, living/dead, moving/stationary. Examples of other incompatible related words are: red/black/silver, grassy/stony/sandy, Byzantine/Gothic/neoclassic. (Note that young, old, cold, and hot also have Epithet uses, and have antonyms in that use; see section §4, below.)

- Synonymy. Some words with Descriptor uses have synonyms; but it is striking that the synonyms commonly are not Descriptors but Epithets (having expressive or social meaning, as discussed in the following section on Epithets): old-ancient, young-juvenile, cold-frigid, black-inky. (The second in each pair is an Epithet, when used in the sense in which it is a synonym.) Perhaps it is only as Epithets that old, young, cold, and black have synonyms; I have not resolved the issue.

- Semantic fields. A number of Descriptors fit into semantic fields (their place in the field largely defining their meaning), rather than into the patterns listed above. Examples include:
  - the colour words (in the field red, orange, yellow, green, and so on),
  - -ed and -ing participial forms, as in "her sleeping face" (where sleeping goes with alternatives such as dozing, and associated activities such as dreaming);

The semantic fields, in which the patterns are irregular and dependent on the facts of the world, are more typical of Descriptors than are the regular and linguistic patterns of synonymy and antonymy.

Borderline instances of Descriptors

Some participles which were Descriptors in their first premodifier use are now Epithets (and are rated as adjectives in dictionaries), as with surprising in “surprising new catwalk trend”. It is natural, therefore that Descriptors grade off towards being Epithets. An example is frilled, as in "a skinny frilled dress", where frilled is very close in meaning to frilly (which is usually an Epithet - “a frilly pink dress”). Old and new as Descriptors are also close to the border of that zone, since they have a somewhat vague meaning, and are frequently used as Epithets; (examples are given in §4.2.3, below).

Conversely, there are instances close to the borderline with the Classifier zone, as participles weaken in event meaning and strengthen in referential meaning (denoting a type of the head entity). "Courageous British disabled skiers" has disabled as a Classifier; "gifted
disabled Irish writers" has it as a Descriptor: the latter use is very close to having the 'type' meaning of the former use.

### 3.7 Conclusion: the semantic structure of Descriptors

**Summary**

The main points from this section are that Descriptors -

- have descriptive meaning;
- are empty of referential, expressive and social meaning;
- are not gradable.

Secondary points about Descriptors are -

- that they are fairly simple in semantic structure (having only one type of meaning, and few sense elements); objective (in lacking expressive meaning); and dominantly perceptual (not conceptual);
- that in comparison with Classifiers, they are more general, have more complexity of relations to other words, and are vaguer;
- that there is a significant semantic difference between the participial Descriptors and adjectival or nominal Descriptors, but they share the qualities listed in this summary.

### 4 Semantic structure of Epithets

#### 4.1 Introduction

This section will discuss the semantic structure of Epithets, which are illustrated in the following table.
Chapter 4: Semantic explanation

The section does not discuss referential meaning, since it does not occur in this zone, just as it does not occur in the Descriptor zone.

4.2 Descriptive meaning, in Epithets

4.2.1 Perceptual meaning

Many Epithets have perceptual meaning, just as Descriptors do, but it is less important than for them, as shown in the rest of this section. In the table below, round illustrates the continuity of perceptual meaning between Descriptor and Epithet uses (both denote shape); great illustrates perceptual meaning in a word without a Descriptor use (denoting size).

<table>
<thead>
<tr>
<th>Det.</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>prominent</td>
<td>round</td>
<td>classical</td>
<td>building</td>
</tr>
<tr>
<td></td>
<td>round</td>
<td>pink</td>
<td>[female]</td>
<td>face</td>
</tr>
<tr>
<td></td>
<td>great</td>
<td>grey</td>
<td>cylindrical</td>
<td>waves</td>
</tr>
</tbody>
</table>

Other examples of Epithets with perceptual meaning are big, delicious, and slim.

The reduced importance of perceptual meaning is shown in the frequent loss or weakening of that meaning in the Epithet use of words that are primarily Descriptors:

<table>
<thead>
<tr>
<th>Det.</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>full-length</td>
<td>black</td>
<td>leather</td>
<td>coat</td>
</tr>
<tr>
<td>A</td>
<td>spicy, very black</td>
<td>[new]</td>
<td></td>
<td>comedy</td>
</tr>
</tbody>
</table>

Here, black means <8b> “Macabre”; BLACKNESS is not part of the necessary meaning of the Epithet use.

4.2.2 Conceptual meaning

The conceptual nature of Epithets can be seen clearly in their contrast with words' Descriptor uses. Byzantine as Descriptor, we saw, denotes architecture with round arches (and so on); as an Epithet, it means <3> "Like Byzantine politics; complicated, inflexible; underhand". The abstract meaning is sometimes achieved by metaphor: compare "a regretful backward glance" (literal, a Descriptor) and "a backward, ignorant, illiterate, inward-looking [native] people" (metaphorical, an Epithet).
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<table>
<thead>
<tr>
<th>Word</th>
<th>Det.</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>Byzantine</td>
<td>an</td>
<td>archaic</td>
<td>Byzantine</td>
<td>[architectural]</td>
<td>style</td>
</tr>
<tr>
<td>Gordon Brown’s</td>
<td>Byzantine</td>
<td>[new]</td>
<td>tax</td>
<td>credits</td>
<td></td>
</tr>
<tr>
<td>backward</td>
<td>a</td>
<td>regretful</td>
<td>backward</td>
<td>glance</td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>backward, ignorant, illiterate, inward-looking</td>
<td>[native]</td>
<td>people</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Conceptual meaning often occurs with other types of meaning. In "garish one-piece climbing suit", for example, garish (<1> "gaudy, over-decorated") has perceptual meaning (DECORATED), conceptual meaning (EXCESSIVE) and expressive meaning (disapproval).

4.2.3 Intensity dimension: gradability and scalarity

We saw in the section on Descriptors that they are not gradable; most Epithets, however, are gradable: that is a crucial difference between them. (As will become evident, I take “gradable” in a wide sense.)

Gradability as degree

Epithets can have degree shown in several ways:

- They can be used in comparative and superlative forms, as in big, bigger, biggest, and in curious, more curious, and most curious.
- They can be graded by intensifying submodifiers such as very, highly, and extremely: “a rather hoarse female voice”, “a thoroughly unitive mystical experience”.
- In other instances, there are different words for the different degrees in the gradation, as in small, tiny and minute, paralleling very small and extremely small.

Gradability by derivation

Grading a concept by deriving a new word with suffixes such as “-ish” also shifts the use from the Descriptor zone to the Epithet zone. Here are examples from colour words, which in their literal use are regularly Descriptors (see section §3).

<table>
<thead>
<tr>
<th>Word</th>
<th>Det.</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Class.</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>blackish</td>
<td>the</td>
<td>blackish</td>
<td>central</td>
<td>cone</td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>blackish</td>
<td>smoky</td>
<td>violet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>the only</td>
<td>blackish</td>
<td>long-legged</td>
<td>bird</td>
<td></td>
<td></td>
</tr>
<tr>
<td>its greenish, powerful</td>
<td>[curved]</td>
<td>beak</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a dull, greenish</td>
<td>[thin]</td>
<td>sickle of shadow</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Gradability by adverbs

Submodification by descriptive adverbs generally turns into Epithets words that are otherwise Descriptors, such as the participial forms in the following table.

<table>
<thead>
<tr>
<th>Word</th>
<th>Use</th>
<th>Det.</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Class.</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>carved</td>
<td>Descriptor</td>
<td>the</td>
<td>great</td>
<td>carved</td>
<td>stone</td>
<td>dragon</td>
</tr>
<tr>
<td></td>
<td>Epithet; graded</td>
<td>the</td>
<td>heavily carved</td>
<td></td>
<td></td>
<td>wardrobe</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ornate</td>
<td>[old]</td>
<td>design</td>
<td></td>
<td></td>
</tr>
<tr>
<td>tailored</td>
<td>Descriptor</td>
<td>a</td>
<td>smart</td>
<td>tailored</td>
<td>trouser</td>
<td>suit</td>
</tr>
<tr>
<td></td>
<td>Epithet; graded</td>
<td>a</td>
<td>finely tailored, top-of-the-line</td>
<td>[new]</td>
<td></td>
<td>suit</td>
</tr>
</tbody>
</table>

Discussion of gradability

It is important to note that words such as carved, tailored, black, old, and young are not graded when used as Descriptors, but when used as Epithets they may be graded, and have a changed meaning. It is also important that it is uses that are gradable or not gradable, rather than words. I illustrated the point in the Descriptors section, but I provide more examples for emphasis.

<table>
<thead>
<tr>
<th>Word</th>
<th>Use</th>
<th>Det.</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>old</td>
<td>Epithet; graded</td>
<td>a</td>
<td>very old</td>
<td>‘new’</td>
<td>breed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>very old and handsome</td>
<td></td>
<td>fellow</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>very old</td>
<td>[black]</td>
<td>iron kissing</td>
<td>gate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Descriptor</td>
<td>a</td>
<td>fat</td>
<td>old</td>
<td>pig</td>
<td></td>
</tr>
<tr>
<td>young</td>
<td>Epithet; graded</td>
<td>very young</td>
<td>pregnant</td>
<td>schoolgirls</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Descriptor</td>
<td>a</td>
<td>hard</td>
<td>young</td>
<td>officer</td>
<td></td>
</tr>
<tr>
<td>black</td>
<td>Epithet; graded</td>
<td>a</td>
<td>very black and negative</td>
<td>mood</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>wonderful, very black, very witty</td>
<td></td>
<td>book</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Descriptor</td>
<td>a</td>
<td>full-length</td>
<td>black</td>
<td>leather</td>
<td>coat</td>
</tr>
</tbody>
</table>

The fact that Descriptors are not gradable is not obvious, for two reasons. First, as just noted, the same word often has a gradable use as an Epithet; second, the fact that words are Descriptors is often not apparent, since they commonly occur without another premodifier that would make the zoning clear.

As Croft and Cruse (2004: 167) say, the difference between gradable and nongradable modifiers arises from complementary ways of seeing qualities: (a) as present or absent, and (b) (with presence presupposed) as present more or less. That fits the distinction between Descriptors, which take the present-or-absent view of qualities, and Epithets, which take the
Chapter 4: Semantic explanation

present-more-or-less view. To take an example from the table: in "a fat old pig", OLD is
construed simply as present, not absent; in "a very old 'new' breed", it is construed as present
to a great degree. In the terms of Langacker (2006), Descriptors construe qualities as discrete;
Epithets construe them as continuous.

A change of meaning goes with the change of viewpoint; or, to put it differently, if we
grade a Descriptor, we change the meaning as well as the zone. If, for example, we add very to
old, in “a fat old pig”, we get #“a fat, very old pig” (which could also be #“a very old, fat pig”).
“Very old” needs to be coordinated with “fat” by a comma or and: it is in the same zone, as an
Epithet:

<table>
<thead>
<tr>
<th>Det.</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>fat</td>
<td>old</td>
<td></td>
<td>pig</td>
</tr>
<tr>
<td>a</td>
<td>fat, very old</td>
<td></td>
<td></td>
<td>pig</td>
</tr>
<tr>
<td>a</td>
<td>very old, fat</td>
<td></td>
<td></td>
<td>pig</td>
</tr>
</tbody>
</table>

Furthermore, old now has not only the factual meaning <1> “That has lived long...” (shared
with the Descriptor use), but has expressive overtones and associations such as impressiveness;
its meaning is close to <7a> “primeval” or <7b> “familiar from of old”. Similarly, “a very
clean smooth shape” could have another very added, modifying smooth; but smooth would
become an Epithet, coordinated with clean and having expressive meaning:

<table>
<thead>
<tr>
<th>Det.</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>very clean</td>
<td>smooth</td>
<td></td>
<td>shape</td>
</tr>
<tr>
<td># a</td>
<td>very clean, very smooth</td>
<td>[moulded]</td>
<td></td>
<td>shape</td>
</tr>
</tbody>
</table>

We conclude tentatively that Epithets are gradable, but Classifiers and Descriptors are
not. However, there are some Epithets that are commonly regarded as nongradable, because
of the nature of their meaning. Eternal and remorseless, for example, seem to be Epithets that are
in fact not graded: they do not occur with very in the British National Corpus, for example. But
that corpus has examples of very used with edible, exquisite, possible, viable and unique, which are all
not gradable in formal use. Those examples suggest that many users of English regard all
Epithets as in some sense gradable.

The explanation can be seen when we distinguish between being intensifiable and being
scalar, as does Paradis (2001). The words being considered may be not intensifiable (e.g. by
very), but they are scalar. As with intensifiable words, their meanings are conceived as being on

16 Adamson (2000) makes a similar point.

17 The fact that it is only Epithets that are gradable explains the apparent oddity that words like big and
small are Epithets. They are perceptual words - we see that things are big or small - so it would be natural
for them to be Descriptors; but they are gradable, in all three of the ways listed.
Chapter 4: Semantic explanation

A scale, but they cannot be intensified because they are at the end of the scale - they are “implicitly superlative” (Paradis 2001: 54). For example, remorseless is at the end of the scale ‘rigorous’ > ‘harsh’ > ‘remorseless’; unique is at the end of the scale ‘common’ > ‘uncommon’ > ‘rare’ > ‘unique’.

This distinction also applies to expletives (such as bloody) and attitudinal Epithets (as in “the wretched fool” and “the poor old thing”). Both types of Epithet are not intensifiable - as noted by Halliday and Hasan (1976: 276) - but they are scalar - semantically situated on a scale (e.g. from enviable to pitiable), and at its end.

Conclusion: Epithets, gradability, and scalarity

Epithets are scalar in descriptive meaning; they are accordingly gradable, unless their meaning is construed as being at the extreme of the scale. Classifiers and Descriptors are not scalar (and therefore not gradable). Grading a premodifier converts it into an Epithet, while changing its meaning.

I have given considerable attention to this apparently unimportant issue because -
- it highlights the crucial importance of semantic structure: reconstruing a word’s meaning as scalar changes a word’s zone, even if its core meaning remains;
- it distinguishes Descriptors from Epithets.18

4.2.4 Other dimensions

Specificity dimension

As I showed in the previous section, the quality denoted by Descriptors has commonly been derived by generalisation over instances of the entity denoted, as with silver, for example. Epithets involve still greater generalisation, resulting in either polysemy - a range of relatively specific senses - as with Byzantine <3> (“Like Byzantine politics”, “complicated”, “inflexible”, “underhand”), or in a single general sense, as with big <3>, “Of considerable size, amount, extent, intensity, etc.”.

1818 A further reason for full discussion lies in further implications. It is common to regard gradability as a feature of adjectives (see both standard reference works such as Quirk et al. 1985: §7.2, and Biber et al. 1999 §7.2, and more recent works such as Aarts 2007: §5.1.3); but the discussion here shows that gradability is a feature of the Epithet zone, rather than of a word or a part of speech, since a word gains it on becoming an Epithet, and loses it again on becoming a Reinforcer. That has implications for the view of “adjective” as a prototype concept of a word class, since it eliminates two features of the prototype - gradability, and forming comparatives with -er/-est (which depends on gradability).
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Vagueness dimension

Epithets are vaguer than Descriptors, generally speaking: details of meaning are underspecified in their definition. They vary greatly, however, from precise Byzantine ("Like Byzantine politics"), through still, and good, to very vague awful.

Necessity and expectedness dimension

As a result of developing various specific elements within their meaning, Epithets often have a number of sense elements which vary on the dimension of expectedness. For example, short as Descriptor (in “her affectionate short [lyric] poem”) invokes only the necessary meaning, SHORT; as Epithet, in “a short, sexy dress”, it invokes such meanings as MORE THAN USUAL, and PROVOCATIVE.

4.2.5 Conclusion to descriptive meaning

Epithets are like Descriptors in descriptive meaning, in that both zones have some perceptual meaning and some conceptual meaning. They differ, in that Epithets are generally more strongly conceptual, less specific, vaguer, and more complex. The differences just listed, however, are generalisations, all with exceptions; they do not distinguish the zones absolutely. The crucial difference is in the intensity dimension: Epithets are scalar.

In that respect, the two zones are semantically distinct.

4.3 Expressive meaning, in Epithets

4.3.1 Attitudinal meaning

We saw in section §4.2 that as words are generalised to other contexts, they are sometimes applied in quite specific situations. When such a situation regularly evokes a particular attitude, the word often acquires that attitude as part of its meaning. In this way, Byzantine was commonly applied to things which speakers disapproved of, so it acquired the disapproving sense, 'underhand'. (I am simplifying attitude, to the approving-disapproving contrast.)

In a number of instances, there is a pattern of approving, neutral, and disapproving words, as illustrated in the following table.
Chapter 4: Semantic explanation

<table>
<thead>
<tr>
<th>Approving</th>
<th>Neutral</th>
<th>Disapproving</th>
</tr>
</thead>
<tbody>
<tr>
<td>famous</td>
<td>well known</td>
<td>notorious</td>
</tr>
<tr>
<td>modern</td>
<td>new</td>
<td>newfangled</td>
</tr>
</tbody>
</table>

The approving and disapproving words are synonymous conceptually, but antonymous attitudinally. In other instances, there are pairs: attitudinal words (*immoral, feminine, childish*) and matching neutral ones (*amoral, female, childlike*).19

The attitudinal words quoted here have a clear conceptual meaning; but *good* and *bad*, for instance, have in many uses lost their conceptual meaning (as in "a good/bad job"): the expression of attitude constitutes their whole meaning.

### 4.3.2 Emotive meaning

The points to be noted for emotive meaning are much the same as for attitudinal meaning, so I will make them briefly.

In some instances, there is a pair of words, with opposed feeling based on opposed concepts (*ugly, beautiful*), or opposed feeling for the same concept (*slim, skinny*) - emotive as well as attitudinal meaning.

In other instances, the contrast is between emotive and neutral words: “child behaviour” / “puerile behaviour”; “pig behaviour” / “piggish behaviour”; “childlike behaviour” / “childish behaviour”).

For emotive Epithets, the Classifier and Descriptor uses of the word are regularly neutral.

<table>
<thead>
<tr>
<th></th>
<th>Det.</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>positive</strong></td>
<td>Neutral</td>
<td>the greatest</td>
<td>positive</td>
<td>human</td>
<td>law</td>
</tr>
<tr>
<td></td>
<td>Emotive</td>
<td>powerful, positive and visionary</td>
<td>[recent]</td>
<td></td>
<td>enjoyment</td>
</tr>
<tr>
<td><strong>distorted</strong></td>
<td>Neutral</td>
<td>the</td>
<td>Ames</td>
<td>distorted</td>
<td>room</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[big]</td>
<td>distorted, swollen</td>
<td></td>
<td>calyx</td>
</tr>
<tr>
<td></td>
<td>Emotive</td>
<td>the most distorted and aggressive</td>
<td>[new]</td>
<td></td>
<td>band</td>
</tr>
<tr>
<td><strong>poor</strong></td>
<td>Neutral</td>
<td>#her occasional</td>
<td>poor</td>
<td></td>
<td>balance</td>
</tr>
<tr>
<td></td>
<td>Emotive</td>
<td>the poor</td>
<td>dry</td>
<td></td>
<td>hide</td>
</tr>
<tr>
<td><strong>infantile</strong></td>
<td>Neutral</td>
<td>#his recent</td>
<td>infantile</td>
<td>paralysis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Emotive</td>
<td>#his recent</td>
<td>infantile</td>
<td>recent</td>
<td>behaviour</td>
</tr>
</tbody>
</table>

19 In a complexity typical of the issues, *childlike* is also sometimes used with favourable attitude.
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4.3.3 Expressive meaning: general

Expressive meaning sets up patterns where synonyms and antonyms are distinguished by their expressive value: in the sets slim / thin / skinny, and plump / fat / obese, slim and skinny are synonyms descriptively, but antonyms expressively; the reverse applies to slim and plump.

Words such as nice, lovely, horrible, terrible and appalling, once words with precise and strong conceptual meaning, have become expressive words, and have lost their conceptual meaning (largely or completely). The absence of descriptive meaning is a very distinctive feature of such Epithets.

Even more distinctive of Epithets is the fact that they can have expressive meaning (emotive or attitudinal or both), whereas Classifiers and Descriptors do not have it. It is hard to demonstrate a negative claim; but the point can be illustrated in the following ways.

- The typical Classifiers and Descriptors we have seen do not have expressive meaning:
  - steel, television, 24-inch, economic, American, oil-pressure (Classifiers);
  - red, grassy, vertical, silver, desiccated, travelling, braided (Descriptors).

- A Descriptor or Classifier becomes an Epithet when used with expressive meaning. That was shown in section just above, on emotive meaning. Further examples are as follows.

<table>
<thead>
<tr>
<th>Det.</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>floating</td>
<td>musical</td>
<td>global</td>
<td>trip</td>
</tr>
<tr>
<td>her</td>
<td>smooth, musical, and utterly feminine</td>
<td>[singing]</td>
<td>organic</td>
<td>fertiliser</td>
</tr>
<tr>
<td>liquid</td>
<td>[copious]</td>
<td>liquid</td>
<td>arid, brown</td>
<td>eyes</td>
</tr>
<tr>
<td>her</td>
<td>liquid</td>
<td>[brown]</td>
<td>Tibetan</td>
<td>plateau</td>
</tr>
<tr>
<td>arid</td>
<td>the</td>
<td>[vast]</td>
<td>arid, brown</td>
<td>head</td>
</tr>
<tr>
<td>his</td>
<td>arid and pedantic</td>
<td>[old]</td>
<td>infantile</td>
<td>paralysis</td>
</tr>
<tr>
<td>infantile</td>
<td>the</td>
<td>dreaded</td>
<td>infantile</td>
<td>behaviour</td>
</tr>
<tr>
<td>my</td>
<td>infantile</td>
<td>bad</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The reason why only Epithets have expressive meaning is perhaps that abstract qualities generate attitudes and feelings consistent enough across society for expressive meaning to attach to words as an established part of their meaning, whereas physical or factual qualities and states do not, as illustrated in the table above.

This section has emphasised expressive meaning in Epithets, but I also emphasise that not all Epithets have it (I have instanced well-known). Similarly, some Epithets (such as soft) have it in some uses, but not in others.
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Expressive meaning is scalar, just as Epithets’ descriptive meaning is. We grade it by phonological stress and intonation, as much as by intensifiers such as very.

4.4 Social meaning, in Epithets

As with emotive meaning, social meaning is conveyed only by Epithets. Again, it is hard to demonstrate the negative, and I illustrate it in the same ways as before.

- The typical Classifiers and Descriptors we have seen do not have social meaning:
  - steel, television, 24-inch, economic, American, oil-pressure (Classifiers);
  - red, grassy, vertical, silver, desiccated, travelling, braided (Descriptors).
- The premodifiers that are typical of those with social meaning are all Epithets:
  - beauit, ripping, cool (slang);
  - bonny, bonzer (dialect);
  - unspeakable, bestarred (literary)
  - rotten, awful (informal).
- Words with social meaning as Epithets do not have it as Descriptors or Classifiers:

<table>
<thead>
<tr>
<th>Det.</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>infantile</td>
<td>the</td>
<td>dreaded</td>
<td>infantile</td>
<td>paralysis</td>
</tr>
<tr>
<td>my</td>
<td>infantile</td>
<td>bad</td>
<td></td>
<td>behaviour</td>
</tr>
<tr>
<td>bloody</td>
<td>#the</td>
<td>recent</td>
<td>bloody</td>
<td>civil</td>
</tr>
<tr>
<td>the</td>
<td>bloody</td>
<td></td>
<td></td>
<td>thing</td>
</tr>
</tbody>
</table>

As with expressive meaning, social meaning sets up patterns of semantic relationships.

- Some Epithets form pairs: a word with social meaning and a standard English alternative:
  - colloquial comfy and standard comfortable, slang easy-peasy and standard easy;
  - literary bestarred and standard starry;
  - dialect wee and standard small.
- A second pattern is in the double contrast between standard and formal use, and standard and informal use, illustrated in the following table. (The ratings are for current New Zealand usage, from my own experience of it.)

<table>
<thead>
<tr>
<th>Formal</th>
<th>Standard</th>
<th>Informal</th>
</tr>
</thead>
<tbody>
<tr>
<td>appealing</td>
<td>attractive</td>
<td>sexy</td>
</tr>
<tr>
<td>courageous</td>
<td>brave</td>
<td>staunch</td>
</tr>
<tr>
<td>voluble</td>
<td>talkative</td>
<td>chatty</td>
</tr>
<tr>
<td>praiseworthy</td>
<td>good</td>
<td>cool</td>
</tr>
</tbody>
</table>
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- The patterns form multiple dimensions: words such as *beaut*, *ripping*, *cool*, *bonny* and *bonzer* are placed on both the slang-formal dimension and the dialect dimension; they form complex and fairly tight paradigms.

We conclude that social meaning contributes to the distinctiveness of Epithets, and increases the semantic relationships that the words form.

The reason for this type of meaning’s being unique to Epithets is evidently similar to the reason for expressive meaning’s being so. It is only words with attitudinal meaning that can embody the values of a social class: there are social attitudes to being *voluble/chatty* and being *courageous/staunch* (Epithets, in the table above), but not to being *brown, smoky* or *central* (Descriptors, from the tables in section §4.2.3).

4.5 Grammatical meaning, in Epithets

Like Descriptors and Classifiers, Epithets have the grammatical meaning of instructing the hearer how to apply the word’s content (its descriptive, expressive and social meaning). For example, in "*sexy* new, restyled Ford Mondeo", *sexy* instructs the hearer to apply the descriptive meaning ATTRACTIVE + approving attitude to "new, restyled Ford Mondeo".

However, some Epithets have other kinds of grammatical meaning. Since they involve interaction with other words, I deal with them in chapter 5, Syntactic Explanation. (An example is that, in "*beautiful* warm weather", the hearer usually feels instructed to intensify *warm*, as well as to apply BEAUTY to the weather.)

Epithets thus have several kinds of grammatical meaning; it is a more important part of their semantic structure than it is for Descriptors and Classifiers.

4.6 Discussion of Epithet semantic structure

4.6.1 Epithets’ part of speech

Most Epithets are adjectives, but a few are participial in form, denoting an abstract quality ("*daring young man*"), which may be graded or intensified ("*immensely gifted* disabled Irish writers", #"*very daring* young man"). A very few Epithet uses are nouns. “She forces a false, *schoolgirl* giggle”.20

20From the British National Corpus. Since *she* refers in the context to an adult, *schoolgirl* is figurative and expressive; it denotes qualities such as >FEMININE and CHILDISH.
4.6.2 Borderline instances of Epithets

Epithets close to Reinforcer and Descriptor zones

Some Epithets are hardly distinguishable from Descriptors. “Old forbidden books” and “curious old writers” use old in very similar ways, but in different zones:

<table>
<thead>
<tr>
<th>Det.</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>old</td>
<td>forbidden</td>
<td>[British]</td>
<td>books</td>
</tr>
<tr>
<td></td>
<td>curious</td>
<td>old</td>
<td>[British]</td>
<td>writers</td>
</tr>
</tbody>
</table>

(See section §4.2.3 for the difference.) New and young have very similar usages.

Other Epithets are very close to the borderline with Reinforcers. Although “great fool” has great as a Reinforcer (the phrase means ‘utter fool’), “great eater” seems to have it as an Epithet (‘he eats greatly’). Raving is similar, in “raving idiot”.

As with the other borderline and ambivalent examples I have noted, these call for further explanation, which I will offer in the Historical Explanation chapter.

Diminutive and intensifying Epithets

There are two small groups of words that I am rating as Epithets, although they are not coordinated with other Epithets:

- diminutive words, as in “dear little thing” “good old Joe”;
- intensifying words, as “nice warm room”, “beautiful big house”.

They are not coordinated with the other Epithet because they are in part submodifying it (as well as modifying the head). As I imply by the term “intensifying”, words of the second type strengthen the meaning of the following word. Words of the “diminutive” type have a variety of meanings: they are used “to convey emotional overtones, as affection, amusement, condescension, disparagement, etc.” (SOED, little <7>); the overtones apply to the previous word. For example, a 698 cc car was described as -

(1) “the nippy wee beast”.

Wee conveys overtones of admiration for the nippiness (and the car in general), as well as denoting small size.

I include these words as Epithets because (a) they are exactly like Epithets in semantic structure; (b) their subordination is not to the rest of the phrase, but to a single word, so they belong in the same zone as that word; (c) they have not become so subordinate as to be submodifying “adverbs” like very.

These words represent what Huddleston and Pullum (2002: 561) call “intensificatory tautology”. They will be considered further in the Syntactic Explanation chapter (chapter 5, §2 and §3).

4.7 Conclusion: Epithet semantic structure

Summary

The characteristics of Epithet semantic structure are as follows.

- They differ from Descriptors in degree:
  - they are more vague and general;
  - they vary more in those dimensions, as in the expectedness of their elements;
  - they have other types of grammatical meaning.
- However, they are distinct from Descriptors in -
  - being scalar;
  - being able to take expressive and social meaning.
- They are distinct from Classifiers in all those ways.

5 Semantic structure of Reinforcers

5.1 Introduction

Examples of Reinforcers are given in the table:

<table>
<thead>
<tr>
<th>Det.</th>
<th>Reinforcer</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>complete</td>
<td>bloody</td>
<td></td>
<td></td>
<td>idiot</td>
</tr>
<tr>
<td></td>
<td>pure</td>
<td>unmitigated</td>
<td></td>
<td>driving</td>
<td>pleasure</td>
</tr>
<tr>
<td></td>
<td>sheer</td>
<td>desperate</td>
<td>necessity</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is fairly uncommon for Reinforcers to be used with other modifiers, as they are in those examples; more common examples are as follows: "sheer arrogance", "outright lie", "pure fabrication" (from Quirk et al. 1985: 49); and "utter disgrace", and "perfect stranger" (from Huddleston and Pullum 2002: 555).
5.2 Descriptive meaning, in Reinforcers

Perceptual and conceptual meaning

The examples just given (such as sheer, absolute, outright) clearly do not have perceptual meaning; they do not even have conceptual meaning. Reinforcers are words with grammatical meaning, not descriptive meaning; they differ radically from Epithets and Descriptors in that respect. That can be seen in several ways.

- Apart from mere, they are synonymous. In the phrase "sheer arrogance", for example, sheer could adequately be replaced by complete, absolute, pure, outright, utter or perfect, so they must be synonymous (as previously defined, in §1.2.2). But as Epithets, they are not synonymous: "complete understanding" (there are no gaps in the understanding) is not the same as "perfect understanding" (there are no flaws in it).
- They do not have antonyms: we cannot say *"incomplete fool", or *"imperfect stranger". As Epithets, they do have antonyms, as in "imperfect understanding" and "incomplete understanding".
- They are not gradable, or otherwise scalar. For example, we cannot say *"very utter disgrace", or *"very pure unmitigated driving pleasure"; but in Epithet use, the same words can be graded: "very pure natural water".22

In these respects, Reinforcers contrast strongly with the same words as Epithets.

Dimensions of descriptive meaning

Since Reinforcers have no descriptive meaning (merely serving to reinforce meaning given by the head), they are totally vague. For example, in “sheer folly”, sheer reinforces FOLLY; but in “sheer arrogance”, it reinforces ARROGANCE.

5.3 Expressive meaning, in Reinforcers

Reinforcers seem to express feeling, but the feeling is generally weak and rather vague; and in fact it depends on the context. Some examples23 will make the point clear.

- In “for sheer daintiness, ‘Hawera’ is hard to beat” (applied to flowers), sheer expresses admiration.

22 Thus Paradis is wrong in asserting that Reinforcers are gradable (2000: 251).

23 All from the British National Corpus.
In “Absence paralysed her in sheer aching agony”, (from fiction) sheer expresses empathetic pain.

In “It was a sheer fluke that he began his career with Manchester Collieries Ltd.”, sheer is used neutrally:

I conclude that Reinforcers have no expressive meaning in themselves, and that their expressive meaning is wholly contextual, as with their apparent conceptual meaning. Indeed, most discussions of them, such as Quirk et al. (1985) and Paradis (2000), do not indicate that they have such meaning.

5.4 Social meaning, in Reinforcers

Reinforcers occur in various social contexts; so they evidently lack inherent social meaning, and take any social value from context, as with other types of meaning.

5.5 Grammatical meaning, in Reinforcers

The grammatical meaning of Reinforcers is different from that of other premodifiers. They do instruct the hearer or reader to adjust the meaning of the head, but the instruction is not to relate the word’s content to the head entity: they have no content.

There are three alternative ways in which they adjust the head’s meaning, as follows. (This is partly as in Quirk et al., 1985: 1338, as discussed below.)

- They instruct hearers to intensify, or maximise, the qualities suggested by the head and by other premodifiers: SOED’s “Having the maximum extent or degree”.\(^24\) For example, in "complete idiot", hearers are intended to intensify the degree to which the person is an idiot. That is the meaning of most Reinforcers. Uses with this function may be called “maximisers”.

- They instruct hearers to minimise the referent’s quality: SOED’s “That is barely or only what it is said to be”\(^25\); for example, "used as mere decoration". Uses with this function may be called “minimisers”.

\(^{24}\) Complete <5>.

\(^{25}\) Mere <4>.
Chapter 4: Semantic explanation

• The meaning is intermediate between those two: SOED’s “As an intensive emphasising identity.... that is truly such”,26 (as in “the very sky”); or “no more nor less than”.27 (Sheer and absolute have this use, as well as a maximiser one.) Uses with this function may be called “limiters”.

I group together the three forms above as “reinforcing”. This type of meaning is dominant in Reinforcers, since they have no descriptive meaning, and no inherent social or expressive meaning.28

5.6 Discussion of Reinforcers

Other types and dimension of meaning

Reinforcers are totally vague: their content changes completely, according to context.

Descriptors and Epithets describe the referent; Classifiers do not - they name it, or “point” to it. Reinforcers direct the hearer to another word (the head), and do not describe anything; so (surprisingly) they are like Classifiers in this: they point - but by deixis, not naming.

Semantic relations

We have seen that there are three types of Reinforcer: maximisers, minimisers, and limiters. Their relationship is thus a paradigm of alternative functions (rather like the favorable / neutral / unfavorable pattern of expressive meaning).

Otherwise, Reinforcers have few semantic relations: they are not linked with synonyms or antonyms in clear patterns of social, attitudinal or emotive meaning; nor do they form such relations through descriptive meaning, since they have none.

Borderline instances of Reinforcers

As with the other zones, there are borderline instances, as follows.

• Some words function as Reinforcers in certain rather idiomatic phrases; but they do not seem to be used that way in other phrases, so do not appear to be established in the language as Reinforcers. Examples are “blithering idiot”, “crashing bore”, “rank injustice”.

2626 Very <7>.
2727 Sheer <5>.
2828 It is possibly more accurate to refer to reinforcement as a constructional meaning - invoked by the Reinforcer zone as a construction; but I will treat it here more simply, as a lexical meaning (as dictionaries do). The status of the zones as constructions will be considered in §2.3 of chapter 11.
Chapter 4: Semantic explanation

- An occasional use seems to be ambivalent. “Pure fantasy” would normally be read as having a Reinforcer - <3a> “...with intensive force”; but in “a mixture of recycled gossip and pure fantasy”, the balance with recycled gives pure weight, inviting an Epithet reading - <2a> “....homogeneous”.

- Actual, as in “I forget his actual name”, sometimes functions as a general emphasiser - a discourse particle - rather than as emphasising a quality denoted by the head. Single is likewise close to being a discourse particle in “the country’s single largest computer system”. (This use will be considered further in sections §4.2 and §6.2 of chapter 5, and in section §3 of chapter 10.)

- Words such as quite vary between maximiser and minimiser uses (“quite brilliant”, “quite good”); and mere has an obsolete maximiser sense, (<3>, “absolute, entire...”) as well as its current minimiser sense, (<4>).

5.7 Conclusion: Reinforcers

Summary
Reinforcers are semantically very different from other modifiers.
- They have no descriptive meaning.
- They have much more grammatical meaning than words in other zones.
- The grammatical meaning, reinforcement, is quite different from that of other premodifiers.
- They are very simple in meaning, and wholly subjective (in relying on hearer’s interpretation).

Having only grammatical meaning makes the zone different from all others.

6 Discussion of premodifier semantic structure

6.1 General discussion
This section makes points that will be used in later chapters, but will not lead to the conclusion of this chapter.

29 Spokesman for the British prime minister, on news reports about the prime minister’s wife.
Chapter 4: Semantic explanation

Part of speech and semantics

We have seen that there is a rough correlation between premodification position and part of speech: most noun premodifiers are Classifiers, and vice versa; most participial premodifiers are Descriptors; most Epithets and Reinforcers are adjectives. But all three parts of speech occur in Classifier, Descriptor and Epithet zones.

An interesting conclusion follows from that, and the semantic characteristics of the zones. In their various premodifier uses, adjectives, verbs, and nouns function semantically according to their zone, rather than with any semantic characteristics of their part of speech:

- as Classifiers, all three forms are treated as denoting entities (§2.6);
- as Descriptors, they denote relatively concrete qualities, in a strict or approximate sense (§3.6);
- as Epithets, they all are treated as denoting abstract qualities (§4.6.1).

For use in different zones, we construe them differently, making salient different relations in the complex of concepts associated with the word. The distinctions among entities, states, and qualities are here linguistic, not metaphysical or epistemological.

Complexity of meaning in different zones

The zones vary greatly in the complexity of their semantic structure.

- Classifiers are very simple, having only referential meaning (as individual words, apart from the constructional meaning they gain from their construction), and consisting of a single unit of meaning.
- Descriptors are also fairly simple, having only descriptive meaning; but that may have several elements.
- Epithets are very complex:
  - They have descriptive meaning, and many have expressive and social meaning, as well.
  - An apparently unitary descriptive meaning may be complex. (Even bloody, as ‘blood-thirsty’ can be analysed as ‘likely to cause the shedding of blood’.)
  - The full meaning of a sense may include various elements with different degrees of intensity and expectedness.
  - Part of their meaning resides in their complex network of sense relations.
- Reinforcers are simple; they have reinforcing meaning.

Complexity will become important in chapter 11, section §3 (grammaticalisation), in particular.
Chapter 4: Semantic explanation

Subjectivity

The zones form a scale of subjectivity.

- Classifiers' meaning is objective, being quite independent of users.
- Descriptors are slightly subjective, since perceptual qualities allow some variation according to speaker (as with maroon/crimson/puce).
- Epithet meaning elements are subjective in various ways. Social and expressive meanings are subjective in being "tied to the here-and-now of the current speech situation" (Cruse 2004: 45, on subjectivity) - expressing feeling, and calling for personal response. Even conceptual meaning is subjective, to the extent that it requires judgment rather than perception - judgment that other people might not accept; for example, "handsome bony face", "steady old eyes", and "hard young officer". On the other hand, they represent content, which is an objective function, since assertion of content may be verified.
- Reinforcers can be subjective in having social and expressive meaning (contextually); and they are wholly subjective replacing assertion of content with indicating the speaker's intention (that the hearer reinforce the content of the head).

This issue will also become important in chapter 11, section §3.

World knowledge and linguistic knowledge

We can choose among alternative Classifiers only on the basis of world knowledge (steel/iron/bronze, or 32-inch/42-inch, for example); but we must choose among such Epithets as bonzer/ripping/good by linguistic knowledge - although we need world knowledge as well for small/large/huge. Similarly, it is linguistic relations that constitute Epithets’ complex paradigms of sense relations. Reinforcers, being without content, are wholly linguistic in their significance for us. From Classifiers to Epithets, then, there is a cline from world knowledge to linguistic knowledge.

This issue will recur in sections §2, §3 and §4 of chapter 10, and section §3.3 of chapter 11.

Semantic structure and language functions

I follow Halliday (2004) in identifying three underlying functions in language. They are as follows. (This exposition is from 2004: 29-30.)
Chapter 4: Semantic explanation

- “Every message is both about something and addressing someone.” In being about something, what we say and write communicates our construal of experience: it serves an experiential function.\(^\text{30}\)
- In addressing someone, we are “enacting our personal and social relations with the other people around us”. For example, we ask for a reply, demand action, or share feelings. That constitutes the interpersonal function.
- To help carry out those functions, we “build up sequences of discourse, organizing the discursive flow and creating cohesion and continuity”. That constitutes the textual function.

The semantic structure of premodifiers reflects and serves those functions. Referential and descriptive meaning, in communicating perceptual and conceptual information, serves the experiential function. Expressive and social meaning serve the interpersonal function. Grammatical meaning (in both the modifying and intensifying forms) serves the textual function of building cohesion and continuity. Since the zones are correlated with types of meaning, they too are correlated with the functions.

The functions will recur in the explanations in other chapters.

I am citing Halliday, but other writers give similar functions; for example, the two functions given by Langacker (2003: 14) match the first two above.

**Semantic “weight”**

We have seen that on the whole zones further forward have more expressive meaning, have a greater range and depth of meaning, and serve a wider range of language functions: they have greater semantic “weight”. That pattern of differing semantic structure in the zones makes it natural for the earliest premodifier to be the most important, communicatively.

### 6.2 Semantic structure as characteristic of the zones

**Introduction**

The body of the chapter has considered the zones in turn, discussing their semantic features. To make clear the chapter’s conclusions, I must briefly consider the semantic features in turn, assessing the extent to which each one characterises the semantics of the zones. That discussion will form the basis for the conclusions in section §7.

\(^{30}\) I am simplifying Halliday’s account: I am setting aside the logical function because it applies only in structures of two or more clauses; the logical and experiential functions together make up the “ideational” function.
Chapter 4: Semantic explanation

The table below can serve as underpinning for the discussion, and for the conclusions to follow. In it, *positive* occurs in all four zones; and although the precise sense differs, all four uses are based on the core meaning of DEFINITE: why does the word occur in all four zones?

<table>
<thead>
<tr>
<th>Det</th>
<th>Reinf.</th>
<th>Epithet</th>
<th>Descr.</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>the</td>
<td></td>
<td>[traditional]</td>
<td>human</td>
<td>positive</td>
<td>law</td>
</tr>
<tr>
<td></td>
<td></td>
<td>greatest</td>
<td>positive</td>
<td>[musical]</td>
<td>enjoyment</td>
</tr>
<tr>
<td>a</td>
<td>positive</td>
<td>powerful, positive and visionary</td>
<td>[recent]</td>
<td>[political]</td>
<td>speeches</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[bloody]</td>
<td>dust</td>
<td>bowl</td>
<td></td>
</tr>
</tbody>
</table>

Types of meaning

(a) Meaning of individual words

Referential meaning occurs only in Classifiers, and Classifiers as individual words have no other (linguistic) meaning: they are names, in effect, designating individuals or types of entity (see section §2). For example, "positive law" designates a type of law - <1> "...formally laid down.... Opp. natural" (Descriptively, such a law may be negative, not positive.) The Classifier positive has lost the descriptive meaning it had in the source language; the conceptual qualities associated with it (the distinction between natural and adjudicated law) are part of our world knowledge, not of meaning.

Descriptive meaning occurs in the Descriptor and Epithet zones. "The greatest positive enjoyment" has a Descriptor: <2> "...definite", which is only slightly conceptualised descriptive meaning (see section §3.3). "Powerful, positive ... speeches" has an Epithet: <6> "...characterised by constructive... attitudes", which is fully conceptualised, quite abstract descriptive meaning (see section §4.2).

Expressive and social meaning occur only in Epithets: the Epithet in "Powerful, positive ... speeches" expresses approval. That makes the zone distinctive, but not all Epithets have those types of meaning (see sections §4.3 and §4.4).

Grammatical meaning with a reinforcing function characterises the Reinforcer zone, since that is its sole non-contextual meaning, and since no other premodifiers have it. In "a positive bloody dustbowl", positive has lost the conceptual meaning it had, and simple reinforces "dust bowl" (see section §5).

(b) Constructional meaning

Classifiers invoke a constructional meaning: only words in that zone do so.

(c) Conclusion to types of meaning

The types of meaning thus distinguish the zones well, apart from the distinction between Descriptor and Epithet zones, since both have descriptive meaning.
Dimensions and other aspects of meaning

The demarcation between Descriptor and Epithet zones is made by the intensity dimension, since Epithets are scalar, but Descriptors are not. In "positive [Descriptor] enjoyment" (<2> “...definite”), DEFINITENESS simply is present, not absent. But in "positive [Epithet] speeches" (<6> "...characterised by constructive... attitudes"), CONSTRUCTIVENESS is present to a certain degree and may be graded, as in %# "very positive speeches".

We have seen in the discussion subsections (on Classifiers and so on, in turn) that the zones differ on the dimensions of specificity and of vagueness, vary in function from naming or referential function through descriptive function to reinforcing function, and vary in the extent to which their members form semantic relations with other words. We saw in section §6.1 that the zones differ / grade in complexity, subjectivity, and in proportion of linguistic to world knowledge. But we also saw that those differences form scales without definable distinctions between zones; so they do not explain what makes the zones distinct.

Conclusion: semantic structure as characteristic of the zones

Semantic structure (the structure of meaning types and scalarity - on the intensity dimension) makes clear-cut distinctions between the zones. (Other dimensions and aspects of meaning are related to the distinctions, but do not constitute them.)

- Reinforcing meaning type distinguishes the Reinforcer zone.
- Referentiality (correlated with constructional meaning) distinguishes the Classifier zone.
- Scalarity (in the intensity dimension of descriptive meaning) distinguishes Descriptor and Epithet zones from each other.

The distinctions may be illustrated in diagram 3, below.

Diagram 3: distinctions between meaning types that distinguish the zones

<table>
<thead>
<tr>
<th>Reinforcers</th>
<th>Epithets</th>
<th>Descriptors</th>
<th>Classifiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>reinforcing</td>
<td>descriptive</td>
<td>non-scalar</td>
<td>referential</td>
</tr>
<tr>
<td>scalar</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We conclude that semantic structure - the pattern of words’ meaning types and dimensions - provides a semantic explanation of premodifier order. That will be set out formally as the conclusion of this chapter, in the next section.

There are two further consequences which should be noted.
It follows from the correlation between meaning type and zone that each premodifier is occupying a zone, even if it is the only premodifier; and that we can identify its zone from its semantic structure, without relying on other premodifiers to show order. These conclusions show why it is normal for one word to be used in different zones: the different senses of the word can have different semantic structures, even when the content is largely the same in the different senses.

In comparison with linguistic explanations that treat meaning as simply conceptual, this explanation from meaning types may seem odd or nebulous, and therefore unconvincing; but it will be supported strongly in later chapters.

**Explanation of anomalies**

The explanation of premodifier order just given is basically straightforward, but two details are anomalous: social and expressive meanings do not appear in that simple explanation; and some Epithets have expressive meaning without descriptive meaning.

The reason why social and expressive meaning do not appear in the basic explanation is that they are different in nature from other meaning: they are expressed rather than symbolised, and it is symbolic meaning (“semantics”) that provides the explanation; but they conform to the explanation, because they depend on Epithets’ scalar abstract meaning (as discussed in section §4.3.3) and because the expressive and social meaning they express is scalar (section §4.3.3, again). The explanation for some Epithets’ having no descriptive meaning is that they have lost it during their history (see section §5.5.2 of chapter 9).

### 7 Conclusion: semantic explanation of unmarked order

#### 7.1 The semantic explanation

The discussion in the preceding section, based on the analysis in the whole of this chapter, shows that there is a gradient from the Classifier zone to the Reinforcer zone, from referential and concrete meaning through descriptive meaning and increasing abstractness to grammatical meaning. That explains premodifiers’ relation to the other elements of the phrase: Classifiers come next to heads, since they share their referential nature; and Reinforcers come next to determiners because they share their abstract and grammatical nature. There is a single
Chapter 4: Semantic explanation

semantic gradient through nominal phrases, from heads through four premodification zones to determiners.

But, as was shown in chapter 3, the zones are distinct, not indistinct areas in a gradient. Characteristics arising from the gradient establish the distinctions:

- The Classifier zone has referential meaning, and constructional meaning.
- The Descriptor zone has nonscalar descriptive meaning.
- The Epithet zone has scalar descriptive or expressive meaning.
- The Reinforcer zone has reinforcing meaning.

The thesis began (section §1 of chapter 1) by setting the nature of unmarked order of premodifiers in English nominal phrases as the first thing to be explained. Chapter 3 showed that the order is one of zones. This chapter has shown that semantic structure (combination of meaning types and dimensions) explains the order of the zones.

To my knowledge, semantic structure has not previously been seen as explaining premodifier order - or any other element of language apart from word meaning.

7.2 Prospect: later chapters

Facts remaining to be explained

Some facts that have arisen in this chapter have not been fully explained so far.

- Anomalies in the Epithet zone were explained in section §6.2, but only partly.
- We have seen that the zone order is often one of parts of speech - paralleling the semantic order: adjectives (as Reinforcers and Epithets) + participles (as Descriptors) + nouns (as Classifiers).
- There are in each zone instances of modifier use that seem to be at or “on” the borderline between zones.

Those facts will be explained historically in chapter 9, specifically sections §3.6 and §4.6.2.

Importance of this chapter for later chapters

Later chapters will build on the semantic explanation given here. The next chapter will give a syntactic explanation, but will argue that semantic structure underlies syntactic structure. The Free Order and Marked Order chapters (7 and 8) will rely on this chapter directly; the Historical Explanation chapter (9) will show how the semantics evolved; still later chapters will use this chapter indirectly.
Chapter 5: Syntactic explanation of unmarked order across the zones

1 Introduction

Purpose of the chapter

The chapter’s purpose is to provide a syntactic explanation of the zone structure set out in chapter 3, parallel to the semantic explanation set out in the last chapter.

Starting point

The starting point is the basic syntactic fact, set out in chapter 3, that premodifiers modify the following part of the phrase. For example, in “the [large [public [nature reserves]]]”, nature modifies “reserves”, public modifies “nature reserves”, and large modifies the still larger unit, “public nature reserves”. The chapter explores what is entailed in the relation of modifying.

The argument

Premodifiers not only modify the following part of the phrase (as just stated). In general, the further from the head a premodifier is -

- the wider is its scope of modification; for example, it can relate to other modifiers individually, and to participants in the discourse situation other than the entity denoted by the head;
- the more types of modification it has;
- the looser is its bond to the head.

Those generalisations, and the exceptions to them, are explained by the semantic structure of the modifiers concerned. These facts lead to the conclusion that syntactic structure makes a partial explanation of premodifier order, but that semantic structure explains the syntactic structure.

Concepts to be used

The concept of modification needs amplification beyond what was given in section §2 of chapter 1. There, I quoted Quirk et al. (1985: 65) as saying that modifiers "add 'descriptive'
information to the head, often restricting the reference of the head”. That relation to the head entails dependency, as defined by Hawkins (2004). In “rock concert”, for example, rock is dependent on concert, because the hearer must use concert to know whether the ambiguous word rock refers to stone or to a type of music (to know what the reference is). Stated formally, dependency exists when interpretation “requires access” to another word “for assignment of syntactic or semantic properties with respect to which [the word] is zero specified or ambiguously or polysemously specified” (2004: 22). In being dependent on concert, rock is a modifier. However, concert depends on rock, for specification of the type of concert.

Semantically, the words are interdependent, and modify each other; I will use "modify" to mean 'affect the meaning of'. “Syntactic modification” (which sets up phrase structure) depends on that “semantic modification”; but semantic modification may occur without syntactic modification (as when concert modifies rock). To put the point differently, “syntax has its basis in a codification of semantic relationships” (Matthews 1981: 124); Givón (1988: 278) makes a similar point.

"Scope" covers both semantic and syntactic modification.

The chapter uses the concept of ascription: a speaker’s act of applying a word to a mental entity, implicitly asserting that the word is appropriate. That includes predicative uses like #“the reserves are large”, attributive uses like “the large reserves”, and also the use of reserves itself, in those phrases - implying that the areas really are reserves, not farms.

A distinction made previously will become more important: premodifiers may function restrictively (to restrict the reference of the head), or descriptively (to add information about the head entity, whose reference is clear by deixis or from context, for example).

Cautions

I repeat the caution I have given earlier, that I am deferring full consideration of the Classifier zone to chapter 6; so this chapter excludes relations between words within the Classifier zone. Also, it excludes relations between words within any other zone, which are discussed in chapter 7, on free order.

Outline of the chapter

Sections §2 to §6 discuss scope of modification, taking different forms of modification in turn: modification of a previous word, of a later modifier, and so on. Section §7 discusses how closely premodifiers in different zones are bound to the head. Section §8 provides more general discussion; section §9 summarises and draws conclusions.
Chapter 5: Syntactic explanation

2 Modification of a preceding modifier

2.1 Introduction

This section shows that although modification usually applies to following words, it sometimes applies to a previous word.

2.2 Types of previous-word modification

Relative modifiers

Cruse (2004: 66-67) says of the phrase "a large mouse" that "large must be interpreted relative to the norm of size for the class of mice". He comments: “Here we have a two-way interaction, because mouse determines how large is to be interpreted, and large limits the application of mouse.” (He calls modifiers such as large "relative descriptors": they are relative to the head.) Similar treatment is given by Katz (1972: 254), Dixon (1982: 16), Jackendoff (1997: 64) - who makes the interesting suggestion that these modifiers “semantically subordinate the noun” - and Taylor (2002: 450).

Explanatory modifiers

Relativity extends beyond the head’s setting a norm of size, however - to other properties, and to dependence of one premodifier on another. Examples follow.

(1) “Those splendid old electric trains”.

The age we assign to the trains (from old) is dependent on electric as well as trains (old electric trains are younger than old steam trains), so electric partly modifies the previous word, old.

Similarly, old and electric help specify the splendour vaguely denoted by the previous word, splendid.

(2) “Such attractive, fruit-filled big red wines”.

Wines indicates which shade of red, which is otherwise indeterminate; red and wine likewise indicate the kind of ‘bigness’; big and fruit-filled make good the underspecification of attractive - a vague word, like so many Epithets.

Other examples follow, with the underlined premodifiers modified by a later word:

(3) "Ugly trailing overhead wires”.

(4) “Vibrant green gum trees.”

(5) "A shy and possibly rather dangerous bird."

This explanatory relationship resolves Vendler’s puzzle with brave and considerate (1968: 132-133); “a brave young man” and “a brave old man” are acceptable, but *“brave blond man” is not. Both young and old, then, help specify the meaning of brave (as ‘taking risks’ or ‘enduring’, perhaps, according to context); but blond is odd because it has no appropriate meaning elements to specify the sense of brave.

Various authors make this point about explanatory modifiers: Bache, (1978: 74) about "a nasty cold wind"; Hetzron, (1978: 177) about "a comfortable wide sofa" and Dixon (1982: 26) about "a good strong box".

**Intensifying and weakening modifiers**

In phrases like "good old George", old is an "intensifier, now rare, except after good, grand, etc". Old intensifies good; its dependence on the previous word is shown also in the pronunciation, since old is reduced in stress, and run on closely with good.

The converse effect, weakening of a previous word, occurs with little and similar words.

(6) "Oh dear! My poor little brain is giving way."

Little expresses feeling, not the size of the brain, and makes the mockery expressed by poor gentle and humorous. It is used, as SOED says, "to convey emotional overtones, as affection, amusement, condescension, disparagement, etc.".

Other examples were given in §4.6.2 of chapter 4, which also argued that these words are Epithets, even though they follow Epithets without coordination, as Descriptors do.

This use is commonly called "diminutive"; but the SOED is accurate in its description, just quoted: the key element is emotion, not a concept of size.

**Other forms of specification of a previous modifier**

In "a safe west coast beach", safe means for Aucklanders that the beach is without unpredictable waves, and very big and rough waves (for which our west coast is notorious) - not just without rips. The explanatory specification comes from world knowledge (associated with the Classifier phrase, “west coast”), not from linguistic meaning.

---

2 SOED, entry for old, <6>

3 SOED example.

4 SOED, entry for little, <7>

5 “Classifier phrase” is a convenient term for a group of words containing Classifier(s) and a head - leaving other premodifiers out of discussion.
2.3 Discussion: modification of a preceding modifier

Borderline instances

In some instances, it is likely that some readers will interpret a word as modifying a previous one, while others do not, because there is an overlap in meaning between the modifiers. For example:

(7) “two hot new game shows”.

Here, new seems to supply the idea of novelty or fashion to hot; but SOED includes the concept in hot <12a>: “completely new; esp. novel and exciting”. Other ambivalent examples with potentially overlapping meaning are: “surprising new catwalk trend”, and “quaint old chrome-steel statues”.

Zones where this modification occurs

In the examples of relative modifiers, the modifying word has been variously the head, a Classifier, and a Descriptor; but in every case, the modified word has been an Epithet. That is illustrated in the following table, in which the modifying word is italicised, and the modified word is underlined.

<table>
<thead>
<tr>
<th>Determ.</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>huge</td>
<td></td>
<td>feather</td>
</tr>
<tr>
<td></td>
<td>safe</td>
<td></td>
<td>West Coast</td>
</tr>
<tr>
<td></td>
<td>ugly</td>
<td>trailing</td>
<td>overhead</td>
</tr>
</tbody>
</table>

Relation to semantic structure

The fact that Epithets are readily modified by following words, whereas other premodifiers apparently are not, is related to various elements of their semantic structure, as follows. (They were set out in the last chapter, section §4).

- They are gradable, so a later word can grade them, as in relative modifiers.
- Words such as huge and safe are vague (underspecified) in descriptive meaning; so a following word can make the meaning more specific (in combination with our world knowledge).
- Epithets’ expressive meaning can be given a cause or reason by a later modifier, as for the disapproval meaning in ugly: “ugly trailing overhead wires”.

6 We saw in chapter 4, §2.3, that Classifiers rely on world knowledge.
Some Epithets are rich in possible sense elements (the expectedness dimension); the later word guides the reader in selecting among the possible meanings, as in the brave examples.

Finally, Epithets are often complex. For “safe”, Taylor (2002: 452) says that the word entails a “scenario” involving value, danger, and protection. Commonly, the context provides these details; in the example given above, “West Coast” provides the nature of the danger.

Descriptors are open to this modification because they are partly conceptual and accordingly a little vague; but they are less open to it than Epithets, because they are more concrete and not scalar.

Reinforcers cannot be modified at all, simply because they have no content to modify. Classifiers likewise have no descriptive content to be explained or graded.

2.4 Conclusion: modification of a previous word

The words that modify earlier ones can be in any zone, and can be the head. There is therefore no significance for order in that.

The modified words are mostly Epithets, which can be modified in various ways, and to a great degree. A few Descriptors can be modified, but only as relative modifiers, it seems, and with semi-conventionalised meanings. Classifiers are apparently not modified by later words; nor are Reinforcers.

We conclude that -

• whether modifiers can be modified by following words depends on their semantic structure, according to their zone;

• there is a pattern: the least modifiable words are close to the head, and the most modifiable are furthest away, except for Reinforcers.
Chapter 5: Syntactic explanation

3 Modification of a later modifier

3.1 Introduction

Several writers assert that premodifiers sometimes modify a following modifier, while also modifying the head. Such modification is natural, since generally each modifier modifies the rest of the phrase, which includes the later modifiers. The issues are whether it can modify individual words (rather than the group as a whole), and whether it can do both at once.

3.2 Types of later-modifier modification

The first type of modification of a later modifier, degree, is discussed fully; other types are discussed more briefly.

Degree

Quirk et al. (1985: 1339) say that “emotionally tinged adjectives often have an adverbial, subordinated relation”, such that “beautiful warm weather” is equivalent to “beautifully warm weather”. Bache (1978: 74-5) gives "nice cosy house" and "good hard knot", as premodifiers that “function semi-adverbially”: "nice cosy" means “cosy to a nice degree”. I accept those assertions.

In approximating adverbs of degree, these words have a grammatical meaning - that of intensifying the word they modify. I emphasise that the modification of the later modifier is additional to the regular modification of the head, with the result that the phrases are ambivalent; in many contexts, "nice cosy house" will mean both "a [[nice cosy] house]" and "a [nice [cosy house]]". The effect of these uses is shown in the contrast with "a [[nice], [quiet] bed]", in which nice modifies bed (‘nice bed’) without modifying quiet (‘quiet to a nice degree’).

The semi-adverbial uses grade off to purely adverbial (submodifying) uses. It seems to me that "nice cosy house" is more adverbial than "good hard knot", that "pure academic interests" is still more adverbial (‘purely academic’, but possibly ‘pure interests’ as well), and that "pure jet aircraft" is completely so (it means ‘pure jet’ and not ‘pure aircraft”).

Cause

A modifier sometimes contributes a cause or reason to a later modifier. Quirk et al. (1972: 1064) cite "long slow strides" (of a person walking), explaining that the strides are slow because
they are long. In "that typical, ordered, middle-class, 'responsible' life", the life is 'responsible' because it is middle-class and ordered.

**Evaluation**

A book reviewer said that a book was a welcome antidote to attacks on popular culture, despite its -

(1) "unfortunate narrow focus on America";

The context shows that it was the narrowness that was regarded as unfortunate rather than the focus itself; so semantically unfortunate modifies the following modifier, narrow. (Syntactically, it modifies focus, the head of the phrase.)

**Reinforcement**

Reinforcers semantically modify the descriptive meaning of each of the following premodifiers.

(2) “a mere useless gibbering stop-the-war-at-any-price pacifist”,

Here, mere reinforces useless and gibbering. Because Classifiers have referential not descriptive meaning, it does not reinforce the stop-the-war-at-any-price, although we expect the Reinforcer to modify each following word. (That awkwardness explains why phrases with all four zones filled are rare - a point noted in section §2.1.1 of chapter 3.)

**Other examples**

Further examples are as follows.

- In "magnificent prancing stallions", we take it that the prancing in particular is magnificent, as well as the stallions generally.
- A final example confirms the point negatively: in “it was a high class and cultural performance” (of a Turgenev play), the word and has been inserted to prevent us from reading high class as modifying cultural.

### 3.3 Discussion: modification of a later modifier

**Borderline instances**

Again, there are borderline examples. In "beautiful long hair", there is a suggestion that the length is beautiful, but that interpretation is not a required one.


8* Cited in Fries (2000: 312). No context is given.
How a modifier can modify different words simultaneously

I have said that in "a nice warm room" nice modifies warm and room simultaneously. I suggest that the parallel modification is made possible by the semi-independence of the meaning types discussed in chapter 1: words like big and low usually have conceptual meaning alone; words like terrible can have expressive meaning alone; words like utter can have grammatical meaning alone. In modification of a later premodifier, those meaning types work independently, as follows.

Nice has in most contexts a descriptive (conceptual) meaning, ATTRACTIVE, and an expressive meaning, APPROVAL; in this context, it also has a grammatical meaning, INTENSIFICATION. The three types of meaning work rather independently: the INTENSIFICATION modifies warm ( = 'very warm'); the ATTRACTIVE meaning modifies room ( = 'the room is nice'); APPROVAL modifies the rest of the phrase, in the normal syntax ( = 'I approve of the room's being warm'). Diagram 1, below, will perhaps make the structure clearer. (Arrows represent modification; boxes delimit the modifier (nice) and its meaning, and the elements modified.)

Diagram 1: structure of semantic relations, in modification of different words at once

I suggest that modification of later modifiers occurs because, as hearers, we tend to take successive words together, making "nice warm" a constituent, rather than nice and its distant head, room. (This is the principle of minimising domains, which I will discuss in section §2 of chapter 10.)

Zone where this modification occurs

Reinforcers regularly modify following premodifiers, as in “a mere useless gibbering stop-the-war-at-any-price pacifist”, cited previously: Another example is “sheer desperate necessity”: the phrase entails both sheer desperation and sheer necessity.

99 Strictly, my capitals represent conceptual meaning, not expressive or grammatical meaning; but the distinctions are not important here. The capitals here mark all kinds of meaning.
Chapter 5: Syntactic explanation

All the other examples given have been of Epithets:

<table>
<thead>
<tr>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>beautiful</td>
<td>warm</td>
<td></td>
<td>weather</td>
</tr>
<tr>
<td>nice</td>
<td>cosy</td>
<td></td>
<td>house</td>
</tr>
<tr>
<td>long</td>
<td>slow</td>
<td></td>
<td>strides</td>
</tr>
<tr>
<td>unfortunate</td>
<td>narrow</td>
<td></td>
<td>focus</td>
</tr>
<tr>
<td>magnificent</td>
<td>prancing</td>
<td></td>
<td>stallions</td>
</tr>
</tbody>
</table>

But Epithets modify later premodifiers only sometimes: in the following phrase, classic does not modify snowy or volcanic individually.

<table>
<thead>
<tr>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>classic</td>
<td>snowy</td>
<td>volcanic</td>
<td>cone</td>
</tr>
</tbody>
</table>

I have found no examples in the Descriptor zone, or in the Classifier zone.

Relation to semantic structure

The fact that Epithets readily modify following words is related to various elements of their semantic structure, in much the same way as we saw in the last section.

- Words such as magnificent are fairly general, with the result that the hearer can interpret them as applying to quite different things: physique, stance, or movement, for example.

- Epithets are often complex. In "that typical, ordered, middle-class, 'responsible' life", both ordered and middle-class have complex meanings including elements like “planning for the future” that provide the causal link to responsible, while other elements (such as “living by conventional moral standards”, for middle-class) relate directly to the head, life.

- The expressive meaning of words such as lovely (in “lovely soft hands”) makes it easy for hearers to apply the approving feeling to abstract softness (in the following modifier), while applying the descriptive meaning (attractive in appearance) to the physical entities denoted by the head (hands).

I attribute my finding no Descriptors or Classifiers as examples to their lacking those features of Epithets - to their being precise, simple, and neutral.

Type of modification

These modifiers are of a specifying type of modification. (Other types of modification will be noted in later sections of this chapter, and summarised in §8.2.)
3.4 Conclusion: modification of a later modifier

Classifiers and Descriptors do not modify later premodifiers; Epithets do so sometimes; Reinforcers do so regularly. Zones further from the head have wider scope: they can modify more words other than the head.

This modification is made possible by the words’ semantic structure.

To the extent that they are not modifying the head, Epithets and Reinforcers are bound to those other words, and bound more loosely to the head.

4 Modification of the act of ascribing properties

4.1 Introduction

In using the phrase, "aged whisky", a speaker ascribes to the liquid both the property of being aged and the property of being whisky. Syntactically, aged modifies the word whisky; semantically, it modifies the entity, whisky - the liquid. But in "fake whisky", the modifier applies to the very act of ascribing to the liquid the property of being whisky, asserting that it is wrong to use whisky of that liquid. The word fake does not apply to the entity itself: it is not fake liquid. This section deals with the use of premodifiers to modify the act of ascription in such a way.

This use has been studied before: see Cruse (2004: 67) on “negational descriptors” such as fake, imitation, and reproduction; Jackendoff (1997), Sweetser (1999: 150-154), Dalrymple (2001), Löbner (2002: 108), for example.

Modifying the ascription of a property, rather than adding to the meaning of a constituent, is “modality”. Stubbs (1996: 200) defines it as “speakers’ or writers’ expression of attitude towards propositional information”; one such attitude is confidence in the truth of the information, as in sentence adverbials such as probably and certainly. Accordingly, I take this type of modification to be modal modification. That view is supported by Huddleston and Pullum (2002: 557), who describe these words as "modals", and list many more. Warren (1984: 231) also calls them modals, giving actual, potential and literal as examples. See also Partington (1993:178) and Löbner (2002: 108).
4.2 Modal modification

Introduction

This section lists and illustrates some types of modal premodification.

Truth of the ascription

The example given above, "fake whisky", illustrates the use of a modifier to modify the truth of an ascription. Other examples are "a bogus English heiress", and "a possible last stand". Other words sometimes used this way are imitation, replica, genuine, and reproduction.

Value of the evidence for the ascription

Similarly, premodifiers sometimes apply to the nature or trustworthiness of the evidence for the ascription. Examples include "purported rape", "a suspected heart attack", and "feared swansong". Other words sometimes used this way are accused, alleged, reported, self-styled, apparent, and putative. An interesting example is "an apparent electrical fire" where apparent does not modify any stated ascription (it was not apparent fire or apparent electricity), but the implicitly ascribed meaning 'caused by'.

Time when the ascription applies

A third group of words modifying the ascription indicate the time when the ascription is or was true. An example is "former glamour model". Other words that may be used this way include potential, present, wartime, ex (now sometimes used as a separate word), and then (as in "the then president"). These uses are discussed by Huddleston and Pullum (2002: 556 - 557) as "temporal attributives".

Other examples

Other examples, which I will not try to classify, are “his two relative failures”, and "a threatened massacre".

Scope of modification

Although these words syntactically modify the following part of the phrase, they may semantically modify a single word: an Epithet alone ("a probable new [E] route"), or a Descriptor alone ("my then young [D] family").

Qualification

As always, the statements made apply to particular uses of words, not to the words regardless of use: words such as actual and potential have non-modal uses.
4.3 Reinforcement

Reinforcers, such as utter and sheer, are usually treated in the literature as intensifying the denotation of the headword, which is thought to be a matter of degree; for example, Paradis cites (2000: 238) "absolute bliss" and "a perfect idiot" thus. Treating these as intensifying the degree of the quality denoted by the head makes a generally adequate account (and one I use myself, in section §5.5 of the previous chapter); but a more precise explanation of what is happening in the utterance is that the speaker is reinforcing the act of ascribing the head word to the entity. For example, in "utter nonsense" (Paradis, 2000: 238), and "It weighs an absolute ton!" (spoken of a sewing machine), being nonsense and weighing a ton are not matters of degree; the speakers use such phrases to emphasise that using the words nonsense and ton is justified - adding expressive force, not adjusting an abstract concept: the Reinforcer is modifying the act of ascription.

Some other examples are as follows:

(1) "That's absolute unmitigated garbage!" (spoken of a political accusation).
(2) "I feel distinctly uneasy about the prospect of being governed by a complete bloody idiot" (referring to the British Home Secretary).
(3) "A big fool" (when it is the folly, not the person, that is “big”).

4.4 Discussion: modification of the act of ascription

Borderline examples

In “Absolute unmitigated garbage”, it is not clear whether unmitigated has more meaning than its disapproval. If it does, perhaps it is a truth modal, unmitigated being equivalent to “it is certain...” (that the accusation referred to is garbage); otherwise, it is a non-modal expressive word.

Classes of modal modification

There does not seem to be a definable set of modal modification types, (or of particular words that can modify modally); but the groups I have given fit quite well with general classifications of modality, such as Halliday’s (2004: 147) - e.g. probability, obligation, etc.

Zones where this modification occurs

(1) Reinforcing modification occurs in the Reinforcer zone.
Chapter 5: Syntactic explanation

(2) The modal premodifiers occur in various zones. Two sets of examples follow, one set (attested) from the time modals, and one (invented) from the truth modals.

<table>
<thead>
<tr>
<th></th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>the</td>
<td>former</td>
<td>British</td>
<td>welterweight</td>
</tr>
<tr>
<td>(b)</td>
<td>his</td>
<td></td>
<td>British</td>
<td>former wife</td>
</tr>
</tbody>
</table>

In (a), *former* is placed as a Descriptor to modify "British welterweight champion", but in (b), it is placed as a Classifier, and after *British*, to modify "wife".

<table>
<thead>
<tr>
<th></th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>fake</td>
<td>ancient</td>
<td>Chinese</td>
<td>porcelain</td>
</tr>
<tr>
<td>(b)</td>
<td>beautiful</td>
<td>fake</td>
<td>Chinese</td>
<td>porcelain</td>
</tr>
<tr>
<td>(c)</td>
<td>beautiful</td>
<td></td>
<td>Chinese</td>
<td>porcelain</td>
</tr>
</tbody>
</table>

In (a), *fake* modifies all of “ancient Chinese porcelain”; nothing positive is ascribed to the “porcelain”. In (b), *fake* modifies only “Chinese porcelain”; the fake porcelain is said to be beautiful. In (c), *fake* modifies only “porcelain”; the material is said to be Chinese, and beautiful.

We conclude, then, that modal premodifiers have a definite scope, but not a definite zone: they are placed immediately before the word or group of words to be modified. (What zone they belong in will be discussed in the next few paragraphs.)

**Relation to semantic structure**

Of the two types of modifying the act of ascription, reinforcement relates zone and semantic structure straightforwardly; since Reinforcers' ability to modify other premodifiers and the head depends on their being wholly abstract and grammatical.

Modals, the other type being considered, vary in semantic structure. *Potential*, and *relative*, for example, are quite abstract and are subjective (in depending on speaker opinion), so they are like Epithets; but *then, alleged, suspected*, and even *fake* are fairly objective, and are not scalar\(^{10}\), so they are like Descriptors (we do not say "very fake"). Moreover, they are used in different zones (without a change of meaning), as just shown (under the heading “Zones where this modification occurs”). Those facts are significant exceptions to the general correlation of semantic structure and zone.

It seems, then, that modal premodifiers are zoneless; they are outside the zone system, which ties position to semantic structure. The reason lies in their very nature: since they modify the act of ascription (not the head entity, as other premodifiers do basically), they do not

\(^{10}\) For scalarity, see chapter 4, §4.2.3.
follow the rule for other premodifiers, but stand immediately before the ascription they modify.

4.5 Conclusion: modification of the act of ascription

We see that Reinforcers regularly modify an ascription, by their nature. Modal premodifiers are an exception to the principle for all other premodifiers: a single sense - with constant semantic structure - can occur in different positions; they are outside the zone system.

5 Modification of a discourse element other than the head entity

5.2 Introduction

We have seen that normally any entity which a premodifier gives information about is the entity denoted by the head. In some uses, however, a premodifier gives information about something else in the discourse, modifying it semantically, though not modifying the word that denotes it syntactically.

5.2 Types of other-element modification

Modifying another participant

Premodifiers can give information about other participants in the discourse.

- Explicit participant, denoted by the determiner. When a tramper wrote that the boulders in the riverbed "began disappearing behind our happy feet",\textsuperscript{11} it is the tramper and her companion that were happy, not their feet. (In this section, I use double underlining to mark

\textsuperscript{11}\textit{New Zealand Alpine Journal.}
Chapter 5: Syntactic explanation

the word denoting the element modified.) Other examples are "Leslie Nielsen's astonished face"; "my naive freshman days"; "your own stupid fault"; "my naked bed".13

• More distant but explicit participant.
  • Subject of the clause: In “Matt emitted happy little squawks”, it is Matt who is happy.
  • Participant in a subordinate prepositional phrase: "a naked photo of the mayor".15
  • The hearer ("you"): "How the hell could you give away half the fucking company?"16 (The anger expressed in fucking is directed at the hearer.)

• Implicit participant. To the extent that modifying something entails giving information about it, expressive modifiers modify the speaker. The cricket commentator who exclaims "Good shot!", gives the information that he approves the shot. When a book reviewer refers to a book as "a slim volume", slim informs us (unintentionally) of the reviewer’s condescension. The various forms of social meaning inform us of the speaker’s social background or relation to the hearer: regionalism - “the nippy wee beast”; informality - "your own stupid fault"; formal use - "Leslie Nielsen's astonished face"; obscenity - “the fucking company”. (The examples have graded off in the relevance to the head of their descriptive meaning; the last one does not modify the head semantically at all.)

Huddleston and Pullum (2002: 556 - 559) discuss two types of such usage, as “associative attributives”, and “transferred attributives” (which they note as being the traditional figure of transferred epithet or “hypallage”).17

Modifying an event

Heads quite often denote an event (rather than an object18), or include an event in their denotation, as in “a big eater”, “hard worker”, "his frank admission", “an indiscriminate

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14 Climber 53 (Spring 2005), page 9.
17 They regard expressions like “criminal lawyer” as modifying an entity “associated with” the head. That seems to be wrong. “Criminal lawyer”, “nuclear scientist” and so on are like “political party”, “social comment” and so on: they all denote a type of the entity denoted by the head. I explain the issues fully in the Classifiers chapter. (I suggest that this resolves the long debate in the literature about “criminal lawyer”.)
18 "Event" and "object" are used here rather loosely; I will refine the use of such terms in the introduction to chapter 6.
massacre”, and the much-discussed "a beautiful dancer". But the event modified is sometimes denoted by a word other than the syntactic head, as follows.

- The verb in the clause: a pianist “played a heavy first note and a curtained second one” ( = 'played the first note heavily'). “Laos threatens to attack new village” ( = 'attack for the first time').

- An implicit event: linguistic nativists are said to “use performance factors and the maturation of universal grammar as unprincipled fudge factors for recalcitrant data” ( = 'the nativists explain the data with great difficulty.')

- The KGB "employed a younger Mr Putin" ( = 'employed Mr Putin when he was younger'.

This use seems to merge with modifying another participant, as discussed just above: for example, “Matt emitted happy little squawks”, could be taken to mean 'Matt emitted little squawks happily'.

5.3 Discussion: modification of another discourse element

Zone where this modification occurs

The examples given have all been Epithets, with the possible exception of "a nude photo of the mayor” (which seems to have a Descriptor):

<table>
<thead>
<tr>
<th>Determiner</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>our</td>
<td>happy</td>
<td></td>
<td></td>
<td>feet</td>
</tr>
<tr>
<td>the</td>
<td>fucking</td>
<td></td>
<td></td>
<td>company</td>
</tr>
<tr>
<td>the</td>
<td>good</td>
<td></td>
<td></td>
<td>shot</td>
</tr>
<tr>
<td>a</td>
<td>happy</td>
<td>little</td>
<td></td>
<td>squawks</td>
</tr>
<tr>
<td>a</td>
<td>heavy</td>
<td>first</td>
<td></td>
<td>note</td>
</tr>
</tbody>
</table>

Reinforcers regularly use this form of modification: being emphatic, and expressing intention, they convey something about the speaker.

<table>
<thead>
<tr>
<th>Reinforcer</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>complete</td>
<td>unmitigated</td>
<td></td>
<td></td>
<td>garbage</td>
</tr>
</tbody>
</table>

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19 Huddleston and Pullum (2002: 557) give a list of such uses, as “process-oriented attributives”. Warren (1984: 239) analyses “hard worker” as “[hard work]-[er]”. Quirk et al. (1985 §7.73) describe them as corresponding to construction with an adverb.

20 Ferris (1993).


Chapter 5: Syntactic explanation

Relation to semantic structure

The modification structure relies on the semantic structure of the modifying words.

Nearly all of these expressions rely on the expressive meaning of Epithets. In “good shot”, the descriptive meaning (“skillful” in the context of cricket) relates to the head entity (the shot); it is only the attitudinal meaning (approval) that relates to the speaker.

In other instances, it is Reinforcers’ and Epithets’ abstract meaning that controls the effect: the hearer transfers HAPPINESS to the other participant because feet and squawks cannot take abstract descriptors.

Classifiers and Descriptors do not modify other discourse elements because they have no expressive or abstract meaning: (The Descriptor in “nude photo of the mayor” modifies another participant only by figure of speech - transferred epithet.)

5.4 Conclusions : modification of another discourse element

From this section, we draw the following conclusions.

- Modifiers can modify a discourse element other than the participant denoted by the head.
- The element modified is outside the scope of normal modification, which is the denotation of the remainder of the phrase.
- Neither Classifiers nor Descriptors appear to be used in this way; Epithets are often so used; Reinforcers are so used routinely.
- This modification of another element is dependent on the modifier’s semantic structure.
- This is a subjective use of modification, since it expresses personal attitudes and feelings rather than objective facts or impersonal concepts.

5 Modification of the discourse situation

6.1 Introduction

This section shows that a modifier may relate semantically to part of the discourse situation: a whole state of affairs in the external world, the social situation of the participants' relationship, or the linguistic situation - the text.
6.2 Types of situation modification

Modifying the relationship between speaker and hearer - interpersonal function

Sometimes modifiers adjust or maintain the social relationship between speaker and hearer, or give the hearer information about the social situation.

Slang establishes group membership and identity (Eble 2000), creating or modifying the social situation. Some language has “the power ... of actually creating a situation” (Cruse 2004: 59). “Awesome goodie bags” (give-aways), for example, was part of the publicity for a major sports event (appealing primarily to the young), using young people’s slang to create rapport with its readers.

Similarly, informal modifiers establish a relationship of social equality. “Bloody great stupid game” has three such modifiers. Other examples include nice and cosy, as in “nice cosy house” cited above. All of these modifiers reflect the informality of the social situation, and help to create it.

Modifying the situation referred to - expressive function

A passenger in a plane which crash-landed expressed his feeling as -

(1) "Get those bloody doors open and get out of the bloody thing." 23

Here, the modifier bloody expresses anxiety, not with the doors or the plane (the “thing”), but with the situation of being in such a landing. The speaker seems to have been attaching the expletive to every available noun.

Similar examples are:

(2) “I have moved five-fucking-thousand miles to be a public-relations jerk!” 24
(3) "When you are sitting up front driving, you can neither see nor hear a damned thing." 25

In this usage, modifiers are placed for emphasis - typically, near the end of the clause: they can be placed well away from the word denoting what they modify (if any); and (as shown just above), they can in colloquial English even interrupt another word or phrase.


2525 British National Corpus.
Chapter 5: Syntactic explanation

(In these examples, bloody and damned also modify the relation between speaker and hearer, as discussed just above. These uses may also modify the addressee, as in "How the hell could you give away half the fucking company?", discussed previously.)

Modifying the textual situation, as discourse marker - textual function

The word actual is sometimes used straightforwardly as an Epithet: "the actual words of Jesus" has OED's meaning <2>, "existing in act or fact". It is sometimes a Reinforcer, emphasising the meaning of the head: “hatred and persecution, later to be transformed into actual genocide”. (This Reinforcer use is not recorded in SOED.) In other uses, however, actual serves a discourse function, and semantically does not modify the rest of the phrase, the ascription, or the participants, as follows.

(4) "A man came who was the bishop of Durham, but whose actual name I don't know." 26 Actual focuses the hearer's attention on the name, to make it contrast with the man's position (bishop). If the speaker had said, #"A man came who was Bishop of Durham but I don't know his name", she would presumably not have used actual at all, since the hearers' attention would have been focussed on name by its position at the end of the sentence. Actual here does not give us information about the head entity (the bishop’s name); nor does it modify any participant, or the speaker’s situation: it is purely a discourse marker, with the function of focussing attention. (Tognini-Bonelli 1993 discusses this use of actual.)

A second discourse function of actual is marking a change of topic. Here are two examples. (The emphasis is in the originals.27)

(5) "... women’s magazines that matter get grottier and grottier if Claire will forgive my saying so. The actual problems that people are allowed to ask advice about have become disgusting beyond belief ...".

(6) "I don't want to read a book that is about psycho-analysis but I think the actual presentation of Freud himself is amazingly successful...".

In both of these examples, actual focuses attention, but the purpose of the focusing is to help the unexpected change of topic: in the first example, the reader expects the topic of the new sentence to be either women’s magazines or grottiness; in the second example, the reader expects the topic to be the speaker (“I”) or psychoanalysis.

26 26 Spontaneous remark by an anonymous speaker at a public meeting; 14 November, 2005.

27 27 Both from Tognini-Bonelli (1993: 195-197); they are treated there as illustrating the "focussing" use of actual.
**Chapter 5: Syntactic explanation**

*Single* has a similar discourse use, as in “GM’s *single* biggest investment”, where *single* seems to have moved from postdeterminer position to Reinforcer position, with discourse-marker function of focusing attention (on *biggest*); its meaning of SINGleness is already expressed by “biggest” and by the singular form of "investment".

These uses modify the head syntactically, but they can hardly be said to modify any one word semantically, since they do not affect any particular word’s interpretation.

### 6.3 Discussion: modification of the discourse situation

#### Zones where this modification occurs

Almost all of the examples of modifying speaker-hearer relationship and of modifying the social situation have been Epithets (“the *bloody* colonel,” “a *damned* thing”). One example was a Classifier: "awesome *goodie* bags".

The two premodifiers modifying the textual situation (as discourse marker) were Reinforcers.

#### Relation to semantic structure

Effect on social situation is achieved by social meaning. “Awesome *goodie* bags” relies on its social meaning as young people’s language (their social dialect, in the terms of Cruse 2004: 59); “*bloody great stupid* game” relies on its informality. So, as in section §3.3, the ability of Epithets to serve two modification functions at once rests on their semantic structure: the descriptive meaning of *great* and *stupid* can modify the head (*game*), while their social meaning modifies the discourse situation.

As we saw in the section §4.4, on modification of ascription, Reinforcers (*actual* in this case) can readily modify something other than the head because they have no inherent descriptive meaning linking them to the head entity.

As in sections §2 to §5, non-canonical modification is controlled by semantic structure; and occurs only with Epithets and Reinforcers. (The Classifier *goodies*, in “awesome *goodie* bags”, is an exception; it has the semantic structure and powers of an Epithet because it has carried them through its migration from slang Epithet or interjection, to slang noun (as plural, *goodies*), and back to premodifier.)
6.2 Conclusion: modification of the discourse situation

We draw the following conclusions.

- Premodifiers are sometimes used to modify the situation of use - either the situation referred to, or the speaker-hearer relation, or the textual situation.
- In this use, their scope is wider than the rest of the phrase (which is the scope of normal premodification), and wider even than modification of other participants, as discussed in the last section.
- They rely for this structure on the complexity of their semantics, and on social and expressive meaning, in particular.
- They are strongly subjective, in serving the speaker's feelings and discourse intentions rather than supplying information about entities.
- The further from the head a zone is, the more frequently do its members modify the discourse situation.

7 Modification of the head: closeness of the syntactic bond

7.2 Introduction

This section discusses how closely premodifiers in the different zones are bound to the head (with incidental comment on how closely they are bound to each other). It draws on the previous sections, but also on new material.

7.3 Closeness to the head of modifiers in the different zones

Classifiers

Classifiers are syntactically close to the head.

- As is entailed in the zone structure set out in chapter 3, on zones, Classifiers can have no other type of modifier intervene before the head.
- Classifiers take no part in the forms of modification studied in the previous sections of this chapter. (There was one exception - “goodie bags”.)
Classifiers and their heads are often replaced by a single word. Sometimes the modifier stands alone, for both words; for example, “macadamia nuts” becomes “macadamias”; “TV set” becomes “TV”. Sometimes, another word replaces both words; for example “novel writer” becomes “novelist”, “ambulance man” and “St John's man” became “zambuck”. In these examples, the Classifier has lost its descriptive meaning, and is referential, serving the same function as the head.

Classifiers are very closely bound to the head.

Descriptors

Descriptors are a little more loosely bound to the head.

In one way, they are close to the head: “young man” is close to functioning as a lexical unit, like “youth”; “retired person” is like “retiree”. On the other hand:

- By definition, Descriptors may have other modifiers (Classifiers) intervene between them and the head.
- Their bond is not so much to the head as to succeeding premodifiers and head, as a group. Black, in “black iron fence” modifies “iron fence”, not “fence” alone.
- Some are relative modifiers, as in “a large mouse” and “a large house”. The contextual adjustment of the meaning on the scale of size is a syntactic operation that can occur only between elements that are distinct.

Epithets

Epithets have a much looser bond to their syntactic head.

- They are separated from the head by two zones of modification; and, since there may be several modifiers in each of those zones, Epithets can grammatically be separated from the head by a number of other premodifiers.
- Epithets can take part in all the non-canonical forms of modification studied in this chapter, though not all Epithets do.
- We have seen that expletives like bloody modify the situation, not being semantically bound to any particular word. (“The army must be paying you more than the bloody colonel”, for example.)
- Finally, an Epithet is sometimes inserted into another word: “amalga-bloody-mated”.28

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28 OED example.
Chapter 5: Syntactic explanation

Words that can modify in so many ways, and can vary in position so greatly, are very loosely bound to the head.

Reinforcers

Reinforcers are bound more loosely still.

- They routinely take part in the non-canonical forms of modification.
- Reinforcers modify most of the other premodifiers in the phrase, rather than having a single modifying relation (to the rest of the phrase).
- Their very nature as reinforcing words is to modify the act of ascription of words (the head or other modifiers), rather than to modify the head, in the sense of adding information to it. That is reflected in the fact that we cannot use Reinforcers predicatively: “the complete idiot” is grammatical, but not “The idiot is complete”.
- Some Reinforcers (such as actual) can modify the situation, not particular words at all.

Reinforcers are the most loosely bound of premodifiers.

7.3 Conclusion: modification of the head

There is a cline in the syntactic bonding of premodifiers with the head, from Classifiers (the most tightly bound), to Reinforcers (the most loosely bound). It can be represented as:

\[(1) \text{Reinforcer} < \text{Epithet} < \text{Descriptor} < \text{Classifier};\]

where the sign “<” means “is less tightly bound than”, or “is more autonomous than”.

The variation in bonding is another syntactic difference between the zones.

8 Discussion: syntactic explanation of unmarked order

8.1 Other syntactic features of the zones

This section discusses syntactic features which explain premodifier order only partially, or indirectly (being dependent on the modification already discussed, or on semantics).

Subjectivity

Standard premodification (where the word simply modifies the rest of the phrase) is relatively conventionalised and objective. Producing and interpreting the other forms of
modification are more reliant on users’ judgement, and allows them some freedom (as to when to use it and as to what the modifier may relate to); it is therefore more subjective. It often entails what Traugott (1995: 32) identifies as "subjectification": "the development of a grammatically identifiable expression of speaker belief or speaker attitude to what is said". The earlier sections of this chapter have shown that the degree of subjectivity increases with distance from the head.

This subjectivity parallels the subjectivity noted the last chapter (§6.1); it will likewise have some importance later (especially for grammaticalisation, in section §3 of chapter 11).

Language function

Most premodification serves the experiential language function, in partnership with referential and descriptive meaning. (See the exposition of functions in section §6.1 of chapter 4, based on Halliday 2004.) Modifying the speaker and hearer and the discourse situation serves the interpersonal function. Modifying the act of ascription, and acting as discourse marker, serve the textual function.

Submodification

The zones differ in whether they allow submodification. Although the other zones allow it, the Reinforcer zone does not, because its words have no content to be modified.

8.2 Other syntactic features of premodification

Types of modification

In the literature on modification, on adjectives, and on noun phrase structure, there seems to be no consensus on what modification consists of, and (in my observation) no clear outline of it. For that reason, and because this chapter has set out considerable variety and complexity in noun phrase modification, it seems worthwhile to suggest an analysis of modification, briefly.

I suggest that there are the following types, in nominal phrase premodification. (I mark the modifying word with double underlining, and the location modified with single underlining.)

- Amplifying modification. The modifier amplifies the reader’s interpretation of the phrase; that is, it adds information to it; for example, thick amplifies slow by adding its causation, in “thick slow hug of the bush”; in “a nice warm room”, WARMTH is added to ROOM. (See sections §3.2 above, on cause and evaluation.)
Chapter 5: Syntactic explanation

- Specifying modification. The modifier makes specific some information that is given vaguely elsewhere; for example, “a good thick layer”. (See section §2.)

- Intensifying modification. The modifier intensifies information given elsewhere; that is, it instructs the hearer to interpret another word more strongly; for example, “a nice warm room”. Weakening modification could be included here, as the same process in the opposite direction. (See section §2.2, §3.2, and §4.3.)

- Situational modification. The modifier does not relate to the informational content at all, but affects the discourse situation - the relation between speaker and hearer; for example, “awesome goodie bags”. (See section §6 above.)

Words are sometimes ambivalent, carrying two types at once; nice is intensifying, in “a nice warm room”, but is also amplifying - “a nice warm room”. Also, the classification applies to submodification within a noun phrase; “a badly carved wooden chair” has amplifying modification; “a highly carved wooden chair” has intensifying modification.

The types do not characterise the zones: intensifying modification occurs in both Reinforcer and Epithet zones, for example. Nor does it characterise the scope of modification: intensifying modification takes scope over both preceding and following words, and previous-word modification may be either specifying or intensifying, for example. Therefore, the types of modification do not determine or characterise premodifier order.

Marked syntax

I do not have properly attested examples of this use, although I believe it is reasonably common in informal speech. I construct one, beginning from an example from Huddleston and Pullum (2002: 452):

(1) “a black large sofa”.

The authors assert that the order is acceptable (instead of the normal “large [black [sofa]]”) when a speaker is distinguishing among large sofas -“a [black [large sofa]]”. I believe that that reordering is so rare as to be unacceptable, and that we use other devices for that sort of contrast. For example, we use contrastive stress, as in -

(2) #“a large black sofa”.

There, black is contrasting one sort of large sofa with others; so that the concept BLACK modifies the concept LARGE SOFA, and the word “black” modifies the words “large...sofa”.

2929 I give evidence from the British National Corpus for a number of such phrases, and deal with the other devices, in the Other Theories section of chapter 11 (section §4.6.2).
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Black, then, occurs in the middle of the word group it modifies, not before it, as in regular (that is, unmarked) syntax. The structure is “a [large {black} sofa]”, where {...} indicates a constituent occurring within the constituent it modifies. That is a marked use, with the contrastive stress carrying out the marking.

A real example of dubious attestation occurred earlier in this chapter (section §2.2), where I wrote -

(3) “old electric trains are younger than old steam trains”.

That contrasts the meaning ‘old trains powered by electricity’ with ‘old trains powered by steam’, with the concept OLD TRAINS modified by ELECTRICITY and by STEAM; so the last phrase of the quotation is structured: “[old {steam}trains]”.

Semantic implications of the chapter

Section §6.2 illustrated general emphasis as a form of reinforcing, as in the discourse marker use of the Reinforcers single and actual. It is more subjective than the intensifying form of reinforcement (which characterises Reinforcers), since it is underspecified as to what is to be reinforced and the nature of the reinforcement, relying on the hearer’s contextual interpretation. We did not have occasion to observe it in the Semantic Explanation chapter, as it is not characteristic of any zone. Accordingly, I note it here as a type of meaning: emphasising and intensifying are two meaning types serving the reinforcing function. I add it to the semantic map given in section §1.2.1 of the previous chapter, where the semantic functions and meaning types were set out. (The addition is in bold type.)

Diagram 2: map of semantic functions and meaning types in English
Support from other writers

I have already cited support for specific points. General support for my treatment of modification comes from several writers who view the interpretation of nominal phrases as being more than adding the effect of successive words and applying straightforward compositional rules. Cruse (2004), Taylor (2002) and Pustejovsky (1995), from their different points of view, all describe meaning as being built by a complex interaction of the word meanings, which varies with the syntax and the context to develop a total meaning that is far from being the sum of straightforward and linear modification.

Support from psycholinguistics will be given in the Supporting Explanations chapter, section §2.

9 Conclusion: syntactic explanation of unmarked order

9.1 Summary

Scope of modification

Modal premodifiers such as alleged and former (discussed in section §4) occur in different positions, being placed so as to immediately precede the word or words that they modify. They thus appear to change zones, even though they have the same content and semantic structure in the different positions. In that, they differ from other premodifiers. They differ also in having a single syntactic power (the regular one, of modifying the following part of the phrase), not the wider powers that other conceptual premodifiers do.

For other premodifiers, the scope is as follows.

- The syntactic scope of premodifiers is the following zones and the head.
- The semantic scope of premodifiers is (a) the same as for syntactic scope, just stated, and (b) occasional additional scope, which is in general as follows:
  - modification of previous words, by some Epithets, and a few Descriptors, in a relative or explanatory relation for example (see section §2);
  - modification of later premodifiers, by Reinforcers and Epithets (as to degree or evaluation, for example (see section §3);
Chapter 5: Syntactic explanation

- modification of the speaker’s act of ascribing properties to the head, by Reinforcers and modal premodifiers (see section §4);
- modification of some element other than the head entity (the speaker, for example), by some Epithets, and a few Descriptors (see section §5);
- modification of the discourse situation, by Epithets, and Reinforcers (to a small degree), making the situation informal, for example (see section §6).

Particular words form exceptions to those generalisations; for example, the Reinforcer actual, as discourse marker, does not modify the following part of the phrase.

In general, then, the further forward a zone is, the wider its scope: its syntactic scope is necessarily wider; its members have more potential forms of modification, and they use the potential more often.

**Relation of syntax to semantic structure**

Premodifiers derive their varying additional scope from their semantic structure. The generalisations in the previous paragraphs derive their force from the semantic structure characteristic of the zones (e.g. Epithets like bloody modify the social situation because of their social meaning); the exceptions derive from the structure of particular words (e.g. the Epithet big does not modify the social situation because it does not have social meaning).

**Closeness of premodifiers’ bond to the head**

The further forward a zone is, the looser are its members’ bonds to the head. (See §7).

### 9.2 Conclusions drawn

#### 9.2.1 Syntactic nature of the zones

We draw the following specific conclusions:

- Chapter 3, on the zones, asserted that the premodifier zones are syntactic units, in that words within one zone are syntactically coordinate with each other, and subordinate to those in later zones. This chapter has confirmed their syntactic status: zones are in order of increasingly wide syntactic scope, further from the head.
- The chapter has also shown that the zone order is one of increasingly wide and varied semantic scope.
- It has also shown that the zones are in order of increasingly loose bonding to the head.
The modal premodifiers are syntactically different from other premodifiers, being placed purely syntactically, not by zone; the generalisations just above do not apply to them.

From those specific conclusions follows the general one, that the order of premodifiers in English nominal phrases has a syntactic explanation, as well as the semantic explanation set out in the previous chapter. It is a further answer to the question with which the thesis began: what is the nature of unmarked premodifier order?

9.2.2 Relationship between syntax and semantics

The general conclusion just reached suggests that syntax and semantics are parallel and equal, in nominal phrases; but the conclusion reached (in section §9.1) that the syntax of premodifiers is based on their semantic structure shows that that is not so. This section works out more fully the syntax-semantics relation. It argues that the relation is complex: explanatorily, semantics is dominant; functionally, the two work together as cooperating equals, mostly; when they conflict, however, semantics overrules syntax.

Explanatory power

The position of modal premodifiers (such as fake and supposed) is explained wholly by syntax: they can occur in different positions according to what they modify syntactically, without change of meaning.

For other premodifiers, however, the scope and type of modification is determined by their semantic structure; that is obviously so for semantic modification, but it is true for “syntactic modification” also. The gradation in syntactic closeness to the head is controlled by the gradation from referential to abstract and expressive-social meaning, as shown in section §7. The basic structure - Reinforcer [Epithet [ Descriptor [Classifier head]]] - also depends on the semantic structure, as an example will show.

(1) “a [splendid [silver [plastic suitcase]]]”.

In this phrase (which is wholly descriptive, in its context), the Classifier plastic modifies “suitcase”: the referential word and the constructional meaning, ‘made of’, add factual meaning to the referential head. The Descriptor silver modifies “plastic suitcase”: being perceptual, it gives physical detail of both the entities denoted by the referential words, suitcase and plastic.

30 British National Corpus.
Chapter 5: Syntactic explanation

The Epithet *splendid* modifies “silver plastic suitcase”: being a conceptual and expressive word, it conveys the writer’s judgement and attitude (admiration of the suitcase, the plastic, and the silveriness). Descriptors by their concrete and usually perceptual nature aptly modify referential Classifiers, as well as the head; and Epithets by their abstract and expressive nature aptly modify other description, as well as the head. Reinforcers can (in principle) modify all of the following words in the phrase because they are grammatical words.

Thus, for these non-modal premodifiers (the vast majority), syntax does provide some explanation of the order, but semantics explains the syntax.

Operation

As we have just seen, syntax and semantics operate together in basic modification: each premodifier modifies the following part of the phrase both semantically and syntactically; syntax and semantics operate in unison.

Conflict

Semantic and syntactic considerations sometimes conflict, however. Occasionally, syntax dominates semantics, but generally semantics overrules syntax.

Syntax is dominant in two situations, as follows.

- Modal premodification. As we have seen, modal premodifiers can be placed in any zonal position, retaining the same simple semantic structure, although semantic rule specifies that semantic structure must change with zone (chapter 4).
- Marked punctuation (to be discussed in section §1.2 of chapter 8). The phrase, “other minor diseases” is normally structured as “other [minor diseases]”, with *other* subordinated to “minor diseases”, and the two modifiers in separate zones (determiner and Epithet). But in “[other,] [minor] diseases” (which allows the previously mentioned diseases to be major ones), the comma (a marked use) changes the syntax, coordinating the modifiers into a single zone, although they are semantically quite different.

Semantics dominates syntax in the following more numerous, and more important, situations.

- In marked syntax (see section §8.2 above), a semantic rule is followed, at the cost of breaking a syntactic one. In #“a large black sofa” (with contrastive stress on *black*), the premodifiers stay in their semantically established zones (*large* as Epithet + *black* as Descriptor). But the phrase contrasts large sofas that are black with large sofas of some other colour; so BLACK
modifies LARGE SOFA, for which the syntactic rule would require “a [black [large sofa]]”, with the premodifier order reversed.

- In many phrases, there is no practical significance in the syntactic order; but the order is fixed - by semantics. I take as example the following, written by a singer:

(24) “I stepped through the thick red velvet curtains of the Royal Opera House.”

The curtains are identified by the postmodifier (“of the Royal Opera House”); the premodifiers are wholly descriptive, adding separate facts about the curtains. So for the readers’ interpretation, there would be no difference if the order were *“red thick velvet curtains, or *“red velvet thick curtains”, and so on. If the phrase were used restrictively with all premodifiers stressed (#“No, I want thick red velvet curtains!”), the order would make no practical difference, since what matters is presence of all the properties, not the order in which they are specified; nor would a different order affect the truth value. The order is determined by the semantic structure, as set out above, in the discussion of “a splendid silver plastic suitcase”; the syntactic structure is of no practical effect in either of those uses. (It is only when one premodifier is contrastive and other is not that the syntax is of practical importance e.g. #“No, I want red velvet curtains, not blue velvet ones!”.)

- The number of zones is set semantically, outweighing syntactic considerations. Consider the following restrictive phrases.

(25) #“I want a large, soft, comfortable sofa”. (Epithet + Epithet + Epithet.)

(26) #“I want a large black leather sofa”. (Epithet + Descriptor + Classifier.)

- There is no difference between the two, in the conceptual relation of premodifiers and sofa, it seems to me; each lists three properties the sofa must have. But example 26 has coordinated modifiers, all in one zone (as Epithets), and the syntax is “I want a [large, soft, comfortable sofa]”; whereas example 27 has subordinated modifiers, in separate zones: “I want a [large [black [leather sofa]]]”, in separate zones. (The identity in structure of the interpretation is shown by what I believe to be the normal pronunciation of such restrictive phrases as 26: the pauses (at the commas) are eliminated, and the phrase run on quickly.) In 26, the modifiers are all in the Epithet zone because they are all conceptual; in 27, they are in different zones because they are conceptual, perceptual and referential respectively. Semantics, not any underlying structure, sets the zones; there are four zones because we distinguish four semantic structures in premodifiers.

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31 New Zealand Opera Society’s Opera News; 2007; I am treating red as modifying curtains, not velvet.
To make a similar argument: if “a large black leather sofa” made three zones because of the syntax (“a [large [black [leather sofa]]]”), then we could have “I want a [fashionable [large [soft [comfortable [new [black [New-Zealand-made [leather sofa]]]]]]]]”, with eight zones; but English semantics specifies only three zones for that phrase: “a [fashionable, large, soft, comfortable] [new, black [New-Zealand-made leather sofa]]].”  

Since semantics allows marked syntax, determines order, and determines the number of zones, semantics outweighs syntax in premodifier order.

9.3 Prospect

Points remaining to be explained later

Some things arising from the chapter remain to be explained in later chapters, as follows

¢ why there are borderline instances (to be explained in section §4.6.2 of chapter 9, Historical Explanation);
¢ why semantics and syntax have such a complex and asymmetrical relationship (also to be explained in section §4.6.2 of chapter 9).

Issues to be considered further

¢ The importance of descriptive and restrictive modification in premodifier order will be discussed further in chapter 10, section §3.2 (on discourse explanation).
¢ The scales of increasing power of modification and decreasing closeness to the head will be discussed further in chapter 11, section §3.3 (on grammaticalisation).

The following chapters

This chapter and the previous chapter have together given most of the synchronic explanation for unmarked order; the exception is that unmarked order within the Classifier zones remains to be considered - in the next chapter (6).

The free and marked orders are discussed in chapters 7 and 8.

32 For why New-Zealand-made and leather go together in one zone, without punctuation, see chapter 6.
Chapter 6: Unmarked order within the Classifier zone

1 Introduction

1.1 General introduction

Relation to previous chapters

In the previous chapters, I have treated the Classifier zone as consisting of a single word; but, as I noted in the Zones chapter, that is a simplification: the Classifier zone often has not only several words but a structure of its own. This chapter sets out and explains that internal structure, which is complex, and quite different from the structure of the other zones; its discussion of semantics parallels chapter 4 and expands section §2.2 in particular, and its discussion of syntax parallels chapter 5.

Starting point: facts to be explained

The chapter starts afresh from the discussion of zones in chapter 3, because there are fresh facts to be explained, as follows.

(a) There are subzones within the Classifier zone, which show coordination within the subzone and subordination of the subzones to following ones, as in the following example.

(1) "This [[brick and tile] [three-bedroom, single-level] townhouse]".

Since the premodifiers are all Classifiers (according to the semantic rules given in section §7.1 of chapter 4), and since coordination of premodifiers occurs only within zones (see section §2.1.2 of chapter 3), the structure must be as follows.

<table>
<thead>
<tr>
<th>Det.</th>
<th>Classifier subzone</th>
<th>Classifier subzone</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>this</td>
<td>brick and tile</td>
<td>three bedroom¹, single level</td>
<td>townhouse</td>
</tr>
</tbody>
</table>

A second example of the subzones:

¹ I rate three as submodifier of bedroom. As in previous chapters, I will treat such groups as single modifiers, without further comment.
Chapter 6: Classifiers

(1) "Panasonic [32 inch [plasma tv's]]"
That could grammatically be expanded, with each Classifier coordinated with another, which shows that they are zones; for example:

<table>
<thead>
<tr>
<th>Classifier subzone</th>
<th>Classifier subzone</th>
<th>Classifier subzone</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td># Panasonic and Sony</td>
<td>32 inch</td>
<td>plasma</td>
<td>tv's</td>
</tr>
<tr>
<td># Panasonic</td>
<td>32 inch and 42 inch</td>
<td>plasma</td>
<td>tv's</td>
</tr>
<tr>
<td># Panasonic</td>
<td>32 inch</td>
<td>plasma and LCD</td>
<td>tv's</td>
</tr>
</tbody>
</table>

(b) The second main fact to be explained is that semantic relations between Classifiers and their heads vary from those of Descriptors and Epithets, and vary from subzone to subzone.

- The modifiers denote entities, rather than denoting properties as other premodifiers do (see §2.3 of chapter 4).

- Sometimes, the relation does resemble that of an entity (expressed by the head) and one of its properties (expressed by the modifier), as in "honing his voice to a steel edge". (The relation there is very like that of the Epithet in "[he applied] a steely edge to his questions".)

- In some other Classifiers, the entity-property relation seems to occur, but with the syntactic roles reversed, as in "public road safety": the modifier (public) denotes an entity, and the head (safety) denotes the property, SAFETY.

- For some Classifiers, the relations are those of an event and its arguments, as in "Israeli arms sales": "Israel [Actor argument] arms [Goal argument] sales [Event]", which parallels "Israel [Actor] sold [Event] arms [Goal]".

(c) The third main fact to be explained is that Classifiers are ambiguous in a systematic way:

- “English teacher”, "Japanese teacher" and so on mean either 'from [that country]' or 'teacher of [that language]'.

- In “Iraqi invasion”, “Iranian attack” and so on, the named participant may be either culprit or victim.

Cautions

There are several potential sources of confusion in explaining order within the Classifier zone. They include the following.

- Often, an important part of the meaning of the phrase is inexplicit and therefore particularly liable to ambiguity. In "British exports", for example, British may be taken to denote the source of the exports, or a category of exports, or the agent of the action of exporting.

2 Both quotations are from the British National Corpus.
Chapter 6: Classifiers

- As a consequence of such indefiniteness, it is very hard to determine the zone of a Classifier on its own, just as it is hard to know whether “tailored suit” has a Classifier, a Descriptor or an Epithet. (I gave that example in section §4.2.3 of the Semantic Explanation chapter.)
- Syntactic role may be ambiguous. For example, in "Pioneer award-winning plasma tv", *Pioneer* is ambiguous between "Pioneer [determiner = Pioneer’s] award-winning [Descriptor] plasma tv", and "Pioneer [Classifier] award-winning [Classifier] plasma tv".
- There can be ambiguity between being a modifier and being a submodifier. "Effluent holding tank", for example, may be read as either 'effluent [holding tank]' (*effluent* as modifier), or '[effluent holding] tank' (*effluent* as submodifier) - or as '[effluent-holding] tank' (a compound single modifier).
- There is often ambiguity as to whether the words form a phrasal structure or a single lexical item. "Sand dune", for example, can be read as a phrase, but can be read as 'sand-dune' - a compound.

I will avoid such problematic examples in my exposition, but I will deal with the problems in my discussion.

This introduction is quite long, because it must introduce six structures, not just one, and a new set of semantic concepts, beyond those presented in chapter 4.

1.2 Outline of the argument

There are five types of order within the Classifier zone. Each has its own combination of constituents; in each, the relation of head to premodifier carries a meaning of its own. Each thus constitutes a construction. There is a sixth use, in which Classifiers occur singly, and in which the hearer infers the relation to the head from context: a constructionless use.

As with the overall order of premodifiers, there is a syntactic explanation and a semantic one. In syntax, the explanation is the same as for the overall order (as set out in chapter 5): each premodifier modifies the group comprising the following premodifiers and the head. The semantic explanation for the order of Classifiers rests on their relationship to the head. (It does not rest on their semantic structure as single words, as the overall order does - see chapter 4.) The principle of order here is that of expectedness (which we saw as a dimension of meaning, in chapter 4): Classifiers with relations that are necessary to the meaning of the head (that is, wholly expected, and so most salient in the head) come closest to it (in the position of least
prominence in the modifying group); those with relations least necessary to the meaning of the head come furthest from it (in the position of greatest prominence). There is a gradient between the two extremes.

The nature of the expectedness varies with the five constructions, which will be explained in following sections.

1.3 Introduction to Classifiers' semantic relations

The purpose of this section is to explain the concepts and terms to be used in the body of chapter. The concepts are useful as a means of explanation, but the argument does not depend on them; so the section is not a complete treatment, and it uses description and illustration, rather than strict definition. I use terms from Croft and Halliday, but most of the concepts are used by many scholars.

I emphasise that the topic is semantic relations of Classifiers - their relations with the head. As I emphasised in section §2.3 of chapter 4, Classifiers as single words are simple; their semantic structure needs no further explanation.

Semantic classes

I follow Croft (1991) in postulating three basic semantic classes: objects, actions, and properties. Those classes have an "unmarked correlation" (Croft 1991: 53) with certain parts of speech: objects are correlated with nouns e.g. vehicle; actions are correlated with verbs e.g. destroy, and properties with adjectives e.g. white. They may, however, be realised differently: DESTROY may be realised as the noun destruction, not as the verb destroy.

Semantic processes

The semantic classes are used as constituents of larger semantic structures, processes. I follow Halliday (2004) in identifying three kinds of process. Material processes are those of the outer, material world, as expressed in "Smith scored six runs", or "The boat sank". Mental processes are those of the inner world of our experience, as in "He felt sick". Relational processes are those of our reflections on those two worlds, and are a construal of our experience rather than the direct representation of it; e.g. "Six runs is a pitiful score", or "The boat was leaky".

3 The term is from Halliday (2004).
4 I do not mark invented examples with "#" in this section, since it is merely introductory.
Chapter 6: Classifiers

The constituents of the processes (which realise the semantic classes) are "roles": either Process (an unfolding through time)\(^5\), or Participant (what is directly involved in the process) or Circumstance (what is associated with the process)\(^6\). Examples are: "He [Participant] won [Process] the 100 m [Participant] in 9.8 seconds [Circumstance]". The distinctions between these constituents are not absolute; (for an explanation, see Halliday 2004: 259-263)\(^7\). There are several types of Participant, according to the type of process. Those relevant to Classifier order are Actor and Goal\(^8\) (in material processes; "He [Actor] won the 100 m [Goal]"), and Carrier and Attribute (in relational processes; "The boat [Carrier] was leaky [Attribute]").

Semantic processes are realised in a syntactic structure; for example, a material process may be realised as a transitive clause: "He [Actor] won [Process] the 100 metres [Goal]".

**Realisation of the classes and processes**

The semantic classes are realised in these semantic roles in varying ways. For example, the action DESTROY may be realised as Participant, as in "The destruction was severe", or as Process (as in "The suicide bomber destroyed the police headquarters"), or as Circumstance (as in "The bomb exploded with great destruction").

Similarly, particular semantic roles (Participants, Processes and Circumstances) may be realised in different syntactic structures. The Participant GAS, the Process EXIT and the Circumstance WITH SPEED may be realised in a material process clause, "The gas exited quickly", or in a relational process clause, "the gas's exit was quick". (EXIT remains a Process while it changes its syntactic function: these are semantic entities.) Alternatively, the process may be realised as a nominal phrase; for example, "fast exiting gas" (with the Participant GAS expressed in the head), or as "fast gas exit" (with the Process EXIT in the head), or as "gas exit velocity" (with the Circumstance WITH SPEED in the head).

---

\(^5\) These are semantic concepts, not metaphysical or even epistemological ones; Process is temporally extended experience, rather than a temporally extended piece of external reality (Kemmer, 2003: 94); so relational Processes such as “is a.....” and “has a.....” are natural.

\(^6\) I use capitals for "Process", “Participant” and “Circumstance” in this use, to distinguish them as technical terms from other uses, such as "discourse participant" and "material process".

\(^7\) Croft (2001, ch. 7) makes the same point (for "argument" versus "adjunct"), and Matthews (1981: ch. 6) makes it for "complement" versus "peripheral element".

\(^8\) Actor and Goal are general terms, here: I do not distinguish between 'actor' and 'agent', for example, or between 'goal' and 'patient'. The analysis to follow does not need such distinctions.
Chapter 6: Classifiers

1.4 Introduction to the types of Classifier order

As noted previously, there are five types of order within the Classifier zone, each of which constitutes a construction, and a sixth, constructionless class of Classifier. (I will explain the claim that they are constructions in section §2.1.3.)

The nature of the types of order can be shown most clearly in terms of Process, Participant and Circumstance, and through the parallel between Classifier structures and clause structures, as follows.

(a) The commonest type of order is illustrated by "Panasonic 32 inch plasma tv". It parallels the clause "The tv is made by Panasonic, 32 inches from corner to corner, and of the plasma type", structured as follows:

<table>
<thead>
<tr>
<th>Participant</th>
<th>Process</th>
<th>Circumstance</th>
<th>Circumstance</th>
<th>Circumstance</th>
</tr>
</thead>
<tbody>
<tr>
<td>The tv</td>
<td>is</td>
<td>made by Panasonic,</td>
<td>32&quot; corner to corner,</td>
<td>[and] of the plasma type</td>
</tr>
</tbody>
</table>

Since the head denotes a Participant, I will call this structure "Participant-head construction". (In the analysis of Halliday, 2004, the parallel clause is relational, of the circumstantial type.)

(b) The second most common type of order is illustrated by "[2006] Israeli arms sales". It parallels the clause, "Israel sold arms in 2006"; (a material-process clause in Halliday, 2004.)

<table>
<thead>
<tr>
<th>Participant (Actor)</th>
<th>Process</th>
<th>Participant (Goal)</th>
<th>Circumstance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Israel</td>
<td>sold</td>
<td>arms</td>
<td>in 2006</td>
</tr>
</tbody>
</table>

In the nominal phrase ("2006 Israeli arms sales"), the Process SELL is expressed as head ("sales"); and both of the Participants, and the Circumstance, are expressed as modifiers.

9⁹ As elsewhere in the thesis, words in square brackets have been added to attested examples to fill the otherwise empty positions, thereby showing more clearly what positions the attested words fill.
Chapter 6: Classifiers

I will call this structure "Process-head construction".

(c) A much less common type is illustrated by "flue gas exit velocity". The parallel here is the material-process clause, "The flue gas exits at a certain velocity":

<table>
<thead>
<tr>
<th>Participant</th>
<th>Process</th>
<th>Circumstance</th>
</tr>
</thead>
<tbody>
<tr>
<td>The flue gas exits</td>
<td>at a certain velocity</td>
<td></td>
</tr>
</tbody>
</table>

In the nominal phrase ("flue gas exit velocity"), the Participant and the Process are expressed as modifiers, and the Circumstance is expressed as the head.

<table>
<thead>
<tr>
<th>Participant (modifier)</th>
<th>Process (modifier)</th>
<th>Circumstance (head)</th>
</tr>
</thead>
<tbody>
<tr>
<td>flue gas</td>
<td>exit</td>
<td>velocity</td>
</tr>
</tbody>
</table>

I will call this structure “Circumstance-head construction”.

(d) Another order is illustrated by "public road safety". That is paralleled by the clause, "the public is safe on the roads"; (a relational clause of the intensive type).

<table>
<thead>
<tr>
<th>Participant (Carrier)</th>
<th>Process</th>
<th>Participant (Attribute)</th>
<th>Circumstance</th>
</tr>
</thead>
<tbody>
<tr>
<td>The public</td>
<td>is</td>
<td>safe</td>
<td>on the roads</td>
</tr>
</tbody>
</table>

In the nominal phrase ("public road safety"), the attribute SAFE is expressed as head, and the Participant and the Circumstance are expressed as modifiers:

<table>
<thead>
<tr>
<th>Participant (Carrier) (modifier)</th>
<th>Circumstance (modifier)</th>
<th>Participant (Attribute) (head)</th>
</tr>
</thead>
<tbody>
<tr>
<td>public</td>
<td>road</td>
<td>safety</td>
</tr>
</tbody>
</table>

I will call this structure "intensive-attribute-head construction".

(e) The last order of Classifiers is illustrated by “28 GB external disk [storage] capacity”. That is paralleled by the clause, “the external disk has capacity for storage, to the extent of 28 Gigabytes”; (a relational clause of the possessive type).

<table>
<thead>
<tr>
<th>Participant (Carrier)</th>
<th>Process</th>
<th>Participant (Attribute)</th>
<th>Circumstance</th>
<th>Circumstance</th>
</tr>
</thead>
<tbody>
<tr>
<td>The external disk</td>
<td>has</td>
<td>capacity</td>
<td>for storage</td>
<td>to the extent of 28 GB</td>
</tr>
</tbody>
</table>

In the nominal phrase, the attribute CAPACITY is expressed as head, and the Participant and the Circumstances are expressed as modifiers:

<table>
<thead>
<tr>
<th>Circumstance (modifier)</th>
<th>Participant (Carrier) (modifier)</th>
<th>Circumstance (modifier)</th>
<th>Participant (Attribute) (head)</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 GB</td>
<td>external disk</td>
<td>[storage]</td>
<td>capacity</td>
</tr>
</tbody>
</table>
I will call this structure "possessed-attribute-head construction".

Classifiers also occur singly, with semantic relations to the head that do not fit clearly into any of the types just listed. Examples are "charcoal burger" (cooked over charcoal), "Fiennes hostess" (the hostess who had an affair with Ralph Fiennes), "crash victim", "glory days", and "sleep inertia". They are constructionless uses, since they have no conventionalised pattern of relationship, and since they have no meaning contributed by the structure - the relation of head and modifier is inferred from context, or is idiomatic to specific phrases.

I emphasise that the clausal forms are given here only as an explanatory parallel; I am not asserting that the phrasal form is derived from the clausal form. I see the two forms as alternative expressions of the same underlying meaning.

### 1.5 Outline of the rest of the chapter

The rest of the chapter sets out and explains the five constructions in turn (§2), and the constructionless uses (§3); then follow some discussion (§4), and a conclusion (§5).

### 2 Classifier constructions

#### 2.1 Participant-head construction

##### 2.1.1 The order of Classifiers in Participant-head constructions

**Relationships**

As noted in section §1.4, the Participant-head construction consists of a head expressing a Participant, and modifiers expressing Circumstances. The example given was, "Panasonic 32 inch plasma tv".

Again as noted in the introduction, the modifiers are related to the head by implicit relations. For example, "[British] 2 inch [brass] electronic oil-pressure gauge" can be paraphrased as: “a gauge of British origin, 2 inches in size, made of brass, of the electronic type, and for the purpose of (measuring) oil-pressure” - where the italicised words make the implicit
relationships explicit. There are five such relations (expressed here loosely, following the example):

- the object's origin;
- its size;
- what it consists of;
- its type;
- its purpose.

I will call those five implicit relations "qualia" (and “quale” in the singular), following Pustejovsky (1995).  

**The order**

The following table sets out the order of these Classifiers; for each position, it gives an example, a statement of the relation the quale consists of, and the name by which I will refer to it.

<table>
<thead>
<tr>
<th>Position: Classifier 1</th>
<th>Classifier 2</th>
<th>Classifier 3</th>
<th>Classifier 4</th>
<th>Classifier 5</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relation expressed:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The following table gives examples of phrases invoking the various qualia, from a range of contexts. (The table continues on the next page.)

<table>
<thead>
<tr>
<th>Modifier: Origin quale</th>
<th>Modifier: Dimension quale</th>
<th>Modifier: Constituency quale</th>
<th>Modifier: Type quale</th>
<th>Modifier: Function quale</th>
<th>Head: Participant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elite</td>
<td>110 cm</td>
<td>stainless</td>
<td>double oven</td>
<td>range</td>
<td>range</td>
</tr>
<tr>
<td>Uniden</td>
<td>2.4 GHz</td>
<td>cordless phone</td>
<td></td>
<td>combo</td>
<td>combo</td>
</tr>
<tr>
<td>Orlando</td>
<td>9 drawer</td>
<td>Scotch</td>
<td></td>
<td>chest</td>
<td>chest</td>
</tr>
<tr>
<td>Roman</td>
<td></td>
<td>winter</td>
<td>fertility</td>
<td>festival</td>
<td>festival</td>
</tr>
<tr>
<td>Aboriginal</td>
<td></td>
<td>rock</td>
<td>art</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neath</td>
<td>15-man</td>
<td>handling</td>
<td>movements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1990's</td>
<td>2 litre</td>
<td>Nissan</td>
<td>Primera</td>
<td></td>
<td></td>
</tr>
<tr>
<td>high denier</td>
<td>nylon</td>
<td>lining</td>
<td>fabric</td>
<td></td>
<td></td>
</tr>
<tr>
<td>high thread-count</td>
<td>nylon</td>
<td>oxford</td>
<td>weave</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 litre</td>
<td>alloy</td>
<td>V8</td>
<td>engine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 cm</td>
<td>stainless steel</td>
<td>gas</td>
<td>cook-top</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 ton</td>
<td>granite</td>
<td></td>
<td>statue</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11 For simplicity of expression, I will use phrases like “qualia Classifiers”, rather than “Classifiers which bear a quale relation with the head”.

111 For simplicity of expression, I will use phrases like “qualia Classifiers”, rather than “Classifiers which bear a quale relation with the head”.

28 November 2008
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<table>
<thead>
<tr>
<th>Modifier:</th>
<th>Modifier:</th>
<th>Modifier:</th>
<th>Modifier:</th>
<th>Modifier:</th>
<th>Head:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Origin quale</td>
<td>Dimension quale</td>
<td>Constituency quale</td>
<td>Type quale</td>
<td>Function quale</td>
<td>Participant</td>
</tr>
<tr>
<td>diamond</td>
<td>double leaf</td>
<td>ear-rings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>white chocolate</td>
<td>raspberry</td>
<td>cheesecake</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 w</td>
<td>electric</td>
<td>soldering</td>
<td>iron 12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 zone</td>
<td>remote control</td>
<td>alarm</td>
<td>kit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>[6 kg]</td>
<td>weigh shaft lever 13</td>
<td>[fixed]</td>
<td>balance</td>
<td>weight</td>
<td></td>
</tr>
</tbody>
</table>

Nature of the subzones

There is some variation in the exact nature of the relationships invoked in some of the qualia positions. For example, the Origin quale basically represents the place of origin (as I will show in the Historical Explanation chapter); but that has been extended to time of origin (1990’s), manufacturer (Sony), brand (Elite). Dimension was originally spatial dimension, but has also been extended (to any measurable attribute, such as voltage). Type varies also, as the table shows. There is some freedom for construing a semantic constituent with a different relation and in a different position accordingly: in “1990s 2.0 litre Nissan Primera” Nissan seems to have been construed with Type relation, though normally it is construed with Origin relation.

The subzones are thus like the main zones in being elements of syntactic structure, with identity through position, coordination and subordination (as in “This brick and tile [Constituency] three-bedroom, single-level [Type] townhouse”); and like the main zones in having a semantic identity which is no longer simple. Consequently, the names I have given are used as technical terms, naming the subzone, not describing it.

The positions and relations in this construction are grammatical realities, just as those of subject, predicator and object are. That can be seen in several ways (which I list at some length, since the claim seems to be a new one).

- It can be seen from the disambiguation of ambiguous phrases by the presence of other premodifiers. In "brick kiln", brick is ambiguous between the kiln’s being made of brick, and having the function of baking bricks; but in #"reinforced-concrete brick kiln" it is not. The presence of a preceding modifier ("reinforced-concrete") filling the “what it consists of”

---

12 “Soldering iron” may seem to be a compound; but it passes the test set out in chapter 1: cf. “branding iron”. (SOED prints it as a phrase.)

13 I take "weigh shaft" to be a phrase submodifying lever.
position makes it clear that brick is in the “purpose” position. A headline writer used the ambiguity for a pun:

(3) “Illegal pigsty flats cost farmer $22,500”.14

They were at once pigsty in type and pigsty in origin: pigsty is ambiguous in position. Compare "American football" (where American is ambiguous between Type - a variety of football - and Origin - all football played in America), with #"American Rugby football". (Other examples were given in chapter 4, §2.2.) That position-dependent ambiguity is like that of digits in numbers: in “222”, the meaning of each “2” depends on its position; empty subzones are place-holders, like the zero in "202".

• Some of these Classifiers can be repeated, with successive Classifiers invoking different relationships: #"a brick brick kiln", #"an English English teacher" (a teacher of English from England).

• There are many Classifier phrases that seem random and vague, but that actually pattern regularly, with consistent qualia meaning; examples are "water board", "water bat", "water cushion", "wire gauge", "wire birch", and so on. The regularity is shown in the following table. The patterning shows that there are various "slots" where Classifiers fit, and that the Classifiers in each column evoke a common meaning.

<table>
<thead>
<tr>
<th>Constituency</th>
<th>Type</th>
<th>Function</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>water</td>
<td>board</td>
<td></td>
<td></td>
</tr>
<tr>
<td>wire</td>
<td>gauge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>hair</td>
<td>net15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>water</td>
<td>bat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>wire</td>
<td>birch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>hair</td>
<td>moss</td>
<td></td>
<td></td>
</tr>
<tr>
<td>water</td>
<td>cushion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>wire</td>
<td>basket</td>
<td></td>
<td></td>
</tr>
<tr>
<td>hair</td>
<td>bag</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

• Above all, however, the range of examples in the main table above, the consistency with which Classifiers pattern in the order shown, and the freedom with which people now write such long phrases show that present-day users of English accept this construction as part of the language.

1414 New Zealand Herald, July 4, 2007. Page A7. There was a third meaning - taking pigsty as Epithet, ‘dirty’ - the flats were a health risk.

1515 “Hair net” occurs in the British National Corpus as a phrase; it is often hyphenated or spelt as one word.
How the relations are interpreted

I have so far taken it for granted that hearers interpret the relations from the positions. That needs justification, for two reasons. First, previous studies have almost all treated these relations as purely semantic (not syntactic), as unpredictable (see chapter 11, §4), and accordingly as inferred from context or learned for particular phrases. Second, the relation to the head sometimes is in fact unpredictable; for example, "coma baby" (a newspaper headline) relied on the relation, 'x [baby, in this example] that was born while the mother was in a state of y [coma]'. In such uses, the reader infers the relation from the context. In other instances, the reader must use world knowledge as well: for example, in interpreting "steel band" with steel as a Type of musical group, not as Constituency of a strip of metal. But the previous discussion shows, I believe, that for such phrases, hearers can draw on the grammatically established relations, using context and world knowledge to resolve ambiguity; hearers need not create the relations afresh for each phrase they meet. In using the established qualia, they use a strictly linguistic source.

2.1.1.2 Recursive constructions

The phrases given so far have used different qualia. There are two types of phrase, however, where successive Classifiers invoke the same quale, constituting subtypes of the Participant-head construction.

Taxonomic construction

Some phrases use the Type quale recursively; each Classifier denotes a type or subtype of what is denoted by the following parts of the phrase - hence my name, "taxonomic" construction. Examples are given in the following table.

<table>
<thead>
<tr>
<th>Determiner</th>
<th>Type Classifiers</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>The</td>
<td>Australian</td>
<td>little 16</td>
</tr>
<tr>
<td></td>
<td>compound</td>
<td>mitre</td>
</tr>
<tr>
<td>The</td>
<td>marketing</td>
<td>general</td>
</tr>
<tr>
<td></td>
<td>bleached</td>
<td>lesser</td>
</tr>
<tr>
<td>The</td>
<td>Revised</td>
<td>Standard</td>
</tr>
<tr>
<td></td>
<td>acting</td>
<td>deputy</td>
</tr>
<tr>
<td>The</td>
<td>Revised</td>
<td>Standard</td>
</tr>
<tr>
<td></td>
<td>principal</td>
<td>assistant</td>
</tr>
<tr>
<td>Two</td>
<td>12-gauge</td>
<td>Greener</td>
</tr>
<tr>
<td>A</td>
<td>hydrated</td>
<td>calcite</td>
</tr>
</tbody>
</table>

16 Note that little is a Classifier here; it is usually an Epithet.

Chapter 6: Classifiers

Meronymic construction

A much less common construction consists of recursive Constituency Classifiers, invoking the part-whole relation - hence the name "meronymic" (from Cruse 2004). Simple examples of part-whole phrases are "a body part", and "sonata movement". More complex examples follow.

<table>
<thead>
<tr>
<th>Whole-part Classifiers</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>locomotive</td>
<td>barrel</td>
</tr>
<tr>
<td>appendage</td>
<td>boom</td>
</tr>
<tr>
<td>express-train</td>
<td>coach</td>
</tr>
<tr>
<td>U.C. Davis</td>
<td>biology department</td>
</tr>
<tr>
<td>Arab</td>
<td>janjaweed</td>
</tr>
</tbody>
</table>

I rate these part-whole Classifiers as invoking the Constituency quale, although nearly all Constituency Classifiers denote the substance constituting the referent; that is because, when they do occur with other qualia Classifiers (which is very rare in my observation), they occur in the constituency position. That is illustrated by "weigh shaft lever", in an example given above and repeated here:

<table>
<thead>
<tr>
<th>Modifier: Dimension quale</th>
<th>Modifier: Constituency quale</th>
<th>Modifier: Type quale</th>
<th>Modifier: Function quale</th>
<th>Head: Participant</th>
</tr>
</thead>
<tbody>
<tr>
<td>[6 kg]</td>
<td>weigh shaft lever</td>
<td>[fixed]</td>
<td>balance</td>
<td>weight</td>
</tr>
</tbody>
</table>

2.1.2 Explanation of the order in Participant-head constructions

Syntactic explanation

Nominal phrases in the Participant-head construction have the same syntactic structure as nominal phrases with Epithets and Descriptors (as set out in chapters 3 and 5): each modifier modifies the group of words that follows. Examples are:

(1) “optical [digital [audio output]]”;
(2) “Fisher & Paykel [7.5 kg [Excellence [washing machine]]”.

The fact that each Classifier modifies the rest of the phrase can be seen in contrastive phrases:

(1) "optical [digital [audio output]]", versus "electrical [digital [audio output]]";
(2) "digital [audio output], versus "analogous [audio output]]".

---

18 The phrase refers to the University of California Davis campus.
19 The phrase is not obviously whole-part, but I can find no better analysis for it.
20
Chapter 6: Classifiers

Semantic explanation

The order of the Classifiers follows the general principle given in the introduction to the chapter: Classifiers with relations most necessary to the concept denoted by the head come closest to it. (I use “Elite 110 cm stainless double oven range” as an example for all but the first point.)

- Function quale. Examples are "electric soldering iron", "remote control alarm kit". These Classifiers come closest to the head, since function is part of the definition of the entity denoted by the phrase. The function quale is absent from “Elite 110 cm stainless double-oven range” - for that reason: "cooking range" is tautologous; it is also tautologous where it is expressed morphologically - refrigerator, heater. Being an expected part of the meaning, the function is often omitted; when expressed, it is placed next to the head - a non-salient position - since it is already salient, in the meaning.

- Type quale (e.g. "double oven range") comes next closest to the head. The type of range is less necessary to RANGE than COOKING is; the fact that it is nevertheless expected in the head concept is shown by the fact that a Type word and its head are often equivalent to a single word (a “morocco leather” is “morocco”; a “prime minister” is a “premier”).

- Constituency quale (e.g. "stainless... range") comes next. The material is not a necessary element in RANGE, and is less expected than DOUBLE-OVEN and COOKING are; it is much less dependent on the head than Function or Type. Other examples are "nylon fabric", "granite statue".

- Dimension quale (e.g. "110 cm... range") comes next. The head entity must have dimensions, but dimensionality is extrinsic to the definition; the size of the range is less expected than its constituency, so it is nearer the salient first position.

- Origin quale (e.g. "Elite... range") comes first. Whether a range originates from Elite or from Baumatic is quite extrinsic to its nature; the origin is not an expected element in the head. Being least predictable, it is placed first.

Conclusion: semantic explanation of Participant-head construction

In this construction, the order of Classifiers is determined by the nature of the qualia: the most expected and semantically salient quale is closest to the head; the merely possible and therefore semantically non-salient is furthest from it - given syntactic salience.

The relation between successive position and the scale of expectedness may be visualised in diagram 1 (below), using “[American] 60 watt [brass] electrical soldering iron” as the
example. The word order shows syntactic salience; the qualia are listed below the head in order of semantic salience; arrows lead from the listed qualia to their positions.

Diagram 1: position, expectedness and salience in the Participant-head construction

\[
\begin{array}{cccc}
\text{American} & 60 \text{ watt} & \text{brass} & \text{electrical} & \text{soldering} \\
\text{Function} & \text{Type} & \text{Constituency} & \text{Dimension} & \text{Origin} \\
\text{Necessary} & \text{Most salient} & \text{Possible} & \text{Least salient} \\
\end{array}
\]

2.1.3 Discussion of the Participant-head construction

The Participant-head structure as a construction

In accordance with the definition of “construction” given in chapter 4, §1.2.1.6, each quale position is a construction, since -

- it is a structure of categories of words (not of particular words) - a modifier of a specific semantic category, and a head;
- it contributes to the expression a meaning of its own (the quale).

An instructive perspective on the positions’ being constructions comes from the difficulty of making Classifiers predicative (as noted in §2.2 of chapter 4): "24 piece dinner set" is acceptable; but (to me) "the set is dinner" and "the set is 24 piece(s)" are unacceptable. The reason is that the predicative form lacks the meaning which the Participant-head construction supplies through the qualia; the predicative forms become acceptable when that relation is made explicit lexically: "the set is of the type used for dinner" or "the set is 24 piece(s) in size".

Another perspective is semantic. We saw in chapter 4, §2.3, that the word meaning of Classifiers is a bare, unbounded concept. The constructional meaning (a relation) complements that: the bare concept and its relation to the head constitute the full meaning. That is why Classifiers sometimes seem to have a property meaning, like other premodifiers, as noted in (b)

---

21 Judgements differ here; in particular, some people find “The set is 24 piece(s)” acceptable. I will show in chapter 9 that these constructions have developed quickly, and are presumably still changing; difference in judgement of acceptability is normal in periods of change. I believe that the predicative form is the newer, spreading variant.
in section §1.1; the example there was, "Honing his voice to a steel [Classifier] edge" - like having "a steely [Epithet] edge to his questions".

Since each quale Classifier forms a specific construction, the Participant-head construction as a whole is a general one - a construction of five constructions. It is high on the generality taxonomy of constructions (Croft and Cruse, 2004: 262).

The structures to be discussed in the next four sections are constructions just as this one is; I will not repeat the explanation.

**Qualia**

I have acknowledged above my debt to Pustejovsky (1995, 2001) for the concept of the qualia, and for the term. However, my account differs from Pustejovsky's: my qualia are broader (especially Origin - his "Agentive" - see 2001: 56); I identify five quale, not four (Dimension is added), and I describe them as relations between modifier and head (not as constituents of the head noun’s meaning, as Pustejovsky does). Johnston and Busa (1999) discuss this construction (as "nominal compound construction"), relying on the qualia; their account has the same limitations as I have noted for Pustejovsky, and they do not explain order, being concerned only with constructions having a single premodifier.


**Submodification**

Classifiers in each of the positions can be submodified. Examples follow. (Single underlining marks the quale modifiers, and double underlining marks the submodifiers.)

- "a 4 storey (over-height by 3.9m), 74 unit apartment block" - coordinated Dimension qualia, each submodified by a numeral (and with “4 storey” post-modified by appositional “overheight by 3.9m”);
- “the S-series Bravia LCD tv” - Origin quale submodified by a Type-quale Classifier;
- "Asynchronous Transfer Mode call switching functions" - Function quale submodified by a Classifier whose nature we see in the next section.
2.2 Process-head construction

2.2.1 The order of Classifiers in the Process-head construction

The relationships among modifiers and head


As with the Participant-head construction, some relationships are implicit, in the sense that some of the meaning may be naturally expressed lexically by the addition of a preposition: 2006 (in the example given) can be paraphrased as “in 2006”. Other relationships here, however, do not invoke such semi-descriptive meaning: they are purely grammatical: the relation of Israeli and arms to sales - the relation of Actor and Goal to Process. The meanings that this construction adds to the meaning of the whole phrase are thus both semi-descriptive and fully grammatical.

Those relationships, and the difference from Participant-head constructions, can be seen from the nature of ambiguity in these constructions. “The Armenian massacre” is ambiguous between the Armenians (Actor) killing others, and others killing them (Goal). “Lexical diffusion” is ambiguous between words (“lexis” - Goal) being diffused, and something (such as sound changes) being diffused through the lexicon (an indirect participant). “Holiday sale” is ambiguous between holidays being sold (Goal), and a holiday being the occasion (Circumstance). Resolution of the ambiguities requires relations of Actor and Goal and so on, not quale relations.

The order

The full order is shown in the following table (which continues on the next page). “Extent” is the distance in space, or the duration in time, over which the Process unfolds; “Location” is the point at which it occurs, again in either space or time. (The concepts and terms are from Halliday, 2004: 263-265.)
Chapter 6: Classifiers

<table>
<thead>
<tr>
<th>Extent</th>
<th>Location</th>
<th>Indirect Participant</th>
<th>Direct Participants:</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Actor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Goal</td>
<td></td>
</tr>
<tr>
<td>Israeli</td>
<td>arms</td>
<td>sales</td>
<td></td>
<td></td>
</tr>
<tr>
<td>government</td>
<td>farms</td>
<td>buy-up</td>
<td></td>
<td></td>
</tr>
<tr>
<td>plastic</td>
<td>retail</td>
<td>rebate</td>
<td>offer</td>
<td></td>
</tr>
<tr>
<td>catfood</td>
<td>manufacturer</td>
<td>job</td>
<td>search</td>
<td></td>
</tr>
<tr>
<td>cover</td>
<td>student</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>business</td>
<td>broadband</td>
<td>offerings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>leaky</td>
<td>court</td>
<td>ruling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>nasal</td>
<td>oxygen</td>
<td>therapy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>in-cache</td>
<td>scalar</td>
<td>processing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ante-natal</td>
<td>fetal</td>
<td>surveillance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cab</td>
<td>mob</td>
<td>hit</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>NZ$2.5m</td>
<td>pretax</td>
<td>currency hedge</td>
<td>cost</td>
<td></td>
</tr>
<tr>
<td>Global</td>
<td>atmospheric</td>
<td>OH concentration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>overnight</td>
<td>on-site</td>
<td>explosives</td>
<td>storage</td>
<td></td>
</tr>
<tr>
<td>wrong-way</td>
<td>motorway</td>
<td>drive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>five minute</td>
<td>pre-heat</td>
<td>countdown</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 hour</td>
<td>roadside</td>
<td>assistance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Extent and Location**

When time and place are both expressed as Circumstances, time regularly precedes place; as in “24 hour roadside assistance” and “overnight on-site storage”; but the positions can not be characterised through those concepts, because many phrases have two time Classifiers (“five minute pre-heat countdown”), or two place Classifiers (“wrong-way motorway drive”). The distinction between Extent and Location is needed.

**Variation in the relationships**

The Indirect Participant position, which is used relatively seldom, has participants in a range of semantic relationships, as the following partial paraphrases of three examples show: “therapy by means of oxygen”; “a rebate for plastic catfood covers”, and “court ruling on the subject of leaky homes”. The position therefore accommodates participants in “Beneficiary” and “Instrument” roles, and so on. Classifiers in the Circumstance position denote entities which are participants in the broad sense, but not Participants in my narrower sense; for example the globe and the atmosphere in “global atmospheric OH concentration”: the distinction between Participant and Circumstance is not clear-cut, but evidently subject to construal.

---


22 Someone searched for jobs for students. (Although we say “searched for jobs”, I take job as Goal.)

23 The mob (i.e. the Mafia) killed someone, in a cab.
Chapter 6: Classifiers

Support


2.2.2 Explanation of the order in the Process-head construction

Semantic explanation of the order

The order of the modifiers follows the general principle given in the introduction to the chapter, and applied to the Participant-head construction: Classifiers with the most expected relation to the head come closest to it, as follows. (I use “2006 Israeli arms sales”, as the main example.)

- The Goal Classifier comes closest to the head. The fact that the Goal is necessary to the Process can be seen in two ways.
- As argued by Seuren (1975), the concept of a generic goal is entailed in the concept of the transitive event itself; BREW entails BEER, in Seuren’s example (1975: 84). The word stating the Goal makes it more specific or merely makes it explicit. “Israeli arms sales” makes more specific the generic goal entailed by sales. An ergative interpretation of events (see Halliday 2004: §5.7.2) shows the point effectively: the arms are the "Medium" or locus of the event, as in "those arms sell well".
- Analysis of event structure (e.g. Croft 1998) shows that SELL, for example, as in “Israeli arms sales”, has at least two successive subevents, an offer of goods and an acceptance; the goods (instantiating the Goal) are involved in the first subevent, and must be invoked for the second subevent to be conceived: they are necessary to the event as a whole.
- The Actor Participant ("Israeli arms sales") is slightly less necessary: selling can be defined without reference to seller or buyer (as transferring ownership of goods for money).
- Circumstances, such as time ("2006") and place, are not salient in the concept of selling, and not expected in every expression of it. They add content, as shown by the paraphrases “...in the Middle East [place] in 2006 [time]”. They are thus more extrinsic than the Actor and Goal relations, which are purely grammatical, and without content.24

---

25 The point was suggested by a remark in Brinton and Traugott (2005:15), on more, and less, grammatical cases, such as nominative and dative.
Extent precedes Location, when they both occur, because it is still less necessary: an event must have a time, but need not have duration.

Like the Participant-head construction, then, this construction has the most expected element next to the head, and the least predictable element furthest from it, in the position of most syntactic prominence.

The order can also be explained usefully as depending on degree of "affectedness". The Goal (the arms) is most affected (the arms change in ownership and location), and is placed closest to the head; the Actor (Israel) is affected to a lesser extent; the Circumstance (the year 2006), is not affected at all, and is placed furthest from the head. But that does not make clear why the most affected should be closest.

**Syntactic explanation of the order**

As with the previous construction, the order is also syntactic. Each premodifier modifies the remainder of the nominal phrase: “2006 [Israeli [arms sales]]”; “student [job search]”.

### 2.2.3 Discussion of the Process-head construction

**Submodification**

The Classifiers in this construction may be submodified:

(1) “high amplitude, low frequency (100 kyr) ice volume variations”.

That is submodified as follows: “high amplitude [Extent submodified by an Epithet], low frequency [Extent submodified by an Epithet], (100 kyr [Extent submodified by a numeral],) ice volume [Actor submodified by a constructionless Classifier] variations”.

The construction may be submodified recursively:

(2) “Serotonin reuptake inhibitor”.

This phrase has reuptake stating the Goal of the Process INHIBIT, and serotonin stating the Goal of the Process TAKE UP AGAIN. Reuptake is thus both modifier in one construction and head of another; and it is at once “noun-like” in denoting a Goal, and “verb-like” in denoting a Process.25

The Process-head construction is used to submodify other constructions. An example is:

(3) “On-site employee health testing clinic”.

---

25 Such words perhaps are “dot-objects” (Pustejovsky, 1995), or have “facets” (Cruse, 2004: 112 ff), as in “Put this book back on the shelf it’s quite unreadable” (Cruse’s example), where book denotes the physical object and the content, at once.
The basic structure is a Participant-head construction, “testing [Function quale] clinic [head]”. Testing is submodified in a Process-head construction, with health giving the Goal for the Process TEST, and on-site giving a Circumstance. (Employee submodifies health, in the construction to be discussed in §2.5.)

**Participant hierarchies**

There is a parallel between the order of Participants in this construction and Givón’s hierarchy of semantic case-roles (1984: 364), his hierarchy of pragmatic case roles (loc. cit.), and the Accessibility Hierarchy of Keenan and Comrie (1977): all are affected by some form of accessibility.

**Functional ambivalence in this construction**

As I noted of reuptake in “serotonin reuptake”, heads in this construction are “nounlike” and “verblike”. The structure, then, is subject to the speaker’s construal of the underlying concepts, and follows semantics rather than rules for parts of speech or rules for an independent syntax.

In section §1.3, I set out the concepts of two semantic “levels” (object/event/property, and Process/Participant/Circumstance), and the syntactic “level” (modifier/head). I suggest that those concepts and that of construal provide a simple and coherent analysis, without the problematic concepts of “noun-like” and degrees of “nouniness”.

### 2.2.4 Summary of the Process-head construction

The order in the Process-head construction may be summarised visually (as for the Participant-head construction), in diagram 2, below.

**Diagram 2: position, expectedness and salience in the Process-head construction**

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### 2.3 Circumstance-head construction
2.3.1 The order of Classifiers in the Circumstance-head construction

**Introduction: the relationships among modifiers and head**

As stated in section §1.4, the Circumstance-head construction parallels a material-process clause, with a Circumstance as head. For example, “instrument operating cycles” parallels “the instruments [Actor] operate [Process] in cycles [Circumstance]”; so we have “instrument [Actor; modifier] operating [Process; modifier] cycles [Circumstance; head]”.

Also as before, the nature of the relationships is highlighted by the possibilities for ambiguity. In “64-bit data transfer rate”, *data* is ambiguous between representing the Actor of an intransitive event (the data transfers elsewhere) and the Goal of a transitive event (the computer transfers the data). That shows that *transfer* is to be interpreted as Participant-related, not as quale-related (with *transfer* as a Type of rate, and *data* denoting a subtype of *transfer*).

Also as before, we have some of the content not stated explicitly: *cycles* evokes a manner relation, as shown by the paraphrase, “the instruments operate in cycles”.

**The order**

The full order is shown in the table below. (I have supplied extra words fairly freely, because I believe the relations in this construction are often confusing.)

<table>
<thead>
<tr>
<th>Modifier: Circumstance (Extent)</th>
<th>Modifier: Circumstance (Location)</th>
<th>Modifier: Participant (Actor)</th>
<th>Modifiers: Process</th>
<th>Head: Circumstance</th>
</tr>
</thead>
<tbody>
<tr>
<td>instrument</td>
<td>exit</td>
<td>cycles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>flue gas</td>
<td>travel</td>
<td>time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sound</td>
<td>passenger travel</td>
<td>time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>air</td>
<td>travel</td>
<td>time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>down-hole</td>
<td>production rate</td>
<td>cycle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>straight-through</td>
<td>flight</td>
<td>time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>twenty-five hours</td>
<td>freestream</td>
<td>[flow]</td>
<td>velocity</td>
<td></td>
</tr>
<tr>
<td>5 m/sec</td>
<td>menu</td>
<td>[succession]</td>
<td>cycle</td>
<td></td>
</tr>
<tr>
<td>3 or 4 week</td>
<td>menu</td>
<td>[distribution]</td>
<td>efficiency</td>
<td></td>
</tr>
<tr>
<td>64-bit</td>
<td>target</td>
<td>[resource]</td>
<td>[travel]</td>
<td>time</td>
</tr>
<tr>
<td>vertical and horizontal</td>
<td>one-way</td>
<td>light</td>
<td>[travel]</td>
<td>time</td>
</tr>
<tr>
<td>20 minute</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Discussion of the order**

I assume that the Process is understood as equivalent to a passive-voice expression: “the oil is produced down-hole at a certain rate”.

I take *data* as a Goal submodifier of *transfer*; it could be read as Actor for *transfer* understood in the passive.
Chapter 6: Classifiers

Some of the Classifiers given in the Location / Place column could be taken as Indirect Participants (e.g. target); but I have no example that suggests that a separate position exists for other participants.

2.3.2 Explanation of the order in the Circumstance-head construction

Semantic explanation

The order of the modifiers follows the general principle given in section §1.4: those with the most expected relations come closest to the head, as follows. (I use “20-minute one-way light [travel] time”, as the main example.)

- The Process modifier (travel) comes closest to the head (time, Circumstance), because it is necessary to it: time is by its nature the duration of some Process. (That is reflected in travel’s omission from the attested example.)
- The Actor (light) comes next. It is next to the Process (travel), since Actor is highly expected in any Process concept (as argued in section §2.2, on the Process-head construction). It is further from the head (time), since the connection between light and time is only through the concept of TRAVEL.
- The other Circumstances come further from the head (time), being still less expected. These Circumstances - direction (one-way) and duration (20 minute) - are related to time only through the whole process - through both light and travel.
- Extent comes further from the head than Location, if both occur, because it is still less necessary: an event must have a time, but need not have duration.

Syntactic explanation

As with the previous constructions, the order is also syntactic: “20-minute [one-way [light [time]]]”; “1962 [Beethoven [cycle]]”.

2.3.3 Discussion

Submodification

Classifiers in the Circumstance-head construction can be submodified, like those in other constructions. In “flue gas exit velocity”, the Actor (gas) is submodified by a Type-quale Classifier (flue). In “data transfer rate”, the Process (transfer) is submodified by a Goal Classifier (data), in a Process-head construction (the computer transfers data).
2.4 Intensive-attribute-head construction

2.4.1 The order of Classifiers in the intensive-attribute-head construction

As stated in section §1.4, the intensive-attribute-head construction parallels a relational-process clause of the intensive type, with the Attribute as head. (An intensive relational clause is one whose Attribute “intensifies”, or expands, our information about the Carrier Participant, which is in Subject position; e.g. “Mary [Carrier] is wise [Attribute]”.) For example, “public road safety” parallels “the public [Carrier] is safe [Attribute] on the roads”. “Road” expresses a Circumstance.

The Process (equivalent to “is”) is implicit. So is the nature of the Circumstantial relation, which is explicit in “the public is safe on the roads”.

Examples are shown in the following table.

<table>
<thead>
<tr>
<th>Modifier: Circumstance</th>
<th>Modifier: Carrier Participant</th>
<th>Modifier: Circumstance</th>
<th>Head: Attribute Participant</th>
</tr>
</thead>
<tbody>
<tr>
<td>public</td>
<td>road</td>
<td>safety</td>
<td></td>
</tr>
<tr>
<td>public</td>
<td>transport</td>
<td>safety</td>
<td></td>
</tr>
<tr>
<td>home</td>
<td>energy</td>
<td>efficiency</td>
<td></td>
</tr>
<tr>
<td>domestic</td>
<td>electrical</td>
<td>efficiency</td>
<td></td>
</tr>
<tr>
<td>military</td>
<td>nuclear</td>
<td>capability 28</td>
<td></td>
</tr>
<tr>
<td>public</td>
<td>risk</td>
<td>aversion</td>
<td></td>
</tr>
<tr>
<td>visage</td>
<td>UV</td>
<td>protection</td>
<td></td>
</tr>
<tr>
<td>top level</td>
<td>corporation</td>
<td>[fraud]</td>
<td>security</td>
</tr>
<tr>
<td>six month</td>
<td>job</td>
<td>[redundancy]</td>
<td>security</td>
</tr>
</tbody>
</table>

2.4.2 Explanation of the order in the intensive-attribute-head construction

Semantic explanation

The order of the modifiers here follows the general principle given in section §1.2: those with the most expected relations come closest to the head, as follows. (I use “public road safety”, as the main example.)

2928 I take “nuclear” to mean “nuclear weapons”.
Chapter 6: Classifiers

- SAFETY entails a danger that you are safe from; so the danger (expressed by road) is necessary to it: it comes closest. Similarly with “home energy efficiency”: EFFICIENCY is the waste-free use of something: an entity used (expressed in energy) is intrinsic to the head concept (efficiency).
- The Carrier Participant (“public road safety”, “home energy efficiency”) is necessary to the relation, but not intrinsic to the concept denoted by the head, just as in “That book was interesting”, the subject, book, is necessary for the existence of a predicate, but the concept BOOK is not intrinsic to the concept INTERESTING.
- The other Circumstance is Extent or Location, as in "six month job security". It is independent of the head concept, as those Circumstances are in the constructions considered above.

**Syntactic explanation**

As with the previous constructions, the order is also syntactic: “public [road [safety]]”;
“home [energy [efficiency]]”.

### 2.4.3 Discussion of intensive-attribute-head construction

**Submodification**

I do not have attested examples of submodification; but I presume that it is grammatical. The following seem acceptable: #“public rail transport safety”; #“public financial risk aversion”.

**Slightness of the construction**

In comparison to the other constructions, this one is slightly built: it has only two modifier positions, as far as I have observed. Other positions seem possible, to my intuition; for example, #“24 hour public road safety”.

The construction is slight in a second sense: it appears to be little used, and to occur with a very limited range of heads: I have found examples with only six different words as heads, and they express only about four concepts (since safety, protection and security are roughly synonymous).

### 2.5 Possessed-attribute-head construction
2.5.1 The order of Classifiers in the possessed-attribute-head construction

**Relationships**

The possessed-attribute-head construction is illustrated in “[28 GB] magnetic disk storage capacity”; it parallels the clause “The magnetic disk has capacity for storage to the extent of 28 GB”.

It is like the intensive-attribute-head construction, just discussed:

- both parallel a relational-process clause;
- both have the structure of Participant + Circumstance + Participant.

They differ in the following ways:

- The relational Process here is of the possessive type. (A possessive relational clause is one whose Attribute denotes another participant, which is possessed by the Carrier Participant; it commonly uses the relation HAVE.) For example, “magnetic disk storage capacity” parallels the clause “the magnetic disk [Carrier] has [possessive relational Process] capacity [Attribute] for storage [Circumstance]”.
- The Circumstance is an action - “disk storage capacity”, not a location; for example, (“public road safety”). The action is not Process; the Process is relational - “the disk has....”.

**The order**

The full order, and examples, are set out in the following table.

<table>
<thead>
<tr>
<th>Modifier: Circumstance (location)</th>
<th>Modifier: Carrier Participant</th>
<th>Modifier: Circumstance (action)</th>
<th>Head: Attribute Participant</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 GB</td>
<td>external disk</td>
<td>storage</td>
<td>capacity</td>
</tr>
<tr>
<td></td>
<td>magnetic disk</td>
<td></td>
<td>capacity</td>
</tr>
<tr>
<td></td>
<td>system</td>
<td>storage</td>
<td>capacity</td>
</tr>
<tr>
<td></td>
<td>dual layer</td>
<td>write</td>
<td>capabilities</td>
</tr>
<tr>
<td></td>
<td>anal sphincter</td>
<td>contractile</td>
<td>capacity</td>
</tr>
<tr>
<td></td>
<td>transducer</td>
<td>production</td>
<td>capacity</td>
</tr>
</tbody>
</table>

2.5.2 Explanation of the order in the possessed-attribute-head construction
Chapter 6: Classifiers

Semantic explanation

The order of the modifiers follows the same general principle as before: those with the most necessary relations come closest to the head, as follows. (I use “28 GB external disk [storage] capacity”, as the main example; the argument parallels points made about the other constructions, especially the intensive-attribute-head construction.)

- These heads denote an ability to perform; a Process is intrinsic to the Attribute itself. So a Process such as STORE or WRITE is intrinsic to CAPACITY.
- As with the previous Attribute construction, the Carrier Participant (“28 GB external disk [storage] capacity”) is not intrinsic to the concept (though necessary to the relation); so it precedes the Process.
- As with the Process-head construction, other Circumstances come further from the head (and with Extent further than Location, if both occur), being extrinsic to the concept of the Process.

Syntactic explanation

As with the previous constructions, the order is also syntactic: “28 GB [external disk [capacity]]”; “dual layer [write [capabilities]]”.

2.5.3 Discussion of the possessed-attribute-head construction

Submodification

Modifiers in the construction may be submodified.

(1) “Apollo block II fuel system storage capacity”.

The basic structure is “system [Carrier] storage [Process] capacity [Attribute head]”. Block II and fuel submodify system, through Origin (i.e. place) and Function qualia in a Participant-head construction: “block II [fuel system]”. Apollo submodifies block II, through the Origin quale in a lower-level Participant-head construction: “Apollo [block II]”.

Productivity

The possessed-attribute-head construction seems to be even less productive than the intensive-attribute-head construction.

3 Constructionless uses of Classifiers

30 From Donald A. Sears, “The noun adjuncts of modern English”, in Linguistics: an international review 72, August 1971; 31-60.
3.1 Introduction

There are many uses of Classifiers where the Classifier is not used in any construction (in the sense used in this chapter). Some examples are: “bed cuts”, “death rate” and “Queenstown sales” (from the headlines on one newspaper page).\textsuperscript{30}

Their characteristics are as follows.

- The Classifiers are used on their own; that is -
- they do not combine with Classifiers that are being used in a construction (and that are modifying the same head);
- they do not combine with other constructionless Classifiers (that are modifying the same head).
- There is no fully conventionalised relation between Classifier and head: the reader must either recall the combination of modifier and head from memory (as a lexical item), or interpret the intended relation from context (with the interpretation liable to variation accordingly).

3.2 Types of constructionless Classifier

There is a gradation in the degree of conventionalisation of the meaning relation, from uses with obscure ad hoc relations to those which are almost conventionalised enough to be rated as constructions. I distinguish three types somewhat arbitrarily, as follows.

(a) Ad hoc uses, with no conventionalisation. Examples are the already cited “coma baby” (born while the mother was in a coma); “avian carnage” (carnage caused to birds); “charcoal burgers”\textsuperscript{31} (burgers cooked over charcoal - not “made of charcoal”); “mosquito disease” (disease carried by mosquitoes); ”Jessica and Megan's holiday toes”\textsuperscript{32} (toes photographed while Jessica and Megan were on holiday). The relationships are not conventionalised in the language, and readers of the phrases can only infer the relationships from context.

(b) Slightly conventionalised uses. We have "red alert", "yellow alert" and "black alert" (rarely); but not "green alert", or "orange alert"; and we have "red zone", but not "black zone"

\textsuperscript{30} New Zealand Herald, November 21st 2007, page A3.

\textsuperscript{31} Sign on an Auckland shop.

\textsuperscript{32} New Zealand Herald, January 16th 2008, page A16.
Chapter 6: Classifiers

(in this sense) or "yellow zone". Other examples are "a people person" "a morning person", and so on.

(c) Semi-conventionalised uses, with a simple relation that does not depend on context, and that recurs with many modifiers and many heads. Examples include phrases with the appositional 'IS A' relation ("boy hero", "boxer hero", "shareholder activists", "Nazi activist"); and the possessive 'HAS A' relation ("helicopter rotor", "propeller blade", and "propeller shaft").

Group (c) uses are close to being constructional; I deem them to be not constructional because they do not, in my observation, ever relate two or more Classifiers to each other.

3.3 Discussion of constructionless Classifiers

Submodification

Constructionless Classifiers can be submodified. For example, in "rape prevention educator Kylie Tippett", prevention is a constructionless modifier of educator; it is in turn modified by rape as Goal to the Process PREVENT, in a Process-head construction.

These uses sometimes result in considerable complexity: “[[Dome Valley] [death crash]] teen”;33 "its [complicated [[[telephone directory] [1-7-4-10-2-8-6-12-3-9-5]] [firing order]]]."34

Support

There is support from other writers for my assertion that some Classifiers fit into no established structure, other than the general structure of modification. Few writers have discussed the order of Classifiers; but among those who do, Downing (1977) and Warren (1978, 1984) find no established structure. Levi (1978) claims that there is an order (based on the transformational derivation of the phrase), but even she concedes that some Classifier uses are constructionless (1978: 253).

Borderline instances

3433 New Zealand Herald headline.

3534 AA Torque magazine. I take the phrase to have “telephone directory 1-7-4-10-2-8-6-12-3-9-5” as Dimension Classifier with complex constructionless submodification, and “firing” as Type Classifier.
In these uses, the Classifier often seems close to the borderline of the Descriptor zone: *horse* in “*horse* face” is close to the adjective *horsy*; *wine* is close to *winy* in “*wine* smell”.

Some Classifier uses are close to the borderline between constructionless and constructional Classifiers. "Fresh Family Homogenised Milk nutrition information"\(^{35}\) can be matched with "internet nutrition information", "consumer nutrition information", and so on. They seem to belong to a partly developed construction that is different from those I have analysed (using the relation, ABOUT - ‘information about nutrition’); but they occur too rarely, and in too limited a range of situations to be adjudged as forming an established construction.

Finally, some are close to being part of a compound - “firing order”, perhaps.

## 4 Discussion of Classifier order

### 4.1 Relation between Classifier phrases and compounds

**Semantics**

Some of the regular semantic relations between Classifiers and their heads also appear in many expressions written as one-word compounds or as hyphenated compounds.

The following table illustrates that, giving forms which are all taken from the SOED section on combination forms for the word *sand*. In the first two columns, the table lists constructions and relations for them; then, for most of the relations, it gives a one-word compound, a hyphenated compound, and an expression written as a phrase, all using the form “sand”. The line for constituency, for example, means that the single word *sandcastle*, the hyphenated form *sand-dune*, and the phrasally expressed “sand filter” all have their elements related by the implicit grammatical meaning MADE OF - the Constituency quale relation.

<table>
<thead>
<tr>
<th>Construction</th>
<th>Relation</th>
<th>One word compound</th>
<th>Hyphenated compound</th>
<th>Words written as a phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant-head</td>
<td>Origin</td>
<td><em>sand-fish</em></td>
<td><em>sand-dune</em></td>
<td>“sand dollar”</td>
</tr>
<tr>
<td>construction</td>
<td>Constitu</td>
<td><em>sandcastle</em></td>
<td><em>sand-dune</em></td>
<td>“sand filter”</td>
</tr>
<tr>
<td></td>
<td>Type</td>
<td><em>sandfly</em></td>
<td><em>sand-bur</em></td>
<td>“sand boa”</td>
</tr>
<tr>
<td></td>
<td>Function</td>
<td><em>sandman</em></td>
<td><em>sand-trap</em></td>
<td></td>
</tr>
<tr>
<td>Process-head</td>
<td>Goal</td>
<td><em>sand-binder</em></td>
<td><em>sand-casting</em></td>
<td>“sand blow”</td>
</tr>
<tr>
<td>construction</td>
<td>Circumstance</td>
<td><em>sandstock</em>(^{36})</td>
<td><em>sand-casting</em></td>
<td>“sand culture”</td>
</tr>
</tbody>
</table>

“Sand dollar” (denoting a type of shellfish) will be regarded as a compound by many people, I believe; but *dollar* is a metaphor for the shellfish (from its shape and colour), and *sand*...
Chapter 6: Classifiers

modifies it. The other expressions in that column should also be regarded as phrases, since they have the same semantic and syntactic relation as “steel knife” (Constituency quale), “double-oven range” (Type quale), and so on - none of which phrases would to my knowledge ever be regarded as compounds. That reinforces the view (noted in chapter 1, §2, and held by a number of linguists) that there is no absolute distinction between compounds and phrases, since many “compounds” have exactly the same semantic structure as many phrases.

Stress

The stress on Classifiers varies with their position: “French teacher” as ‘teacher from France’ (with teacher in Origin position) has relatively strong stress on teacher - “French teacher”, approximately; but “French teacher” as ‘teacher of French’ (teacher in Type position) has relatively weak stress on teacher - “French teacher”. (That variation accords with the varying semantic and syntactic closeness noted in §2.1.2.) The following table illustrates the point further. (The (a) examples may seem to be compounds; but they fit my definition of phrases in section §2 of chapter 1, and SOED does not give them as compounds.)

<table>
<thead>
<tr>
<th>Classifier</th>
<th>Constituency</th>
<th>Type</th>
<th>Function</th>
<th>Head</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>slate</td>
<td>(a)</td>
<td>slate</td>
<td>quarry</td>
<td>quarry</td>
<td>‘quarry for slate’</td>
</tr>
<tr>
<td></td>
<td>(b)</td>
<td>slate</td>
<td>roof</td>
<td>roof</td>
<td>‘roof made of slate’</td>
</tr>
<tr>
<td>toy</td>
<td>(a)</td>
<td>toy</td>
<td>factory</td>
<td>factory</td>
<td>‘factory for toys’</td>
</tr>
<tr>
<td></td>
<td>(b)</td>
<td>toy</td>
<td>factory</td>
<td>factory</td>
<td>‘factory that is a toy’</td>
</tr>
</tbody>
</table>

For the French and toy examples, the difference in stress is our only clue to the difference in meaning. Single stress is a standard criterion for differentiating compounds from phrases (see Bauer 1998, and Giegerich 2005: 589, for example); but it follows from the examples that here it differentiates between different phrasal constructions.

Conclusion: Classifier phrases and compounds

I cannot develop fully the implications of this chapter for the extensive literature on “compounds”, “complex nominals”, “noun + noun compounds”, and so on, since that topic is beyond the scope of the thesis. Since some of the literature on premodifiers deals with Classifiers, I discuss it briefly in Chapter 11, §4.9.
4.2 Completeness of the account of Classifier constructions

My account lists five constructions, and the constructionless uses of Classifiers. But there are many Classifier phrases that may seem to be outside those six groups and to cast doubt on the completeness of my account. This section discusses such phrases, and argues that they do not in fact falsify my account.

(a) Inchoate constructions

I have already noted (§3.3) that a new construction seems to be partly formed but not established; there may be others. That fits the account (chapter 9, §5.2) of the recent and probably continuing development of Classifier constructions.

(b) Phrases that seem to reverse the qualia structure

Some apparent exceptions to my account of the qualia structure are reconstruals of Classifiers from their usual qualia position to another. Examples include the following.

(1) “Heart native timber”; and “native heart timber”. (Both attested.)
The first has native as the Type, because the context was native versus exotic timber; the second has heart as the Type, because the context was heartwood versus sapwood.

(2) “Glass ’41 coupe” [a fibreglass coupe car made in 1941] and “’38 four door sedan”.37
The first construes ’41 (the year) as Type (with glass as Constituency); the second construes ’38 (the year) as Origin, with “two door” as Type.

(c) Phrases that are not grammatical at all

Some of the apparent exceptions to my categorisation are due, I believe, simply to the writer’s confusion about the structure: the phrases are exceptions to grammaticality, not to my account. For example:

(3) “Novelty race shock wire game”.38
That was intended to mean “a novel game which is a race, played using wires, and giving a shock on failure”. All four modifiers seem to be intended as Type Classifiers; but they do not seem to submodify later words; putting successive words in the same position otherwise is

37 Both from Hot Rod, October 2006, page 18.
38 Catalogue for Jaycar electronic products.
Chapter 6: Classifiers

ungrammatical, in that it has no regular or established use; and *wire* does not seem to have an accepted Type interpretation at all (*"wire game").

(d) Phrases whose apparent premodifiers are something else

- Some Classifiers that are apparently premodifiers are postmodifiers, in fact. (12) "Sanyo 3100 *Pinkilicious Go* prepaid mobile".
  Here, "Pinkilicious Go" is not a premodifier of *mobile*, but a postmodifier of the model number, *3100*.
- Other apparent premodification structures are appositive. (13) “Packard Bell *C3-244 Notebook*”.
  *C3-244* identifies the referent uniquely; *Notebook* is in apposition to it.
- Some of what may seem to be modifiers are submodifiers. An example follows. (I give considerable space to this analysis, for a further purpose: demonstrating that my analysis of Classifier constructions can give a convincing account of even the most complex and potentially confusing Classifier phrases.) (14) “Pioneer guidance and navigation control system reaction control system digital autopilot". 30
  The structure is shown in diagram 3, on the next page. The top line indicates that the whole phrase is a Participant-head construction. The second line indicates that the phrase has three main parts; that "Pioneer guidance and navigation control system" is a modifier in that construction, invoking the Constituency quale, and being itself a Participant-head construction; and so on. (Notes: *Pioneer* could be read as modifying the head directly - a fourth modifier on the second line. In the diagram, I have abridged the names of the constructions.)

Diagram 3: structure of 11-word Classifier phrase

Chapter 6: Classifiers

Conclusion to completeness of the account

There is much less variability in Classifier constructions than there may appear to be. I believe that the chapter is complete; allowing for the points made in this section, it will provide a convincing analysis of nearly all Classifier phrases, and will provide plausible alternative analyses for the rest.

4.3 Relation of Classifier constructions to each other

The constructions as alternative construals of semantic processes

We have seen alternative construals of words invoking one quale as invoking another (in sections §2.2 and §4.2.) Alternative construals also underlie the parallel between the five Classifier constructions. For example, the ISRAEL - SELL - ARMAMENT concepts may be construed with a material process, in a Process-head construction, as we have seen:

<table>
<thead>
<tr>
<th>Participant (modifier)</th>
<th>Participant (modifier)</th>
<th>Process (head)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Israeli</td>
<td>arms</td>
<td>sales</td>
</tr>
</tbody>
</table>

Or they may be construed with a possessive relational process, in a Possessed-attribute-head construction:
Chapter 6: Classifiers

<table>
<thead>
<tr>
<th>Circumstance (modifier)</th>
<th>Participant (Carrier) (modifier)</th>
<th>Circumstance (modifier)</th>
<th>Participant (Attribute)</th>
</tr>
</thead>
<tbody>
<tr>
<td># Israeli</td>
<td>arms sales</td>
<td>capacity</td>
<td></td>
</tr>
</tbody>
</table>

Or they may be construed as an intensive relational process, in a Participant-head construction:

<table>
<thead>
<tr>
<th>Circumstance Origin quale</th>
<th>Circumstance Dimension quale</th>
<th>Circumstance Type quale</th>
<th>Participant (head)</th>
</tr>
</thead>
<tbody>
<tr>
<td># Israeli</td>
<td>multi-million pound</td>
<td>armament</td>
<td>sales</td>
</tr>
</tbody>
</table>

The constructions as alternative construals of semantic classes

The examples just given show a similar variation in the construal of the semantic classes. *SELL*, which is an action at that level, may be construed as Process ("Israeli arms sales"), or as Participant ("their 2005 sales success"), or as Circumstance ("the company sales pitch" or "company pitch for sales"). At the syntactic level, *SELL* can be expressed as modifier ("sales capacity"), or as head ("arms sales"). Expressing *SELL* as *selling* would allow still more construals.

The constructions as semantic unities

I have referred (in §2.1.3, for example) to the five main constructions as “constructions of constructions”, and have treated individual Classifiers as having their own relation with the head. There is, nevertheless, a semantic unity in each construction. That should be clear from the fact that each construction represents a single process; it has the same unity as a clause. But the unity goes further. The main constructions are never mixed - no qualia-related Classifier occurs with Classifiers from the other constructions, for example; and, perhaps most strikingly, constructionless Classifiers are not combined (although one can submodify another.)

Productivity

The Participant-head construction (e.g. “32 inch plasma tv”) is extremely productive, especially in advertising, but also in various technical genres; it has some use elsewhere. The process-head construction (e.g. “Israeli arms sales”) is less productive; the Circumstance-head construction (e.g. “Gas exit velocity”) still less so. The two Attribute-head constructions are quite unproductive: to find examples, one must search hard.

Those differences call for an explanation, which will be given in chapter 9: it is historical.

41 Arms does not modify capacity; it submodifies sales, in the Process-head construction just illustrated.
Levels of construction

Following Croft (1999: 65) and Traugott (2006), who argue that constructions are schematic (or abstract) in varying degrees, we can say that the five Classifier constructions are relatively schematic. In particular, the Participant-head construction (whose constructional meaning is the relation of Circumstances to Participant in a relational process) is a schematic one, made up of the specific qualia constructions (whose constructional meaning is the quale relation).

4.4 Relation of Classifier constructions to the overall modification structure

There is a significant overlap in meaning between the Participant-head construction and the overall construction of the premodification zones. Consider the following, for example.

(1) “Sony 36 inch plasma television”.
(2) "Sony's big plasma television”.

The two expressions are approximately synonymous; and until you analyse them, they seem to have much the same syntax, as well; but analysis shows them to be different syntactically:

<table>
<thead>
<tr>
<th>Determ.</th>
<th>Epithet</th>
<th>Descr.</th>
<th>Classifiers</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sony’s</td>
<td>big</td>
<td></td>
<td>36 inch</td>
<td>plasma television</td>
</tr>
</tbody>
</table>

In these phrases, a determiner (Sony’s) and an Origin Classifier (Sony) are equivalent; so are an Epithet (big) and a Dimension Classifier (36 inch).

I will offer a partial historical explanation in section §5.5.2 of chapter 9, and will deal with the issue more fully while discussing the zones in section §2 of chapter 11.

5 Conclusion: order within the Classifier zone

5.1 Summary

What the order consists of

The order of the Classifiers is not so much an order of word senses (as with the order of Reinforcer → Epithet → Descriptor), as an order of constructions. Each Classifier position constitutes a construction, consisting of the meaning of the Classifier itself and the
constructional meaning (the relation of the Classifier’s lexical meaning to that of the head). Those specific constructions constitute a more schematic construction (the whole Classifier phrase), which has a single unifying relation which controls the order.

There are five constructions, as follows.

(1) The Participant-head construction has its modifiers in the Circumstance role, in the order: first Origin, then Dimension, Constituency, Type, and Function. (Those five circumstantial relations have been called “qualia”.)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Elite</td>
<td>110 cm</td>
<td>stainless</td>
<td>double oven</td>
<td>range</td>
<td></td>
</tr>
</tbody>
</table>

(2) The Process-head construction has its modifiers in the order: first Circumstances (Extent, then Location), then Indirect Participant, Actor Participant, and Goal Participant.

<table>
<thead>
<tr>
<th>Modifiers: Circumstances</th>
<th>Modifiers: Participants</th>
<th>Head: Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extent</td>
<td>Indirect Participant</td>
<td>Process</td>
</tr>
<tr>
<td>Location</td>
<td>Actor</td>
<td>Goal</td>
</tr>
<tr>
<td>overnight</td>
<td>[contractor]</td>
<td>explosives</td>
</tr>
<tr>
<td>[2005]</td>
<td>court</td>
<td>storage</td>
</tr>
<tr>
<td>leaky homes</td>
<td>court</td>
<td>ruling</td>
</tr>
</tbody>
</table>

(3) The Circumstance-head construction has its modifiers in the order: first Circumstance (Extent, then Location), then Actor Participant, and Process.

<table>
<thead>
<tr>
<th>Modifier: Extent Circumstance</th>
<th>Modifier: Location Circumstance</th>
<th>Modifier: Actor Participant</th>
<th>Modifier: Process</th>
<th>Head: Circumstance</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 m/sec</td>
<td>[surface]</td>
<td>freestream</td>
<td>[flow]</td>
<td>velocity</td>
</tr>
</tbody>
</table>

(4) The intensive-attribute-head construction has its modifiers in the order: first Carrier Participant, then Circumstance.

<table>
<thead>
<tr>
<th>Modifier: Carrier Participant</th>
<th>Modifier: Circumstance</th>
<th>Head: Attribute Participant</th>
</tr>
</thead>
<tbody>
<tr>
<td>public</td>
<td>transport</td>
<td>safety</td>
</tr>
</tbody>
</table>

(5) The possessive-attribute-head construction has its modifiers in the order: first Circumstance, then Carrier Participant, and Process.

<table>
<thead>
<tr>
<th>Modifier: Circumstance</th>
<th>Modifier: Carrier Participant</th>
<th>Modifier: Process</th>
<th>Head: Attribute</th>
</tr>
</thead>
<tbody>
<tr>
<td>28 GB</td>
<td>external disk</td>
<td>[storage]</td>
<td>capacity</td>
</tr>
</tbody>
</table>
Chapter 6: Classifiers

There are also constructionless uses of Classifiers, which take only a single Classifier, and are therefore without internal order.

Explanation of the order

(a) Semantics

The Classifier whose constructional meaning is most intrinsic to the conceptual meaning of the head come closest to it; the least intrinsic comes furthest from the head. The nature of being intrinsic varies with the construction.

(b) Syntax

Classifiers conform to the same syntactic structure as do other premodifiers: they modify the following part of the phrase: “Wyndham [high denier [nylon [Oxford weave [lining fabric]]]]”.

(c) Relation of semantics and syntax

I have shown for each construction that it is semantics that controls Classifier order fundamentally. Furthermore, no subzone has different or wider powers of modification, as Reinforcer and Epithet zones do (chapter 5); so syntax does not have the extended role that it does in the other zones.

Explanatory power

We now have explanations of the facts (a) to (c) with which the chapter began (§1.1): the positions (or specific constructions) in the constructions 1 to 5 in the summary above explain fact (a), the existence of subzones;

- the variation in the nature of the constructions explains fact (b), the variation in relations between Classifier and head;

- the difficulty of knowing which position a Classifier is occupying when only some positions are filled explains fact (c), the systematic ambiguity.

This chapter, on Classifiers, complements chapters 4 and 5, on the semantics and syntax of the zones overall, to answer the original question of the thesis (chapter 1, section §1): what is the nature of unmarked premodifier order?
5.2 Prospect: the following chapters

Features yet to be explained

The preceding sections have explained the order of Classifiers, and a number of other features, but there are several features noted in the discussion that need further explanation, as follows:

- the great differences between Classifiers on the one hand and Reinforcers, Epithets and Descriptors on the other;
- the number of constructionless uses;
- the range of relations invoked by some of the positions, especially the qualia positions;
- the amount of ambivalence and ambiguity that occur;
- the great differences in complexity and productivity of the different constructions;
- the existence of borderline instances.

Chapter 9 will offer a historical explanation for those features, in section §5.5.2.

Two features will be explained psycholinguistically, in section §2 of chapter 10:

- the complexity of the Classifier zone, which is much greater than that of the other zones;
- Classifiers’ frequency of use.

Types of order to be discussed

Chapters 4 and 5 and this one have explained the unmarked order of nominal phrase premodifiers. The next two chapters explain free order (next chapter) and marked order (the following one).
Chapter 7: Free order

1 Introduction

Purpose of the chapter

This chapter explains free order (order within one zone), complementing the previous three chapters, which explain unmarked order (grammatically set order across zones).

Starting point

The chapter starts from two points made in chapter 3:

- order within a zone is not bound by grammatical rule;
- multiple premodifiers within one zone are coordinated (by commas or conjunctions such as and and but, for example).

Premodifiers within the same zone are sequential in utterance, but not sequential in syntactic structure: they modify the group made up of words in later zones and the head; they do not modify other words in the same zone. The phrase, “its full-bodied, soft, sweet lingering dark cherry flavours”, can be represented in diagram 1 below, where the arrows combine with the brackets to indicate modification.

Diagram 1: syntactic structure of coordinated premodifiers

```
Determiner  Epithets  Descriptor  Classifier  Head

"its \[ full-bodied, soft, lingering \[ dark cherry \[ flavours ] ] \]
```

The lack of structural sequence gives the speaker freedom to vary "full-bodied, soft, sweet...." to "soft, sweet, full-bodied....", or "sweet, soft, full-bodied....". This chapter examines that freedom.

Argument, and outline

The chapter argues as follows, for “free” order:

- although the order is free grammatically, there are some constraints that limit speakers’ freedom arising from content and from convention (section §2);
in some situations, speakers set the order by a stylistic principle, accepting a constraint on their grammatical freedom voluntarily: the most important of the modifiers is put first (section §3), or it is put last (section §4); otherwise, the order is a random one (section §5).

Discussion follows (section §6), and conclusions (section §7).

2 Constraints on the order within a zone

Conventional order

With some groups of premodifiers, a certain order has been conventionalised to some degree. For example, we regularly prefer "black and white" to "white and black", as in "black and white photography". (The OED gives "black and white" as a combination, but not "white and black".) Other examples of conventionalised order are "black and tan terriers"; "men's and women's footwear".

Sometimes, conventionalisation is taken further, to the point where different orders carry different meanings. For example, the British flag is regularly a "red, white and blue flag"; the order has connotations of British patriotism, as in "... the professional patrioteer ... who waves a red-white-&-blue handkerchief". The expression "blue, white and red flag" is commonly taken to refer to the French tricolour.

Time order

When two premodifiers refer to successive events, they are normally written in the order in which the events occurred. Examples follow.

(1) "Yet he was only a child of time, a lonely relic of a devoured and forgotten generation."

The generation was devoured before it was forgotten.

Similar examples are:

(2) Sailors in a storm thought that they heard the voices "of dead and gone skippers".

(3) A recipe instructs the cook to fry some fish, marinate it, then "put the fried, marinated fish in a bowl".

---

1 SOED phrase.
2 OED citation.
3 The order may be regarded as iconic, as in “I came, I saw, I conquered.”
Chapter 7: Free order

Order of speaker's experience

Oller and Sales (1969) report an experiment in which their subjects said, "It is a shaded and lined square", if they had seen a shaded square previously, but said, "It is a lined and shaded square" if they had seen a lined one previously. That is, the modifiers were given in the order in which the qualities were experienced.

A real-life example is the phrase, "vivid and fleeting rainbows". Here, the vividness is experienced first and the rapid fading of the rainbows is experienced second.

Explanatory order

I showed in section §2.2 of chapter 5 that an Epithet can be explained by a following word (a Descriptor). Speakers who want to use two Epithets, with one explaining the other, seem to be under a strong constraint to put the explaining word after the one explained. Examples follow.5

(4) “A nice, warm prison”; warm explains why prison is nice.
(5) “A good, strong boat”.

The force of the constraint is shown by the oddity of the reversed order: “a warm, nice prison”, “a strong, good boat”.6

Sometimes the explanatory word is appositive:7

(6) Some maps have “a large, red (i.e. risky) area”.
(7) “The so-called ‘gray’ (questionable) sayings” of Jesus.

Conclusion

These phrases would be grammatical with the order reversed, but would not be fully idiomatic English: “white and black photography”, “forgotten and devoured generation”, “fleeting and vivid rainbows”; we are constrained in the order we use, with limited freedom to vary it.

The following sections deal with situations where there is great freedom.

4\footnote{In other circumstances, the phrase could be structured without the commas as “fried (Descriptor) marinated (Classifier) fish”, where “marinated fish” is construed as an entity - an ingredient - like “smoked fish”.

5\footnote{The first three are from the British National Corpus.

6\footnote{However, we also expect the "nice warm" order because of submodification - "nicely warm"; see chapter 2, §3.2.

7\footnote{I take these examples to be coordinated by their bracketing.}
3 Order with the most important modifier first

Introductory note

In this section, I illustrate the various reasons for which speakers rate one premodifier as more important, and place it first accordingly. (I show reduced importance of words by reduced type size.)

Thematic information first

A review of a biography said that in 1986:

(1) "....... Vesua Bjelogrlic.......... decided to leave her stagnant but peaceful Yugoslav homeland, and move with her English fiancé to London."\(^8\)

Here, stagnant provided the motivation for Vesua's move, so was vital to the biographical theme. Peaceful had secondary importance. Yugoslav was unimportant in the book - outweighed by personal interest - and homeland was already given in the context. The order is that of thematic importance (where “thematic” is used in the non-technical sense of ‘relating to a recurrent topic in the text’).

These uses sometimes operate on the principle (noted in section §3 of chapter 5) that premodifiers can modify a following word. We saw there that expletives give words in following zones their own expressive meaning; they are also put first in their zone to affect following Epithets:

(2) “A bloody, great, stupid game”.

Similarly, irate colours steely when a novelist describes a tree, in a context of fear and determination, as -

(3) “an irate, steely black steeple”.\(^9\)

This thematic use enhances the cohesion of the text (as discussed by Halliday and Hasan 1976), that is, the structure of text as a unit greater than the clause.

New information first

An Automobile Association review of a new Mazda sports car said:

\(^8\) Economist, March 26, 2005; page 77.

\(^9\) John Knowles, A Separate Peace (London: Heinemann; 1959); page 11.
Chapter 7: Free order

(4) "The outgoing car's been hailed for its fine balance for some 16 years, and fans were concerned the recipe would be lost in the model change. [New paragraph.] They needn't have worried. The iconic sports car may be bigger, but not by much; and the light weight, fine-handling, nicely-balanced and affordable sports recipe appears to have been retained." 10

The concept of the head word, recipe, is given in the previous paragraph, and affordable is inferrable from the fact that the car is a Mazda, so both words are relatively unimportant. The concept of nicely balanced is also given in the previous paragraph (as fine balance), but has importance for the sports-car theme. The new information in the phrase, therefore, comes from the first two modifiers, light weight and fine-handling, which are also crucial to the theme of being an "iconic sports car". The phrase, then, has its new and thematic information placed first.

Concluding a discussion of AIBO, a household robotic dog, a report said:

(5) “Most Japanese consumers.... like AIBO because it is a clean, safe and predictable pet.” 11

The issue of newness will return, with greater importance, in chapter 10, section §3 (Discourse Explanation).

Emotion first

An article on politics in a weekly news magazine reported:

(6) "It has been an extraordinarily hopeful few weeks in the habitually dank and depressing politics of the Middle East." 12

Dank is a strong word here, having its regular emotive meaning reinforced by its being used metaphorically; depressing is inherently weaker, and is rather hackneyed. So the more emotive word is placed first.

This example is from spontaneous speech:

(7) “You did all your eye make-up in really DARK, bold colours, and it looked stunning.” 13

[The emphasis is in the transcription.]

A newspaper headline:

1010 AA Autofocus, Autumn, 2005; page 7.
1111 Economist, December 24, 2005; page 43.
1212 Economist, March 5, 2005; page 9
1313 Wellington Corpus, T_DPC040 1335 KA.
Chapter 7: Free order

(8) "It's a cruel, cool summer." 14

An opinion article by a politician has:

(9) “Africa is a continent of breathtaking beauty and diversity with an extraordinary, energetic and resilient people.” 15

This order is a frequent one, used in many everyday phrases, such as "nice, polite little kid", and "nasty, cold wind", and is often reinforced by the explanatory principle given in section §2 above.

The point is supported by Bache (1978: 73ff.), in his principle of "emotional load", and by Quirk et al. (1985: 1337).

Conclusion

Writers and speakers sometimes use their freedom to arrange same-zone premodifiers as they wish by putting first what they consider to be most important. That importance may consist of the word’s being emotive, being new, or being thematic.

The order here has the same pattern as the overall order of premodifiers, where emotive and otherwise forceful words (Epithets) precede less forceful ones.

4 Order with the most important modifier last

Emotion last

Shelley's sonnet, "England in 1819", begins:

(1) "An old, mad, despised and dying king".

Old and mad were factual, for George III; blind is metaphorical, referring to political misjudgements, and therefore is mildly emotive. Despised (in the context of blind) carries the additional meaning of despicable (which Shelley could hardly say of the king), and expresses angry scorn: it is placed almost last of the premodifiers, as the most emotive: it is climactic.

(2) “the biggest, most complex, most audacious thrill of the film”. 16

(3) “the sharp, rather arrogant, and even offensive tone”.


15 15 Tony Blair; reported in Economist, November 1, 2005; page 44.

16 16 Climber 51, Autumn 2005; page 45.
Chapter 7: Free order

Most significant concept last

A political report on Iraq (in 2005) in a weekly news magazine, *Economist*, commented that wrangling over a new government’s formation -

(4) “... is what democracy is bound to be about, in a multi-ethnic, multi-confessional, artificially constructed, war-and dictator-blighted country.”

The modifiers are conceptually climactic in the scale of the issues they represent, each issue being more damaging to Iraq than the one before.

Sometimes the later modifier makes the previous one more specific (as we saw for modification across zones in section §2 of chapter 5):

(5) “interesting, unusual flight patterns”.

Sometimes the last modifier is a logical conclusion from the others:

(6) “an extraordinary, celestial, divine, and therefore all powerful being”;

(7) “the sly, evasive, untrustworthy smile”.17

Most evocative word last

A book about American planning to attack Iraq said of George and Laura Bush's house in Texas:

(8) "Their place is a small, very modern, even spare ranch-style house on a man-made lake."

*Spare* evokes restraint and modesty as qualities of the owners who have not let their wealth and power lead to ostentation: it is strongly evocative here.

Further examples:

(9) A fossil had an “amazing, emotive and exquisite unity of rock, wind and water”.18

(10) “Good, penetrating, X-rayish phrases”.19

Discussion: order with the important last

There are some minor issues, suggested in the literature as affecting order in general, which do affect free order at least, and which are in some sense “important last”.

Quirk et al. (1985: 1341) report that rhythm has been suggested as controlling the order of modifiers within the same zone - "e.g. short items before longer ones". To Vendler (1968: 122),

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17 Grahame Greene, *The Power and the Glory*.


that is "a simple phonetic rule". I accept that in free order, writers do often use rhythm intentionally; it adds to the climactic effect discussed above.

Bache (1978) says that morphologically derived words follow nonderived words; Quirk et al. (1985: 1338-1339) evidently accept his claim. Quirk et al. (1985: 1341) report that it has been suggested that "common items" precede "rare ones". Bache (1978: 76) gives "the principle of length" - words with fewer syllables tend to precede those with more syllables. (In both works, these principles of order are "tendencies, rather than absolute rules", to quote Quirk et al., 1985: 1339.) Where they do apply, they work together, since derived and uncommon words regularly have more length. They thus influence the rhythm - putting "short items before longer ones" - so are covered by the comments in the last paragraph.

All those “tendencies” are illustrated in the example given previously:

(11) “The sly, evasive, untrustworthy smile.”

Conclusion: order with the important last

Writers (and possibly speakers) sometimes arrange free-order premodifiers by putting what they consider to be most important last. That importance may consist of the word’s being thematic, or most emotive, or most conceptually significant, or most evocative.

5 Arbitrary order

Not surprisingly, many phrases with coordinated premodifiers show no clear pattern in their order. Some examples follow.

From a prayer:

(1) "We pray for all peoples separated from one another because of religious, social, ethnic or political differences."

A description of an old seaman manages three pairs of unstructured, coordinated premodifiers:

(2) "It was a fine, effective grunt that went well with his menacing utterance, with his heavy, bull-necked frame, his jerky, rolling gait; with his big, seamed face, his steady eyes, and sardonic mouth."

I see in these examples no motivation for the choice of order - no difference in meaning or stylistic effect that would be made by changing the order.
6 Discussion of free order

6.1 The basis for free order

Introductory note

This section suggests several bases for free order. They are not alternatives, but coordinated levels of language. They are influences on the speaker or writer, not determinants: the order is set by stylistic choice, not grammatical rule.

Semantics as the basis for free order

If we examine the zone membership of the modifiers involved in the choice of order within a zone, as illustrated by the examples in the preceding sections, we find striking results.

- The premodifiers constrained by convention, time, or experience are all Descriptors: Descriptors are perceptual words (expressing experience, including time), and simple in semantic structure, and easily conventionalised because they are simple. Those constrained by explanation are Epithets: Epithets express abstract concepts, the stuff of explanation.
- The premodifiers subject to placement by importance are all Epithets, which are words that by nature have expressive meaning and depth of possible meaning; that makes gradation in importance possible, and makes thematic linking possible.
- The words in arbitrary order include Classifiers, Descriptor and Epithets.

(I have found, in my whole research, only one instance of Reinforcers used together; and only one phrase with coordinated Classifiers that seems to have a significant order.)

I conclude that whether coordinated premodifiers can form a significant order depends on their semantic structure, which confirms its importance - as shown in section §6.2 of chapter 4, section §9.2.2 of chapter 5, and section §5.1 of chapter 6.

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20 "True, pure villa"; the phrase is hardly a piece of regular usage, being from a real estate agent's flyer, and it was a headline.

21 The phrase is, "A terrible pile of building, aircraft and human debris." Human, coming after building and aircraft as if it were of no more significance than them, shocks us - in a type of climax.
Syntax as the basis for free order

Syntax, as well as semantics, is sometimes the basis for free order. In particular, the climactic structures sometimes rely on the power of Epithets to modify other premodifiers (as set out in chapter 5). An example follows.

(1) "a large, bright, brilliant, buoyant, tumultuous sun".

The phrase, reporting a dream, is used symbolically to express the climactic change in the main character's life; and tumultuous is a climactic word in the phrase. The effect relies on the transfer of concepts and imagery from large, bright and brilliant to buoyant, and from all of those to tumultuous.

Importance as the basis for free order

Where a phrase allows either of the significant orders (important first or important last), the choice seems to depend on the genre in which it is used. The examples I have given occur as follows.

- The climactic, important-last examples come from fiction and news-reporting articles: climactic order fits the narrative build-up to a culminating event, which can aptly be mirrored in a climactic structure of premodifiers.
- The important-first examples come from book reviews or editorials. Those genres expound a theme, so they use theme-related linking words to help show the development of thought, and to keep the text cohesive; those thematic words are highlighted by prominence in first position. (I have shown in section §6.1 of chapter 4 that first position is the default position for prominence.)

Language function as the basis for free order

The various forms of free order discussed in this chapter fairly clearly serve the language functions which I argued (in section §6.1 of chapter 4) to underlie unmarked order.

- The forms constrained by experience or time are controlled by the experiential function.
- Putting thematic or new information first serves the textual function, since it develops the structure of the passage as text.
- Putting emotive, significant or evocative information last serves the interpersonal function, since it builds a climax, whose effect lies in the hearer’s personal response.

Just as the functions underlie unmarked order, so they underlie free order.

6.2 General discussion

Support

Most work on premodifier order does not account for free order. The only exception I am aware of is Sussex (1974: 111-112), who notes that it can be used for "stylistic markedness" (which is not explained further).

7 Conclusion: free order

Summary

• When speakers and writers use two or more premodifiers in the same zone, they may use them in any order: the order is not set grammatically.
• However, there are some external constraints (namely convention, time order, and experience) which limit speakers’ freedom.
• Speakers often choose a stylistic order:
  • either they put first, in a position of prominence, what is new or what relates to the theme of the whole text (for example);
  • or they put the most emphatic or emotive (for example) last, to form a climax.
• Otherwise, the order is arbitrary.

Conclusion

That summary explains the second phenomenon noted in section §1 of chapter 1: why the order can sometimes be varied freely, and the nature of the variations.

Prospect: following chapters

The chapter leaves two matters unexplained:
• how the mind can use principles for premodifiers within a zone that are quite different from those it uses for premodifiers in different zones, even while processing a single phrase;
• why the principles discussed as constraints (in section §2) do not allow freedom, whereas those discussed in later sections do allow it.
I will suggest the explanation in chapter 10, section §2 (Psycholinguistic Explanation).

The language functions and the principle of importance discussed in section §6.1 will gain further significance in chapter 10, section §3 (Discourse Explanation).

We have been considering speakers’ freedom to arrange words within a zone; we turn in the next chapter to a more powerful freedom: that of flouting the grammatically prescribed order across zones, in marked order.
Chapter 8: Marked order

1 Introduction

1.1 General introduction

Purpose of the chapter

This chapter completes the exposition of the three types of order: chapters 4, 5 and 6 presented unmarked order; chapter 7 presented free order; this presents the last type, marked order.

Starting point

Like the last four, this chapter starts from the outline of zones and types of order in chapter 3. Specifically, it starts from the assertion there that premodifiers are sometimes used in marked order; that is, in an apparently ungrammatical order (but one established by usage), in which the unmarked order is changed for a special purpose.

For example, *ruby* has a Classifier sense, as in "sweet-tasting [E] [old] [D] ruby [C] port", and it has a Descriptor sense, as in “[beautiful] [E] ruby [D] lustre [C] tiles”. (There, and often in this chapter, I abbreviate the zones to their initials.) But it is used in Epithet position in the following: "ruby [E], sweet-tasting [E] Parma [C] ham”.¹ The word has no established Epithet sense, and has a marked use here: its anomalous position forces us to ascribe to it a new sense inferred from the context, such as 'rich, attractive' (while retaining the colour meaning). Thus we have:

<table>
<thead>
<tr>
<th>Unmarked order (established senses):</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>sweet-tasting</td>
<td>[old]</td>
<td>ruby</td>
<td>port</td>
<td></td>
</tr>
<tr>
<td>beautiful</td>
<td>ruby</td>
<td>lustre</td>
<td>tiles</td>
<td></td>
</tr>
<tr>
<td>Marked order (new, marked sense):</td>
<td>ruby, sweet-tasting</td>
<td>Parma</td>
<td>ham</td>
<td></td>
</tr>
</tbody>
</table>

The argument

The chapter is intended primarily to show that:
• marked order is an established device in English;

¹ *Economist*, January 20th 2007, page 73.
Chapter 8: Marked order

- it has several different and important functions, especially the creation of vivid new senses;
- the marking is carried out in a variety of ways.

Some more general conclusions will be drawn, as well.

Concepts to be used

As noted in chapter 3 (section §2.1.2), I will simplify discussion by roughly equating zoning, position and order; and I refer to marked “order” or “position”, even for phrases with only one premodifier.

As I showed in chapter 4 (section §6.2), zone membership can be determined from meaning (taking context into account if necessary to determine meaning). Consequently, I will in this chapter often rely on semantic structure for determining zone membership, without demonstrating it from relation to other premodifiers.

“Marked order” here means both (a) an order that is used less frequently, and (b) an order that carries special significance. (These two senses correspond to (a) Croft’s ‘frequency’ sense of unmarked, and (b) his ‘neutral value’ sense, respectively; Croft 1991: 57.) The markedness of the use is commonly shown by the sequence (for example, a word with no Epithet sense precedes an Epithet (as in example 1 above); but in some situations, as we will see, sequence alone will not show that a marked use is intended, so speakers use some other linguistic device (such as submodification): they “mark” the use. We thus have sense (c) of marked (corresponding to Croft’s “structural” sense of unmarked - Croft 1991: 57).

1.2 Cautions

Basic points

I repeat two points made in the Zones chapter (section §2.1.2), that are crucial to this chapter.

- Premodifiers coordinated by commas or conjunctions (for example "red[D], white[D] and blue[D] stripes") belong in the same zone.
- Conversely, premodifiers that are not coordinated belong in different zones; for example, "trendy [E] new [D] cigarette [C] tins".

The rest of this chapter relies on those points. Not keeping them in mind them would cause confusion.
Errors

It is possible for speakers and writers to make errors in punctuation; so, since my analysis often uses punctuation, apparent exceptions to the analysis may be not real ones. (Where there is doubt, I use semantic structure and context as well as punctuation, to determine the speaker’s intention.)

Marked punctuation

Consider the following example:

(1) "Virtually all the state's counties [i.e. North Dakota's counties] have been losing well educated young people to other states. Only Iowa retains fewer of its young home-grown college-educated residents." ²

Since the modifiers are not coordinated, they should, when taken at face value, be read as belonging in different zones; but the results are anomalous:

<table>
<thead>
<tr>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>? young</td>
<td>home-grown</td>
<td>? college-educated</td>
<td>residents</td>
</tr>
</tbody>
</table>

The order and lack of coordination suggests that young is an Epithet,³ and that college-educated is a Classifier; but they cannot be, because of the semantic structure required in the context; they must be interpreted as Descriptors. The explanation is that they have been written without coordination to signal readers that the phrase must be taken restrictively: "its [young [home-grown [college-educated residents]]]." Inserting the commas normal for coordinated premodifiers ("its [young,] [home-grown,] [college-educated] [residents]") makes the phrase read descriptively (that is, nonrestrictively), implying that all residents in the state are young, all are home-grown, and all are college-educated. In fact, then, the order is not significant, and is not marked: the words have their normal senses, and are in a normal order (i.e. free order). Rather, the punctuation is marked (in the sense that it is the exceptional use, not the regular one); the punctuation is used to switch from descriptive syntactic structure - [...] [...] [...] - to restrictive structure - [...] [... [...]].

The following is an example of the converse use of marked punctuation: it forces a descriptive reading on what would otherwise be a restrictive reading.

(1) “....the results of syphilis, gonorrhoea, or other, minor sexually transmitted diseases”.⁴


³³ Young is often an Epithet in other contexts, with a different sense, as illustrated in section §3.3.3 of chapter 4.

⁴⁴ British National Corpus.
That reads as “[other,] [minor] [sexually transmitted diseases]”; with normal punctuation, it would be “other [minor [sexually transmitted diseases]]”, implying that syphilis and gonorrhoea are minor diseases. A postdeterminer (other) has been coordinated with an Epithet (minor).

These are marked uses of punctuation, then, not marked premodifier order: the words retain their usual sense, and there is none of the salience that marking brings.

**Words with uncommon senses**

*Smooth + dark* makes an unmarked order:

(1) "... smooth [E] dark [D] run".5

That has *smooth* as Epithet (<6b> “soft or pleasing to the taste”), and *dark* as Descriptor (<3> “having,... intensity of colour”).

So the reverse order may seem marked:

(1) “[the ship] pitched headlong into dark [E] smooth [D] hollows”. 6

But *dark* has here a standard Epithet sense (<5> “gloomy, dismal”), and *smooth* has a standard Descriptor sense (<10> “Of... the sea etc.: not broken”): *dark* is now an Epithet and *smooth* a Descriptor - the reverse of the zoning in (5) - but the order is unmarked.

A final illustration of the point has *smooth* and *dark* in the same order as in the first example, when the first was an Epithet and the second a Descriptor, but now coordinated as Epithets:


*Smooth* means <1> “... presenting no roughness”; *dark* means <3> “....approaching black in hue”. The words are regular in meaning and position: again, there is no marked usage.

In assessing marked order, we must keep in mind both common and uncommon senses.

### 1.3 Outline of the rest of the chapter

The next section, §2, deals with the function of changing modification structure, and §3 deals with the function of changing meaning; §4 gives general discussion; and §5 concludes.

5 British National Corpus.


7 British National Corpus.
2 Marked order used to change modification structure

Example of the use

The use of marked order to change modification structure is well shown in the experimental results of Oller and Sales (1969). Their subjects were shown squares that were small and coloured. The unmarked order for describing such a square is "small red square" or "small green square". However, when most of the squares on display were green and small, and only one of them was red and small, a majority of the subjects said "red small square".

In the unmarked order, _small_ modifies “red square” (i.e. “small [red square]”), making a contrast with red squares of other sizes. In the alternative, marked order (“red [small square]”), the modification structure is changed, the contrast being with small squares of other colours. (Oller and Sales concluded that the change highlighted the contrast between the red squares and the green squares, by moving _red_ forward into a position of prominence.)

Support from other authors


Discussion

Although this use is so widely supported, it appears to be quite uncommon in spontaneous English, the examples those writers give having been obtained in experiments (Oller and Sales 1969), or apparently invented (e.g. “Swiss red chair” - Danks and Glucksberg 1971: 66). I deal with the issue in discussing other theories, in section §4.6.2 of chapter 11.

Conclusion

Marked order can be used to change the modification structure, to highlight a contrast. The usage is rare.

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8 It is noteworthy that many of the subjects were (according to Oller and Sales) inhibited from using that marked order by the strength of the unmarked order, "small red square", which they felt to be required as the grammatical order.
Marked order used to change meaning

3.1 Introduction

The most frequent function for marked order is changing the meaning of the word which is moved into marked position: the nonstandard position requires the hearer to take a nonstandard meaning from it, since it has no established meaning for that position. For example, when the word is moved forward into Epithet position (which in my observation is the commonest change), hearers will construct a new meaning of the Epithet type; that is, one that is abstract, or with richer connotations, or with attitudinal or emotive meaning (see chapter 4).

There must be some feature that prompts the hearer to reinterpret the word - something to mark the use. The examples so far have relied on position relative to other premodifiers: "ruby[E], sweet-tasting[E] Parma[C] ham", for example, is anomalous in having ruby (normally a Descriptor or Classifier) precede an Epithet, sweet-tasting. When there is only one premodifier, the speaker must mark the usage in some other way. The following sections illustrate the different methods of marking.

3.2 Marked by position relative to other premodifiers

Marked use as Epithet

In the first example, young is used twice, in different positions. The novelist, P. D. James, said of one of her characters:

(1) “Here was a young, impulsive, over-curious young woman.”

The second young has SOED’s meaning <1> "Not yet old...".

<table>
<thead>
<tr>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>young</td>
<td>‘not yet old’</td>
<td></td>
<td>woman</td>
</tr>
</tbody>
</table>

The first young must have a meaning different from “not yet old”. That is required pragmatically, since we presume James to be not repeating herself; but it is also required

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Chapter 8: Marked order

linguistically, because young is in Epithet position (since it precedes two Epithets), and is contextually linked to impulsive and over-curious. The nearest SOED meaning for young here is

\(<2>\) “……having or showing the freshness or vigour of youth”, which suggests approval. But in the phrase being considered the word is disapproving, through its link with the negative words over-curious and impulsive; so its meaning in this use is approximately "youthfully foolish".

We now have:

<table>
<thead>
<tr>
<th>Epithets</th>
<th>Descriptor</th>
<th>Cl.</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>young</td>
<td>'youthfully foolish' + [disapproval]</td>
<td>impulsive</td>
<td>over-curious</td>
</tr>
</tbody>
</table>

The word young has a different sense primarily because of its position (as an Epithet); but the meaning relies partly on other words in the context. It is forceful, because of the markedness of the usage, and because of its prominent position.

Other examples follow, with less analysis. The words are marked as Epithets by position in front of Epithets.

(1) [The ideal library]. “If you want a book, you order it online, wait until it’s delivered, and read it in a modern [E], purpose-built [E], properly lit [E], secure [E], well ventilated [E] modern [D] library with proper access for disabled people and then return it.” 10

The first modern is a conversion from the Descriptor zone; it adds favourable expressive meaning, as young in the first example added unfavourable meaning. It gains emphasis from the repetition, and the effort needed to distinguish the senses of the two uses.

(1) [The Civil Unions Bill is] "just Labour Government [E], vote-buying [E], we're-nice-to-gays [E] garbage".11

Labour government is normally an emotionally neutral Classifier. It has become a sarcastic Epithet.

(1) "A strange[E], chemical[E], putrid[E] smell".12

That was spoken spontaneously; I presume that chemical (normally a factual Classifier, now an expressive Epithet) was marked by intonation and pausing, as well as by position. (I have not attempted to document that form of marking formally.)

Chapter 8: Marked order

Marked use as Reinforcer

(1) "There was worse than slackness: there was black [R] downright [R] treachery by men in the king's pay." 13

The Epithet use of black (<7> "Foul.... atrocious") has been converted to Reinforcer use, augmenting another Reinforcer (but carrying some of its Epithet meaning, and perhaps some Descriptor meaning of colour, by metaphor).

Marked use as Classifier

(1) "He has a mean [E], unbroken [E] sheer [C] bastard in his outfit". 14

Sheer, normally a Reinforcer, must be read as a Classifier, since it follows Epithets, and since the only plausible interpretation (I believe) is that of the Type quale (see chapter 6, section §2.1) - implying, "There are various types of bastard, and he was a member of the worst type!".

3.3 Marked by coordination

This section illustrates marking by coordination.

(1) "These were celebrated [E], American [E] breasts, engineered by silicon to be as broad and bountiful as the prairie." 15

Without the coordinating comma, the phrase would read, “celebrated [E] American [C] breasts”. Here, since American is coordinated with the Epithet celebrated, it must be read as an Epithet, taking favourable associations like those of broad and bountiful.

(2) "....one of those bland [E], wishy-washy [E], American [E] kind of statements". 16

The same process has occurred, but the context produces negative associations - contrasting with those in the last example. (The remark was spontaneous.)

A review of a book about South Africa described the author as:

(3) "... a bright [E], young [E] and black [E] academic". 17

With young in the phrase, and forthright and thorough nearby in the context, black (usually Classifier or Descriptor) gains associations of 'freshness', 'vigour', and 'integrity'.


1414 From the Brown Corpus; cited by Fries (2000: 314).

1515 Economist, February 17th 2007, page 87; the phrase refers to Anna Nicole Smith.

1616 David Clark, public discussion in Auckland, October 14th, 2005.

1717 Economist, March 26 2005, 76.
A climber complained of -

(4) "rotten [E], Weetbix [E] rock".18

Marked uses quite often use metaphor; in this example, a literal Classifier use becomes a metaphorical Epithet use.

### 3.4 Marked by being graded

As we saw in the Semantic Explanation chapter, Classifiers and Descriptors cannot be graded or submodified by intensifying words like very, rather, fairly, and so on - only Epithets can be graded. For example, in "Swedish pornographic films", pornographic designates a type of film, and is a Classifier and not gradable; but in "extremely pornographic Swedish films", it is a disapproving and emotive Epithet, and gradable. Position before Swedish signals the hearer that pornographic is an Epithet, but so does extremely. The Epithet use is an established one, so is not a marked use; but grading a normally nongradable word will constitute a marked use.

While the Reserve Bank of New Zealand was planning to abolish the five-cent coin and replace most of the other coins, a spokesman ended a radio interview by saying:

(1) "Yes, it's quite a logistical [E] matter."19

Logistical is normally a Classifier (meaning 'Concerned with the detailed organisation..... of a plan...'), and cannot be graded. The grading submodifying expression, "quite a", marks it as an Epithet; the context showed that it was to mean approximately 'complex, difficult, and time-consuming'.

The referential Classifier, real time, has become a praising Epithet in:

(2) "very, very real time[E] intelligence".20

The grading can also carried out by affixes; (see section §4 of chapter 4). For example: many people did not welcome genetically modified food crops even though they were said to be -

(3) "a greener[E] green[D] revolution".21

(Position, as well as the -er inflection, marks that use.)

2020 Oliver North, testifying to the US Senate; quoted in Ann Wroe, Lives, lies and the Iran-Contra affair.
Cited from British National Corpus.
The Classifier X-ray is an Epithet, meaning 'brilliantly penetrating', in:

(4) "good[E], penetrating[E], X-rayish[E] phrases".22

3.5 Marked by semantic clash

A man out walking in London was said to be under -

(1) “an Italian [E] sky”.23

The clash between locations - England and Italy - forces the reader to reinterpret Italian as meaning approximately 'rich, deep blue'. (The literary associations of Italian affect the reading, too.) A Classifier is marked as an Epithet by the semantic clash between its usual meaning and the context.

Chinese-style dried pork was said (on its packet) to have -

(2) “an oriental [E] taste of New Zealand”.

A Classifier has become an Epithet, meaning 'exotic' or 'spicy', presumably.

The praise that is integral to superb clashed with the bitter blame expressed by other words in:

(3) “...for pure vacillating stupidity, for superb [R] incompetence to command.....”.24

The Epithet superb is marked as an ironic Reinforcer, meaning 'utter'.

The device is common in poetry. Matthew Arnold laments separation, and ends a poem:


All three premodifiers would normally be Descriptors. Estranging applies only to human experience, so clashes with inanimate sea; so it is read as an Epithet (by personification). Since salt and unplumb'd are coordinated with it, they become Epithets too; as such, they cannot be read as perceptual words ('containing salt', and 'not measured'); they are taken figuratively, also. All three words now signify estrangement, loss, and grief - because estranging is marked by its semantic clash.

2525 To Marguerite.
3.6 Discussion: marked order used for change of meaning

We have seen Italian meaning ‘rich, deep blue’, and American meaning either ‘broad and bountiful’ or ‘wishy-washy’ - descriptive senses quite different from their established senses - the referential ‘Of or pertaining to Italy / America’. English and French also have descriptive senses different from their referential ones, but those senses are established; for example, French <2> “Having....... (a) refinement [or] (b) impropriety”. I suggest that whereas Bryant’s marked use of Italian, seventy years ago, to mean ‘rich, deep blue’, has not been taken up into the language, the established senses of French and English came from other people’s comparable marked uses of the words - and that the three senses of Byzantine developed in the same way (see chapter 4, §1.4). I will argue later that marked use has been important historically in the development of new word senses (see sections §4.5 and §5.4 of chapter 9).

4 Marked order for control of information structure

A film review began, without previous reference to the director or his films:

(1) “In Tony Ares’ poignant [E] second [D] feature, .....”.26

Second is normally a determiner, placed before Epithets, such as poignant: #“Tony Ares’ second poignant feature” would be the normal order. That would be read restrictively, with second discriminating between the two poignant features, and poignant being read as expressing given information. The writer has reversed the order, to make us read both poignant and second as giving new information (and to allow brevity); the phrase could be paraphrased as, ‘Ares has made two features; and this one (the second) is poignant’. Second is in marked position as a Descriptor, after the Epithet, poignant. A postdeterminer has become a premodifier, to control the information structure.

Other examples are as follows. All the premodifiers give new information.

(2) “After a quiet [E] three [D] decades, ....”.27

The phrase is also marked by the anomalous “a”: *“a three decades” is not grammatical.

(3) “I spent a therapeutic [E] few [D] hours........”.


I return to the relation of discourse structure to premodifier order in section §3 of chapter 10.

Writers sometimes place after the head what are normally premodifiers, to give them prominence in the discourse structure:

(4) “... the abominable heap of things heavy, of things sharp, of things clumsy to handle”.  

This is Teyssier’s (1968: 236) “inverted word order”.

5 Discussion of marked order

5.1 Borderline instances

Some uses of premodifiers seem close to the borderline between marked and established use, just as there were borderline instances noted in previous chapters. Red (in literal use) is a Descriptor; but I have found so many instances of its use as an Epithet (retaining that literal meaning while adding other sense elements) that I believe it is now an accepted use, although it has not reached SOED. (It seems to have an underspecified connotation of being unusual or dangerous, and expressive meaning, which shift with context.)

(25) “A large [E], red [E], hairy [E] monster”.

(26) “The red [E], curvaceous [E], 1950’s [E] double-decker” [i.e. London bus].

(27) “His rather red [E], slightly over-full [E], countryish [E] cheeks”.

(28) “A large [E], red [E] (i.e. risky) area” [on a map].

5.2 Other discussion

Generativity

There are interesting connections between the generation of new meanings in marked order and the discussion of lexical generativity in Pustejovsky (1995), Bouillon and Busa
(2001), and related work - the study of means of “‘shifting’ meaning in ways and across
domains that are not random” (Bouillon and Busa 2001: xiv).

Significance of marked and free order for understanding the order of premodifiers

The concept of a marked order in premodification has provided powerful explanation in
this chapter, and will recur in the historical explanation in the next chapter. As far as I am
aware, it is new in the literature on premodifier order.

Most explanations of premodifier order given by previous studies have not resolved the
order fully, relying on qualifying expressions such as "tendency" to precede, and "preferred
order", with inadequate explanation of what controls the tendencies and preferences. The
account of marked order in this chapter, and of free order in the last chapter, explain the
variations in premodifier order simply and tightly, without unexplained qualifications. That, I
suggest, is an important advance on previous work.

4 Conclusion: marked order

Summary

• General. Just as nominal phrases can have a marked stress pattern (e.g. “a large black sofa”,
with primary stress on black), so can they have a marked order of premodifiers, in which words
are used in a position for which they have no established sense. Although the marked use
breaks the “rule” (that position is set by the word’s established sense), it is (again like marked
stress) an established pattern in English.

• Functions.

  • The marking nearly always requires hearers to construct a nonce meaning (using context
and world knowledge, as well as an established sense), which is vivid or emphatic.

  • Sometimes it changes the discourse structure.

  • Rarely, it changes the modification structure.

• Method of marking. The order can be marked in different ways:

  • inherently, by the word sequence (e.g. "red big" as against "big red");

  • syntactically (by coordination);

  • morphologically (by submodification or inflection).
• **Language functions.** In being used for its special impact on the hearer, marked order serves the interpersonal function of language (as discussed in previous chapters); and to the extent that it manages discourse structure, it serves the textual function.

• **“Important first”**. Marked order generally makes the word more prominent by putting it in a zone further forward. That reinforces the general principle that the important word comes first, seen in unmarked order (in chapter 4, §6.1), and in much free order (in chapter 7, §3).

• **Zones as constructions.** Since the new meaning is forced upon the word merely by use in a new zone (it is not acquired by gradual development), that meaning must be constructional. That suggests that all zones are constructions - not just the Classifier zone (chapter 6); I return to the issue in section §2 of chapter 11.

**Conclusion drawn**

That summary explains the last of the three phenomena noted in section §1 of chapter 1: the acceptability and effect of flouting the rules for unmarked order.

**Prospect: following chapters**

Marked order, like purposeful choice of free order (discussed in the last chapter), is rather incongruous with unmarked order, in working on different principles (and in being salient to the hearer). I will offer a psycholinguistic explanation for that in section §2 of chapter 10.

Some wider issues that have arisen here (such as discourse structure) will be developed further in chapters 10 and 11.

First, however, we turn to the historical explanation of all three premodifier orders, the exposition of substantive synchronic explanations being now complete.
Chapter 9: Historical explanation of premodifier order

1 Introduction

Purpose

This chapter has two purposes:

- to give a general explanation for premodifier order in English nominal phrases;
- to explain specific features which have not been explained in the preceding chapters.

Starting point

The chapter begins where the last four left off: they explained the three types of premodifier order synchronically; this chapter explains diachronically both the basic structure of zones (chapter 3) and the premodifier semantics and syntax (chapters 4 to 8).

The argument

The chapter argues as follows.

- The unmarked order of premodifiers has evolved (from Old English times onward) from a quite different structure, gradually, and in stages, as follows.
  - In Old English, the order was by part of speech: adjective + participle + genitive noun.
  - By late in Middle English, the part-of-speech order had been reinterpreted as a syntactic one: premodifier [premodifier [premodifier [head]]].
  - By the 16th century, the order had its present structure, by the reanalysis of the syntactic pattern as embodying a semantic pattern.
- Free order has always existed, but it has changed in its nature and use; marked order has evolved in the last century or so.
- The changes depended on changes in what semantic structures were possible for premodifiers.
- As part of all those changes, individual words have been changing in zone membership (as they have developed new senses).
Chapter 9: Historical explanation

- That evolution explains general features of premodifier order that also have a synchronic explanation; and it explains some specific features that have no good synchronic explanation at all.

**Approach**

Rather than giving a continuous narrative of the changes, I give "snapshots" of premodifier order in particular periods and in the work of particular authors. That is to show that the various features I ascribe to one stage of development did occur together, and that they were available as a system to individual users of the language.


**Concepts and assumptions**

Although general explanation of the causes of change is outside the purpose of the chapter, I am arguing for certain elements of causation, so some explanation is needed here.

I follow the "invisible hand" explanation of Keller (1994). Merchants set out to make money for themselves; but, through better goods and lower prices, everyone benefits - as a result of an "invisible hand". Similarly, I argue that present day premodifier order is "the result of human actions but not the execution of any human design" (Keller 1994: 38; see also Haspelmath 1999, and Bybee, Perkins and Pagliuca 1994: 300). Functional value may cause changes to be retained, but it does not initiate them.

I also assume the mechanisms of word change accepted in such historical linguistics literature as Croft (2000), Bybee and Hopper (2001), Traugott and Dasher (2002) - mechanisms (or “processes”) such as metaphor, analogy, and incorporation of contextual meaning. I deal with mechanisms only briefly, near the end of the chapter (section §6.2).

**Cautions**

I do not have space enough to describe the history of premodifier order fully, so the explanations are rather sketchy, and the conclusions are rather tentative.

**Outline of the chapter**

The rest of the chapter runs as follows.

- Section §2 deals with Old English (to 1066), Section §3 with Middle English (1066 to 1476), and Section §4 with Early Modern English (1476 to 1776); that covers the main development of unmarked premodifier order.
- Section §5, on Later Modern English (1776 to the present day), shows how the patterns within the Classifier zone developed in the 19th and 20th centuries, and discusses minor changes that completed the historical development.
Section §6 gives discussion, including a brief history of free and marked order.

Section §7 states conclusions. The sections deal primarily with the premodifier order existent in that period, but some subsections provide material needed for later explanation.

2 Old English period

2.1 Introduction

Purpose
This section is intended to establish the semantic and syntactic patterns from which modern premodifier order evolved.

Coverage
This section deals with the language up to about 1066, but predominantly with that of the 10th century. (I do not deal with changes within the period.)

On the whole, I exclude the poetry from consideration, since it differs greatly from the prose in both syntax and semantics (see Mitchell 1985, Strang 1970).

Concepts
I emphasise that I am dealing with premodifiers, since the authorities I cite deal with "adjectives", "participles" and "nouns" (not "premodifiers").

Outline
Section §2.2 argues that premodifiers were ordered by part of speech, not by syntax or semantics. Discussion and conclusions follow.

2.2 Order of premodifiers in Old English

2.2.1 The order

According to Mitchell (1985: §143), nominal phrases in prose followed "basic rules" of order for “qualifying elements” preceding the noun. I reproduce part of his table (loc. cit.), which is taken from Carlton (1963: 780), with translations added in italics.
Table: order of premodifiers in Old English (from Mitchell 1985)

<table>
<thead>
<tr>
<th>6th position</th>
<th>5th position</th>
<th>4th position</th>
<th>3rd position</th>
<th>2nd position</th>
<th>1st position</th>
<th>Head word</th>
</tr>
</thead>
<tbody>
<tr>
<td>(eall, sum, manig)</td>
<td>(pronoun)</td>
<td>(numer-al)</td>
<td>(oþer)</td>
<td>(adj. and participle.)</td>
<td>(noun in genitive case)</td>
<td>(noun)</td>
</tr>
<tr>
<td>all, some, many</td>
<td>that/the</td>
<td>geættradan</td>
<td>deofles</td>
<td>lare</td>
<td>that/the</td>
<td>the</td>
</tr>
<tr>
<td></td>
<td>an</td>
<td>poisoned</td>
<td>devil's / of the</td>
<td>teaching</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>an</td>
<td>oþer</td>
<td>half</td>
<td>gear</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ænne</td>
<td>a / one</td>
<td>blacne</td>
<td>stedan</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>oprum</td>
<td>other</td>
<td>black</td>
<td>stallion</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>lands</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mitchell accepts Carlton’s findings on premodifiers, with the exception of -weard words, represented by modern eastward and forward (1985: §148). They are exceptions to what I outline below, as well.

Both Mitchell (1985: §173) and Carlton (1963: 779) accept that their findings may need revision. That is indeed so: the "2nd position" in the table (adjectives and participles) should be divided into two positions, since adjectives and participles occurred in the same phrase, with adjectives regularly preceding participles.

Accordingly, the situation is more accurately represented in the following table, with adjectives and participles in separate positions. It condenses Carlton’s 3rd to 6th positions into one (since they are all for determiners not premodifiers); it gives some of Carlton’s examples, but I have added my own, to illustrate the sequence of adjective and participle. [The table is on the next page.]

The first example in the table simply repeats a Carlton entry. The key examples are (b) to (e): they each show an adjective preceding a participle.

The rules for premodifier order in Old English nominal phrases thus appear to be as follows.

- Adjectives precede participles; participles precede genitive nouns.
- A word from one of the three premodifier classes may not be coordinated with a word from another class. I have found none myself; I believe that neither Mitchell nor Carlton cite any.179

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179 They may be coordinated when the demonstrative/article is repeated, as in "þone mildheorhtan and þone unscéþþendan Christ" (the merciful and the un-injuring Christ; from Richard J. Kelly (ed.) 2003, Bückling Homilies, 2/5); such phrases seem to constitute separate noun phrases.
Two or more words of the same class may be coordinated with each other, with or without a conjunction such as "and" or "but". Examples follow.

- coordinated adjectives: "swetum and wynsumum wyrtum",\(^{180}\) (sweet and pleasant plants/herbs)
- coordinated genitive nouns: "Godes and mædenes bearn",\(^{181}\) (God's and maiden's child).

(I have not found any coordinated participles as premodifiers.)

<table>
<thead>
<tr>
<th>Head word</th>
<th>1st position: nouns (genitive)</th>
<th>2nd position: participles</th>
<th>3rd position: adjectives</th>
<th>4th position: Determiners</th>
</tr>
</thead>
<tbody>
<tr>
<td>sunu son</td>
<td>godes of god / god's</td>
<td>forlegene</td>
<td>fule foul</td>
<td>acennedan begotten</td>
</tr>
<tr>
<td>horns adulterers</td>
<td></td>
<td>having committed fornication or adultery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>reafe clothes</td>
<td>against committing adultery</td>
<td></td>
<td>hwitum white</td>
<td></td>
</tr>
<tr>
<td>sige victory</td>
<td></td>
<td></td>
<td>merean great</td>
<td>baere that/ the</td>
</tr>
<tr>
<td>ricu kingdom</td>
<td></td>
<td></td>
<td>scinan beautiful</td>
<td>ba that/ the</td>
</tr>
<tr>
<td></td>
<td>(a) 182</td>
<td></td>
<td>acennedan begotten</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(b) 183</td>
<td></td>
<td>forlegene</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(c) 184</td>
<td></td>
<td>hwitum white</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(d) 185</td>
<td></td>
<td>merean great</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(e) 186</td>
<td></td>
<td>scinan beautiful</td>
<td>ba that/ the</td>
</tr>
</tbody>
</table>

### 2.2.2 Nature of the order

The order is grammatical.

The order of premodifiers as set out in my table above is grammatical; that is, it is an order of word class (or "part of speech"). That was natural for a form of the language in which word-

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\(^{181}\) Mitchell (1985: §1328).


\(^{184}\) *Legends of the Holy Rood, 3/18*.

\(^{185}\) *Legends of the Holy Rood, 5/1*.

\(^{186}\) Mitchell (1985: §167); I include it as illustration, although it is from a poem.
Chapter 9: Historical explanation

class morphology (derivational and inflectional) showed the relations among clause and phrase elements.

Since that kind of order can be determined by an underlying syntactic or semantic order, as in Present Day English (see chapter 4, especially §6.1), I argue in the rest of this section that that was not so for Old English.

**The order is not semantic**

It is not an order of semantic structure (of the type discussed in chapter 4), for the following reasons.

(a) Different kinds of meaning occur in the same position. For example, the adjective position has some words that are abstract in meaning, e.g. "mæran" (great, as in the table), but some that are concrete, e.g. "hwit" (white, as in the table); some are descriptive, e.g. "scenan" (beautiful, as in the table), but others are ordinal, e.g. "forman" (first/former), or emotive, e.g. "ful" (foul, as in the table).

(b) The same kind of meaning occurs in different positions; for example:

- size meaning occurs in determiners (4th position), e.g. "micel" (big - "micle and manege fixes" big and many fish), and in adjectives (3rd position), e.g. "lytel" (little, in "anum lyllum glæsenan fæte"),\(^\text{187}\) a little glass vessel);\(^\text{188}\)
- expressive meaning of disapproval was expressed in genitive nouns (1st position - "deofles", of-the-devil / devilish, as in the first table) and in adjectives (3rd position - "ful", foul, as in the table).

(c) The underlying reason is that there was in Old English not enough differentiation in lexical semantics to support such a structure. That assertion needs justification, since the nature of lexical semantics in Old English is not (to my knowledge) described in any of the linguistic literature; but the argument needed to demonstrate it is too bulky to be included here. It is summarised in the following paragraph.

In descriptive meaning, premodifiers in Old English were generally like *good* in Present Day English, in that their established or “dictionary” meaning was broad; hearers inferred any more specific meaning from the context, or took it from world knowledge.\(^\text{189}\) That accords

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10\(^\text{188}\) The point could be made differently, by saying that quantifiers and adjectives were not clearly distinguished.

11\(^\text{189}\) The role and importance of world knowledge in words’ significance has been shown in chapter 4, and will become clearer in chapter 10, §4 (Language Acquisition).
with the syntax, since modifiers and headwords were not well differentiated (adjectives and nouns could both be modifiers or heads), and it seems very unlikely that there were specialised meanings without specialised functions. It also follows from lexical relations: everyday English had a much smaller lexicon than now; it was much less specialised in descriptive meaning, and did not have regular sets of synonyms that could set up contrasts in expressive and social meaning (see chapter 4, §4). Specifically, then: referential meaning was not very distinct from descriptive meaning; social meaning was not at all developed; and expressive meaning, although it existed for a few words, was not a part of the semantic system.

**The order is not syntactic**

Although the syntax of Old English is much more thoroughly discussed in the literature than the semantics is, the issues involved here do not seem to have been studied; but again the argument needed is too bulky to be included here, so it is given in summary.

The order is not syntactic; that is, multiple premodifiers do not modify the rest of the phrase, as in the Present Day English phrase, "the [finest and fastest [light [GT car]]]". That can be seen from the following.

- Syntax was in general not created by order, in Old English (although that was changing).
- The meaning of phrases with multiple modifiers shows that premodifiers modified the head independently - they did not modify the rest of the phrase, restrictively. For example:

  (1) Þæs acænnedan godes sunu

  \[
  \text{the \ [ \{\text{begotten}\} \ \{\text{god}'s\} \ \{\text{son}\} }\]

  That cannot distinguish the begotten son of God from any other son of God.

- Restrictive modification - restricting the reference of the head, as in "the [finest and fastest [light [GT car]]]" - seems to have been managed differently in Old English - by compounding and postmodification, for example.

- Restrictive modification in modern nominal phrases rests on the principle that it is the phrase as a whole that denotes the referent; the reader makes a single act of reference, which is triggered by the head (as modified); but Old English seems to have not had that structure: all elements of the nominal phrase were referential: demonstratives, modifiers, and head.

  I am suggesting that there was no formal distinction made between restrictive and descriptive modification. (Modifiers were largely descriptive; restrictiveness was treated as one form of salience, and salient modifiers were put after the head.) It follows that the order of premodifiers cannot have been the syntactic order in which each modifier restricts or delimits the denotation of the rest of the phrase.
2.3 Discussion: the Old English period

Exceptions to my explanation of the order of premodifiers

(a) I have found one clear exception to the rules cited, in which a participle precedes the adjective instead of following it:

(1) "for-swore-en-um sweart-um niht-um" 190

\textit{wholly-darken-part.-dat.pl. dark-dat.pl. night-dat.pl.}

“utterly dark and gloomy nights” (my translation).

But the phrase is from a poem, and the poetic convention of balanced half-lines seem to have constrained the order. See Strang (1970: §181) and Mitchell (1985: §172) for detail.

(b) There are many expressions in which a genitive noun precedes an adjective; an example is as follows.

(2) Noes eltstan sunu 191

\textit{Noah's oldest son}

However, the genitive noun is functioning as a determiner, not a premodifier, so such phrases are not exceptions. (This use of genitives as determiners was emerging during the period; it is not allowed for in the table from Mitchell and Carlton - section §2.2.1 above - nor illustrated in my table there.)

Free and marked order

In one sense, free order existed as in Present Day English, since Old English sometimes had two premodifiers coordinated, and there seems to have been no rule for their sequence. But I have seen no evidence that the freedom was used in prose for a specific purpose or effect, as it is in modern free order. Marked order was impossible, since the zones did not exist.

Old English antecedents of modern zones

Phrases in the table in section §2.2.1, reformatted below, suggest that the Old English positions were antecedents for the modern zones, which the rest of this chapter will

---


13\textsuperscript{191} Mitchell (1985: §56).
demonstrate. The table adds another genitive noun premodifier, from “hwæles hyde” \(^\text{192}\) (= "whale’s hide"), Present Day English ("P. D. E.") \textit{whale hide}.

<table>
<thead>
<tr>
<th>O. E. structure:</th>
<th>Demonstrative</th>
<th>Adjective</th>
<th>Participle</th>
<th>Noun</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examples:</td>
<td>\textit{the}</td>
<td>\textit{great}</td>
<td>\textit{promised}</td>
<td>\textit{victory}</td>
<td></td>
</tr>
<tr>
<td></td>
<td>\textit{the}</td>
<td>\textit{beautiful}</td>
<td>\textit{shining}</td>
<td>\textit{kingdom}</td>
<td></td>
</tr>
<tr>
<td>P. D. E. structure:</td>
<td>Determiner</td>
<td>Epithet</td>
<td>Descriptor</td>
<td>Classifier</td>
<td>Head</td>
</tr>
</tbody>
</table>

\textbf{2.4 Conclusion: the Old English period}

\textbf{Conclusion to the argument}

In Old English, the order of premodifiers in nominal phrases was determined by the modifiers’ part of speech: adjectives preceded participles, which preceded genitive nouns.\(^\text{193}\)

\textbf{3 Middle English period}

\textbf{3.1 Introduction}

\textbf{General introduction}

This section on Middle English covers the period from 1066 to 1476. I focus on the late part of the period.

Standard works on Middle English, such as Mustanoja (1960) and Mossé (1952) do not discuss premodifier order.

\textbf{The argument}

By the 14th century, premodifier order was controlled by syntax, not by part of speech as in Old English.

\textbf{Transition from Old English to late Middle English}


\(15^{\text{193}}\) I put aside the interesting issue of why the order did not have genitive nouns or participles ahead of adjectives.
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In syntax:

- In the period 1170 to 1370, definite and indefinite articles, which are not referential, became fully established (as determiners, that is), distinct from demonstratives, which are referential (Strang 1970: 271).

- Most genitives came to be either inflected genitives as determiners (e.g. "John's book"), or postposed "of --" phrases (although others remained as premodifiers,194 e.g. "mother tongue", "precious heart blood"195).

- The articles and adjectives lost their grammatical inflections. For adjectives, that involved the loss of definiteness, and a clearer distinction between them and nouns.

- Speakers had much less freedom to place adjectives, participles, and especially genitive nouns after the head.

The overall structure of nominal phrases had thus changed radically: they had been a series of semi-independent words, each being at least partly referential; now they were unified and tightly structured, with all words before the head clearly dependent on it, and arranged with specifying words first (the determiners), and modifying ("descriptive") words following them (the adjectives and some uninflected nouns). The structure is much clearer, tighter, and more orderly:

- syntactically, it is: determiner [modifier [head]];

- semantically, it is (a) determining words, serving to specify or determine an entity; (b) modifiers serving to describe the entity (being abstract or perceptual in varying degrees); (c) a referential word (head).

There was a great influx of new words (borrowed and derived), affecting lexical relations and semantics.

Outline of the Middle English section

The section runs as follows.

---

16194 This survival of genitives as uninflected noun premodifiers in Middle English and on into Present Day English seems to be omitted from recent discussion of the history of the genitive in English, from Altenberg (1980) to Rosenbach (2006), although it is recorded by Curme (1931: 70 ff.). It deserves investigation, I believe.

Section §3.2, on syntax, shows that the syntax of nominal phrases had become essentially modern by the end of the period, in that premodifiers commonly modified the following part of the phrase, not the head alone.

Section §3.3, on semantics, shows that premodifiers had by then developed most of their modern semantic features.

Section §3.4, on order in general, evaluates different elements of order, concluding that although there was some semantic patterning, the order was controlled by the syntax.

Section §3.5 gives discussion, and §3.6 concludes.

3.2 Syntax in Middle English

This section deals with the changes in premodifiers' scope of modification, away from the Old English structure, in which each premodifier modified the headword directly - as in "the [holy] [Christ's] [cross]".196

Modifiers modifying the rest of the phrase

The main development was that premodifiers came to commonly modify the group consisting of any following premodifiers and the headword, as in Present Day English phrases like "a [smart [two-tone [colour scheme]]]" (chapters 3 and 5). My evidence for the change comes from surveying a body of Wyclif's work,197 about 45,000 words in length, written from about 1360 to 1384. (I give details of the survey in Appendix A, at the end of the thesis.) The survey established two crucial points:

- Of the 42 nominal phrases with more than one premodifier, about 60% were clearly subordinating, as in "little [poor priests]".
- Premodifiers alternate in position, according to the syntax. For example, in "thy poor [wretched priests]",198 and "little [poor priests]",199 poor changes position as the modification structure changes.

Therefore, the subordinating structure of nominal phrases was well established in the late fourteenth century: "little poor priests", for example, would normally have been read as having

18196 I use modern spelling when citing Middle English words and phrases, and when citing Old English phrases for comparison.

19197 I take most of my Middle English examples from Wyclif partly because his work has many multi-modifier phrases, and therefore demonstrates premodifier order.

20198 Page 71.

21199 Page 45.
Chapter 9: Historical explanation

subordinated premodifiers - as different from “little, poor priests” (with coordinated premodifiers).

It seems likely that the new structure developed as part of the overall development of nominal phrases (see §3.1). Determiners now simply modified the rest of the phrase (and were not demonstrative) as in "thy [poor priests]". (Hence the positioning of possessives like Noah's with the old demonstratives like that/the.) Taking premodifiers’ as modifying the rest of the phrase, as in "Thy [poor [wretched priests]]", simply extends the structure.

The subordinating structure was not universal. Examples are "these [uncunning] [worldly] priests" and "[open] [cursed] traitors", whose contexts show them to have two descriptive modifiers, and no restrictive sense in the order, although the lack of commas suggests to modern readers that the first modifier is subordinated.

**Other changes in the scope of modification**

Two less important developments may be noted.

- By late Middle English, premodifiers occasionally related to some other entity semantically, although they modify the head syntactically. For example, Wyclif (referring to Mary Magdalen) wrote of her "meek sitting", "devout hearing" and "peaceable hearing". Semantically, it is Mary who was meek, devout and peaceable, rather than her actions.

- Occasionally, also, premodifiers modified the act of ascription - as modal premodifiers (see chapter 5, §4.2 “Truth of the ascription”). For example, very could mean <1> “Properly so-called”, as in Mandeville’s "very diamond". In "open wicked deeds", Wyclif means “obviously wicked” - the ascription of wicked to the deeds is certainly justified.

These changes establish the basis for the present-day wide scope of Epithets (see ch. 5.)

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22 Page 23.
23 Page 105.
24 It is instructive that Ross (1940), who has edited his texts for punctuation, includes commas in "rich, hard men", and "a false, feigned love" (for example), making it clear that he considers the modifiers to be coordinated; and by contrast he omits commas in "this false worldly friendship", making subordination clear. The punctuation of English has changed, along with its syntax.
25 All from page 189.
27 Page 18.
28 *Open* cannot mean 'public'; the context provides no contrast with private deeds.
3.3 Semantics in Middle English

**Introduction**

The purpose of this section is not to explain Middle English premodification, but to support the general argument of the chapter, by illustrating the gradual changes in semantics on which the development of modern premodification depended.

**Referential meaning**

I have argued above that, in the Old English period, referential meaning and descriptive meaning were not distinct in premodifiers. By the end of the Middle English period, however, their referential meaning had become fairly distinct from descriptive meaning; that is, some denoted a type or subtype of entity, while others gave descriptive information. That is shown in several ways.

- It appears in the frequent use of nouns as modifiers, expressing minimal descriptive meaning, but denoting a subclass: "kitchen clerks", "altar stones", “church yards”, for example.
- We see a distinction between modifiers and elements of a compound, as distinct roles for the same word-form: *seaboard* and *river side* were compounds, but "sea fish" and "river fish" were phrases, used contrastively.
- Parts of speech other than nouns were being used referentially: participial *fried* (of meats or fish) was used restrictively, in contrast to *roasted*; the adjective *contemplative*, in “feigned contemplative life” (“monastic life”) contrasted with “active life” (“in a parish”).

Many premodifiers, then, were used referentially, like modern Classifiers.

**Descriptive meaning**

In the Middle English period, descriptive meaning of premodifiers became much more precise, in such ways as the resolution of one vague word meaning into several more precise ones. For example, in Old English, *worldly* ("woruldie") had a vague meaning that shifted contextually, but Wyclif uses it in three distinct senses: (a) ‘physical’ (versus ‘mental or inward’); e.g. *worldly labour*; (b) ‘secular’ (versus ‘religious’); e.g. *worldly lordships*; (c)
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‘over concerned with physical or secular things’; e.g. "such wretched worldly life" (of clerics)

Expressive meaning

Expressive meaning became more nearly established in Middle English. Some word uses were purely expressive, having lost their original descriptive meaning: Wyclif’s "feigned rotten habit", "their open cursed life", "stinking and abominable blasts". Moreover, expressive meaning is sometimes clearly one element of meaning, along with conceptual meaning; e.g. Wyclif’s worldly in sense (c), just above.

Social meaning

During the Middle English period, words were being used in an increasing number of dialectal and technical varieties, spreading from one variety to others (Burnley 1992); and there were social restrictions: in polite discourse, you did not use wench or lemmen, but dame and lady; and in the 15th century, members of the Mercers' Company were fined several pounds for calling people carl or harlot (Burnley 1992: 458). That, however, does not establish technical or dialect value as part of words' conventionalised meaning: rather, the varieties existed in parallel, as different languages had in Britain in the early Old English period.

Grammatical meaning

In Old English, there were adverbial submodifiers such as swithe; but beyond that, the grammatical meaning of modifiers was limited to the basic modification function itself. In Middle English, grammatical meaning in premodifiers grew greatly, with several words gaining use as intensifiers of the headword: very, perfect, pure, utter, horrible, extreme (see OED). Thus, some words were now used as modern Reinforcers are.

Conclusion

There seem, then, to have been various types of meaning in premodifiers. But referential (e.g. "kitchen clerks") and intensifying meaning (e.g. "very diamond") were generally used separately from the other types - not regularly coexisting in the same phrase, or in the same

34\textsuperscript{212} Page 24.
35\textsuperscript{213} Page 94.
36\textsuperscript{214} The words are purely expressive in the uses cited; they retained their descriptive meaning in other uses.
37\textsuperscript{215} Page 19.
38\textsuperscript{216} Page 80.
39\textsuperscript{217} Page 17.
word. Descriptive meaning and expressive meaning were used in multi-modified phrases ("little poor priests", "such wretched worldly life"), but expressive meaning was largely contextual. So by late Middle English, there were uses of almost all the modern meaning types, the exception being social meaning. But since the meaning types seldom coexisted in phrases or words, the semantic structure was substantially different from that of today.

3.4 The nature of premodifier order in Middle English

Introduction

To some extent at least, Middle English premodifiers seem to follow the Old English order (adjective + participle + genitive noun), as seen in the following, from Wyclif:

<table>
<thead>
<tr>
<th>Adjective</th>
<th>Participle</th>
<th>Genitive noun</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>new</td>
<td>feigned</td>
<td>heart</td>
<td>religious</td>
</tr>
</tbody>
</table>

As we saw in the syntax section, however, there is also a significant syntactic order; and, as we saw in the semantics section, there is also some semantic structure. This section evaluates which of those three controlled the unmarked order in Middle English.

Whether parts of speech constitute the order

Middle English often breaks the old part-of-speech rules:

- Participles sometimes precede adjectives: "these uncunning worldly priests"; and "feigned contemplative life".

- Modifiers of the same part of speech are often not coordinated: participles in "their feigned rotten habit"; and adjectives in "great fat horses".

- Different parts of speech are coordinated: "cursed and sinful hypocrites"; "spiced and high wines"; "stinking and abominable blasts".

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40 Pages 19 and 62.
41 Page 33.
42 Page 188.
43 Page 19.
44 Page 60.
45 Page 4.
46 Page 13.
47 Page 17.
Chapter 9: Historical explanation

The conclusion is that premodifier order in Middle English was not controlled by part of speech.

Whether semantics constitutes the order

On the one hand, there is some evidence that Middle English had semantic zones, much as in Present Day English: when words of different types occur together, they often occur in the modern order.

<table>
<thead>
<tr>
<th>Reinforcer type</th>
<th>Epithet type</th>
<th>Descriptor type</th>
<th>Classifier type</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>very, perfect</td>
<td>gentle</td>
<td></td>
<td></td>
<td>knight226</td>
</tr>
<tr>
<td></td>
<td>great</td>
<td>fat</td>
<td></td>
<td>horses227</td>
</tr>
<tr>
<td></td>
<td>silly</td>
<td>little</td>
<td></td>
<td>clout228</td>
</tr>
<tr>
<td></td>
<td>precious</td>
<td></td>
<td>heart</td>
<td>blood229</td>
</tr>
</tbody>
</table>

On the other hand, there is no regular pattern of premodifiers in semantic order:

- The combination of Reinforcer and Classifier types with others is rare, in my observation.
- When Epithet and Descriptor types occur together, the order is just as often reversed, as in "feigned rotten habit"230, and "open ['public'] and privy ['private'] cursed living"231 (where relatively precise and neutral modifiers come first, and a vague, almost empty emotive word comes after them).
- It does not seem to be the case that particular words vary in position on the principle that first position will take an emotive or abstract sense, and second position will take a neutral or concrete sense, as in present-day English. For example, new and poor have such senses, and conform to the rule sometimes, but break it in "new sinful caitif",232 and in "new feigned religious",233 "the poor wretched priests".234 (I rely on context for the interpretation of those words.)

49227 Page 60.
50228 Page 227.
51229 Page 71.
52230 Page 19.
53231 Page 62; I take open and privy as constituting a single modifier.
54232 Page 10.
55233 Page 20.
56234 Page 71.
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We should conclude that the case for semantic structure controlling order in Middle English is weak.

**Whether syntax constitutes the order**

I have shown, in the syntax section, that Middle English (in Wyclif at least) had two syntactic structures, as follows.

- In one structure, premodifiers modified the rest of the phrase, restrictively (as in "feigned [contemplative life]"); the order is set syntactically.
- In the other structure, the two modifiers are semantically coordinated, and modify the head separately and nonrestrictively (as in "these [uncunning] [worldly] priests"); the order of the premodifiers is not set syntactically.\(^{235}\)

That constitutes a simple and consistent system, in which the premodifiers may be restrictive (with subordinated premodifiers in subordinating order), and may be nonrestrictive (with no syntactically set order).

Moreover, where modifiers are not in the modern semantic order, they conform to the syntactic order. Examples follow.

- In "new ['modern'] sinful caitif",\(^{236}\) new should, semantically speaking, follow sinful, being less abstract and less emotive, just as it comes second in "false new pharisees". But it precedes sinful, because Wyclif is distinguishing the "new" sinful caitifs from the old ones (the heathen philosophers): "new [sinful caitifs]".
- Other examples (given without analysis) are:
  - "new [feigned religious]\(^{237}\) (where religious = ‘members of religious orders’) - compare "feigned [contemplative life]\(^{238}\)."
  - "wretched [worldly life]",\(^{239}\) - compare "thy [[poor] [wretched] priests]".\(^{240}\)

**Conclusion: the nature of premodifier order in Middle English**

57\(^{235}\) The distinction between coordinated and subordinated modifiers was not fully developed, however. Commas were not regularly used for this purpose; and coordinated words were not always marked with conjunctions. It is my impression that writers used conjunctions when they felt the words to be synonymous - as in “stinking and abominable blasts” - but not otherwise - as in "thy [[poor] [wretched] priests]". See also note 24.

58\(^{236}\) Page 10.
59\(^{237}\) Page 20.
60\(^{238}\) Wyclif. Page 188.
61\(^{239}\) Page 94.
62\(^{240}\) Page 71.
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There are many phrases with premodifiers in part-of-speech order, as in Old English, since there was no general shifting of word classes (apart from possessive genitives), but there are many exceptions. There is some element of semantic order; but again there are many exceptions. There is a consistent syntactic order, which explains the exceptions to both the part-of-speech and semantic patterns. Therefore, Middle English premodifier order is controlled by syntax; the part-of-speech order has been reanalysed as a syntactic one. Since the syntactic order was not regularly matched by a semantic order, premodification zones did not yet exist.

3.5 Discussion: the Middle English period

Free order

We have seen that there was no set order for coordinated premodifiers; but I have not observed any phrases in Middle English where premodifiers have been deliberately arranged for thematic or climactic effect, as discussed in chapter 7.

Consequences of the changes

When one premodifier identified the referent fully, a second one would give extra descriptive information about the referent; about 20% of the multiple premodifiers in my sample from Wyclif have that structure. For example, "these proud [worldly clerks]" describes as "proud" the worldly clerks already identified as such; "thy [precious [heart's blood]]" describes Christ's heart's blood as "precious". Since the first premodifier is commenting, it could readily acquire wider meaning from context, becoming more personal, for example, especially in phrases like "poor [needy men]", and "little [poor woman]". Indeed, it was in this period that poor came to mean 'unfortunate'; little came to mean 'trivial', and to be used "to convey emotional overtones", cursed came to mean 'damned, confounded'; and new came to mean 'strange' (although that is perhaps only part of the reason for those changes).

Those are distinctively Epithet senses; I presume that those changes contributed to the development of the Epithet zone.

Further, having a commenting word distinct from the identifying words begins the pattern of topical words and commenting words to be discussed in chapter 10, §3, as information structure. That was aided by the alternation between a preposed word and the corresponding

63 Page 79.
64 Page 71.
65 SOED.
postposed prepositional phrase: Wyclif has "ordinal of Salisbury" becoming "Salisbury use" a few lines later; \(^{244}\) "office of priests" becomes "priests' office"; \(^{245}\) "traitors of God" becomes "God's traitors". \(^{246}\) In each case, Wyclif uses the postposed phrase when the entity is introduced - new information - and the preposed word when it is given information. Modifier position was being used for information structure in Middle English (see chapter 10, §3).

**Signs of the future development of Classifiers**

The use of Classifier-like premodifiers, noted in Old English, continued in Middle English. Examples include: "silver vessel," "cathedral church," "barnacle geese," and "parish church".

### 3.6 Conclusion: the Middle English period

**Summary**

By the time of Wyclif, in the 14th century:

- Reinforcers, Epithets, Descriptors, and Classifiers had developed as semantic types (although the zones were not yet established), except that:
  - Epithets and Descriptors formed a range, without a clear borderline;
  - social meaning had not yet developed at all fully.
- On the relatively uncommon occasions when those semantic types occurred in one phrase, they were usually ordered much as in Present Day English: Reinforcers first, and so on.
- In syntax, premodifiers had come to commonly modify the group consisting of any following modifier and the head, while sometimes two premodifiers modified the head independently.
- Where the requirements of semantic and syntactic orders clashed, syntax prevailed.
- Since syntax prevailed over semantics, the modern zones were not established; but nearly all of the elements for them were present by the end of the period.
- Those semantic and syntactic principles were a reanalysis of the Old English order, which was followed where the new principles did not require a variation from them.

**Explanatory power of the history so far**

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\(^{66}\) Page 192-193.

\(^{67}\) Page 191 and 193.

\(^{68}\) Page 105.
Chapter 9: Historical explanation

I have shown that the Old English part-of-speech order was not destroyed, but was reanalysed as a syntactic structure and in part as a semantic structure. That provides the explanation (promised in section §7.2 of chapter 4) for why Present Day English so often has that part-of-speech order, within the semantic structure: it has survived the intervening thousand years.

The facts that premodifier order was syntactic in Middle English and that the semantic order is a later modification imposed on the syntax explain why that present-day semantic order is not wholly simple and clear-cut - having descriptive meaning spread over two zones, and having several types of meaning in the Epithet zone: the order did not originally develop as a semantic one. (That explanation was promised in section §7.2 of chapter 4.)

4 Early Modern English period

4.1 Introduction

Coverage

This section covers the years from 1476 to 1776; but it concentrates on work by Sir Thomas More and John Colet, early in the period, since their premodifier structure is already modern.

The argument

By the mid-16th century, there were both a syntactic order and a matching order of semantic structure; therefore the modern zonal order of premodification was established.

Transition from Middle English to Early Modern English

There are two general changes in the language that concern us.

A standard form of the language developed by about the late 15th century, according to Gorlach (1999) and Nevalainen (1999). Some dialectal words, for example, were accepted as standard e.g. clever and stingy, from East Anglian (Gorlach 1999: 497), while others came to be regarded as variants within the standard form, rather than being seen as belonging to a different form of the language. The acceptance of a standard made possible the development of distinct social meanings, and therefore of the full Epithet semantic structure.
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Borrowing from other languages increased greatly, from 1450 to 1660 - at a rate of up to 6,000 words in 20 years (Nevalainen 1999: 339). That expansion of the vocabulary was very important in the development of lexical relations, and thence of semantic structure.

Outline of the section

The section deals in turn with syntax (§4.2), semantics (§4.3), and order in general (§4.4); then it gives discussion and conclusions.

4.2 Syntax in Early Modern English

Types of modification

In Early Modern English, the non-canonical forms of modification set out in chapter 5 developed fairly fully.

Premodifiers began to interact semantically. For example, Colet\(^{247}\) writes -

(1) "the very Roman eloquence".\(^{248}\)

Here, \textit{very} ['true'] modifies \textit{Roman} as much as \textit{eloquence}; the phrase could be paraphrased as "the \textit{truly} Roman eloquence". Similarly, "continual secular occupation" (of priests)\(^{249}\), means 'continually secular'; and "good thick quilt of cotton"\(^{250}\) means 'good because thick'.

Premodifiers came to modify other participants in the discourse situation freely. From Sir Thomas More:\(^{251}\) in priests' "\textit{wood} [reckless] and \textit{raging} contention",\(^{252}\) it is the priests, rather than abstract contention, that is reckless; in "my long continued \textit{sinful} life" \(^{253}\), \textit{sinful} describes More himself - \textit{my} sinfulness'.

The main syntactic features which I showed in chapter 5 to be distinctive of the Epithet zone were fairly well established in the early 16th century.

Number of modifiers

\(^{69}\)Colet. Page 279.
\(^{70}\)Colet. Page 296.
\(^{71}\)Colet. Page 296.
\(^{72}\)Andrew Borde (1557), in F. J. Furnivall (ed.) 1868. \textit{Early English Meals and Manners} London: EETS. Page 129
\(^{73}\)My citations from More are taken from Raumolin-Brunberg (1991).
\(^{74}\)Colet. Page 296.
As the period began, writers almost never used more than two premodifiers in one phrase. The use of several premodifiers at once is, however, a necessary condition for the development of premodification zones: there can not be four clearly distinct zones when there are only two premodifiers.

In the Early Modern English period, writers cast off this restraint enthusiastically. More has a phrase with nine premodifiers.

(2) “And give me good Lord an humble, lowly, quiet, peaceable, patient, charitable, kind, tender, and pitiful mind, with all my works.” 254

Burton has a phrase with twelve premodifiers:

(3) “How many decrepit, hoary, harsh, whiten, bursten-bellied, crooked, toothless, bald, bleary-eyed, impotent, rotten old men shall you see flickering still in every place?” 255

Such long phrases facilitated, and almost required, zoning.

**Marking of coordination and subordination**

We saw that in Wyclf, premodifiers are commonly ambiguous between being coordinated and being subordinated: there is no reliable marking of it (by conjunctions or commas). But in Early Modern English, it is marked. With the Renaissance came precision in punctuation, along with new punctuation marks, such as semicolons and hyphens (Salmon 1999). In Burton’s twelve premodifiers (cited just above), there are commas coordinating the first eleven, but no comma before the last (old), indicating that it is to be read as being in a separate zone, with the others subordinate to it but coordinate with each other.

**Conclusion**

Since phrases often had many premodifiers, which were clearly coordinated or subordinated, and which used several types of semantic modification, the syntax of premodification in this period is modern.

### 4.3 Semantics in Early Modern English

**Reinforcers**

SOED shows that the use of Reinforcers 256 flourished. Open, very, and perfect continued in use. Other words gained a Reinforcer use: utter, mere, sheer, perfect.

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Chapter 9: Historical explanation

**Epithets**

Epithets and Descriptors became fairly distinct from each other, through the development of expressive and social meaning.

Middle English had words with expressive meaning - *wretched, foul, cursed*, for example; but in each use, they either had little or no descriptive meaning, or were purely descriptive. In Early Modern English, many words came to combine the meaning types clearly in particular uses. Examples follow.\(^{257}\)

1. Colet's school was not to teach any of the "the Latin adulterate [= 'adulterated Latin'] which ignorant blind fools brought into this world".\(^{258}\)
2. "And therefore would I never be so childish nor so play the proud arrogant fool...."\(^{259}\)
3. "But now good readers, I have unto these delicate and dainty folk that can away with ['get along with'] no long reading, provided with mine own pain and labour, as much ease as..."\(^{260}\)

"Delicate and dainty" works at a double level: on the surface, the words have a favourable meaning, but their intended meaning is an ironic and unfavourable one. Expressive meaning is treated as one dimension of words' full meaning, along with descriptive meaning.

In Middle English, *big* had half a dozen synonyms (*great, giant*, etc.). In this period, it acquired more: *monstrous, enormous, vasty, Cyclopean, elephantine, prodigious, gigantic, Brobdingnagian, colossal, whopping* (and others). They were distinguished partly by their expressive meaning - dislike, awe, admiration, and so on.

Social meaning developed, largely because of the development of a standard variety of English in about the 15th century (as discussed in section §4.1): learned, dialectal and social meaning rely on a standard, for contrast. Nevalainen (1999: 343-344) shows the large number of specialist borrowings (which will have had a learned social meaning), and cites work (1999: 344) showing that *rustic* had *rustical, rude, boorish, clownish, bob-like, lumpish*, and *loutish* as colloquial
(near-)synonyms, at the beginning of the 17th century. More has "fruitful ghostly food"\textsuperscript{261}, where \textit{ghostly} is an archaic and rather literary synonym for \textit{spiritual}; and "your accustomed \textit{benignity}" \textsuperscript{262}, where "your usual \textit{kindness}" would have been standard. Some of the synonyms of \textit{big}, cited just above, were distinguished by their social meaning - e.g. learned \textit{Cyclopean}, colloquial \textit{whopping} and \textit{whacking} (the latter being from late 18th century).

\textbf{Descriptors}

Some Descriptors had been becoming simpler and more perceptual; for example, some of the colour words, which (in literal use) are typical Descriptors in Present Day English. \textit{White} seems in this period to have lost most of its "looser and wider senses" as OED calls them: its use to describe silver became obsolete; and its senses "light or pale in colour" and "colourless" became limited to technical use - as Classifier senses. The remaining senses became more sharply either perceptual Descriptor senses (SOED <1> "Of the colour of... snow"), or figurative Epithet senses (<5> "...pale from.... fear").

\textbf{Classifiers}

The use of Classifiers increased by the conversion of postposed modifying phrases to noun premodifiers. Colet provides an example. He wrote, "... to other business of the school..."; but when he referred to the same thing later in the sentence, he wrote "school business".\textsuperscript{263}

The borrowing of learned terms also increased the use of Classifiers. Robert Burton, for example, used them frequently in \textit{Anatomy of melancholy} (1621),\textsuperscript{264} explicitly for classifying. Burton classifies the causes of melancholy as either \textit{general} or \textit{particular};\textsuperscript{265} the general causes are either \textit{natural} or \textit{supernatural}, and so on. He has diseases classified as \textit{acute} and \textit{chronic} and as \textit{first} or \textit{secondary}.\textsuperscript{266} Those examples clearly use adjectives as Classifiers; in Middle English, they were ambivalent between classifying and descriptive use (as in Wyclif’s "feigned contemplative life").

\textsuperscript{261} Page 196.
\textsuperscript{262} Page 63.
\textsuperscript{263} Colet. Page 280.
\textsuperscript{265} Page 119.
\textsuperscript{266} Page 120.
The distinction between Classifiers on the one hand and Descriptors and Epithets on the other is complete when the same word is used, not only in different meanings, but in different positions. When Mandeville wrote (in the Middle English period) "great long leaves" (describing the wonderful banana palm), and Mallory wrote "great black horse" (in the early 16th century), both used great descriptively, and in first position. But when Fuller wrote (in mid-17th century) "like a Spanish great galleon and an English man-of-war", great is primarily referential (designating a type of galleon), and comes second (and, significantly, after the Classifier Spanish).

**Conclusion**

I have shown that:

- in Epithet-type words, social and expressive meaning had become clear and systematic, parallel with descriptive meaning within individual words;
- the Descriptor-type words were distinct as perceptual words with neither expressive nor social meaning;
- the Classifier-type words were quite distinct, and the specifically classifying use was established.

Gradability does not seem to have distinguished between types, as now, but I will show in the next section that the distinction on which it is built was observed - that between factual, concrete words arising from perception, and abstract words arising from judgement.

### 4.4 Zones, as syntactic-semantic structures, in Early Modern English

We have seen that syntax and semantics were almost completely modern by mid-16th century. It remains to be shown that position and semantic structure were correlative, as now.

The following table shows that premodifiers expressing judgement (including emotive and abstract ones) regularly precede perceptual and factual ones, and that referential ones come last - in the modern sequence. Group 1 phrases have both premodifiers used restrictively, so can be seen as simply following the old syntactic principle that each premodifier restricts what follows: for example, "good [Latin authors]"). Group 2 have a descriptive premodifier followed by a restrictive one; since they are not bound by the syntactic principle, and are in semantic order, they are more telling examples. Group 3 are completely descriptive; there can be no restrictive

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order, but they are all in semantic order. The last example is the most telling ("Spanish **great**
galleon"), since the other order would change the meaning: "**great** Spanish galleon" (**great** refers
to size, not type).

<table>
<thead>
<tr>
<th>Rein-Forcer</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>good</td>
<td>[abstract]</td>
<td>Latin</td>
<td>authors 268</td>
</tr>
<tr>
<td></td>
<td>very269</td>
<td>[abstract] [expressive]</td>
<td>Roman</td>
<td>eloquence 270</td>
</tr>
<tr>
<td>2</td>
<td>fruitful</td>
<td>[factual]</td>
<td>ghostly</td>
<td>food 272</td>
</tr>
<tr>
<td></td>
<td>good</td>
<td>[abstract]</td>
<td>lettered and learned</td>
<td>men 273</td>
</tr>
<tr>
<td></td>
<td>little</td>
<td>[judgement]</td>
<td>mid</td>
<td>chamber 274</td>
</tr>
<tr>
<td></td>
<td>old</td>
<td>[judgement]</td>
<td>burned</td>
<td>chamber 275</td>
</tr>
<tr>
<td></td>
<td>great</td>
<td>[judgement]</td>
<td>banqueting</td>
<td>dishes 276</td>
</tr>
<tr>
<td>3</td>
<td>little</td>
<td>[judgement]</td>
<td>white</td>
<td>hands 277</td>
</tr>
<tr>
<td></td>
<td>malicious</td>
<td>[abstract] [expressive]</td>
<td>revenging [concrete] [neutral]</td>
<td>devils 278</td>
</tr>
<tr>
<td></td>
<td>true, perfect</td>
<td>[grammatical]</td>
<td>gentle</td>
<td>knight 279</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td>Spanish great</td>
<td>galleon</td>
</tr>
</tbody>
</table>

90268 Colet. Page 291.  
91269 **Very** means "true".  
92270 Colet. Page 279.  
93271 Colet. Page 279.  
95273 Colet. Page 282.  
96274 Colet. Page 273.  
97275 More. Page 207.  
98276 Burton. Page 169.  
99277 Colet. Page 279.  
100278 Burton. Page 164.  
101279 Chaucer; already cited. The phrase has the modern structure, although it is from the 14th century.
Chapter 9: Historical explanation

The order is evidently set by the semantic structure.\textsuperscript{280}

For the structure to be completely modern, "ignorant blind fools" and "the proud arrogant fool" (already cited) should have had their pairs of Epithets coordinated with a comma, but perhaps the authors followed Middle English practice in the punctuation.

We may conclude that the positions did function as zones, and that the modern structure of (unmarked) premodifier order was complete, in its essentials, in Early Modern English. Just as the Old English part-of-speech order persisted into Middle English but was reanalysed as a syntactic order, so that syntactic order continued into Early Modern English, but was reanalysed as embodying a parallel semantic order.

4.5 Discussion: the Early Modern English period

Marked order

It follows from my conclusion, above, that premodification zones became established in the Early Modern English period, that marked usage became possible then. The only clear example of it I have found is the phrase already quoted: "a Spanish great galleon". It must have been a marked use, because great regularly appeared before other premodifiers, including Spanish. Its use after Spanish, therefore would be read (when first used) as an apparent anomaly designed to highlight the new Classifier use of great.

Free order

I have cited phrases with many coordinated premodifiers (such as More’s “......charitable, kind, tender, and pitiful mind’”). The order seems to have been free; but I have noticed no such effects as climax, even though many Renaissance writers pursued literary effects eagerly.

4.6 Conclusion: the Early Modern English period

4.6.1 Summary

In unmarked order, the semantics and syntax were now modern in most ways (§4.2 and §4.3); the semantic order had become established, and was correlated with the syntactic order (§4.4). Free and marked order existed, without being used as expressively as now (§4.5).

The Present Day English zone structure was therefore established.

\textsuperscript{280} Raumolin-Brunberg (1991: 212) notes emotive and evaluative meaning as influencing modifier order in this period.
4.6.2 Explanatory power of the history in this period

Part-of-speech order

I explained in section §3.6 why nominal phrases so often have a part-of-speech pattern (adjective + participle + noun). The history in this period provides the explanation (promised in section §7.2 of chapter 4) for why the exceptions occur: the newly formed semantic structure created the exceptions. Taking a participial form as referential (denoting a type) moves it to the “noun” position as a Classifier (as in Burton’s “falling sickness”\footnote{281}). Reconstruing it as conceptual moves it to the “adjective” position, as an Epithet (as in Burton’s “most unparalleled and consummate industry”\footnote{282}).

Relation of zones to meaning types

The three main types of premodifier (referential, descriptive and intensifying) had become fairly distinct in Middle English; the distinction between Descriptors and Epithets, as types of descriptive meaning, developed only in this period. That lateness possibly explains why we have four zones for essentially three meaning types - an anomaly noted in section §7.2 of chapter 4.

Relation of descriptive to expressive and social meaning

We have seen that expressive and social meaning emerged as a systematic part of word meaning only in the Early Modern English period, and piecemeal, as contextual meanings were integrated with the existing descriptive meaning, word by particular word. That precedence of descriptive meaning partly explains, I suggest, why it so often occurs without the other types (as noted in section §6.2 of chapter 4).

Borderline uses

We see also the explanation for words’ being close to the borderline between zones (remarked on in section §4.6, §6.2 and §7.2 of chapter 4, and in section §9.3 of chapter 5). For example, great changed from Epithet (“a great Spanish galleon”) to Classifier (“a Spanish great galleon”). On the assumption generally made, that word use changes gradually, expressions like "a great galleon" must for some time have been ambivalent - on the "borderline" between zones. (We will see in following sections that such changes in premodifiers have been very frequent - almost universal.)

Semantic and syntactic orders, in parallel

\footnote{103\textsuperscript{281} Page 120.}\footnote{104\textsuperscript{282} Page 25.}
Finally, I consider what I think to be the feature that most needs explanation: the existence of parallel semantic and syntactic explanations of premodifier order in a quite complex relationship (see section §9.2 of chapter 5). The explanation - promised in section §9.3 of chapter 5 - is historical. The syntactic system evolved first (in Middle English), and was simple and consistent. Its provision that the earlier modifier modified the rest of the phrase syntactically came gradually to be equated with the earlier modifier modifying the rest semantically, partly for the semantic reasons set out in chapter 5, §9.2.2. Their common element (modifying the rest of the phrase) kept syntax and semantics working harmoniously in most circumstances; but with modal premodifiers the old pre-eminence of syntax survived; in other circumstances (marked order, most clearly), semantics has come to dominate.

Section §2 of chapter 10 will give psycholinguistic support for that explanation.

5 Later Modern English period

5.1 Introduction

Purpose of the section
This section traces the development, from about 1776 onward, of important features that were not yet fully formed in Early Modern English.

Transition from Early to Later Modern English
Throughout this period, society was becoming more egalitarian, democratic, and libertarian; and education became universal. Those changes facilitated linguistic changes already under way: nominalisation (dating from Old English - Strang 1970: 330); new varieties of English (notably advertising and technical varieties); increased freedom (in use of the varieties, in word-formation, and in use of syntax); and standardisation (see §4.1).

Outline of the section
Section §5.2 explains the development of Classifiers (the constructions). Section §5.3 explains the development of the remaining semantic and syntactic features of the Epithet zone. Section §5.4 gives discussion, and section §5.6 gives conclusions.

5.2 Classifier zone in Later Modern English
Chapter 9: Historical explanation

Introductory note

In this section, I show how the two commonest Classifier constructions (as described in chapter 6) have evolved from the noun premodifiers which I noted as precursors in Old English (section §2.3) and Middle English (section §3.5).

Participant-head construction

As set out in section §2.1 of chapter 6, Classifiers in the Participant-head construction relate the entities they denote to the head entity by the qualia relations of Origin, Dimension, Constituency, Type, and Function. For example:

<table>
<thead>
<tr>
<th>Origin</th>
<th>Dimension</th>
<th>Constituency</th>
<th>Type</th>
<th>Function</th>
<th>(Head)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lanzar</td>
<td>mylar</td>
<td>dome</td>
<td>flat</td>
<td>trailer</td>
<td>plug</td>
</tr>
</tbody>
</table>

Until the 19th century, Classifiers were used singly (with a few exceptions\(^{283}\)); their semantic relation to the head was extremely variable, and evidently inferred contextually. It became possible for readers to take a specific and constructional meaning from a Classifier only when two were used together, establishing a contrasting relation to the head.

The first stage seems to have begun in the early or middle 19th century, with the development of the Origin position. The November 1859 issue of *Nature* (volume 1) has 12 clear instances of the Participant-head construction; nine of the twelve have an Origin Classifier; the other Classifiers represent all of the other positions; but only one phrase has two of the other positions filled. The structure therefore seems to be: word with Origin quale + one other word of indeterminate relation to the head (inferred in context). Examples are given in the table below (with words assigned to the quale such words would have now).

<table>
<thead>
<tr>
<th>Origin</th>
<th>Dimension</th>
<th>Constituency</th>
<th>Class</th>
<th>Function</th>
<th>(Head)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ordnance</td>
<td>one-inch</td>
<td></td>
<td></td>
<td>series [=map]</td>
<td></td>
</tr>
<tr>
<td>French</td>
<td></td>
<td>gold</td>
<td></td>
<td>coins(^{284})</td>
<td></td>
</tr>
<tr>
<td>English</td>
<td></td>
<td>working</td>
<td></td>
<td>men(^{285})</td>
<td></td>
</tr>
<tr>
<td>Oriental</td>
<td></td>
<td>tooth</td>
<td></td>
<td>paste(^{286})</td>
<td></td>
</tr>
</tbody>
</table>

By 1935, a new stage had been reached, in which the positions for Dimension and Constituency qualia were established (along with the Origin position), and a fourth position

\(^{283}\) Burton, for example, has phrases like “unnatural adust humours” (page 152), in the late 17th century.

\(^{284}\) Page 30.

\(^{285}\) Page 71.

\(^{286}\) Page 38; printed with “tooth paste” as a phrase, not “toothpaste” as a compound.
which was indeterminate between Class and Function. This stage is illustrated in the following table of examples from display advertisements in the *New Zealand Herald* of March 2nd, 1935.287

<table>
<thead>
<tr>
<th>Origin</th>
<th>Dimension</th>
<th>Constituency</th>
<th>Class</th>
<th>Function</th>
<th>(Head)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-piece solid wood bedroom suite</td>
<td>54-inch all-wool</td>
<td>leatherette</td>
<td>tip-out seats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkey rug wool</td>
<td>White Heather baby wool</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(The range of what can occur in the Origin position has expanded: trade names such as “White Heather”, occur there.)

The last stage in the growth of the Participant-head construction is the distinction between the Class and Function positions, as at the present day, evidently occurring late in the 20th century.

This specialisation of undifferentiated Classifiers in the qualia positions can be represented in the following diagram. It represents the passage of time from left to right, with centuries printed across the bottom of the diagram as a very approximate time scale; junctions represent differentiation of the qualia. (It hypothesises an intermediate stage, where Origin and Dimension were distinct from the other three positions.288)

Diagram 1: historical development of qualia positions

```
/-------- Origin quale
Undifferentiated --/----------- Dimension quale
Classifiers \-/-\-------- Constituency quale
\-/-\---- Class quale
\-\-\-\- Function quale
18C 19C 20C 21C
```

I presume that the qualia developed steadily from leftmost in the phrase to rightmost because (as set out in section §2.1 of the Classifiers chapter) the leftmost qualia are most particular and therefore make those Classifiers most distinct from the head. It seems natural

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109287 I have surveyed newspaper advertising for development of the participant-head construction in the 20th century, because in my observation the construction has been most highly developed in advertising.

110288 The hypothesis is based on the assumption that those two qualia positions developed in turn, as the others did.
Chapter 9: Historical explanation

that the Origin quale position developed first for the further reason that words of origin (such as English, Danish) are very old, and are fairly common in our earliest texts.

Other Classifier constructions

The Process-head construction developed at about the same time as the Participant-head construction; (that is, phrases like “2005 Israeli arms sales”).

Classifiers with such an (inferred) semantic relation to the head had appeared in Early Modern English, but as single Classifiers, not in a definite construction: “midnight [Circumstance] murderer [MURDER, Process]”, “demoniacal [DEMONS, Actor] possession [POSSESS, Process]”. The first stage in the development of the construction was the appearance of a second argument Classifier; and again it had developed by mid-19th century. Examples from Nature 1 (1859) are given in the table below. (I give the analysis tentatively, since the phrases are not all fully idiomatic for modern use.)

<table>
<thead>
<tr>
<th>Modifier: Circumstance Argument</th>
<th>Modifier: Indirect Participant</th>
<th>Modifier: Actor Participant</th>
<th>Modifier: Goal Participant</th>
<th>(Head)</th>
</tr>
</thead>
<tbody>
<tr>
<td>telegraph</td>
<td>longitude</td>
<td></td>
<td></td>
<td>success</td>
</tr>
<tr>
<td>atmospheric</td>
<td></td>
<td></td>
<td>mutual</td>
<td>assurance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>clergy</td>
<td>chromatic dispersion</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Since 1859, there have been two developments: the use of recursiveness, and of two Circumstance arguments in one phrase (as discussed in chapter 6).

I do not attempt to trace the other constructions; I believe them to have arisen later.

Semantic structure of Classifiers

I have argued that noun premodifiers, like others, were partly referential and partly descriptive in Old English. I suggest that the semantic structure of Classifiers (see chapter 4, §2) developed slowly as noun premodifiers became more referential and other premodifiers became more descriptive, throughout Middle English and Early Modern English. I suggest further that they came to denote bare referential concepts as the constructions developed in Later Modern English. Taking "gold coins" as an example:

111 The phrase entails the Process MURDER, and the circumstance MIDNIGHT; the murderer is the Actor.
112 The phrase entails the Process POSSESS, and the Actor DEMONS; the Goal is unspecified.
113 Page 30.
114 Page 146.
115 Page 179.
Until the 19th century, MADE OF had been indeterminate between contextual meaning and word meaning; but as the Participant-head construction developed, MADE OF came to be understood as constructional meaning - the content of the Constituency quale.

As that constructional meaning became more sharply defined, and became established as linguistic meaning, qualities such as HEAVY and VALUABLE were implicitly distinguished as world knowledge (aided by the general increase in knowledge, with education).

The central concept, GOLD, was left as the linguistic meaning, and as a bare unbounded concept denoted by gold. It became unbounded because it now denoted a concept in a conceptual relationship (Constituency); in not referring directly to reality, it did not denote a bounded physical substance.

(The reason for that reduction in referentiality and the loss of boundedness will be amplified in chapter 10, §3, on Discourse Explanation.)

5.3 Epithet zone in Later Modern English

Semantics: development of social meaning and emphasising meaning

Social meaning seems to have developed quite slowly in the 17th and 18th centuries, since according to MacMahon (1998: 388) it was only at the end of the 18th century that dialectal pronunciation of standard vocabulary became an acceptable variation from the standard form of the language; and according to Adamson (1998: 551) acceptance of dialectal vocabulary and syntax came by about the early 19th century. The change was aided by the acceptance of informal vocabulary in the late 18th century (Finegan 1998: 553 ff), or early 19th century (Adamson 1998). Since then, the social, educational and literary changes mentioned in section §5.1 will have speeded up the development, bringing in the present situation where the social meaning of words like bonzer and top-hole will place a speaker by region, social class, and age.

Emphasis as a meaning type, in the discourse-marker use of actual and single for example (see section §6.2 of chapter 5), developed in this period also, I believe.

Syntax: development of scope of modification

The enlargement of scope of modification, begun in Middle English, continued in this period; I will not trace the details.

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116 I assert that from general reading. The SOED entry for actual supports the claim, in that the absence of any account of this use implies its modernity; SOED's entry for single is not clear on the dating.
Chapter 9: Historical explanation

The power to modify the discourse situation (chapter 5, §6) presumably came late in history because of the length of the development from concrete meaning through abstract meaning and attitudinal meaning to social meaning, which is its prerequisite. The history of *bloody* (chapter 4, §1.4) illustrates the point: it was used in Old English, but (by SOED’s history) did not gain social meaning until the 18th century.

5.4 Discussion: the Later Modern English period

History of semantic structure

The development of premodifier semantic structure, completed in this period, can be visualised by converting the semantic map given earlier (chapter 5, §8.2) to a historical version, as in diagram 2 (below). The arrows represent directions of change of meaning type; the boxes represent the extent of the semantic structure of premodifiers at the end of the periods discussed. (The horizontal scale is generality, and the vertical scale is subjectivity, as before.)

Diagram 2: historical semantic map of English

![Diagram 2: historical semantic map of English](image)

Key to boxes: 

- = end of Middle English period
- = end of early Modern English period
- = Present Day English

Many writers have described changes in the meaning of particular words; but, to my knowledge, there has been no recognition that the semantic nature of English itself has changed historically, in some such way as is illustrated in the diagram above: in Old English, the nature of word meaning was such that speakers simply could not use words with the full semantic structure set out in chapter 4. So I believe that my account opens up a new field -
"historical semantics", distinct from "lexical semantics", perhaps. I suggest that further study is likely to produce important results - by comparing the semantic structure of verbal and nominal expressions with that of premodifiers, for example.

**Marked and free order in Later Modern English**

I argued in section §4.5 above that marked order occurred rarely as a deliberate device in Early Modern English, but presumably much more often as a spontaneous expressive device which created new meanings. I believe that that has continued, as an important mechanism producing new meanings; for example, it seems likely that the expressive and social meanings of *bloody* (see chapter 4, §1.4) developed in this period from its being given prominence at the beginning of the phrase. My impression is that marked order is now used much more frequently, and more deliberately.

Free order has also come to be used more freely, and to be used for deliberate effect, as set out in chapter 7.

**Use of three zones at once**

When writers began using three premodifiers at once, they generally used only one or two zones (with two or three words in one of them). A new stage was reached when they began to use three zones at once frequently - a stage which marks the maturity of the zone structure. (As noted previously, it is very rare for all four zones to be used at once.) This stage, like others discussed above, was reached by the 19th century, and is observable in *Nature*, Volume 1 (1859-1860) and Volume 2. (1860-1861), where it is reasonably frequent. Examples follow.

<table>
<thead>
<tr>
<th>Determiner</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>the</td>
<td>short</td>
<td>insulated</td>
<td>French</td>
<td>line 295</td>
</tr>
<tr>
<td>the</td>
<td>regular</td>
<td>daily</td>
<td>outdoor</td>
<td>exercise 296</td>
</tr>
<tr>
<td>a</td>
<td>peculiar</td>
<td>metallic</td>
<td>vibratory</td>
<td>sound 297</td>
</tr>
</tbody>
</table>

The earliest example I have observed is from the 1640's: “their loud up-lifted angel trumpets”. 298

**Trends in premodification**

It seems likely that the following current developments will continue.
Chapter 9: Historical explanation

- Replacement of adjectival Classifiers with nouns. For example, in the British National Corpus, uses of "parental rights" (with an adjective) outnumber uses of "parent rights" (with a noun) by about 50 to 1; but a search of the web (via www.webcorp.org.uk) in February 2008 showed that by then the ratio was only about 2 to 1.299

- Increasing range of structured options - being “systemic” (Halliday, 2004). All the events narrated in this chapter have given users of English a wider range of semantic and syntactic choices, and thereby scope for richer, subtler and more complex expression. The most likely form for a continuation to take seems to be development of the Classifier zone, since the subzones are recent and unevenly developed. That could lead to another main construction; or other qualia positions in the Participant-head constriction; or other positions (e.g. Circumstances) in the Attribute-head constructions. For example, the pattern of Classifiers with information (noted in chapter 6, §3.3), could conventionalise its relations further, making possible phrases such as "Taco Bell consumer product nutrition information", with nutrition indicating subject matter, product indicating the range of the subject matter, consumer indicating its beneficiary; that would establish three new qualia.

- Greater nominalisation. Dating from Old English at least (Strang 1970: 329-330), and continuing at present (Halliday 1978), nominalisation has led to sentences like the following, from a city council proposal for changes to a public park. (I underline the nominal phrases.)

  (10) "Existing footpaths phased out and a new wide footpath network introduced to allow multi-user access throughout the year".301

  The next stage is presumably as follows.

  (11) "Existing footpath elimination. New wide footpath network introduction. Twelve-month multi-user access potential."

  The sentences consist entirely of nominal phrases, and 83% of the words are nominals.

- Semantic specialisation within the Epithet zone. As noted in chapter 5, some expressive Epithets (such as lovely), and expletives (such as bloody and fucking), are partly modifiers of the head and partly submodifiers of the following modifier. They commonly can not be coordinated with other Epithets; so we can have “a lovely wide blue pool”, but not (in my

121.299 "Parents’ rights" is not used as an alternative, for a reason that will be given in section §3.3 of chapter 10.

122.300 The phrase is constructed from attested shorter but complex phrases found on the internet via www.webcorp.org.uk and Google.

123.301 Auckland City Council website, on Churchill Park; 2006.
judgement) *“a lovely and wide blue pool”; and we have "bloody stupid thing", but not *"bloody and stupid thing". Perhaps such Epithets will specialise, and form separate zones - a fifth zone; perhaps they will instead gain a distinct submodifying sense, as real has done, and as very did.

- Greater orientation to message structure. Halliday (2000) and Du Bois (2003) argue that English has over several centuries been giving “greater prominence to the structure of the message”, and less prominence to “the structure of the experience” (Halliday, 2000: 229). I will show in chapter 10, section §3 (Discourse Explanation) that the trend has recently spread to the premodification structure of nominal phrases.

5.5 Conclusion: the Later Modern English period

5.5.1 Summary

The main changes in the unmarked order have been as follows.

- In the Classifier zone, the modern constructions and subzones developed, with the Participant-head construction developing first.
- In the Epithet zone, the full scale of social meaning developed gradually, and the last forms of modification developed.
- The zones came to be used freely, with three and even all four zones used in one phrase.
- The marked and free orders came to be used freely and fairly deliberately.

5.5.2 Explanatory power of the history in this period

Classifiers

This period provides the explanation, promised in section §5.2 of chapter 6, for a number of Classifier features not explained in that chapter.

We have seen that by historical standards the Classifier patterns have developed quite recently, and that they are still evolving. In a time of active linguistic change, it is normal for current usage to include both an old form and the new one that will replace it, and also some almost experimental new forms that will not survive. Hence:
the Classifier constructions’ difference in complexity - the oldest one (with the qualia) being most complex;
- the number of constructionless uses;
- the ambivalence of many uses;
- the Origin-quale position being sometimes used for other relations.

**Classifiers: overlap with overall premodification**

An overlap between Classifier constructions and overall premodification has been noted (chapter 6, §4.4). There are several elements in the explanation, I suggest.

- Classifiers overlap the other premodifier zones because -
  - they evolved quite differently from the other premodifiers - from genitive nouns, not from adjectives and participles;
  - they evolved so much later that there has not been time for the overlap to be resolved (by amalgamation, or the development of consistent distinctions).
- Classifiers overlap determiners (for example, “Sony’s [determiner] big tv sets” and “a big Sony [Classifier] tv set”) because both evolved from Old English genitives, through Middle English possessives.

**Classifier zone: differences from other zones**

The preceding chapters show that the Classifier zone is markedly different from other zones - in using constructional meanings equivalent to content (such as the Constituency quale, MADE OF), in allowing recursive submodification by other premodifiers (not just adverbs), and in having subzones. The late development of the zone seems to explain that, in part. The four zones were established in one phase of growth, between the 14th and 16th centuries. The Classifier subzones developed separately, from the 19th century onwards; and I suggest that it has had a separate impulse\(^{302}\) and motivation. (That will be discussed in chapter 11, §3.3.4.)

**Epithets**

As noted by Partington (1993) and Haspelmath (1999), many words become “worn out” by what hearers feel to be exaggeration; it is especially the conceptual meaning of Epithets such as horrible (‘hair-raising’), and nice (successively ‘foolish’, ‘lascivious’, ‘strange’; and so on) that has

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\(^{302}\) I find this impulse - to use nouns to modify nouns - reminiscent of the impulse that allowed nouns (in the form of genitives and denominal adjectives) to modify nouns in Old English. The comparison perhaps merits further study.
been "worn out". That historical loss of conceptual meaning while the word retained its expressive meaning explains the anomaly noted in sections §6.2 and §7.1 of chapter 4, in which the simple and clear characterisation of the Epithets as having scalar descriptive meaning must be provided with the alternative, "gradable descriptive or expressive meaning".

Nouns as Descriptors and Epithets

The vigorous expansion of the Classifier zone also explains, I suggest, the recent appearance of nouns as Descriptors and Epithets. In the following, for example, the underlined words must be Epithets, since they carry expressive meaning: “the worst cowboy cleaning company in the country”,\(^{303}\) “their low-rent letter boxes”, and “an iconic, breakthrough device”.\(^{304}\) In the past, nouns could not be used as Epithets; their current use is explicable as analogy from the free use of nouns as Classifiers, and the urge to give them expressive meaning through the shift to Epithet zone. The fact that this use is both by analogy and very recent explains why such noun Epithets seem to be not gradable.

That adds to the discussion of parts of speech given in §4.6.2 above.

Functionality

I referred in section §1 to the “invisible hand”, whereby a functional system results from changes that began without deliberate intention, and for nonfunctional reasons. We can now identify some such changes in premodifiers, as follows.

- Expressive and social meaning began through the general human tendency to associate ideas - associating feelings with words and with the occasion of use.
- The importance to speakers of being emphatic made the intensifiability of some descriptive words important: it became the distinguishing feature of Epithets.
- The meaning types, developing independently, have combined to form a very expressive and versatile system.
- The human tendency to emphasis and exaggeration “bleached” many Epithets, leaving them with no more than their emphatic value; that was retained as Reinforcer meaning.

(I return to the issue in sections §2 and §3 of chapter 10 - giving psycholinguistic and discourse explanations.)

\(^{125}\) British National Corpus.

\(^{126}\) Economist, September 17th 2005, page Insert 3.
6 Discussion of the historical explanation of premodifier order

6.1 Introduction

The chapter so far has demonstrated that the premodification zones have evolved; this section complements that, by setting out a few of the mechanisms of the evolution, and the role of words’ changing zone.

6.2 Mechanisms by which premodifier order evolved

I stated in the introduction to the chapter that I would take for granted the basic and well known mechanisms of linguistic change. Here, I draw attention to less familiar mechanisms, drawing together points established earlier in the chapter.

First, I draw attention to my discussion of marked order throughout the chapter, culminating in section §5.4, where I asserted that it has been a significant mechanism for the development of meanings (and therefore, of zone structure). That seems to have remained unnoticed in the historical linguistics literature. Indeed, Traugott (1999:178), and Bybee and others (1994, as cited by Traugott) explicitly deny that change in syntactic position can cause or even precede change in semantics.

Other noteworthy mechanisms or preconditions for change include:

- the great increase in the number of premodifiers (reinforcing the earlier general trend from postmodification to premodification);
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- the consequent growth in the sense relations which are very important to premodifiers' semantic structure, and therefore to the zones;
- the distinction between restrictive and descriptive use.

6.3 Words changing zone

6.3.1 Introduction

The purpose of this section

I have assumed so far in the thesis that the development of zones was substantially affected by words’ frequently developing meanings which are used (now) in a zone different from the original one. But for that effect to be substantial, there must have been many such changes, and although I have cited a number of examples of it, the words cited do not make up a significant proportion of the premodifiers being used in any period. The main purpose of this section, therefore, is to show that the zone-changing was widespread enough to have affected the history of premodifier order. A secondary purpose is to prepare for the section on grammaticalisation, in chapter 11.

Analysis

I analysed a random sample of words to gain data on words’ change of zone - 100 premodifiers from everyday written and spoken English - and use the results in this section. I explain the choice of passages, the method of analysis, and the detailed results in Appendix B, at the end of the thesis.

I emphasise that the changes during Old English and Middle English are of semantic type, rather than strictly of zone membership (since the zones were not established in those periods). I emphasise also that the results are given as suggestive, not as being valid by statistical standards.

Terms used
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In this section, I refer to words “changing zone”, and “moving” - either “forward” or back”. “Changing zone” is a convenient (and deliberately dramatic) abbreviated expression for developing a new meaning which is used (now) in a different zone. Usually, the older meaning was retained, so “moving” and “changing” are potentially misleading; "spreading" is perhaps more accurate. “Forward” means toward the determiner.

Outline of the section

The section gives word histories to illustrate the issues (in §6.3.2), reports the results of the analysis (§6.3.3), and discusses them (§6.3.4)

6.3.2 Word histories to illustrate issues

I give some histories of words in the sample, to illustrate the linguistic reality behind the data and generalisations, and to make some important points about the growth of new meanings in English premodifiers. One diagrammatic history follows, as diagram 3, illustrating most features of zone change; it is set out verbally in Appendix B, with another two histories which illustrate minor features.

Notes on the diagram follow.

- The columns across the diagram represent the zones - Classifier senses on the right, and so on. Rows downward represent successive historical periods.
- The diagram reads from top right, with the Classifier-type sense <1a> in Middle English (“M.E”) as the first sense of the word in English; senses evolve leftward (representing “forward”, in phrase order), and downward (representing later time).
- Only selected senses of perfect are shown.
- Here, and in later diagrams, the linking of senses is mine, based on SOED's developmental order.

Diagram 3: perfect: development of senses in new zones
The change in meaning from <1a> to <3c> took about four centuries; the full dictionary entries show a sequence of senses, each only slightly different from the preceding one; the change evidently occurred in everyday use, and without deliberate intention, and was movement forward. Meanings <9>, <10> and <16> seem to have come about differently: there is a figurative transfer to another domain of knowledge, and no smooth transition of sense; the changes could well have been made deliberately by an educated writer who redefined the word at the moment of writing, and have come about abruptly.

6.3.3 Results of analysis

In this section, I summarise the results of my analysis, which are given in full in Appendix B.

- Words: there were 100 premodifiers (60 from written English, and 40 from spoken English), which seemed in fact representative of current English, as well as having been selected randomly.
- Movement: the majority of words (64%) have changed zone. (I will show in section §6.3.4 that the significant percentage is very much greater.)
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- Direction: 50% of the premodifiers had some forward movement (including 12% that moved back as well), and 26% had some movement back (including the 12%).
- Number of meanings: on the whole, senses proliferate as words move forward. (Senses, here, are what SOED assigns numbers to; the subsenses, separated by semicolons, are not counted.)
- Written and spoken English: there were no significant differences between them.
- Speed: moving forward one zone took on average about 200 to 250 years; moving back occurred after about 200 years, in my sample.

6.3.4 Discussion of words changing zone

Introduction

In this section I draw on the analysis just reported, but also on the wider observation I have used in the whole thesis.

I refer to "routes" of change, by which I mean patterns of movement that may be discerned by generalising the changes in meaning that have occurred in many words. The routes are for the loss of words, as well as development of meanings, and the position of head is included as part of the route; and, as with routes in nonlinguistic realms, many movements do not cover all parts of the route.

I distinguish two routes: (1) movement toward the determiner zone; (2) movement away from the determiner zone.

I concentrate on the routes as changes in semantic structure, shown in chapter 4, although they include the syntactic differences set out in chapter 5. As a reminder to the reader, I summarise the semantic nature as follows: in the Classifier zone, naming function and referentiality; in the Descriptor zone, perceptual, non-scalar meaning; in the Epithet zone, abstract and general scalar meaning (often with expressive or social meaning); in the Reinforcer zone, purely grammatical meaning (primarily reinforcement).

Route (1): words moving forward

Moving forward is illustrated by perfect's move from Classifier all the way to Reinforcer; it includes words' move from head to Classifier - by use as a noun premodifier, conversion to adjective, and derivation (with -ive etc).

Some words travel most of the route, and some travel all of it. In the sample, free and social moved from Classifier to Epithet. Ginger moved from head to Descriptor without derivation;
most of the words that appear to have moved forward from the head by derivation did so in
the language from which English took them - defective, for example.

Words do not "jump" zones; they move through the Descriptor zone on their way from
Classifier to Epithet.305

The number of senses per zone increases with forward movement to Epithet, reflecting
the polysemy of Epithets - see chapter 4, §4.2.4. (The words average 1.0 Classifier sense, 1.4
Descriptor senses, and 2.4 Epithet senses. But they average .03 Reinforcer senses, reflecting the
specialised function of that zone.) The words total 4.9 senses each.

Some meanings are lost from the Classifier and Descriptor zones, by archaism, from both
social and linguistic causes (three of perfect's 18 meanings, for example). Losses from the
Epithet zone are mostly through weakening in intensifying uses: Strang (1970) notes losses of
intensifying submodifiers in each period; and we have lost the Reinforcer use of very.

Route (2): words moving back

Movement on this route is illustrated by perfect's development of the Classifier use, <16>,
from the Epithet use, <4>. The common movements are as follows:

- Movement from Epithet or Descriptor to Classifier: words develop a referential, Classifier
  use from a generally descriptive use. Examples in the sample were: basic and massive. Some that
  had a Classifier-type meaning originally developed another one later - free and economic, for
  example.
- Movement from Classifier to head: examples in the sample are free (<4> “A free kick”), and
  financial (as a plural, financials). The change is frequent in modern use: “a television (set)
  “medical sharps” (sharp objects) and so on; but it has occurred all through known history: white
  gained the head usage, “the white of an egg”, in Old English. The movement is common: half
  of the premodifiers in my sample have developed uses as head (by derivation).

Movements on this route are more limited than on the other route. Words do not (in the
sample or in the rest of my observation) move back from the Reinforcer zone: grammatical
words do not regain a descriptive meaning. (Words that have developed a Reinforcer use may
later develop other meanings; but a new Epithet will develop from an existing Epithet.) Words
seldom develop a Descriptor meaning from an Epithet meaning; crescent is an exception: <1>

127305 The only exception I have noted is wholesale; I presume that the Epithet use (<2> "Fig:
...indiscriminate") developed directly from the noun use, by metaphor.
"Growing" (16th century) seems to have had Epithet uses; \(<2>\) "Shaped like the new... moon" (17th century) = Descriptor; "a crescent roll" (i.e. 'croissant'; modern) = Classifier.

I presume that the reason for these limitations in backward movement is that as words move forward, the earlier meanings are retained; so that when a word gains a Reinforcer use, it has corresponding Epithet senses, and words with Epithet uses generally have corresponding Descriptor senses. Apart from the few senses lost by archaism, every sense that is likely to evolve on this route is already in the lexicon.

**Speed of the changes**

In general, change of zone takes an appreciable time - about 200 to 250 years, on average, for a forward move - with a wide range of times. (The diagram of perfect in §6.3.2 is potentially misleading here: it seems likely that the Classifier, Descriptor and Epithet senses - all recorded in Middle English - were all taken from French in the same period, the development having taken place as the Latin word evolved into the French one.) Movement back occurred about once in 200 years in my sample; but the range was so great (occurring in the same period, or seven centuries later) that an average seems to have little validity.

**Scale of the changes**

The scale of the changes is much greater than appears from the statement that 64% changed zone, for the following reasons.

First, Epithets are at the end of the normal development forward, having virtually no scope to develop a new sense. That is because, to develop a Reinforcer sense, they must be of one of very few appropriate conceptual types (such as COMPLETENESS and EXTREMITY - like the Reinforcers total, complete, and utter); they must change function (to reinforcing); and they must overcome the "competition" of the existing Reinforcers, which already form a set of synonyms. So Epithets can in general not change zone. Second, since words take a long time to develop new senses, recent borrowings and recently formed senses can not normally change zone either. Those constraints cover 33 of the 36 words which did not change zones.\(^{306}\)

Allowing for that, the proportion of words capable of movement that did move is 96%.

Further, I surveyed only words that moved in their existing form - not words that began as nouns (with premodifier uses) and formed adjectives by derivation, like *steel* > *steely*, and *glass* >
The tendency of premodifiers to move between zones is therefore very great.

The scale within one word’s range of senses can also be very great: counting SOED’s lettered senses (e.g. <1a>, <1b>, <1c>), perfect has developed 1 Reinforcer sense, 8 Epithets, 3 Descriptors, and 16 Classifiers: 28 senses from the original single sense.

Support

Adamson (2000) shows change of zone with change of meaning, which accords with my account. (However, she does not account for all four zones or all of the movements, and does not show how widespread and systematic the changes have been.)

6.3.5 Conclusion: words changing zone

To summarise: nearly all premodifiers that have time enough, and are not already at the end of the route of change, do change zone. Furthermore, heads move to a premodifier use, and premodifiers move to use as head. The conclusion is that change of position among premodifiers and head is so common as to be almost universal; and that it has certainly been widespread enough to strengthen the zone system, by multiplying the senses in the lexicon, and thereby strengthening the structure of lexical relations within zones and across zones. Every time we use perfect, for example, we must place it in the right zone, which is different for different senses.

7 Conclusion: historical explanation of premodifier order

Summary

Zone structure

In Old English (up to the 11th century), the order of premodifiers in nominal phrases was determined by the modifiers’ part of speech: adjective + participle + genitive noun.

By the end of the Middle English period (end of the 14th century), most premodifiers still occurred in that order, but:
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- the order had been reanalysed: premodifiers were seen as ordered syntactically;
- premodifiers could be placed in different positions (for the sake of syntax), without change in meaning;
- the semantic structure characteristic of modern Reinforcers, Epithets and so on was fairly well developed, but it did not control order;
- the modern zones were, consequently, not established, but nearly all of the elements for them were present.

By the 16th century, in the Early Modern English period, premodifiers were still in syntactic order, but:
- their semantic structure was felt to constitute a semantic order;
- the semantic order was correlated with the syntactic order (premodifiers could not be moved simply for the syntax);
- most of the characteristics of modern semantics and syntax had become established;
- the Present Day English zones and unmarked order were therefore established;
- the free order and marked orders were used, but not freely or extensively.

In the Later Modern English period:
- the unmarked order of premodifiers became complete, as the Epithet zone developed further, and the Classifier zone developed its constructions;
- the marked and free orders came to be used freely and purposefully.

Words changing zone
- Premodifiers change in semantic structure, and “change zones” (i.e. develop a sense in a new zone), if time and their meaning allow.
- The majority of premodifiers have changed zone, in fact.
- The movement is mostly “forward” (away from the head), but sometimes “back”.

Conclusions

The order of premodifiers
- The unmarked order of premodifiers has evolved, from Old English times onward: from a quite different structure, gradually, and in stages:
  - a part-of-speech order;
  - syntactic order;
  - semantic and syntactic order, constituting premodification zones.
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- Free order has always existed, but it has changed in its nature and use.
- Marked order has evolved in the last century or so.

Semantic structure

Not only the meaning of particular words has changed, but the very semantics of the language has changed - at least that of premodifiers.307

Explanatory power

Historical development explains many features of English premodifier order, both general (such as the parallel of semantic and syntactic orders), and specific (such as the existence of borderline uses). Some of those features have a partial explanation elsewhere (in semantic structure especially), but some (such as the part-of-speech pattern, borderline uses, and the close but imperfect fit of semantics and syntax) have no explanation other than the historical one.

Finally, I suggest that this chapter helps explain why there has been so much difference of opinion on the order of premodifiers: first, the history has made premodifier semantics and syntax quite complex, so that difference between understandings is natural; second, some features of premodification, having arisen for historical reasons, are irrelevant to synchronic explanation, as Bauer notes (1998: 84).

Prospect: later chapters

This chapter completes the basic explanation of premodifier order: the chapters so far are intended to show that all features of premodification zones are adequately explained by the semantic and syntactic analysis, both synchronic and diachronic.

The next chapter (chapter 10) offers supporting explanation - that is, discussion which gives further insight without being explanatorily necessary, and which comes from fields wider than the core of linguistics (such as study of discourse structure). Chapter 11 gives still wider discussion; then comes the conclusion.

307 That is contrary to the assumption in historical linguistics that words have changed individually, within an unchanging system, although the systems of phonology, morphology and syntax have changed.
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Chapter 10: Supporting explanations of premodifier order

1 Introduction

Purpose
The purpose of the chapter is to strengthen the explanations already given, rather than to give independent ones, and in doing so to complete the coverage of the thesis topic. The type of support given varies from section to section.

Starting point
Each section starts from a different point, which will be stated in the introductions.

The argument
The argument in the thesis so far, from synchronic and diachronic semantics and syntax, leaves several areas of language not discussed. This section argues that scholars’ knowledge of those areas supports the explanations given previously, making the whole thesis coherent, well integrated, and complete.

Outline of the chapter
Section §2 deals with psycholinguistics, §3 with discourse structure, §4 with language acquisition, and §5 with morphology and phonology. (They are in that order to enable later sections to use concepts from earlier ones.)

2 Psycholinguistic explanation

2.1 Introduction
Since I have assumed throughout the thesis so far that language is integral with other mental activity, the explanations I have given in previous chapters should be credible psychologically. In this section, I set out to show that they are. I deal with the main features of the synchronic and diachronic explanations given in the previous chapters, and in the same
Chapter 10: Supporting explanations

order. I rely largely on Barsalou (1992), which (as its title says) is an overview of cognitive psychology for cognitive scientists.

2.2 Types of order

Unmarked order - the standard, routine order - fits Barsalou’s processing by automatic control (1992: chapter 4), which is fast and unconscious, and therefore operating under binding grammatical rules. Free and marked orders, which I have portrayed as relatively uncommon, and as chosen stylistically, fit Barsalou’s processing by "strategic" control, which has some degree of conscious intention. Increasing skill in strategically controlled processing can convert it to automatic control (1992: chapter 4); that would enable historically new uses to become embedded in regular use and in linguistic structure, and would enable some speakers to manage free and marked order spontaneously.

2.3 Semantics

The semantic structure I have described (chapter 4) is supported strongly by psycholinguistic research. I begin with the types of meaning.

Classifiers

Hawkins (2004: 40) states as the first of the mind’s three main principles in processing: “Minimise forms; that is minimise the number of morphemes, words and so on to be processed”. Specifically, "Assign more properties to fewer forms". That principle explains the nature of Classifiers and their frequency in current usage: a single word evokes a complex meaning, by invoking implicit constructional meaning, and by invoking associated knowledge selectively, outside linguistic meaning and below full consciousness.

I described the lexical meaning of Classifiers (chapter 4, §2.3) as being a single referential concept, without descriptive content. The psychological reality of that account is supported by Schreuder and Flores D’Arcais (1989). They see the mind’s content for coffee (their example) as consisting of (a) a minimal node (COFFEE), (b) "perceptual elements" (such as colour, smell, and taste - BLACK, LIQUID, etc.), and (c) "functional elements" (such as coffee’s being made from roasted beans, and where it is produced). Those three elements of the network are

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1308 However, the constraints on free order (chapter 7, §2) presumably operate under automatic control.
activated together or independently in different situations (of speech, experience, and thinking). I suggest that the minimal node (e.g. COFFEE) provides the meaning of coffee as Classifier: the single referential concept, without descriptive content. (Classifiers in established constructions seem to be truly minimal; constructionless Classifiers, and Classifiers as used in earlier centuries, seem to have varying degrees of perceptual knowledge associated with them.)

McClelland, Rumelhart and Hinton (1986) describe featureless "instance units" denoting an entity; representing content (i.e. features) requires linkage to neighbouring nodes; the mental network can inhibit links to neighbouring nodes - which is supported by Lamb (1999). Malt, Sloman, Gennari, Shi and Wang (1999) show that patterns of naming things often do not match the pattern of understanding: so the referential concept and the descriptive concepts must be distinct. Malt, Sloman and Gennari (2003) give a very similar and more up-to-date account of entities represented as points in mental space, citing other researchers.

Descriptors

Descriptors express the “perceptual elements” in (b) above - BLACK, for instance; they may be specific to one mode of perception, such as auditory or visual imagery (Barsalou 1992, chapter 5), or partly generalised as “image schemas” (as discussed by Gibbs and Colston 2006.)

This is the “observational meaning” described as basic in Cruse (2004: 133-134), and the experientially basic meaning of Barsalou (1992: chapter 5). (Classifiers, by contrast, are basic semantically.)

Other works in the field that make the distinction between perceptual and conceptual elements in both mind and language include Baars (1988), Lamb (1999), and Tomasello (2003a).

The inhibition mentioned for Classifiers, just above, also helps explain how a word can have certain sense elements as an Epithet, but not as a Descriptor: its position and context inhibit them.

Epithets

Concepts evolve from further processing of perceptual material; they are the "functional elements" in (c) above, constituting the primary element of Epithet meaning. That fits my conceptual/perceptual division between Epithet and Descriptors, and the gradation between them.

\[3^{309}\] Strictly: Classifiers in constructions are semantically basic; constructionless Classifiers are experientially basic.
Hawkins’s principle of minimising processing (given for Classifiers) explains Epithets’ complex and somewhat inconsistent semantic structure. They use vagueness and ambiguity; they are polysemous; they have expressive and social meanings as well as descriptive meaning; they assign many meanings ("properties") to a single word.

Although some knowledge is "logical" in the everyday sense, other knowledge is structured by “illogical” association (Barsalou 1992, chapter 7). That provides for association of sense elements within a word, including expressive and social meaning within Epithets.

Reinforcers

Reinforcers’ purely grammatical (or functional) meaning corresponds to "procedural" knowledge - one of the three types, along with "episodic" knowledge (memory of particular episodes in the past), and "declarative" knowledge (knowing that...). (See Barsalou 1992: chapter 7.)

Dimensions of meaning

The existence of dimensions of meaning is supported (indirectly) by the writers cited so far in this section, and particularly by McClelland and Rumelhart (1986) and Rumelhart and McClelland (1986), in two ways. First, they all regard the meaning of a word as an area of a network, such that varying parts of the whole meaning are activated in varying circumstances. Second, they regard each item of content as being activated to varying degrees, and as being more or less closely related to other content. The dimensions, such as degrees of expectedness, are part of those variations.

Reality of semantic distinctions

Kemmerer (2000) showed from neurolinguistic research that some brain injury affected certain abstract forms of meaning, and thereby disturbed his subjects' placing of adjectives in zones; that comes very close to demonstrating that the zones I describe are real in the brain, as well as in the mind.310

2.4 Syntax

Hawkins’s principle of minimising domains requires minimising the size of the structure to which syntactic and semantic properties must be assigned. I suggest that my account does minimise the structure to be processed, and the rules to be followed, for the following reasons.

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310 The demonstration is not exact; I suspect that the reason lies in his using Bache's inexact understanding of zones; see chapter 2, §2.2.1, and chapter 11, §4.2.2.
Chapter 10: Supporting explanations

- There are only four elements in the structure, at most - the four zones - and usually fewer.
- For producing a nominal phrase, the rules are simple:
  - You can use either the semantic rule (chapter 4) or the syntactic rule (chapter 5) - since they give the same order.
  - The semantic rule is: type of meaning determines the zone. (So: if the word in the intended use has reinforcing meaning, use it as a Reinforcer; if it has scalar meaning (descriptive or expressive), use it as an Epithet; if nonscalar descriptive meaning, use it as a Descriptor; if referential meaning, use it as a Classifier.)
  - The syntactic rule is: put the word before all the words it is to modify.
- For understanding phrases, corresponding rules apply.

My account, with the zones distinct, allows for processing to be very much simpler and quicker than do the accounts that have an indefinite number of rather arbitrary points on a scale (see chapter 11, §4.2.3, for example). The distinction between the zones illustrates Givón’s principle (1988: 278), that “Syntax tends to discretize the scalar cognitive dimensions that underlie it” (Givón’s italics). I presume that the “discretization” is a powerful psycholinguistic need.

To consider a couple of less important points:
- The power of Epithets (especially) to modify the following modifier is minimising domains: we reduce their domain from the rest of the phrase to the next word only. (See chapter 5, §3, and chapter 9, §4.2.)
- The more general ability of premodifiers to interact semantically follows from their being part of a network (see above), which has multiple connections, each of which may operate in either direction.

2.5 Discussion of the psycholinguistic explanation

The relation of semantics to syntax

I have given a historical explanation (in chapter 9, §4.6.2) for the imperfect match between semantics and syntax - for their working in parallel but with different kinds of “rule”, which seems linguistically strange. It has a psycholinguistic explanation, as well: in the parallel distributed processing of McClelland and Rumelhart (1986) and Rumelhart and McClelland (1986), different modules (such as semantics and syntax, in my application of the parallelism
principle) naturally work simultaneously, and there are no abstract or explicit rules (just patterns of behaviour, and constraints on them); any clashing constraints from different modules are resolved according to their weighting.

**Historical development**

According to Barsalou (1992: chapter 5), the mind recasts perceptual material gradually (with repeated use) into conceptual form; and it coordinates different modules, such as perception, cognition, emotion, and control of physical action. That fits the word histories and development of semantic structure I have described (in chapter 9, Historical Explanation), in which -

- conceptual meanings evolved from perceptual ones;
- expressive and social meaning (from other modules) became associated with conceptual meaning;
- a few conceptual meanings developed into wholly abstract reinforcing meanings;
- the experientially basic but slightly complex concepts of constructionless Classifiers each separated in modern times into a semantically basic minimal-node Classifier + a simple constructional meaning;
- the main zones and the Classifier subzones evolved accordingly.

**2.6 Conclusion: psycholinguistic explanation**

The strictly linguistic explanations of premodifier order given in earlier chapters conform to widely accepted recent psycholinguistic research. If that research is correct, the earlier explanations are psycholinguistically credible. In particular, the research supports the features that distinguish my account from other accounts: it shows that the key types of meaning (referential, perceptual, conceptual, and grammatical) are psycholinguistically real, and that the zones which they distinguish are psycholinguistically real, accordingly.
3 Discourse explanation

3.1 Introduction

Purpose of the section

The immediate purpose of this section is to show that the order of premodifiers often creates a discourse structure; the ultimate purpose is to support the syntactic and semantic explanations by showing that they explain the discourse structure as well as the zone structure.

Concepts to be used

By “discourse”, I mean the perspective that sees language through its overall function for the speaker or writer, not “discourse” in the sense of units of language greater than the sentence; I am shifting the perspective of study from structure to function. (The distinctions are those of Schiffrin 1987: 1.)

Other important concepts will be introduced as they become relevant.

Scope of the section

In chapter 7, on free order, I showed that coordinated premodifiers often have a climactic order, which is a discourse effect, or have the first word providing a link with the context, which is also a discourse effect. In chapter 8, on marked order, I showed that that order increases impact on the reader - again, a discourse effect transcending the semantics and syntax it uses as means. I take it as established, then, that free and marked order phrases are largely controlled by discourse function, and devote the rest of this section to discussing the discourse function of phrases in unmarked order - most phrases, that is.

Outline of the argument, and of the section

This section argues that some nominal phrases have a discourse structure much like discourse structure in clauses: section §3.2 argues that there is sometimes a Topic-Comment structure (of the sort familiar in the discourse-structure literature); section §3.3 argues that there is occasionally a Theme-Rheme structure, also (a less familiar structure).

3.2 Structure from the system of information

Introduction

By "system of information" (Halliday 2004: 93), I mean the structure of Given and New. The Given is what is treated as already known to the hearer, and what has later information building on it; it is often called “Topic”. The New is the added information; it includes what is
important, as well as what is new in the narrow sense; it is often called “Comment”.

“Information” includes qualities, as well as participant entities.

**Premodifier as Comment**

Modifiers are often used descriptively, adding information about the head entity, and not working restrictively to identify the referent; and sometimes the description serves a deeper purpose: commenting on the head - which accordingly is in effect a Topic. Examples follow.

(1) “.......... Hillary Clinton’s (still undeclared) bid for the presidency.”

The parentheses separate “still undeclared” from the rest of the phrase, making it a distinct Comment on the Topic represented by “bid for the presidency”, just as it would be in the separate adjectival clause, "which is still undeclared".

(2) "He felt he had made a mistake by hiring the flashy, controversial Carly Fiorina as his successor at Hewlett Packard."  

Here, the modifiers (flashy, controversial) add extra information which is asserted of the head (Carly Fiorina), again as if the words were in a nonrestrictive adjectival clause (as in “...hiring Carly Fiorina, who was flashy and controversial”). Inside the main Topic-Comment structure (“He [Topic] felt he had made a mistake by hiring... Carly Fiorina [Comment]”), another Topic-Comment structure is embedded (“Carly Fiorina is flashy and controversial”). The extra words are not merely descriptive, because they implicitly give the reason for the hiring being a mistake.

(3) "Jacques Delors, the brainy, spiky French president of the European Commission, [was] widely referred to as .....".

Brainy, spiky and French do not aid the phrase's function of identifying Delors; they make independent, informative comments on the Topic (“president of the European Commission”), without the need for a separate clause.

In the examples so far, all the premodifiers are descriptive, and only the head is restrictive, constituting the Topic; but that varies greatly, as illustrated below.

(4) “She [Hanna Reitsch] was the golden girl of the great prewar German soaring scene.”

(A Descriptor and two Classifiers form the Topic.)

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5\textsuperscript{511} Economist, July 29 2006, page 66.

6\textsuperscript{512} In this section, single underlining marks Topical wording, and double underlining marks Comment wording.

7\textsuperscript{513} Economist, June 10 2006., page 82.
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(5) “I spent a therapeutic few hours...”.315 (A determiner is part of the Topic.)
(6) [There will be mosaics at the street corner in Ellerslie on public display. ... The artwork is being produced..... A trust will seek sponsorship for... ] "what will be a stunning and Ellerslie's first, public artwork.".316 (There are two Comments on one Topic.)

Often, hearers must construe the discourse structure pragmatically. But it is sometimes signalled syntactically. In “the flashy, controversial Carly Fiorina”, the definite article (abnormal with a proper noun) marks “flashy, controversial” as Comment, and as definite (that is, as already known to the reader). Similarly, when a cricketer “was caught behind by a diving Geraint Jones”, the indefinite article, a, marks diving as indefinite (unknown to the reader), and as Comment. In “I spent a therapeutic few hours”, the abnormal position of the quantifier few marks "few hours" as Topic, and "therapeutic" as Comment.

We conclude that there is a rule of discourse order (applying when there are both descriptive and restrictive premodifiers), as follows:
(7) Descriptive premodifiers precede restrictive ones. The rule is a reanalysis of the syntactic one, that premodifiers modify following premodifiers (and the head). It is quite powerful: observing it leads to two marked uses, as follows. (The uses, and the examples, are given in chapter 8, Marked Order.)
- Marked punctuation (chapter 8, §1.2); for example, “other, minor sexually transmitted diseases" - “the other sexually transmitted diseases are minor”, in effect;
- Marked order (chapter 8, §4); for example, “a quiet three decades”, where the Epithet quiet precedes the determiner three, so that it can be Comment - “the three decades were quiet”, in effect.

(Givón, 1990: 470, gives the rule more narrowly - given information follows new, in the order of adjectives. The rule seems to have escaped notice otherwise.)

Head as Comment

Rarely, a headword functions as Comment:
(8) “the second, whiter skin of a gymnast’s leotard”.317

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8314 Gliding Kiwi 29 (5), (June-July 2006,) page 6.
9315 New Zealand Herald, travel article.
11317 British National Corpus.
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The information structure is, “A gymnasts’ leotard is a second skin, whiter than real skin”. The Topic (LEOTARD) is represented by the head of a syntactically dependent prepositional phrase.

A climber describes the scene at dawn: 318

(9) "... red snow, red rock, red sky".

Red (in the second and third phrases) represents given information - given by the first red - and comment is made on it: ‘Red spread over the rock, and over the sky’, in effect. The modifier (red) acts as Topic, and the heads (rock, sky) represent Comment information.

Discussion of structure from the system of information

This structure from the system of information is related to explanations in previous chapters:

- We saw in chapter 4, Semantic Explanation, that premodifiers further from the head are more general, more complex, more subjective, and expressive, so they are semantically suitable for comment.
- Premodifiers modify the rest of the phrase syntactically, so they necessarily make a “comment” on it, in a loose sense, and very clearly so in the descriptive use of premodifiers.
  (See chapters 3 and 4.)
- As noted just above, features from chapter 8, Marked Order, can be involved.
- We saw in chapter 9 that information structure was influencing modifier order in the work of Wycliff (Middle English period), and of Colet (Early Modern English period), and more extensively in Later Modern English. What was for Wycliff evidently a stylistic choice has been conventionalised into an established structure.

My assertion that premodification order is often a Topic-Comment order has some limited support in other works. Svoboda (1968: 66) notes that heads of noun phrases can be a Topic (“theme” in his terms). Warren (1978: 40) sees the same structure in “compounds” such as “pocket knife”. Mel’cuk (1988: 58) notes the embedded Topic-Comment structure in noun clauses which are part of the Comment (“rheme”) of a main clause.

3.3 Structure from the system of theme

Introduction

Again following Halliday (2004: chapter 3), I use “system of theme” to mean the structure of Theme and Rheme. The Theme is the speaker’s point of departure, which locates and

Chapter 10: Supporting explanations

orients the information, for the hearer; it is always expressed at the beginning of the information unit (whereas Topics may be introduced later). The Rheme traces the speaker’s route through the information from the point of departure (2004: 93). The Theme may orient the information by means of stating the Topic (serving the experiential function); or it may use the textual or interpersonal functions. Since section §3.2 above illustrates structure with Theme as Topic, this section concentrates on the other types of Theme.

Instances of textual Themes

The beginning of the premodification can locate the phrase in the text, enabling the hearer or reader to interpret the surrounding words or phrases correctly.

If we hear a sentence begin, “He’s a mere...”, we know that the following information will be derogatory - as in “a mere useless gibbering stop-the-war-at-any-price pacifist”; without mere, we need not interpret stop-the-war-at-any-price and pacifist derogatorily. Reinforcers such as mere orient the hearers, guiding their interpretation of the following words.

(1) “There was a queer white misty patch in the sky like a halo of the sun.”

Queer orients us as readers to oddities, encouraging us to take white and misty as odd; that interpretation is confirmed by “like a halo of the sun” and following events: the misty patch is the first sign of the coming typhoon.

Thematic premodifiers can structure a whole passage. With a theme of prettiness (and headed “Pretty pastels”), an advertisement read:

(2) “Try these cute, festive fairy room decorations as part of a pretty pastel decorative theme in soft pastel pinks and purples.”

Instances of interpersonal Themes

The beginning of the premodification also guides the hearer or reader to the intended emotional response.

A humorous anecdote from a hunting story begins as follows.

(3) "Rain fell all night... The water began flowing through the bush. My super-duper new pup tent that was guaranteed 'totally weather-proof' began to leak so badly that my sleeping bag became a soggy sponge."

13 For an explanation of the functions, see section chapter 4, §6.3. For discussion of interpersonal and textual Themes in clauses, see Halliday (2004: §3.4).


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Super-duper, being colloquial hyperbole, orients us to the tone of the sentence - self-mocking humour - and makes us interpret the other modifier, new, as a continuation of that humorous tone. The first premodifier is Thematic, using expressive meaning.

It may also use social meaning: “snappy ankle-flared beat jeans” - with social meaning of vougishness.

Expletive premodifiers also are commonly Thematic, orienting the hearer to the speaker’s intention: they occur first, as in “Bloody great stupid game”; (the initial bloody indicates that great, stupid and game are also intended angrily and derisively). They can colour the whole utterance:

(4) "Get those bloody doors open and get out of the bloody thing".324

That expressed the speaker’s feeling about being in plane that had just crash-landed; bloody - like the imperative mood in commands - colours the whole of the utterance.

Consequently, expletives can occur in very unusual positions, as in "Remember the News Chronicle? On sale one day. Amalga-bloody-mated the next".325). This is the explanation for that apparently anomalous shift in position, noted in section §6.2 of chapter 9.

Conclusion

Premodifier order is occasionally, then, a Theme-Rheme structure: the first modifier uses its evocative power as Reinforcer or Epithet to orient the reader to implications in the rest of the phrase.

3.4 Discussion of the discourse explanation

General

I have not mentioned the experiential language function in this section, although I have discussed the others; that is because the experiential function sets the semantic order (see chapter 4, §6.3); so it has been discussed already.

Discourse structure reduces the status of participant entities

Nouns are potentially referential; but since the head is necessarily the focus of reference in a nominal phrase, nouns as Classifiers are not referential; the entities they denote are lower in discourse status than the head entity. That is, they are less particular (as discussed in chapter 6, §2.1.2); they are more closely bound to the head (as discussed in chapter 5, §7); and they appear

19325 SOED citation. Semantically, bloody belongs most closely with “News Chronicle”.

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to be less salient. (For all those reasons, they are readily confused with the first element of a compound.)

The reduction in status is marked by morphological reduction, as in the following.

- When "on business of the school" becomes "on school business" on repetition, school is reconstrued as denoting a type of business, rather than as a participant in the discourse, and the definite article disappears (and the stress is lowered, I believe).\(^{326}\)
- When a university is said to have "a student centre", student makes no reference to specific students, and is not marked for number (apparently singular): the students are not participants in the immediate discourse. Similarly, we have “pedestrian crossing, and “doctor parking”.
- "Child language acquisition" means ‘children’s acquisition of language’, but the genitive inflection is omitted - as also in “spacecraft payload”.
- Verbs occur in the base form, unmarked for tense and aspect: “a drink driver”, “skim milk”, “barb wire”, “carry bag”.

The reduction in morphology reflects a reduction in semantic structure, as well as in discourse status: the Classifiers just cited have been reduced to the unbounded state (discussed in chapter 4, §1); they are conceived without reference to extent in time or space, which is reflected in nouns' having no number or possessive marking, and verbs' having no tense or aspect. (It is as if the count nouns become mass nouns; the verbs evidently become nonfinite.) It is not


There are exceptions to the morphological reduction, to avoid ambiguity ("explosives storage", not "explosive storage"), and for reasons discussed by Quirk et al. (1985: §17.109), for example. But the change in discourse status and semantic structure applies to such Classifiers nevertheless.

**Discourse structure is a matter of degree**

In many of the examples cited, the discourse value of the premodifiers has been a matter of degree - a cline - with the most important first: “My super-duper(1st) new(2nd) pup(3rd) tent”; “these cute (1st equal), festive (1st equal) fairy (2nd) room (3rd) decorations”. That

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\(^{326}\) The example was cited in chapter 9, from the 16th century: this reduction is an old process.

\(^{327}\) The morphological and discourse reduction of nouns included in nominal phrases has several elements in common with "noun incorporation", as discussed by Mithun (1984), for example; the connections seem worth examining. Dahl (2004: chapter 10) deals with the issue, but not for English.
graduation fits closely with degrees of accessibility (Chafe, 1994), of newness (Prince, 1981), of referential importance (Chafe 1994), and of "communicative dynamism" (Firbas, 1992; Vachek, 1966; Svoboda, 1968).

That explains how we interpret questioning and negation of descriptive premodification. If a speaker refers to “my super-duper new pup tent”, and a hearer says "That's not a super-duper new pup tent”, the first speaker will interpret the comment (I believe) as 'It's not super-duper' (not as 'It's not a pup tent' or It's not new'): the first premodifier is most salient.

Similarly, moving a referent from premodifier position to determiner raises its salience (or "distinguishability"); placing it as head of the phrase or subject of the clause raises it further. Compare the alternatives in each of the following:

(1) “a student centre”, “the students’ centre”, and “the students have a centre”;
(2) “the Iranian war...”, “Iran’s war...”, and “Iran fought....”.

**Discourse structure sometimes controls order**

I have described discourse structure as if it were an extra layer, adding meaning to the order set by semantics and syntax. It seems, however, that on occasion discourse structure itself sets the order, as follows.

(3) "What drives me is a desire to understand and to know. Discovery is an incredible bloody thrill, it’s un-bloody-believable".328

It seems that the speaker began his second sentence wanting to emphasise incredible, so put it ahead of bloody, although it usually follows: discourse function over-ruled the standard rule. (The speaker presumably then realised that he wanted to emphasise bloody, so added a clause, placing bloody inside unbelievable for extra prominence.)

(4) [A fish has] “a broad [E] vertical [D] band covering the tail fin”.329 (“E” = Epithet, and so on.)

(5) “Each pectoral fin has a vertical [E] orange [D] band and there is a small orange spot at the end of the dorsal fin.”330

The two uses of vertical have identical Descriptor-type senses; but the second one is placed as an Epithet to be more prominent, and make “vertical orange band” contrast better with “small orange spot”.

22328 Prof. M Walker (reported in New Zealand Herald, November 17th 2007), on discovering that some fish navigate by magnetic minerals in their nose.

23329 British National Corpus.

24330 British National Corpus.
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A final example: *triangular* is placed as an Epithet, for prominence, in "*triangular* yellow bottle" (versus normal Descriptor position in "*yellow, triangular* bottle", or "*short triangular* pelvic fins").³³¹

In these instances, discourse structure has overridden semantics. I believe that marked order (as studied in both chapter 8 and chapter 9) is now often intended to give prominence, as much as to change meaning.

3.5 Conclusion: discourse explanation

The conclusions are as follows.

- Nominal phrases in free and marked order regularly have a discourse structure, and those in unmarked order sometimes do.
- Since the discourse structures rely on semantic and syntactic principles, without having any principles of their own that override the semantic and syntactic ones (except in a few dubious instances), they do not constitute an independent or fundamental explanation of premodifier order.
- Nevertheless:
  - this discourse explanation supports those semantic and syntactic explanations;
  - it explains some features of how the order is used.

3 Language acquisition

4.1 Introduction

This section supports the main explanations of premodifier order by showing that those explanations also explain the order of children’s acquisition of premodifiers: constructionless Classifiers (being experientially basic) are learned first, and other premodifiers are learned in order away from the head.

I aduce evidence from -

²⁵³³¹ All from the British National Corpus. "Triangular yellow bottle" contrasted with "square red bottle".
general research on children’s learning of words and of meaning, and on learning processes (section §4.2),
research on development of particular children (section §4.3).

4.2 Evidence from general research

Order in which parts of speech are acquired

There is general agreement that nouns are learned before adjectives; see Tomasello (2003a), Gentner and Boroditsky (2001), Bates and Goodman (1999). Since (to generalise) Classifiers are nouns, and Descriptors, Epithets and Reinforcers are adjectives, that suggests strongly that Classifiers like "baby doll", and "Thomas engine" are learned first among premodifiers.

Order in which types of meaning are acquired


Order in which processes of acquisition are used

Tomasello (2003a), following others’ research, shows that children's learning of language begins in the joint attention that the child and caregiver give to things, which would establish referentiality (in Classifiers). Then come pattern-finding (needed for descriptive meaning, in Descriptors and Epithets) and reading others' intentions. Later come using lexical contrast and linguistic context (which characterise Epithets). A still later skill is taking different perspectives (which Epithets need, when they carry attitudinal or social meaning).

Gentner and Boroditsky (2001) show that cognitive input dominates the early learning (which is of nouns), scaling off (through verbs) to dominance of linguistic input (for closed class words) later. That implies that Classifiers (nouns) would be learned before Descriptors (mixed input), before Epithets (dominantly linguistic input), before Reinforcers (closed-class words, with wholly linguistic input - grammatical meaning).
Karmiloff-Smith (1992), Hudson and Holmes (2000), and Inchaurralde (2000) give further support for those points.

**Conclusion**

The order of children’s language development mirrors the order of zones. The order of processes of acquisition, and of the learning of parts of speech and types of meaning all correspond to -

- the semantic order we saw in chapter 4 (one of linguistic basicness);
- the structure we saw in the Psycholinguistic Explanation section of this chapter (one of cognitive basicness);
- the development of word meaning we saw in chapter 9, Historical Explanation.

### 4.3 Evidence from particular children

In this section, I present conclusions from data of particular children's speech, from the only useful study I have found (Bloom 1970), which reports on observation of three children learning English. The book does not cite all of the children's speech in full; so I rely in part on Bloom’s analysis, though I have made my own analysis where she does cite the utterances. I argue that the data, although not conclusive, confirms the conclusion just reached from general studies.

In the time recorded, Kathryn (aged 21 months) used as premodifiers five nouns (Classifiers - for example, "baby book"), and twelve adjectives, almost exclusively perceptual in her use; (big, cold, dirty, for example). There were no abstract adjectives, or emotive ones, and no grammatical ones, such as mere. I conclude that Kathryn was using Classifiers and Descriptors, and not using Epithets (no abstract or emotive premodifiers) or Reinforcers.

Gia (at 20 months) used nouns as premodifiers 20 times in the hours of observation (“animal book”, for example), and did not use adjectives (in the usual sense of the word) as premodifiers at all. (She seldom used adjectives predicatively, either.) That directly supports the claim that Classifiers come first.

Data from the third child, Eric, is inconclusive.

I conclude that Bloom’s data support the conclusion reached in previous sections: Classifiers are learned before Descriptors, before Epithets, before Reinforcers.
Chapter 10: Supporting explanations

4.4 Conclusion: language acquisition

There is good evidence (though not proof) that children generally acquire the use of the premodification zones in order away from the head. That confirms the explanations given previously: the same principles underlie the order in which children learn premodifiers, the semantic order of the zones, the way words develop historically, and the way language is processed psycholinguistically.

5 Morphological and phonological explanations

Introduction

This section provides relatively minor support for the earlier chapters, from the levels of language not previously discussed: morphology and phonology.

Morphological explanation

It seems likely that the inflections that distinguish nouns, adjectives and participles are useful psycholinguistically in processing nominal phrases, since the inflections are a useful guide in identifying zone. (Adjectival suffixes fairly reliably distinguish Epithets and Descriptors from Classifiers; participial suffixes are a useful guide to Descriptor position; and noun form very reliably indicates Classifier position.) That suggestion is speculative; but it has two forms of further support:

- To a significant degree, nonderived adjectives (such as new, young, slow, thick, red) are Descriptors, whereas derived adjectives (such as powerful, dangerous, horrible) are Epithets: again, the morphology is a guide to position. (Quirk et al., 1985:1338, note the tendency.)
- There has been a trend from at least the 18th century towards replacing adjectival Classifiers with the corresponding nouns, in expressions like “historical lecture” (now “history lecture”), and “geographical book” (now “geography book”); the trend continues, as in the current increase in use of phrases like “California oranges” (not “Californian oranges”), and recently

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26332 The conclusion should be readily verifiable by further examination of children’s early language - a piece of research that seems worth undertaking.

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“science instruments”\textsuperscript{27}. That trend makes stricter the part-of-speech distinction between Classifier and Descriptor zones, and there seems to be no other motivation.

I showed in chapter 9 that this part-of-speech order was part of the historical explanation. Here, I am not suggesting that it provides an explanation of its own, but that part-of-speech morphology contributes to the psycholinguistic explanation I have given, and that it has thus partly motivated the historical survival.

**Phonological explanation**

It seems clear intuitively that, when spoken, “splendid old electric trains” (for example) would have more stress on *splendid* than on the other premodifiers; "splendid old electric trains" or "splendid old electric trains" would be marked in stress.

Phonological prominence of the first premodifier fits naturally with the semantic importance of Epithets (see chapter 4, §6.1), the greater syntactic powers of earlier premodifiers (chapter 5), and their importance in discourse structure (this chapter, §3). Moreover, it is widely accepted that semantic and discourse prominence affect phonology. It is said, for example, that stress falls on the most informative word (Oller and Sales 1969: 214); that it marks Topic-Comment structure (Gundel 1988: 230); that it falls on "the center of interest" (Bolinger 1968: 90); and that new information is made prominent phonologically (Halliday 2004: 61, 89). Phonology expresses or "realises" the other levels of language.

Reliable evidence that first premodifiers are prominent phonologically would provide significant confirmation of several arguments I have made; but I have regarded phonological research as too specialised to be included in my research, so I leave the matter to be investigated empirically by others.\textsuperscript{28}

Phonology has another, less important role in order. Sound symbolism seems to be used more in zones further from the head. (That refers to use of words’ sound to represent real sound, to symbolise other sensation, or to express feeling.) Consider, for example, “a whopping £43m loss”, and “a blithering, hen-pecked twerp”,\textsuperscript{29} in which sound words precede other premodifiers. This symbolism is commonly disregarded; but Rhodes (1994) shows that it has its own syntax and regular meaning; Morton (1994) shows that it has a biological basis and

\textsuperscript{27}New Zealand Herald, September 27th 2007, page A17.

\textsuperscript{28}Van Donzel (1999) presents research on Dutch, showing that the most prominent words in information structure are most prominent phonologically, in that language.

\textsuperscript{29}Both from the British National Corpus.
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social reality; and the other writers in Hinton, Nichols and Ohala (1994) show how widespread and systematic it is in the languages of the world.

Conclusion

As well as providing some further supporting explanation, this section has helped to show that all levels of language contribute to premodifier order.

6 Discussion

In the literature on premodifier order, a few points have been made on the linguistic areas discussed in this chapter. For example, Martin (1969a, 1969b) suggested that processing affects order; Givón (1990) noted that new information precedes the given; several authors have noted that morphologically longer words tend to precede shorter ones. But the whole of my language-acquisition explanation is new, as far as I am aware, and also the main substance of the other explanations in this chapter.

7 Conclusion: supporting explanations

Summary

- Respected research in psycholinguistics shows that the semantic and syntactic explanations set out in earlier chapters fit the mind’s processing abilities and constraints (section §2).
- Speakers and writers sometimes exploit the structure determined by semantics and syntax, using it to build a miniature discourse structure, paralleling that of clauses (section §3).
- Research indicates that zones furthest from the head are more difficult to learn, and that children learn premodifiers in that order of difficulty (the zone order), learning the furthest from the head last (section §4).
- Morphology seems likely to contribute to order psycholinguistically (section §5).
- It is likely that phonological prominence matches other forms of prominence - in order to express them (section §5).
Conclusion drawn

It follows from that summary that my basic explanations from semantics and syntax are supported by what we know of the other levels of language (discourse structure, morphology and phonology), of psycholinguistics, and of language acquisition. That supports the main argument of the thesis.

I suggest that it also makes my account comprehensive, coherent, and well integrated.

Prospect: next chapter

The supporting material given in this chapter has completed my explanation of premodifier order in English nominal phrases. There remain to be considered what explanation others have given, and some wider issues arising from what has been said so far.

I turn to that in the next chapter.
Chapter 11: Discussion

1 Introduction

In the previous chapters, I have set out the types of premodifier order in English nominal phrases, and have given complementary explanations of them from both synchronic and diachronic points of view. That completes the substance of the thesis. This chapter raises some wider issues that arise from the thesis so far, with the purpose varying from section to section.

Outline

The section topics are as follows.
- Section §2: the significance of the premodification zones.
- Section §3: grammaticalisation in the premodification structure.
- Section §4: other theories of premodifier order.
- Section §5: conclusion to the chapter.

2 Premodification zones

2.1 Introduction

In chapter 3, zones were presented in little more than a bare assertion - that premodification in English nominal phrases is a structure of zones. This section draws on the previous chapters to vindicate that assertion, and to show their full significance.

2.2 Zones’ significance across linguistic levels

The zones are significant at all levels of language.
- In semantics, words in different zones and subzones have different semantic structures (see chapters 4 and 6); and change of zone is correlated with change of meaning (see chapter 8 for synchronic change, and chapter 9 for historical change.)
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- In syntax, the order of premodifiers in successive zones is fixed (see chapters 5 and 6), but the order of premodifiers in the same zone is not fixed (see chapter 7).
- Psycholinguistically, words in the different zones seem to have different mental structures and different processing. (See chapter 10, §2.)
- Zones often build discourse structure within the nominal phrase. (See chapter 10, §3.)
- In acquiring language, children evidently learn the zones in sequence. (See chapter 10, §4.)
- There is some correlation between morphology and zone membership; there appears to be phonological expression of the zone differences. (See chapter 10, §5.)
- At all those levels, the order is controlled (where fixed) or affected (where free) by the same complex of principles. Their nature will be the focus of the next chapter, but they may be summed up here as grading from basicness (close to the head) to sophistication (furthest from it).

2.3 Zones as constructions

My discussion of Classifier order (in chapter 6), showed that the five patterns in the Classifier zone are constructions (in the narrow sense), one of them being constituted by five more specific constructions. I also concluded (in chapter 9, §6) that each of the other zones constitutes a construction. This section develops those conclusions.

The overall structure of the four zones, as set out in chapters 4 and 5, is a grammatical construction - a quite general and schematic one - with the following features.
- The order, premodifier + head, signifies the premodification relation (just as the order nominal phrase + main verb commonly signifies subject-predicate relation), and that relation constitutes a meaning contributed to the expression, additional to the meaning of the words. (See Goldberg 1995 for that characteristic of grammatical constructions.)
- The unmarked order is rigid; see Givón (1979: 108), and Haspelmath (2004: 58) for rigidity of order.
- The structure consists of categories (namely Reinforcers, Epithets and so on), rather than of particular words; see Bybee (2003: 158).
- The structure has tight subordination (as shown in chapter 5); see Givón (1979: 98).

Each zone, having its own type of meaning, is a more specific construction, whose constructional meaning amounts to an instruction to the reader or hearer about interpretation. For the Reinforcer zone, for example, the instruction is to reinforce the qualities denoted by
the rest of the phrase. For the Descriptor and Epithet zones, the instruction is to apply the word's descriptive meaning to the head entity as a property; and for the Epithet zone, it is also to interpret the word's meaning as abstract and scalar, allowing full invocation of its possible meanings, including social and expressive ones.

The fact that the zones are constructions is shown particularly clearly by the change in meaning that occurs when a word is moved to a different zone, in marked use (see chapter 8): it is the new construction that requires the new interpretation of the word.

There is thus a hierarchy of constructions, of the sort discussed by Croft (2001: chapter 1), from the overall premodification construction - a schematic one - to the specific zone constructions. The hierarchy may be set out as in diagram 1 (below).

Diagram 1: hierarchy of constructions in premodification

Each construction requires its constituents to be of a particular semantic class (see chapter 6, §1.3, for the classes), and allows particular modificational relations. The overall premodification construction requires the premodifiers to be semantic properties. The descriptive (Epithets and Descriptors) construction therefore takes property adjectives straightforwardly; but participles must be reconstrued as denoting properties instead of actions. The Classifier construction construes the combination of the object denoted by the word plus the constructional meaning as a property; for example, in "steel knife", the object STEEL + the quale MADE OF are construed as the property which is ascribed to the knife - 'made of steel'.

The Reinforcer construction construes as property the reinforced contextual content of the word (for example, EXTREME FOLLy, in "a complete fool"). The Epithet construction (but not

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1 I use the term "premodification construction" because premodification is the topic of the thesis; but it could also be called the "attributive construction", which would suit the discussion in following paragraphs.
the Descriptor construction) allows modification of entities other than the head entity; the overall construction allows modification of the act of ascription (in modal premodifiers).

This account, I suggest, resolves the long-running puzzlement as to why noun premodifiers and some adjectives cannot be used predicatively, although most premodifiers can be; for an example of the discussion, see Quirk et al. (1985: §7.37-39). Predicative use constitutes a different construction from attributive use: it requires words of the property class, and allows only ascription of that property to the head entity (subject of the clause, normally). Epithets and Descriptors fit those requirements, so they can be used predicatively. The following cannot be predicative.

- Reinforcers do have not have property meaning of their own, so cannot be predicative (as noted in chapter 5, §7.2);
- Modal premodifiers (e.g. supposed and alleged; see chapter 5, §4) denote properties, so can be used in the premodification construction; but they are ascribed to the act of ascription, not to the head entity, so cannot usually be predicative for that reason - not *"the murderer is alleged". (They are often omitted from the discussion of predicability.)
- Classifiers as individual words do not denote properties - even adjectival Classifiers - so they can not be predicative; it is only when the constructional meaning is added lexically (forming an adjectival phrase) that they can be predicative; compare "the steel knife" and "the knife is made of steel". (See chapter 4, §2.2, and chapter 6, §2.1.3).

It is crucial to that explanation that the ability to be predicative is determined by the semantic class of each sense of a word; it is not determined by the word as a whole (i.e. by a lexical unit having various senses and syntactic properties). We can say, #"That behaviour is infantile" (Epithet sense), but not *"That paralysis is infantile" (Classifier sense).³

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² It seems that predicative use is becoming acceptable; see the discussion in chapter 6, §2.1.3.
³ Since it is common to regard attributive use and predicative use as features of "adjectives" as whole words (e.g. Quirk et al. 1985: §7.2, Biber et al. §7.2, Aarts 2007: §5.1.3), the demonstration that those features are controlled by particular senses (not whole words) has implications for the view of "adjectives" as a prototype category: it eliminates two characteristics of the prototype. We have seen (chapter 4, §4.2.3) that two other characteristics (gradability, and forming comparatives) are similarly dependent on particular senses (varying with zone and semantic structure), and are not features of the whole word as a certain part of speech. That removes all of Quirk and others' four features of adjectives. It removes three of Biber and others' four features; descriptive, the last characteristic, is like predicability in being a feature of Epithet and Descriptor zones, but not of Reinforcer and Classifier zones. The last characteristic in Aarts's list is taking un- as prefix, which is of minimal significance since it is shared by adverbs, verbs, and nouns. All Reinforcer senses of "adjectives" (e.g. utter fool, sheer rubbish, complete fool), and all Classifier senses of them (e.g. infantile paralysis and mental hospital), have none of the common characteristics claimed for adjectives - though the Epithet senses of infantile, mental and complete have them. The conclusion seems to be that "adjective" as a prototype concept for a class of whole words has no valid use: its alleged
Chapter 11: Discussion

2.4 Limits to the importance of zones and of apparent zone structure

The account given so far seems to pose a problem: hearers and readers apparently rely on a premodifier's zone position in interpreting the word; but when a word is the only premodifier, they apparently cannot identify the position. The problem is real, but not as serious as it appears to be.

Many uses of premodifiers are readily interpreted without recourse to zone membership, because they have only one frequent use; and, as Hawkins shows (2004), we ignore infrequent possibilities unless they are forced upon us. Thus *dangerous* and *silly* will be interpreted as Epithets automatically, I believe; *broken* will be a Descriptor, and *water* and *leather* will be Classifiers.

When a word has uses in different zones, the hearer can use the context: in “a *smart* person”, *smart* must be an Epithet (because of *person*); in "a *smart* bomb", it must be a Classifier (because of *bomb*). (There are other guides, noted previously, such as a grading submodifier - indicating that the word is an Epithet - and morphology - e.g. -er and -est indicate an Epithet.)

If all these interpretive procedures fail, then communication may fail, in part, as a consequence. For example, in "an ugly, *rectilinear* old hulk", *rectilinear* is clearly an Epithet, so must be interpreted with associations like those of *ugly*; but if the phrase had been reduced to "a *rectilinear* hulk", the reader would take the default reading of *rectilinear* as a Descriptor, without those associations, and the writer's evocative intention would fail.

2.5 Conclusion: premodification zones

We conclude that the premodification zones are important in the grammar of English, having significance at most linguistic levels, and in learning and processing the language. That importance does not seem to have been recognised previously, although it was adumbrated by Quirk and other (1985).

characteristics apply only to particular senses, and to particular zones.

44 It is coordinated with the Epithet *ugly* (Epithet because it is emotive), and precedes *old* without coordination.
3 Grammaticalisation of premodifiers

3.1 Introduction

Purpose of the section

This section is intended to show grammaticalisation within English premodifier order - a place in the language where it has been recognised very incompletely.

Concepts to be used

I adopt a wide definition of "grammaticalisation", in which grammaticalisation is not only the process by which a lexical item becomes grammatical or a grammatical one becomes more grammatical, but is also the creation of new constructions (formed as the words within them grammaticalise). The definition is based on Bybee (2003: 146), and is supported by Croft (2000: 156), Tomasello (2003b: 6 - 7), Wiemer and Bisang (2004), and Hopper and Traugott (1993: 50-56).

I equate “grammatical” and “functional” (both being contrasted with carrying content), as do Fischer, van Kemenade, Koopman and van der Wurff (2000: 284). I use "grammaticalness" for the degree to which a linguistic item is a grammatical one.

Argument

The main argument of this section is as follows.

- The historical development of the present overall premodifier order was grammaticalisation (the creation of new constructions).
- The zones grade in grammaticalness (as a synchronic structure), being more grammatical further from the head.
- The changes as premodifiers move "forward" from zone to zone is the historical process of grammaticalisation.

The argument will draw heavily on previous chapters, particularly the semantics in chapter 4 (the types of meanings will be shown to have degrees of grammaticalness), and the history in chapter 9 (words have for centuries been moving forward).

Outline of the section

There are two main parts in the section: section 3.2 deals with the development of constructions ("construction grammaticalisation"); section 3.3 deals with the grammaticalisation of individual words ("word grammaticalisation").
3.2 Construction grammaticalisation

I have shown in section §2 above that the structure of premodification described in
previous chapters constitutes a grammatical construction. It follows that the historical
development of the construction from a syntactically looser arrangement of words in Old
English (as narrated in the historical explanation in chapter 6) constitutes construction
grammaticalisation (as defined just above).

It also follows that the development of the zones in late Middle English and Early Modern
English was the emergence of new grammatical categories. Their emergence does not seem to
have been noted previously; and such events do not occur very often.

3.2 Word grammaticalisation

3.3.1 Introduction

Starting point

This section starts from several facts, established earlier, as follows.

- The different zones have different meaning types and syntactic powers (see chapters 4 and 5),
  and differ in function (see the discussion of zones as constructions, in section §2, above).
- The range of meaning types across the zones is a gradation in the width of the words'
  application, from specific and precise (Classifiers) to general and vague (Reinforcers), the
  precise-vague "stratum" complementing the specific-general stratum. (See chapter 4, §1.2.2).
- That gradation in generality gives the zones a parallel gradation in syntactic powers, with
  Classifiers having narrow scope and a single form of modification, and Epithets and
  Reinforcers having wide scope and several forms of modification. (See chapter 5.)
- The majority of premodifiers have "moved" historically, in the sense of developing a sense
  used in a different zone. (See chapter 9, on historical explanation, especially §6.3).
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Approach

The section begins from the assumption that grammaticalisation is not a single phenomenon or process but occurs in various forms, as asserted by Bybee et al. (1994: section §8.10), Tabor and Traugott (1998), and Fischer (2007: section §3.2).

I use Lehmann (1995) as a frequent reference, because that work is thorough and conveniently systematic, and because it is widely accepted as a basic account (see Croft, 2000: 16-17, in particular); but I will cite other support during the discussion.

Argument

The section argues that the gradation in the specific-general stratum is a gradation of grammaticalness, away from the head, and towards greater modifying function; and that movement along the gradient is a form of grammaticalisation. It closely resembles the shift of the Old English numeral adjective *an* ('one') to the indefinite article *a/an*  - a movement away from the head (postdeterminer to central determiner, in the terms of Quirk et al. 1985) - a standard example of grammaticalisation.

An argument can be made that the gradation in the precise-vague stratum is also a gradation of grammaticalness - towards the head (not away from it), and towards greater referential function (not modifying function) - and that movement along that gradient is another form of grammaticalisation (very different from what is studied in the existing literature). I put it aside for lack of space.

Word histories

I begin by presenting diagrammatically the history of three particular words, to illustrate concretely (and in complementary ways) the changes of zone and meaning to be discussed briefly and abstractly in the rest of the section. I draw on details of the words from earlier chapters.

(1) Perfect

Diagram 2 repeats part of an earlier one (from chapter 6, §6.3.2), presenting selected senses of *perfect* from SOED. It shows *perfect* beginning at top right as a Classifier-type word⁶, and gaining Descriptor-type, Epithet-type, and Reinforcer-type senses in turn. For the Classifier sense, the diagram gives the function, not a meaning, since Classifiers do not have descriptive meaning. (SOED says of sense <1> "Of a legal act: duly completed").

⁶ Fischer et al. (2000: 288).

⁵ As earlier in the thesis, I use "Classifier-type word", not "Classifier" for Old and Middle English senses, because the Classifier zone was not established as a zone until the Early Modern English period.
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Diagram 2: *perfect*: movement away from the head

<table>
<thead>
<tr>
<th>Reinforcer-type senses</th>
<th>Epithet-type senses</th>
<th>Descriptor-type senses</th>
<th>Classifier-type senses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;2&gt; M.E.</td>
<td>&lt;1c&gt; M.E.</td>
<td>&lt;1a&gt; M.E.</td>
</tr>
<tr>
<td>&quot;Having all the</td>
<td>&quot;Grown up, adult&quot;</td>
<td>[Designates type</td>
<td></td>
</tr>
<tr>
<td>essential elements&quot;</td>
<td></td>
<td>of legal act]</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;3e&gt; 16th C.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;Complete, utter&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The senses became more general and more abstract, and belong in different zones. *Right* and *sheer* have similar histories - developing from Classifier-type words to Reinforcers.

(2) Bloody

Diagram 3, below, presents the changes in types of meaning as the word gained new senses (as set out in chapter 4, §1.4); notes on the diagram follow it.

Diagram 3: *bloody*: changes in types of meaning, in new senses

- **Grammatical meaning**
- **Social meaning**
- **Expressive meaning**
- **Conceptual meaning**
- **Perceptual meaning**
- **Referential meaning**

Senses:

- <1> O.E.
- <2> O.E.
- <3> M.E.
- <5> 16th C.
- <8> 17th C.
- <8> 17th C.

The diagram has a different purpose from the previous one, so is set out differently. It reads from the bottom left: it shows new senses developing through time, left to right (with SOED's
sense number and period of origin across the bottom); and it shows the layers of meaning being added, on the vertical axis. The wording of the senses (in the columns) is my paraphrase of the SOED definitions. The first two columns may be paraphrased as follows: *bloody*, in its first recorded sense, i.e. <1>, (in Old English), had only referential meaning - 'of blood', as in "bloody drops"; in the same period, it gained perceptual meaning in sense <2>, 'covered in [blood]' - something you perceive by sight.

Those senses are distributed across all four zones, as shown by the following table. (Most of the phrases are now archaic.)

<table>
<thead>
<tr>
<th>Sense</th>
<th>Det.</th>
<th>Reinf.</th>
<th>Epithet</th>
<th>Desc.</th>
<th>Class.</th>
<th>Head</th>
<th>Date of phrase</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1&gt; O.E.</td>
<td></td>
<td></td>
<td>[red]</td>
<td>bloody</td>
<td>drops</td>
<td></td>
<td>1526 AD</td>
</tr>
<tr>
<td>&lt;2&gt; O.E.</td>
<td></td>
<td>dirty</td>
<td>bloody</td>
<td>[English]</td>
<td>sports</td>
<td></td>
<td>1656 AD</td>
</tr>
<tr>
<td>16th century</td>
<td>the</td>
<td>bloody and deceitful</td>
<td>[old]</td>
<td>[English]</td>
<td>man</td>
<td></td>
<td>1606 AD</td>
</tr>
<tr>
<td>17th century</td>
<td>not a</td>
<td>bloody</td>
<td>[single]</td>
<td></td>
<td>one</td>
<td></td>
<td>20th C.</td>
</tr>
</tbody>
</table>

As with *perfect*, the senses became more general and more abstract, and belong in different zones; and they developed by the addition of other types of meaning. Those points are crucial to what follows.

**Positive**

The same pattern is shown by *positive*. Later senses are more abstract and subjective, and further forward. The table below repeats a table from chapter 4, §6.2, adding the periods when the senses developed.

<table>
<thead>
<tr>
<th>Sense</th>
<th>Reinf.</th>
<th>Epithet</th>
<th>Descr.</th>
<th>Classifier</th>
<th>Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1&gt; M.E.</td>
<td>[traditional]</td>
<td>human</td>
<td>positive</td>
<td>law</td>
<td></td>
</tr>
<tr>
<td>&lt;6&gt; (i) Late M.E.</td>
<td>greatest</td>
<td>positive</td>
<td>[musical]</td>
<td>enjoyment</td>
<td></td>
</tr>
<tr>
<td>&lt;6&gt; (ii) Late M.E.</td>
<td>powerful, positive and visionary</td>
<td>[recent]</td>
<td>[political]</td>
<td>speeches</td>
<td></td>
</tr>
<tr>
<td>&lt;5b&gt; 19th C.</td>
<td>positive</td>
<td>[bloody]</td>
<td>dust</td>
<td>bowl</td>
<td></td>
</tr>
</tbody>
</table>

### 3.3.2 Scale of grammaticalness

I showed in the semantic and syntactic explanation chapters (4 and 5) that the zones are increasingly general in meaning and in syntactic power. That generality is the stratum in which this type of grammaticalisation occurs: because the senses are increasingly flexible, or broad, or
'attenuated', they can modify more and more others, and gain more and more functions.7 I consider three standard criteria of grammaticalisation, in turn,

**Becoming more functional**

Increasing functionality is a criterion of grammaticalisation by definition: grammaticalisation is a lexical item's becoming grammatical or more grammatical (that is, functional), from being a content item. I consider two forms of functionality, in turn.

(a) Modifying function. Zones further from the head are more general: the meanings are more abstract and general (chapter 4, section §6.1), and they accordingly modify more generally (modifying more and more parts of the utterance - chapter 5, §9.1). That constitutes an extension of the modifying function.

- Nouns used only as heads have frequently become premodifiers, either with derivation to adjective (blood/bloody, man/manly), or without ("some silver"/ "a silver brooch"). That is an increase in functionality, since the use gains modifying function.

- In the Classifier zone, it is not the individual word so much as the relational (constructional) meaning that modifies the head. (For example, in the now archaic phrase “bloody drops”, BLOOD itself does not modify DROPS: it is CONSISTING OF [...] that makes the link. Classifiers are weak in modifying function.

- Descriptors have a simple, basic modifying function.

- Epithets are stronger in function:
  - Being general and abstract, they can semantically modify not only the head entity, but other participants, the situation and so on (chapter 5). In "the bloody [Epithet] thing", bloody modifies the situation, as much as the referent, and modifies the speaker (in conveying the speaker’s feeling); it is more widely functional than in "dirty bloody [Descriptor] sports".
  - Many Epithets are weak in content, and correspondingly relatively strong in function; e.g. bloody, again, horrible and so on.

- Reinforcers are purely functional - reinforcing the head and other premodifiers: they are entirely grammatical, without content of their own. Perfect became steadily more abstract to the point where, in "a perfect fool", it is no longer descriptive, having lost the content, EXCELLENT; so the Reinforcer perfect is more grammatical than the Epithet perfect, in the same

7 Those features of grammaticalising words are from Cruse (2004: 88).
way that intensifying adverbs (such as *awfully*) are more grammatical than the adjectives they derive from.8

There is therefore a gradation in modifying functionality across the zones.

(b) Subjectification. Traugott (1995) and Tabor and Traugott (1998) show that part of the greater functionality of grammatical forms is that they have greater function of “being a marker of something in the language”, not only of “being a marker of something in the world” (Tabor and Traugott 1998: 262); see also Rosenbach, Stein and Vezzosi (2000), and Fischer (2007: 182). Since that depends on the speaker’s purpose, and on the interpersonal situation, it is “subjectification”; and in the terms of language functions (from Halliday 2004), it is increase in textual and interpersonal function. Using the term “subjectivity”, I have shown the increase in those functions across the zones in semantics (chapter 4, §6.1) and syntax (chapter 5, §8.2); and have shown the increase in interpersonal function across the zones in semantics (chapter 4, §6.1) and syntax (chapter 5, §8.3). (However, in one respect Reinforcers are less functional, in that they have no experiential function. Modal premodifiers - studied in chapter 5, section §4 - also do not fit the pattern exactly, since they do not belong in a particular zone, although in being modal they are subjective.)

Diagram 3 (above) shows increase in subjectification across zones, as *bloody* gained the subjective forms of meaning.

Further from the head, then, the zones are (on the whole) progressively more functional in having a wider range of functions - a higher degree of subjectification. 9

**Forming paradigms**

As words grammaticalise, they form paradigms, which (a) become smaller and more homogeneous, and (b) come to consist of closed-set words. This is Lehmann’s “paradigmatic cohesion”; its status as a criterion of grammaticalisation is supported by Bybee et al. (1994: 7), Croft 2003: (224-225), and Hopper and Traugott (2003: 165).

(a) The paradigms are smaller and more homogeneous. I have already shown the following. (The section references are all to chapter 4, on semantics).

- Classifiers have few lexical relations, so they form no linguistic paradigms (section §2.6). (Their referents form paradigms of world knowledge, however: Halliday, 2004: 320.)

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8* Traugott (1982: 251-2) discusses the historical grammaticalisation of such words.

9* Subjectification and increase in modifying function cover "autonomy", which is sometimes treated as a characteristic of grammaticalisation.
Chapter 11: Discussion

"Of a legal act: duly completed", now obsolete) did not have imperfect as antonym; to know an alternative word, you needed legal knowledge.

- Descriptors (section §3.6) sometimes form a clear semantic field or spectrum, (as with colours); but mostly sets of Descriptors are large, of indefinite size, and not clearly structured (as with running, walking, jumping and so on).

- Epithets (section §4.6.2) form regular, fairly small patterns: the comparative and superlative forms; synonyms (perfect / faultless) and antonyms (perfect / imperfect) - often in several dimensions (conceptual, social and expressive); those patterns have only two or three members (e.g. big / bigger / biggest, formal / informal).

- Reinforcers (section §5.6) constitute a tight pattern, on only one dimension, and with only three categories: maximiser (perfect), limiter (absolute <5>), and minimiser (mere <4>).

Premodifiers, therefore, form smaller and more homogeneous paradigms as we move away from the head.

(b) The paradigms are formed of increasingly closed sets. (I assume that being closed is a matter of degree. Also, I adopt the criteria of Quirk et al. (1985: 71-72): a closed set is "only exceptionally extended by the addition of new members"; closed-class members are "mutually exclusive and mutually defining in meaning".)

- Addition of new members. Chapter 9, §6.3, showed that, historically, words have frequently failed to enter the next zone. Further examples: military developed from Classifier only to Descriptor; Byzantine developed from Classifier to Descriptor and Epithet; perfect has developed all the way to Reinforcer (one of only a dozen or so words that have ever developed a Reinforcer sense). Reinforcers constitute a closed class, then, since the class is rarely added to; the Epithet class is partially closed, because only some premodifiers enter it; Classifiers form an open class (neologism, borrowing, and so on add to it frequently).

- Being mutually exclusive and mutually defining.
  - Classifiers do not have any mutually defining semantic sets (American, British and so on do not define each other); they can be used with other Classifiers freely. The Classifier perfect (as a type of legal act, or type of binding) is not defined in such a way.
  - Descriptors are to some extent mutually defining - where they have antonyms (retired/working), and where they form regular fields (e.g. colours).
  - Both the expressive and social meanings of Epithets are structured in mutually exclusive and defining oppositions: approving/disapproving; and formal/informal, dialect/standard, spoken/written, and so on; (for example, to understand formality in language, you must
The descriptive meaning of most Epithets is structured similarly, by synonyms and antonyms; for example, *perfect*/faultless, and *perfect*/imperfect.

- Reinforcers fit the criterion fully, since (as descriptively empty words), they are defined only by their place in the paradigm of maximisers, limiters and minimisers.

The increasingly paradigmatic structure as premodifiers move forward results from the increasing generality: generality brings abstract concepts, which are the substance of paradigms; and greater generality brings more contexts, which provide new dimensions for paradigms (social relations, for example). But as generalisation goes further, in the Reinforcer zone, those concepts and contexts are reduced, so that the basis for paradigms becomes smaller and more homogeneous.

There is, then, a gradation in the size and homogeneity of paradigm across the zones.

**Constraining choice within the paradigm, by the grammar**

The more grammatical a word is, the more the user's choice of item within the paradigm is constrained by the grammar, and the less by world knowledge. (This is Lehmann's "paradigmatic variability" parameter; it is supported by Croft, 2003: 224-225.)

- As we have seen (chapter 4, §2), Classifiers' significance as words is largely the world knowledge we associate with them; so grammar cannot constrain our choice.
- In Epithets, comparison is formally constrained to two forms (\(-er, -est, or more, most\)), and the paradigms described just above constrain our general choice. For example, if I want to express SMALL, then my choice among *small*, *wee*, *dinky*, and so on is constrained by English grammar's paradigms of formal, slang, and regional usage, and by its gradation through *small* and *minute* to *microscopic*.
- In the Reinforcer zone, speakers are very tightly constrained:
  - they must choose maximiser, or limiter, or minimiser;
  - there are only a couple of lexical choices for a limiter (*sheer* <5>, and *absolute* <5> "in the strictest sense"), and for a minimiser (*mere* <4>, and *absolute* <5> "mere"); the grammar forbids use of the apparently synonymous word, *perfect*.

Across the zones, there is a gradation in grammatical constraint of choice.
Chapter 11: Discussion

Conclusion: scale of grammaticalness

Two conclusions follow.

First, the premodification zones form a scale of grammaticalness: zones (and words) further from the head are more grammatical, because they are more functional (that is, less lexical), they form smaller and tighter linguistic paradigms, and they grade in grammatical constraint of choice. Movement away from the head would therefore be grammaticalisation.

Second: the whole nominal phrase, from determiner to head, forms a gradient of grammaticalness. That is because articles are more grammatical than any premodifier (having a two-item paradigm - definite/indefinite - and being grammatically obligatory); the premodifiers are progressively less grammatical towards the head; and heads are less grammatical than any premodifier (being content words with no modifying function and no subjectification).

3.3.3 Historical change of zone as grammaticalisation

Conclusion

Chapter 9 showed that premodifiers have frequently moved forward from zone to zone through historical time. (The diagrams of perfect, bloody and positive in section §3.3.1 illustrate the movements.) It follows, from the conclusion on grammaticalness reached immediately above, that those changes have been grammaticalisation, with words becoming more general, less content-oriented, and more functional, as they move towards the Reinforcer zone. The changes are closely related to the grammaticalisation to possessive position studied by Rosenbach et al. (2000), and to grammaticalisation from premodifier to postdeterminer studied by Breban (2006, 2007).

Chapter 9 also showed that the large majority of premodifiers that were able to move forward have in fact moved. It follows that grammaticalisation has been widespread through the lexicon of English premodifiers.

10 I leave aside considering whether articles differ from other determiners in grammaticalness.

11 The changes are even more clearly grammaticalisation if we adopt the subjectification criteria set by Tabor and Traugott (1998); see §3.3.2.

12 “Able to move” referred to syntactic ability (being in a position that has a zone further from the head), semantic ability (having content that is cognitively capable of use in the next zone), and having enough historical time to evolve a new sense.
Chapter 11: Discussion

Cline of grammaticalisation

We should therefore modify the standard cline, which is given by Hopper and Traugott (2003: 7) as:

(1) content item > grammatical word > clitic > inflectional affix.

(The sign "->" means "is less grammatical than".)

First: in the grammaticalisation of premodifiers, the stage "content item" has two substages: (i) specific content item (the Descriptor zone), and (ii) general content item (the Epithet zone).

Second: there is a stage before the content item; that is, naming item (Classifier zone), which is free of descriptive content, serving a referential and identifying function through world knowledge (see chapter 4, §2).

Thus the cline for movement of premodifiers away from the head is as follows (covering the stages "content item > grammatical word" in the cline given in (1), above):

(2) naming item > specific content item > general content item > grammatical word.

Expressed by zones, that cline is as follows.

(3) Classifiers > Descriptors > Epithets > Reinforcers.

3.3.4 Discussion of word grammaticalisation

Bleaching and enrichment of meaning

In discussing grammaticalisation, I have not considered “bleaching” of meaning, although it is part of Lehmann’s first criterion (“paradigmatic weight”) and is widely accepted as a feature of grammaticalisation (Croft 2000: §6.3.1, Bybee 2003: 157, for example).

The grammaticalisation discussed here can be seen as entailing bleaching, since some Epithets have lost perceptual meaning (being abstract) and some lose conceptual meaning (e.g. awful, terrible), and since Reinforcers have lost all descriptive meaning. But there is enrichment as well: Classifiers gain perceptual meaning in becoming Descriptors; Descriptors gain conceptual meaning, and expressive and social meaning, as Epithets. All of that is a natural part of their generalising. I suggest, therefore, that enrichment of meaning is a consequence of generalising, and that it can occur naturally with grammaticalisation. That is supported by Tabor and Traugott (1998: 231), and Fischer (2007: 119).

I suggest, further, that the concept of bleaching (as loss of meaning) is a misleading simplification: it restricts meaning to quantifiable content, ignoring feeling, force, and emphasis.
which premodifiers gain in some stages of their grammaticalisation. Moreover, it misses the essential point that, in grammaticalising, words do not gain or lose meaning so much as change the form of expression of their meaning - from lexical form to grammatical form.

I am not asserting that enrichment is a general characteristic of grammaticalisation; I suggest that it is a separate process, "semanticization" (Eckardt, 2006: 4).

**Processes and mechanisms**

As in chapter 9 (Historical Explanation), space prohibits full explanation of processes and mechanisms. I make a couple of points, however.

I have shown (in chapter 4 and in this section on grammaticalisation) that words generalise as they move away from the head. It is widely accepted that generalisation is central to grammaticalisation: see Bybee et al. (1994: 6), Miller (2004), Himmelmann (2004: 31), and Traugott (2006: 13). I have also shown (in section §3.3.2) that the movement extends words' use to textual and interpersonal purposes, in "subjectification" (Traugott 1995). That too is a characteristic of grammaticalisation: Traugott (1995), and Traugott and Dasher (2002).

It is also widely accepted that grammaticalisation processes are gradual, preserve the original construction, and occur in ordinary language use; see Haspelmath (2004: 28), for example. I have shown (in chapter 9, §6) that all three characteristics apply to movement away from the head. That contrasts with movement towards the head, where none of the three apply: changes are abrupt, create new constructions, and are commonly established by authoritative use (chapter 9, §6).

**Motivation**

I consider motivation here, although I have not considered it generally, to explain why movement here is in both directions, which seems quite unusual.

In moving forward and thereby grammaticalising, words have moved along the specific-to-general continuum; speakers and writers have used the value of generality, which expanding words from the limitations of specificity, through perceptual details (in Descriptors), to depth of possible meanings, complexity of sense relations, and expressive and social meaning (in Epithets), to the forcefulness of Reinforcers. (That is along part of Givón's apparently universal path from discourse through syntax to morphology - Givón 1979.) The motivation 14

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14 Fischer (2007: 119) calls for an explanation of the “strange behaviour” of words gaining meaning in much grammaticalisation; my account provides it, I believe.
Chapter 11: Discussion

for retaining these changes in words is their expressive force. (Compare Haiman, 1985, and Croft, 2003, on expressiveness.)

In moving words back towards the head, users have exploited the potential value of preciseness, as words move along the complementary vague-to-precise continuum. Vagueness, which goes with generality, has been repudiated. Individual words have become precise and referential as Classifiers; varying and uncertain relations between premodifier and head have become precise and fixed, as constructional meanings; senses have become objective, and fixed in meaning (without variation according to context and user, as with Reinforcer and Epithets), and are without overlaps. They are thus valued for clarity and exactness, and are used particularly for communication of knowledge, rather than personal expression. That is part of another path, balancing Givón's: lexicalisation - the process of bringing what is communicated out of the immediacy and subjectivity of the speech situation, making it fully and stated (lexically or constructionally): "displaced" (Cruse 2004: 45, following Hockett), and objective. The reduction of content to implicit (constructional) expression carries another advantage - conciseness: economy is a further motivation. (Haiman 1985, and Croft 2003, deal with the economy, but miss the cognitive motivation of exactness and objectivity.)

Support for grammaticalisation in premodification

Adamson (2000) notes that there is a "pathway" (2000: 59) in which premodifiers move to the left, shift category, and become more subjective (and sometimes move to the right); that agrees with my account. (However, her categories do not fit the processes well, she gives little detail, and she does not show how widespread in English the process is.) Paradis (2000) identifies the change from Epithet to Reinforcer (my terms, not hers) as grammaticalisation.

Directionality (1): movement forward and back

Most work on grammaticalisation discusses whether it is unidirectional, generally concluding that it is so, on the whole.

From what I have shown, it follows that grammaticalisation of premodifiers is not unidirectional, in two respects: movement occurs in both directions; and the subjectification occurring in forward movement is undone in backward movement. (I am asserting here only that the movement is not unidirectional. As noted in §3.3.1, it is arguable that movement backward is also a form of grammaticalisation, in which case grammaticalisation itself operates in both directions.)

However, both movements are unidirectional in the sense that the changes in individual words are not undone by movement in the other direction: just as the Descriptor senses of a
word remain in use as Epithet senses develop, so do the Epithet and Descriptor senses remain in use as Classifier senses develop. (For an example, see perfect, in chapter 9, §3.3.1; senses <1c>, <2> and <4> remained as <10> and <16> developed.) That is "layering", as discussed in Bybee et al. (1994: 15), and Himmelmann (2004: 30).

Haspelmath, unlike other writers, gives a motivation for the unidirectionality of grammaticalisation: the principle of "extravagance" (2004: 37-38) - attracting attention and being emphatic or forceful. There are two points to be noted.

* The layering I have just referred to provides a second motivation for unidirectionality: the expressive value of retaining all the new word senses and uses. That is part of expressiveness in general, as discussed by Haiman (1985) and Croft (2003), for example.

* Haspelmath misses a point I have made above: although no-one reverses the forward movement (motivated by "extravagance") by speaking in order to avoid attention or be weak in expression, speakers and especially writers are often more concerned with precision than with generality, force, or "extravagance"; they may then shift words in the other direction, for the precision and economy that brings. That is the motivation for change in the other direction, whose existence he denies.

I conclude that movement in each direction is well motivated.

**Directionality (2): movement "up" and "down"**

Premodifiers occasionally move out of the "pathways" described so far, as follows.

* Some move out of the forward path:
  * Some move "down" to submodifier rank, as intensifiers. Words may keep their adjectival form (e.g. very, pretty in informal use, and real in American informal use), or take a derived form (e.g. terribly, awfully). Since intensifiers are wholly grammatical, that change is grammaticalisation.
  * Some move "up" to a higher rank, as discourse particle (e.g. actual - see chapter 5, §6.2), and lovely as "response particle" (Adamson, 2000: 62). Since such words become purely functional, and empty of content, the change may be seen as grammaticalisation; but since they become less closely bound to the head, and wider in scope, the change may be seen as degrammaticalisation.

* Some words move out of the backward path.
  * Some move down to bound morpheme rank, in compounding (e.g. blackbird) - a form of grammaticalisation.
Chapter 11: Discussion

As we have seen, Classifiers often move up a rank, becoming head of the phrase (e.g. "a [Ford]" becomes “a [Ford]”; compare "a cashew", “my mobile”). Since they become quite independent of other words in the phrase, that change also may be seen as degrammaticalisation.

These shifts upward and downward are like “escape routes”, taking words out of continuing change on the regular paths.

These forms of change are worth noting, because degrammaticalisation is controversial, and because (to my knowledge) no authors make explicit the fact that some stages of grammaticalisation entail a change of rank.

Relation of premodifiers to determiners, and to heads

It will be evident to the reader that determiners such as the articles a/an and the are wholly grammatical, and therefore more grammatical than any premodifier. Likewise, I take it for granted that noun headwords are in general fully lexical, and therefore less grammatical than any premodifier; as noted in §3.3.2, they lack modifying function, in particular. Since the four premodifier zones grade between those extremes, there is in nominal phrases a single scale of grammaticalness, with six steps:

(1) Determiner > Reinforcer > Epithet > Descriptor > Classifier > head.14

Grammaticalisation has occurred from premodification into determiner position: for example, a/an formed from the Old English numeral, "one"; and there are comparable more recent changes; see Rosenbach et al. (2000), Breban (2006, for example), and Breban and Davidse (2005). Grammaticalisation has occurred from premodification into head position (as Classifiers fuse with the head or replace it); and grammaticalisation occurs across all the zones. So the historical process involves all steps of the scale.

3.3 Conclusion: grammaticalisation

3.4.1 Construction grammaticalisation

Historically, the development of premodifier order in English nominal phrases has been grammaticalisation of the type I have called "construction grammaticalisation", and so has the development of the specific constructions within the Classifier zone.

1514 I leave open the question of whether there are degrees of grammaticalness among predeterminers, central determiners, and postdeterminers.
3.4.2 Word grammaticalisation

Conclusions

- The zones form two complementary scales, with the four zones as steps: a scale of generality, the Reinforcer zone being the most general, and a scale of specificity, the Classifier zone being the most specific.
- Premodifiers move on both scales:
  - they move away from the head, on the generality scale, in grammaticalisation;
  - they move towards the head, on the preciseness scale.
- The processes have been occurring for many centuries, and are continuing.
- Grammaticalisation is a general characteristic of premodifiers, not an incidental process affecting a few words here and there.

Explanatory power

This section has not explained anything for which I have not previously offered an explanation; but I suggest that it enriches and coordinates other explanations, by showing in detail the interaction of semantic structure, zone order, and historical change.

I also suggest that it illumines grammaticalisation, since several features of my account have not to my knowledge been described before:
- the existence of parallel processes in opposite directions;
- the basis of grammaticalisation in a single stratum of meaning;
- the relevance to grammaticalisation of words' changing syntactic rank;
- the motivation for the form of unidirectionality both movements have;
- precision as a motivation for historical change.
4 Other theories of premodifier order

4.1 Introduction

Purpose
The immediate purpose of this section is to evaluate theories of English premodifier order other than my own. The ultimate purpose is to support my own account, by contrasting it with the inadequacies in others, and by showing that it incorporates what is valuable in them.

Coverage
The coverage is intended to be comprehensive, including all kinds of theory, but without attempting to refer to every author who has written on the subject.

Outline
Most of the subsections deal with unmarked order, taking in turn theories that are conceptual (section §4.2), semantic (§4.3), syntactic (§4.4), grammatical (§4.5), functional (§4.6), and psycholinguistic (§4.7); they are followed by a section on marked and free order (§4.8), discussion (§4.9), and a conclusion (§4.10).

Each section expounds the theory, assesses its descriptive and explanatory adequacy\(^\text{15}\), and discusses how it fits into my own account.

4.2 Conceptual theories

4.2.1 Introduction

"Conceptual theories" are those that explain premodifier order by the concepts which the modifiers denote. The issue is sometimes called "semantic" (e.g. Ruimy, Gola and Monachini 2001: 358); but to me semantics deals with the relationship between words and what they mean, not with the things or concepts meant. Some writers, such as Frawley (1992: 468), Partee (2000: 483), and Scott (2002: 9) call the issue “ontological”.

\(^{15}\) I take the terms from Chomsky (1965: 24 - 25); but "descriptive adequacy" here means 'how much of the data of attested nominal phrases a theory accounts for', and "explanatory adequacy" means 'how much understanding of premodifier order it offers'.
Chapter 11: Discussion

I group these conceptual theories into:

- those that assert that there are distinct classes of modifiers;
- those that assert there is a scale, with degrees.

I omit from each section the general criticisms which I will apply to all conceptual theories in the conclusion, §4.2.4.

4.2.2 Conceptual classes

Instances

There are several theories of this type. They include those of Hornby (1954); Brown (1965); Crystal (1971); Dixon (1982); Huddleston and Pullum (2002); Scott (2002). Other works include conceptual classes as part of their theory, making it a subordinate issue. They include Sussex (1974), Hetzron (1978), Quirk et al. (1985), and Bache (2000). I concentrate on the work of Dixon (1982), as a representative of the theories.

Exposition

Dixon's theory can be outlined in diagram 6 (below), which presents his classes and some of his examples (though I have constructed the table myself).

Diagram 6: Dixon's theory of premodifier order

<table>
<thead>
<tr>
<th>Value</th>
<th>Dimension</th>
<th>Physical Property</th>
<th>Speed</th>
<th>Human propensity</th>
<th>Age</th>
<th>Colour</th>
<th>Origin / Composition</th>
<th>Purpose / Beneficiary</th>
</tr>
</thead>
<tbody>
<tr>
<td>good</td>
<td>wide</td>
<td>hard</td>
<td>fast</td>
<td>wicked</td>
<td>new</td>
<td>white</td>
<td>oatmeal</td>
<td>dog</td>
</tr>
<tr>
<td>bad</td>
<td>big</td>
<td>heavy</td>
<td>slow</td>
<td>clever</td>
<td>old</td>
<td>brown</td>
<td></td>
<td></td>
</tr>
<tr>
<td>delicious</td>
<td>long</td>
<td>hot</td>
<td>quick</td>
<td>jealous</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The table indicates that value words precede dimension words, which precede physical property words, and so on. Dixon says (1982: 15-16) that there are “semantic”, syntactic and morphological criteria; but his discussion is on “semantics”, as the headings for the nine classes indicate.

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17 Premodifiers in Scott's 17 classes are "generated" in the order of the classes, and placed as "specifiers" of "functional projections"; but there is no reason for the order other than the conceptual class. The ordering is part of universal grammar, not only of English.

18 These nouns are premodifiers in phrases like "oatmeal dog food".
Chapter 11: Discussion

This group of theories includes most of the few accounts I am aware of that deal with order within the Classifier zone. For example, Huddleston and Pullum (2002: 453) say that words of provenance precede those of manufacture, which precede those of type. Others are Quirk et al. (1985), and Scott (2002: 114).  

Descriptive adequacy

The description given by Dixon (1982), and by others in this group of theories, does account for a large number of nominal phrases: “new white house”, for instance. But they are sharply limited in what they cover: all writers acknowledge some limitation, with expressions such as “no definite rules” (Hornby 1954: 154), “loose approximation” (Brown 1965: 281), and “tendencies” (Bache 2000: 241). Dixon specifies that he omits adjectives which are "deep nouns" (such as noisy) or "deep verbs" (such as burning), and various "difficult" adjectives such as curious and easy.

But the theories are simply wrong in implying that there is no regular variation in the position of words for a specific concept, as I have shown repeatedly. To give more examples (from the British National Corpus): main (which does not fit any of Dixon's categories very well), and the colour word purple, occur in different positions in normal use:

<table>
<thead>
<tr>
<th>main</th>
<th>a self-supporting</th>
<th>woody</th>
<th>main</th>
<th>stem</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>its engagingly</td>
<td></td>
<td>main</td>
<td>tune</td>
</tr>
<tr>
<td></td>
<td>lyrical</td>
<td></td>
<td>[theme]</td>
<td></td>
</tr>
<tr>
<td>the</td>
<td>main</td>
<td>independent</td>
<td>AIDS homecare</td>
<td>provider</td>
</tr>
<tr>
<td>purple</td>
<td>an adult</td>
<td>male</td>
<td>purple</td>
<td>hairstreak</td>
</tr>
<tr>
<td></td>
<td>a magic</td>
<td>purple</td>
<td>possum</td>
<td>plucker</td>
</tr>
<tr>
<td></td>
<td>purple, bulbous</td>
<td>[new]</td>
<td>pillow</td>
<td>lavas</td>
</tr>
</tbody>
</table>

(There are other important gaps in coverage, which I will explain in §4.2.4.)

Explanatory adequacy

These theories do not show any connection between the conceptual classes and any other feature of syntax or semantics, or with any function the order might serve, or with processing of the phrase. They do not explain why words are in conceptual classes, or why the order of classes is as it is - why, for example, does speed come before age (“fast new”), and not age before speed (“new fast”)? So the theories are of no explanatory value.

How these theorists go wrong

These theorists view language as simply conceptual; they are writing in the philosophical tradition which views the world as consisting of entities, events and properties, which we refer

1918 I emphasise the implication that no work I am aware of describes the constructional nature of Classifiers.
to directly in language; it views the function of language as simply communicating truths about them. They have failed to take into account - 

- the practical, expressive and social functions of language;
- the important difference between knowledge and meaning (which has been elucidated in previous chapters);
- the elements of meaning of which we are less conscious (see chapter 4, and chapter 10, §2); the "grammatically relevant semantic features" are "less salient to consciousness" (Kemmerer 2000: 58), so it is natural that linguists have been unaware of them.

4.2.3 Conceptual scales

4.2.3.1 Introduction

In this section, I include both theories that posit a cline, with differences of degree, and theories that posit steps in a scale.

4.2.3.2 Iconicity

Exposition

According to Haiman (1985: 106-107), "formal distance [between linguistic elements] corresponds to conceptual distance"; and "two ideas are conceptually close to the extent that they a. share semantic features, properties or parts; b. affect each other; c. are factually inseparable; d. are perceived as a unit, whether factually inseparable or not". By implication, then, a premodifier should be closer to the head than another premodifier if it is conceptually closer.

Givón (1990: 470) has a similar view, explicitly for noun premodifiers.

Descriptive adequacy

Nominal phrases do often have their premodifiers in what is intuitively an order of conceptual closeness. But there are many phrases where the principle does not apply.

- Haiman concedes in general that iconicity motivates order only sometimes: it is often outweighed by a competing motivation, such as economy.
- In many phrases, there is no difference in conceptual distance - in "four two-tone colour schemes", for example, where both modifiers denote colour.
- In other phrases, a more distant modifier is conceptually closer; in "snappy ankle-flared beat jeans", for example, ankle-flared is conceptually close to jeans (closer than beat is) because both share ANKLE and relationship to the body; but it is more distant.
Chapter 11: Discussion

Explanatory adequacy

The theory rests on a metaphor, "close"; when the metaphor is reduced to a literal and precise statement, the plausibility largely disappears.

First, "closeness" (in Haiman's definition, above) confuses concepts ("properties") with meanings ("semantic features"), entities ("parts", "affect each other", and "factually inseparable"), and perception ("perceived as a unit").

Second, what plausibility it has is better explained in other ways (as I have done in previous chapters); for example, the "closeness" is -

- shared referentiality (Classifiers and head; see chapter 4);
- shared objectivity (Descriptors and head share objectivity, relative to Epithets; see chapter 4);
- shared descriptiveness (that is, being not restrictive; see chapter 10, §3).

How these theorists go wrong

These theorists rely too much on a metaphor - "closeness" / "distance".

4.2.3.3 Generality, inherence, and so on

Exposition

Premodifiers are said to precede others if they are -

- "broader, more comprehensive, more general, commoner" - Goyvaerts (1968: 17-18); Givón (1990: 470) and Hornby (1954) have a similar view;
- "less definite" - Ziff (1960: 204); that is, if they can be used with a wider range of headwords;
- less "inherent" - Givón (1990: 470), and Whorf (1945/1956) - or less "intrinsic" (Byrne 1979).

Descriptive adequacy

The theories do not cover the range of nominal phrases very fully. Almost all of them do not even claim full coverage: they have qualifiers such as "typical" and "often" (Byrne 1979: 78), "likely" (Givón 1990: 470); "by and large" (Halliday 2004: 323).

Even their own examples are often not convincing. Whorf cites "a steep rocky hill" and "large red house"; but *steep* does not seem to be less inherent in *hill* than *rocky* is; nor (to apply the criteria from other works cited) does *steep* seem to be broader, or less definite, or less permanent than *rocky* is.
Chapter 11: Discussion

Explanatory adequacy

There is little explanatory power in these theories, since they do not explain how this order came about, what function it serves, or how it relates to any other feature of language. What validity they do have is dealt with by my account of the degrees of generality and subjectivity in semantic structure; (see chapter 4).

4.2.3.4 Steps on a scale: subcategorisation

Exposition

To Halliday (2004: 329), the structure of nominal phrase modification is "subcategorisation", with each modifier denoting a "subset" of what is denoted by the rest of the phrase. For example, in "those splendid old electric trains", old electric trains form a subset of electric trains. The same view is taken by Oller and Sales (1969: 222); by Bache (2000: 242), for his modification zone III; and by Warren (1984: 281), for her "classifying adjectives".

Descriptive adequacy

Describing premodifier structure as subcategorisation fits two types of phrase:
- phrases with subclassifying Classifiers (as I showed in chapter 6, §2.1.1.2) - an exact fit;
- restrictive phrases, where it fits the syntactic structure's step-by-step restriction - modifier [modifier [modifier head]] - a looser fit.

However, very many premodifiers are used descriptively, and saying that they subcategorise quite misrepresents the author's intention and the reader's response. For an example, I take the following sentence from a novel:

(1) "Why did she marry him, this musing brown-eyed young woman with coiled, plaited hair and a mysterious smile?"

The function of the premodifiers is descriptive - to depict the woman's present appearance, to heighten the sense of puzzlement about her motives; it cannot be to subcategorise this woman or women in general, or to identify this woman by categorising her.

Since a large proportion of nominal phrases are descriptive, the theory fails to cover usage adequately.

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Explanatory adequacy

For the phrases that the theory does apply to, it leaves obscure the nature and purpose of the categorisation - what the taxonomic basis is (e.g. science versus everyday usage), and whether the categorisation is an end in itself, or a means to identifying the referent.

How the theorists went wrong

The theory overextends a valid observation, making the common assumption that nominal phrases are in general restrictive, serving only to identify participants in the discourse. I suggest, further, that it confuses categorising with restricting reference.

4.2.4 Conceptual theories: Conclusion

This section provides general criticism of all the theories in this Conceptual Theories section. It draws heavily on the semantic explanation in chapter 4, but also on the syntactic explanation in chapter 5.

These theories assume that all premodifiers denote concepts, and that the concepts are related to the head as properties to an entity.

Because they assume that premodifier meaning is simply conceptual, they cannot account for:
- premodifiers that have only grammatical meaning, as do all Reinforcers, such as "an utter fool";
- premodifiers that have purely attitudinal or emotive meaning, as in "the bloody thing".

Because they assume that premodifiers denote properties, they cannot account for premodifiers that denote -
- actions or events, as in "a dying soldier";
- direction, place, or time, as in “upward movement”, "the above statement", and "early riser";
- an entity that is related to the head as an argument, as in "an enemy attack", and "ticket sales".

Because they assume that premodifiers all simply modify the head entity, they cannot account for other forms of premodification (see chapter 5), such as modifying -
- other participants, as in "their insane cackle", "a nude photo of the mayor";
- the act of predication, as in "a fake Picasso", "the alleged criminal".

Because the relation of a property to its entity is fixed, the position of the modifier should be fixed, according to these theories; so they cannot account for -
Chapter 11: Discussion

- a single premodifier that occurs in different zones (with the same core meaning), as in the examples of purple and main, given in section §4.2.2.
- phrases that have premodifiers in different positions simultaneously, like "high high heels";
- words that have changed in zone historically (as shown in chapter 9).

(The theories do allow for synchronic and diachronic changes in position when the word’s meaning changes as well.)

**How these theorists went wrong**

The ultimate cause of failure for all these theories appears to be the philosophical approach to language referred to above, in which language is seen only as communicating propositional information, as having no textual, personal or social functions, and as having no other meaning than the conceptual.

### 4.3 Semantic theories

By "semantic" here, I mean 'concerned with the nature of the relation between words and what they denote or express'.

**Exposition**

Quirk et al. (1985) give an account of four zones, on which my own account is based. They go on (1985: 1341) to "suggest one principle accounting for all premodifiers: a subjective/objective polarity". "Objective" means "relating to properties which are (relatively) inherent in the head of the noun phrase, visually observable, and objectively recognisable or assessible [sic]". "Subjective" means "what is relatively a matter of opinion, imposed on the head by the observer, not visually observed, and only subjectively assessible". (The authors qualify their account, by adding that the criteria for subjectivity are themselves subjective, and that "writers and speakers will naturally arrange premodification semantically, i.e. according to their communicative intentions". The last clause hints at my discourse explanation in chapter 10, but it is not explained.)

Hetzron (1978) gives a very similar account - his work was a source for Quirk et al. (1985). He gives subjectivity as the principle underlining the conceptual classes he sets out, which are similar to those of Dixon (1982).
Adamson (2000) has an element of this theory, in asserting that affective adjectives come before descriptive ones.

**Descriptive adequacy**

I accept this description of premodifier order: it is very close to my own semantic explanation, in chapter 4.

**Explanatory adequacy**

The theory is more explanatory than any of the conceptual theories. But, for both Quirk et al. (1985) and Hetzron (1978), there are several criteria (being inherent, observable, and public), which are not clearly unified; and the relationship of premodifier subjectivity to other features of language is not made clear.

### 4.4 Syntactic theories

**Exposition**

Halliday (2004: 322) says that the order of positions in the nominal phrase is "the progression... from the greatest specifying potential to the least". From that statement and his principle of subcategorising (discussed above), I presume this principle to be that of syntactic structure, such that each premodifier comes before the group of words it modifies or "specifies": "those [splendid [old [electric trains]]]", where splendid occupies the position which has “the greatest specifying potential”.

Ziff (1960: 201) gives the same principle (in addition to his principle of definiteness).

**Adequacy**

I accept this account: it is what I have set out as my syntactic explanation, in chapter 5.

**Discussion**

It is very striking that, although many authors are aware of the syntactic structure of nominal phrases - for example, in referring to "right-branching" structure - no others I have surveyed give syntactic structure as a fundamental explanation of premodifier order.
4.5 Grammatical theories

4.5.1 Order is by part of speech

Exposition

According to Biber et al. (1999: 598), the order of premodifiers is as follows. (The sign “>” means “comes before”.)

(1) Adverb > adjective > colour adjective > participle > noun ( > head).

Descriptive adequacy

The theory does accurately describe some phrases. But it has several inadequacies, as follows.

- Even by Biber and others' own account, the description is incomplete, since it applies only "in general", and it is only the “preferred” order.
- The parts of speech are not defined, so we cannot apply the theory reliably; we need to know whether "an interesting remark" has a participle or an adjective, for example.
- The parts of speech are not in fact in a regular order, as I have shown in earlier chapters. To illustrate the fact again: “40 watt incandescent bulbs” has a noun before an adjective; "the leading independent exploration and production companies" has a participle before an adjective.
- The theory cannot even account for a succession of adjectives, except when one of them is a colour adjective.

Explanatory adequacy

The theory states an order but gives no explanation, since it provides no cause or function for ordering by part of speech. Rather, it requires an explanation - such as my historical explanation in chapter 9.

How the theorists went wrong

The writers have simply accepted a generalisation they know to be partial - encouraged, presumably, by the common current view that such generalisations can be valid, for “prototype” concepts.
4.5.2 Order is by transformations undergone

Exposition

Martin (1969a, 1969b, 1970) and Sussex (1974) assume transformations in the formation of nominal phrases; but for them it is not the transformations that determine order, so I do not deal with their theories here. Levi (1978) asserts transformations for my Classifiers, but does not discuss the order of multiple Classifiers.

According to Vendler (1968), attributive adjectives are placed in their positions by transformations which move them from the predicative position in which they are first placed (in the base structure). When there are several adjectives in the nominal phrase, the transformations are applied in succession; the first to be moved is placed nearest the head; each successive transformation places its adjective further away from the head (1968: 127-128).

There are 22 possible positions.

Descriptive adequacy

There are several types of premodifie r that the theory cannot account for:

- the adjectives that can be used only in attributive position; for example, *future, damn(ed)* eventual, and many others (as listed by Huddleston and Pullum 2002: 553); and all the Reinforcers, such as *sheer, mere, and utter*;
- nouns and verbs used as premodifiers, since they are apparently not subject to those transformations;
- words that occur in different positions with much the same basic meaning, since the transformations cannot place a word from one base position into different positions in the surface structure; (I have given examples of this systematic variation of position in a number of places, including *purple* and *main in section §4.2.2 above.*

Explanatory adequacy

As argued by Martin (1969a: 698), there is no explanation or support for the postulated order of transformations, other than the order of the adjectives; indeed, Chatman (1960: 93) thought that transformations work the other way, from attributive adjectives to postmodifying expressions. So Vendler’s argument appears to be circular. Even if we accept Vendler’s order of transformations, the resulting order is still not explained: the first transformation could move its adjective to any of the 22 positions; the second adjective could go next to the first, or anywhere else; so a further rule is needed to explain the ordering; the transformation order itself has thus no value as explanation.
Chapter 11: Discussion

Vendler himself, moreover, says (1968: 130-134) that there are several rules that interfere with the results of transformation, such as rules for emotive adjectives and for some descriptive uses (1968: 133). Those further rules outweigh the transformational ordering; so again the transformations fail as explanation.

Some noteworthy proponents of transformational grammar have apparently felt unable to explain premodifier order: Haegeman (1994), a comprehensive textbook of government and binding theory, does not discuss the issue; and Chomsky wrote, as late as 1995, (1995: 382), “We still have no good phrase structure theory for such simple matters as attributive adjectives”. (Some recent transformational theorists have offered non-transformational explanations instead: see section §4.5.3.)

How the theorists went wrong

It seems possible that Vendler was influenced by historical “transformations”, such as the movement of genitive nouns from post-position to pre-position in the Old English period; his theory would be more convincing if stated historically. See, for example, chapter 9, §3.5 (where we saw that "ordinal of Salisbury" was “transformed” into "Salisbury use"), and §4.3. Otherwise, I conclude that his approach is simply wrong.

4.5.3 Order is by functional projections

Crisma (1995) and Scott (2002), building on the work of Cinque (e.g. 1994), suggest that the order is that of the “functional projections” in which the adjectives are generated; the adjectives are not moved by transformations, though in some accounts (e.g. Cinque’s) , the head moves (explaining the difference in pre-position and post-position between Romance and Germanic languages).

Exposition

For Scott (2002), which I take as a representative of this school, the functional projections determine order, and are each associated with a semantic class, very much like the classes of Dixon (1982) discussed above. Each projection can add something to the interpretation of the adjective. For example, in “the old man”, the projection adds AGE; but in “my old boss” (“former”), old is generated in a different projection, which adds TEMPORAL, and old will be placed in a different position. (These different interpretations are not worked out fully in Scott 2002, and still less fully in Crisma 1995.)
Chapter 11: Discussion

Adequacy

This theory accounts for changes in meaning with change in position; and it allows for what I call “constructional” meaning, in what the projection adds. But it leaves quite unexplained why the projections are arranged in that particular order, suffering from the problems of conceptual-class theories discussed in §4.2.2 and §4.2.4; and it seems improbable that the mind handles a sequence of 17 positions (Scott 2002: 114).

4.6 Functional theories

4.6.1 An order of functions determines the order

This theory is set out by Teyssier (1968), and is supported by Coates (1971), McGregor (1997), Bache (2000), and Adamson (2000).

Exposition

There are three functional types of premodifier, with a set order, as follows.

• First come "identifying" premodifiers, such as numbers, quantifiers, and (in some accounts) superlatives. These modifiers are determiners (not premodifiers) in my terms, and therefore outside the scope of this discussion.

• Next come "characterising" premodifiers; that is (in my terms), descriptive ones.

• Last come "classifying" premodifiers; that is restrictive ones.

Descriptive adequacy

The theory is correct for many phrases; and I have accepted it accordingly (as set out in chapter 10, §3, on discourse explanation). However, it is quite inadequate as a general description, since it does not cover nominal phrases where there are -

• several "characterising" modifiers, as in "After a relaxing waterside lunch"; or -

• several "classifying" modifiers, as in "Sixty is the minimum mandatory retirement age".

Explanatory adequacy

For the phrases to which it does apply, the theory is a good explanation.

How the theorists went wrong

These theorists have overextended a sound observation.
4.6.2 A single functional principle determines the order

Exposition

The theory assumes the syntactic principle that each premodifier modifies the rest of the phrase, and explains that by the further principle that "the most discriminative adjective tends to be placed first". What is “discriminative” is “determined by the pragmatic demands of the communicative situation” (Danks and Glucksberg 1971: 66). So (to use the example given by Danks and Glucksberg), if there are two red tables, only one of which is Swiss, we say "the Swiss red table" (not "the red Swiss table").

This principle is used by some other authors to explain exceptions to the order prescribed by their main principle: Vendler (1968: 130), Martin (1970: 379), Sussex (1974: 112), Huddleston and Pullum (2002: 452, 454).

Descriptive adequacy

The theory does accurately describe a large number of phrases (many of those with restrictive premodifiers), but it gives no account of descriptive phrases.

It is wrong in its implication that speakers can vary the order freely on this principle. That is shown by three different arguments.

- The authors give no evidence that the principle is followed in real usage. Martin (1970) gives laboratory evidence; the other authors appear to be giving invented examples.
- The groups of words cited by the authors occur in the British National Corpus in only a single order. The table in diagram 7 (below) illustrates the point from expressions given by these authors, by showing the fairly frequent occurrence in the corpus of the established order, and the non-occurrence of the allegedly acceptable reversed order. On this evidence, the reversed order is not acceptable to users of English.

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Established order</th>
<th>Reversed order</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wording</td>
<td>Occurrences</td>
</tr>
<tr>
<td>Sproat &amp; Shih (1988)</td>
<td>&quot;small brown&quot;</td>
<td>26</td>
</tr>
<tr>
<td>Sussex (1974)</td>
<td>“fine white”</td>
<td>28</td>
</tr>
<tr>
<td>Martin (1970)</td>
<td>“large red”</td>
<td>40</td>
</tr>
<tr>
<td>Huddleston and Pullum (2002)</td>
<td>“large black”</td>
<td>80</td>
</tr>
<tr>
<td>Crystal (1971)</td>
<td>&quot;long black&quot;</td>
<td>157</td>
</tr>
</tbody>
</table>
These authors' examples use words of the sort which I have shown (in chapter 4) to have different senses and to therefore occur in different positions anyway (e.g. long, fine). For other premodifiers, it has still less credibility: "skinny denim frock" and "regular weather reports" can hardly be *"denim skinny frock" or *"weather regular reports".

Explanatory adequacy

For the phrases to which it does apply, the theory is a good explanation: the most "discriminative" premodifier does precede others, as I showed in chapter 5 (Syntactic Explanation).

How the theorists went wrong

It appears that these theorists erred in not examining usage widely, relying instead on their own intuition, or on data obtained in artificial circumstances. They did not realise that meaning changes when the order changes (as demonstrated in chapter 4). They have also not taken into account alternative methods of achieving contrast such as contrastive stress ("a new cotton shirt"), and postposing one element ("a new shirt made of cotton").

4.7 Psycholinguistic theories

Some scholars explain premodifier order partly or wholly through psycholinguistic processing.

According to Martin (1969a, 1969b, 1970), the order of adjectives is determined partly by their relative accessibility (and partly by transformations, as noted previously). To Sproat and Shih (1988), the order of conceptual classes is determined by the number of computations each needs in processing: modifiers of size (e.g. large) need more computations (comparisons, primarily) than those of colour, for example, so they precede. Both theories leave important questions unanswered (such as why accessibility or number of computations should influence position); and the theories do not seem to have been sustained by later work.

Hawkins (2004) has a thorough psycholinguistic study of order, based on recent research, but gives no discussion of premodifiers. (I have related my account to that work in chapter 10, §2.)
4.7 Theories of free and marked order

4.8.1 Free order

I have argued (in chapter 3, on zones, and chapter 7, on free order) that within each zone premodifiers (being coordinated) are in grammatically free order, and that speakers may control the order stylistically. I have found no other accounts that make that claim clearly. Even Quirk et al. (1985), on which my account of zones is based, does not recognise freedom of order within the zones.

However, some works recognise that there is some freedom. For example, Bache says (2000: 240) that when commas separate premodifiers, the modifiers are "paratactically related". Huddleston and Pullum (2002: 452) distinguish between "rigid ordering" (where violation "results in clear ungrammaticality"), and "labile ordering" (where violation "may be justified by considerations of scope and information packaging [i.e. contrastiveness]"").

No writers I have read explicitly deny that freedom exists. But many deny it implicitly, in presenting a single scale with an indefinitely large number of degrees, on which all premodifiers are placed; see, for example, sections §4.2.3 and §4.3 above, on conceptual scale theories and semantic theories. Since they implicitly deny the existence of zones of modification, and since it is zones that provide freedom, they deny free order.

Adequacy

All such accounts are inadequate: by omitting co-ordinated structure, and implying that subordinated structure is universal, they imply that "a red, white and blue flag" is structured as "a [red, [white and [blue flag]]]", which implies that the blue flag is white, and that the white and blue flag is red - which is almost nonsensical.

4.8.2 Marked order

A number of authors describe (in various terms) an order which is marked, in the sense of reversing the usual order they set out (whether conceptual or semantic, whether classes or scales), and which is used for contrast. That is in effect the theory of discriminative order, which I have discussed above in section §4.6, on functional theories.

Denison (1998: 125) implicitly denies the possibility of marked order, in denying that there are rigid rules: "big brown bag" is simply "a more likely ordering" than "brown big bag".

No work I have read describes marked order of the kind I have set out.
4.8.3 Orders that are "tendencies"

Exposition

Many of the writers discussed so far give (as a main or secondary principle) an order whose use is a tendency.

Adequacy

I have accepted a number of such principles as correct, though only partial as explanations; for example:
- argument structure - Quirk et al. (1985: 1342); see chapter 6;
- derivational morphology - Bache (2000: 242); Quirk et al. (1985:1338); see chapter 10, §5;
- length, rhythm - Hetzron (1978: 176); Bache (2000:242); see the discussion of free order in chapter 7;
- explanatory relation - Hetzron (1978: 177); see chapter 5, §2.2, on syntax.

The system hypothesised by these authors is very complex, since there are subtendencies within tendencies within zones. Quirk et al., for example, say (1985: 1338-1339) that within zone II, nonderived words tend to come before deverbal words, which tend to come before denominal words; and that within nonderived words, size and length words tend to come before others. That makes seven positions; but since emotive words tend to precede others (1985: 1339) in all those positions (two places within each position), there are in effect 14 positions. Speakers must calculate indefinite probabilities for 14 positions. The processing limits discussed in the psycholinguistic literature cited in chapter 10, §2, make it very unlikely that the mind can operate such a system in spontaneous speech, at least.

How these theorists went wrong

The error here, I suggest, can be seen in the key word, “tend”. Empirically, “deverbal words tend to precede denominal words” means only that that the order occurs more often, statistically; but there is no explanatory force in the statistics.
4.9 Discussion of other theories

Classifiers

I noted in chapter 6, §4.1, that there has been a long and inconclusive discussion of what I have called "Classifiers", under terms such as "nominal compounds" (Lees 1970), "compound nouns" (Downing 1977), "complex nominals" (Levi 1978), "classifying adjectives" (Warren 1984), "noun-noun compounds" (Ryder 1994). See also Coates (1971), and Al-Kharabsheh (2005). The approach used has varied widely. Some works note the Process-head structure (with Agent and Patient), in phrases such as "opposition corruption allegations" (e.g. Radford 1993: 75), usually attributing it to an underlying "sentence". However, they are alike in concluding that there is no syntactic structure among Classifiers as a whole - only an indefinitely large set of semantic relations: Ryder (1994: title) describes the situation as "chaos".

Perhaps the main mistake of most of the authors was methodological: they considered Classifiers individually, therefore missing the patterns that appear when long Classifier groups are compared (as in my tables in chapter 6). They were also handicapped, I suggest, by their assumption that (because they are nouns) noun premodifiers are fundamentally like noun heads, and not like adjectival premodifiers, even though Quirk et al. (1972: §13.65) had shown that to be wrong before most of those works were written.

I suggest that my account resolves the main issues, showing that there are fully established constructions (which those studies deny), as well as constructionless uses, and illuminating the nature of the various relations those authors discuss.

"Problem words": little, old, young.


In fact, there is nothing special or puzzling about the order of these premodifiers: they are explained by the principles set out in earlier chapters.

• They occur in different zones, with different senses; see chapter 4, especially §4.2.3. (Examples include “little [Epithet] black dress” and “Australian little [Classifier] penguin”.)
Chapter 11: Discussion

- They have diminutive and intensifying uses; see the semantic explanation in chapter 4, §4.6.5, and the syntactic explanation in chapter 5, §2.2. (Examples include “dear little thing” and “good old Joe”).
- They have a number of uses in idioms. (Examples include “my old man” [‘my father’], “little man” [‘boy’], “little house” [‘privy’], and “young man” [‘boyfriend’].
- Marked use explains the only use I have met that is not covered by the points above:

(6) "My mum had .... a blown glass [submodified Classifier] little [Classifier] mug".20

Normal use would be "a little [Epithet] blown glass [Classifier] mug"; the speaker treats "little mug" as a type of mug, contrasting with "Toby mug", in a marked use.

A number of uses seem borderline between idiomatic and diminutive use (e.g. “any old thing”), or between standard and diminutive use (e.g. the baby’s “hot little forehead”); that is a natural consequence of the historical development of one use from another.

4.10 Conclusion: other theories

In this section, I make some general comment on the weaknesses of the theories I have discussed, drawing conclusions which support the approach I have taken in the whole thesis.

Most of the plausible theories of premodifier order are semantic; the transformational theories and the philosophical (or “conceptual”) theories have been unconvincing. That suggests that the best explanation has semantics at its core.

There is a wide range of approaches to explaining premodifier order, with many having something of value to contribute. Nearly all of the single-principle theories are limited in their coverage, by their authors’ own admission. Those two facts suggest that the best explanation must incorporate a number of linguistic levels and explanatory approaches.

We found that many theories are correct to the extent that they do apply to many of the nominal phrases that occur in English, but that they are of little value, because they do not explain why the order should be so, or how it came about. Conversely some theories offer useful explanation, but fail to describe many nominal phrases. A good account must combine both descriptive and explanatory adequacy. A few theories are adequate in both ways, but are too complex to be workable.

21 20 Wellington Corpus, WSC#DPC067: 035: BU; spontaneous conversation.
To sum up: other theories of premodifier order largely fail, with their failures suggesting the following criteria. The best explanation must:

- have semantics at its core;
- use a full range of approaches, and involve many levels of language;
- be adequate both descriptively and explanatorily;
- be complex (in covering a wide range of phenomena), yet simple (in providing for fast processing of long phrases).

I claim that my account succeeds by those standards, and that consideration of other theories of premodifier order, while not giving direct evidence for my account, gives it solid support.

5 Conclusion to discussion

This chapter has discussed the nature of the zones, grammaticalisation, and other theories of premodifier order. Those topics are not related directly, and each section has its own summary, so I give no general summary.

In previous chapters, I gave my own account of premodifier order; in this chapter, I have amplified it, and reviewed what other writers have said: we are ready to conclude the thesis.
Chapter 12: Conclusion

1 Introduction

The chapter has two purposes:

- to summarise the thesis -
  - what it asserts about the nature of premodifier order in English nominal phrases;
  - the explanations it gives for the order;
- to integrate its explanations (which are numerous and so varied as to perhaps seem heterogeneous), and to do so in a fresh way.

Outline of the chapter

The chapter is arranged as follows.

- Section §2 gives general conclusions, in a broad summary, across the chapters.
- Section §3 gives specific conclusions, in a chapter-by-chapter summary.
- Section §4 integrates the explanations of premodifier order.
- Section §5 discusses the fulfilment of the purpose of the thesis, as set out at the beginning.
- Section §6 suggests areas for further research.

2 General conclusions

This section summarises the main points of the thesis briefly, and in order of importance to the argument developed.

Unmarked order:

- There is a normal, grammatically required unmarked order in English nominal premodifiers.
- That order consists of the order of the zones in which the words occur.
- There are four zones, each of which may have many words (coordinated with each other), or none.
Chapter 12: Conclusion

- The order of zones is at once -
- semantic (that is, of words' constituent types and dimensions of meaning - their "semantic structure"), and -
- syntactic (that is, earlier words modify all the later words as a group, and are subordinated to them).

**Marked order:**
- The normal order can be varied: moving a word into a zone for which it has no conventionalised use gives the word emphasis, and a new meaning of the type appropriate to its zone.

**Free order:**
- When there are two or more words in a zone, speakers may grammatically put them in any order.
- Sometimes speakers choose to follow a stylistic principle for the order.

**History**

The order has evolved historically, with the syntactic order developing in Middle English, and the semantic order developing as an extra dimension by early in the Modern English period.

**General**

The principles given just above are confirmed by information structure in the phrase, by the processes of grammaticalisation, and by what we know of psycholinguistic processing and of children's acquisition of nominal phrase structure.

The various direct and supporting explanations provide an integrated explanation of premodifier order, with semantic structure as its basis.

### 3 Specific conclusions

**Introductory note**

This section expands the previous section, to set out the conclusions of the thesis fairly fully, in the order of the chapters. The sections are based on the chapter conclusions, but they are intended to be readable on their own.
Chapter 12: Conclusion

(1) Zones chapter:
- Four zones control the order of premodifiers in English nominal phrases; they are -
  - a "Classifier" zone (closest to the head); e.g. “Your actual tinny round percussion instrument”;
  - a "Descriptor" zone; e.g. “Your actual thin round percussion instrument”;
  - an "Epithet" zone; e.g. “Your actual tinny round percussion instrument”;
  - a "Reinforcer" zone (furthest from the head); e.g. “Your actual tinny round percussion instrument”;
- The order of premodifiers is determined by their zone membership.
- It is the specific use of the word that determines its zone; many words belong in different zones in different uses; e.g. pure in the following:

<table>
<thead>
<tr>
<th>Reinforcer</th>
<th>Epithet</th>
<th>Descriptor</th>
<th>Classifier</th>
<th>head</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Shetland pure</td>
<td>wool</td>
</tr>
<tr>
<td>a</td>
<td>pure</td>
<td>unforced</td>
<td>German</td>
<td>identity</td>
</tr>
<tr>
<td>her</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>pure</td>
<td>disgusted</td>
<td>natural</td>
<td>soprano</td>
</tr>
<tr>
<td></td>
<td></td>
<td>shameless</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

- There are three types of order. They are -
  - unmarked order (grammatically required, and applying to words in different zones);
  - marked order (applying to words in different zones, and a breach of the unmarked order, but established as an option by usage);
  - free order (in which there is no grammatically required order, and applying to words in the same zone).

(2) Semantic Explanation chapter

The unmarked order is in part semantic.
- The zones are semantically distinct, each having its own type of semantic structure - that is, combination of types and dimensions of meaning. (The following examples are from the phrases cited just above.)

11 British National Corpus.
22 All examples are from the British National Corpus.
Chapter 12: Conclusion

- Reinforcers are purely grammatical; e.g. *actual*; “pure disgusted .... young woman”.
- Epithets have scalar descriptive meaning, and only they can have expressive or social meaning; e.g. *tinny* (unfavourable and colloquial); “pure unforced natural soprano”.
- Descriptors have nonscalar descriptive meaning; e.g. *round*; “… pure German identity”.
- Classifiers have referential meaning, and relate to the head by a constructional meaning; e.g. *percussion* - related to *instrument* by the constructional meaning, OF THE [percussion] TYPE; “Shetland pure wool” - FROM Shetland, CLASSIFIED AS ”pure”.

That is an order from the cognitively most basic, simplest and least linguistic (Classifiers), towards the most complex, most sophisticated, and most linguistic (Epithets and Reinforcers); it has the most directly referential words (Classifiers) next to the head, which is the focus for the act of reference made through the whole phase.

That is a required order, constituting a grammatical rule.

(3) Syntactic Explanation chapter

The unmarked order is in part syntactic.

- Each premodifier precedes the group of words it modifies - that is, any following premodifiers and the head; e.g. “her [pure [unforced [natural soprano]]]”.

That is a required order, constituting a grammatical rule.

- The zones further forward have wider syntactic powers: they can semantically modify more entities than the later zones can - even outside the nominal phrase.

- If the situation of use puts semantic and syntactic rules in conflict, users must follow the semantic rule; for example, the syntactic structure for contrasting a new German identity with a new French one would be **“a German new identity”, but the semantic rule disallows that.**

There is, however, an exception to the dominance of semantics:

- modal premodifiers such as *fake and supposed* are placed immediately before what they modify, regardless of other premodifiers’ semantic structure; (#“supposed new German identity”, or #“new supposed German identity”, or even #”new German supposed identity”).

The syntactic scope and modifying power of the various zones depends on their semantic structure.
Chapter 12: Conclusion

(4) Classifiers chapter

The Classifier zone has an unmarked order of its own, in five alternative constructions. The constructions express process relations parallel to those of clauses; the two commonest can be illustrated as follows.

- “60 watt electric soldering iron”, with the Participant in the process relation (IRON) as head and the Circumstances as modifiers, and with implicit relations to the head ("qualia"); for example, IS THE FUNCTION OF is the implicit relation of soldering to iron;
- “U.S. drug enforcement”, with the Process in the semantic relation (ENFORCE) as head, and with the modifiers related to the head as arguments - Actor (U.S.) and Goal (drug).

Many Classifiers are used in no construction, singly.

(5) Free Order chapter

When there are several premodifiers in one zone, the order is grammatically free, but speakers and writers often give the modifiers a stylistic order, such as:

- achieving climax; with the most forceful word last; e.g. "a small, very modern, even spare house";
- developing the integrity and cohesiveness of the text, with the key word first; e.g. "her stagnant but peaceful Yugoslav homeland", where stagnant gives the feeling and theme of the whole passage.

(6) Marked Order chapter

The unmarked order set by the semantic and syntactic rules may be varied at the speaker's choice, in marked order. Moving a word into a new zone makes it salient, and gives it a temporary new meaning appropriate to its new zone and its context; for example, “the ruby, sweet-tasting Parma ham” (not “sweet-tasting ruby Parma ham”), where ruby is no longer simply a colour word (Descriptor), but an evocative Epithet.

(7) Historical Explanation chapter

The present unmarked order of premodifiers has evolved through the history of English, in three main stages:

- In Old English, the order was adjective + participle + genitive noun, with all premodifiers modifying the head directly, as in #“[poor and old] [starving] [of-London] men”.

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In Middle English, Old English order was reanalysed as a syntactic structure; “old [poor [London men]]” restricted the reference of “poor London men”, and “poor [old [London men]]”, restricted the reference of “old London men”; poor, old and London were similar semantically (factually descriptive) in inherent meaning.

By Early Modern English, the order had been reanalysed again, as having a semantic structure as well as the syntactic one, and as being fixed by the semantic structure of the words; “poor [old [London men]]” was required as the order; and poor was an Epithet, old was a Descriptor, and London was a Classifier, having different semantic structures. That change created the zones.

In the 19th and 20th centuries, several constructions evolved in the Classifier zone, each forming its own structure of subzones.

The history provides a general explanation of the order, parallel with the synchronic ones; but it also explains specific features such as the frequency of adjective-participle-noun sequences, and borderline examples.

Free order always existed for coordinated premodifiers, but the stylistic use seems to have developed only in recent centuries.

Marked order evolved with the zones (on which it is dependent) in the transition to Early Modern English; it has been used deliberately only since the 20th century.

### (8) Supporting Explanations chapter

The explanations given in the previous chapters have support in other areas of language.

- Modern understanding of language processing makes the explanations of order given in the thesis psycholinguistically credible.
- Some nominal phrases have a discourse structure of their own (paralleling clause structure), based on the semantic and syntactic structures.
- What we know of the order in which children acquire premodifiers supports the explanations given: Classifiers (closest to the head) are learned first - being the most basic - and others in succession away from the head; that mirrors the semantic and syntactic order.
- It seems probable that phonological structure mirrors semantic and syntactic structure, in expressing them (the unmarked order for each being to have the most important first); and that morphological structure fits the order, as a processing aid.
(9) Discussion chapter

- The premodification zones:
  - they are vital to nominal phrase structure, operating at all linguistic levels - discourse, syntactic, semantic, morphological, and probably phonological;
  - the Classifier zone is different from the other zones in several important ways, while similar in others.
- Historically, premodifiers undergo grammaticalisation; they become more general and more functional as modifiers, as new senses develop for zones further forward.
- There are a number of other theories of premodifier order, most of which have some valid element which has been incorporated into this account, but a few of which must be simply rejected.

4 Explanatory conclusion

Introductory note

So far in the thesis, explanation has been by linguistic level (semantics, syntax, and so on), and from synchronic and diachronic approaches. This section sets out to integrate the explanations through several principles that have so far been incidental; then those principles are further integrated through the principle of language function.

Processing constraints

Language is fundamentally constrained by the mind’s ability to process the structure and content of language. (The subtitle of Givón, 1979, encapsulates the point: “grammar as a processing strategy”.) The processing of premodifiers in unmarked order is automatic and unconscious, since the order is constituted simply by four zones, and is fixed by grammatical rule. Premodifiers in free order (in the same zone) are often arranged unconsciously, but sometimes speakers work more deliberately, following a stylistic principle. Marked order is a relatively deliberate structure, not produced by routine automatic processing; it mostly occurs in writing.
Gradience and discretisation

The processing is assisted very greatly by Givón’s “discretization”: “Syntax tends to discretize the scalar cognitive dimensions that underlie it. ... Such discretization is an absolute necessity for information processing under real-world time constraints.” (1988: 278.) Subject, predicator and object discretise the flow of a clause. Similarly, the zones discretise semantic gradients of several kinds: specific to general, content-oriented to grammatical, and monosemous to polysemous, for example. The syntax is also structured by discrete units: word units within the zone unit. So is the discourse structure: Topic and Comment discretise the gradient from given to new. (Section §4.2.3 of chapter 4 noted that Descriptors discretise qualities that Epithets represent as scalar - "continuous").

Construal

The gradients (such as from specific senses to general ones) are formed historically by repeated fresh construal: other types and dimensions of meaning are added (or lost), giving a word a new semantic structure. We have seen that it is semantic structure, not content, that distinguishes the zones semantically, and that in principle almost any word can occur in different zones - an important characteristic of the zones, and one that has generally been missed in the literature. (This reconstrual is analogous to giving words new relations and functions by derivation of adjectives from nouns, and so on; premodifiers are reconstrued similarly, without derivation.) Likewise, words' syntactic relations are reconstrued: first, within the four main zones, from modifying simply the head entity (Descriptors) to modifying some other participant or the whole situation (Epithets), for example; and second, within the Classifier subzones, among the five constructions. The history of individual premodifiers, and of the premodification structure itself, is characterised by reconstrual.

Importance of what comes first

Another element of the gradience in premodification is that, as a default principle, more important words come further from the head. Semantically, the most forceful or informative word comes first; syntactically, the most discriminating comes first; in discourse structure, the word with most information value comes first. Those are the principle's application in unmarked order; in free order, it may be the most important for the textual theme that comes first; in marked order, it is first position that gives the word prominence and forces the semantic change. The default order can be overruled by deliberate processing: for example, free

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order may put the important last, as climax, and marked order may move a word to last position, to gain preciseness.

Developmental sequence

The gradients (including that of “important first”) constitute a synchronic developmental order, from Classifiers forward. Cognitively, Classifiers are conceptually most basic and Descriptors experientially most basic; Reinforcers are most sophisticated, and thus advanced. Semantically, the zones develop in generality and subjectivity, and thereby in grammaticalness. They are part of the larger sequence from referential, naming, and heavily cognitive heads, through partly abstract and descriptive premodifiers, to determining, fully abstract and wholly linguistic determiners.

Historically, development has mirrored the cognitive and semantic sequence, with the most sophisticated and grammatical developing last, on the whole; that applies to both the zones (broadly), and to individual words - as grammaticalisation. The developmental order appears also in child development, with children evidently learning Classifiers first, and Reinforcers last.

Realisation and exploitation

The historical development has had many “triggers” or “causes” for the innovations that contributed to it; but the adoption and spread of the innovations has (I have argued) been motivated by a deeper and more personal need: finding nominal phrase structures that satisfyingly realise deeper structures and intentions. The zones realise different semantic structures. That is highlighted by the change in the role of parts of speech; for example, a participle in Classifier position realises an object, in Epithet position it realises a property, and only in Descriptor position does it realise an event. The syntactic modification structure realises the semantic modification (perceptual Descriptors modifying referential Classifier + head, conceptual Epithets modifying both of them, and so on.) Phonological stress appears to realise the important-first structure when it occurs, just as contrastive stress realises conceptual contrast.

To some extent, however, a complementary process has been at work: a structure that developed to realise one structure is now exploited for another. The discourse structures (e.g. modifier as Comment, with head as Topic) use the pre-existing syntactic structure, just as the modern semantic structure used the pre-existing syntactic structure.
Chapter 12: Conclusion

There is a more general principle below those principles of processing constraints, gradience, construal, exploitation, importance of what is first, developmental sequence, and realisation. To that we now turn.

Language function

Premodifier semantics and syntax is constrained - "from below", as it were - by the nature and limitations of the mind's processing system; but it is also constrained - from above - by the purposes I have identified as language functions. The experiential and textual functions are realised through the semantic and syntactic units into which the gradients have been discretised; and, where necessary, those units are provided by the functions' reconstrual of more fundamental units. The expressive function exploits the gradients themselves (which also constitute the synchronic and diachronic developmental sequence), putting first what is important for personal and interpersonal expression.

The fundamental explanation for premodifier order in English nominal phrases is the working out of the functions they serve for language users.

5 Fulfilment of the purpose of the thesis

In section §1 of chapter 1, I wrote that my purpose was to account for the nature and function of three broad phenomena:

- rules of premodifier order that are set grammatically;
- rules that apply when the order is not set grammatically;
- rules that allow speakers to break the grammatically set rules.

I have accounted for those three phenomena, as unmarked order, free order, and marked order.

I also set out my purpose (in section §3 of chapter 1) as filling the need implied by Cruse (2004: 302): “Various partial explanations [of the order of premodifiers] have been put forward, but none is comprehensively convincing". I specified the need as solving three general problems: the relationships and plausibility of different explanations were not clear; there were gaps in the approaches followed previously; and some fundamental facts had not been taken into account.

I have integrated the various explanations, while adding others (such as from discourse structure, language acquisition, and psycholinguistics); I have followed the missing approaches
(semantic and historical, chiefly); and I have accounted for the new facts (such as the
occurrence of the same word in different positions, and the change of meaning as words
change in position).

I claim, then, to have given a comprehensive explanation of premodifier order in English
nominal phrases, as Cruse asked for. I leave it to the reader to decide whether the explanation
is comprehensively convincing.

6 Beyond the thesis: further research

Several topics have emerged during the thesis, a full treatment of which would have been
beyond its scope, but which invite further research because they appear to be both new and
promising. They are as follows:

- the implications of my analysis of Classifier constructions for the study of compounds (see
  chapter 6, especially §4.1);
- the history of the order - for example, mechanisms of development, and evolution of the
  modification types listed in chapter 5 (see chapter 9);
- the survival, as Classifiers, of uses that are historically genitive - a third type, additional to of
  and -s genitives (see chapter 9, §3.1);
- present trends in premodification, and the probable future (see chapter 9, §5.4);
- the history of semantic structure itself - when and how the types and dimensions of meaning
  in English developed (see chapter 9, §5.4) - which appears to be a new subfield within
  linguistics;
- the existence of information structure in various types of phrase, as well as in clauses (see
  chapter 10, §3);
- the role of phonology in premodifier order (see chapter 10, §5);
- grammaticalisation in nominal phrases, and the existence of grammaticalisation in matching
  opposite directions (see chapter 11, §3);
- the nature of “parts of speech”, and the use of “prototype concepts" for linguistic analysis
  (see chapter 11, §4.6.2 footnote).

I suggest that further research in those areas will be profitable.
Appendixes

Introduction

These appendixes supply data and argument that supplement the text of the Historical Explanation chapter.

1 Appendix A: Middle English

Introduction

This appendix gives data illustrating the change in nominal phrase modification structure asserted in chapter 9, §3 - the Middle English section of the Historical Explanation chapter.

It is taken from a survey of a body of Wyclif's writing. I worked from the Early English Text Society's edition of Wyclif, taking whole chapters totalling about 45,000 words from the first part of the book.

I did not count repeated phrases, or phrases with explicitly coordinated modifiers such as "needful and profitable ordinance". In phrases like "open and privy cursed living", I took "open and privy" to be coordinated and therefore a single modifying expression, and "cursed" to be a second modifier. On that basis, there were 42 multi-modifier nominal phrases, and none of the phrases had more than two premodifiers.

Restrictiveness

To test my hypothesis that the order in Middle English was syntactic (based on restrictive use of premodifiers), I determined from the context whether each premodifier was intended to be restrictive or "descriptive" in function. (I use "descriptive" as a more precise word than "nonrestrictive".)

The results of the analysis are as follows.

- In 10 phrases, both premodifiers were restrictive; e.g. "feigned contemplative life"; where contemplative life is contrasted with active life, and feigned contemplative life is contrasted with sincere contemplative life.

- In 9 phrases, the first premodifier was descriptive, and the second restrictive; e.g. "their little worldly lordships"; the worldly lordships are contrasted with secular lordships, and are then described as "little" (= 'petty').

- In 21 phrases, both premodifiers were descriptive, e.g. "the old poor man"; in the context, the man has already been identified uniquely, and poor and old are added descriptively.

- In 2 phrases, I could not determine the function of the premodifiers.

**Subordination**

I analysed further the 21 phrases with two descriptive modifiers, to see from the context whether fourteenth century speakers would in fact have understood the modifiers as subordinated. (The issue is illustrated by "a smart two-tone colour scheme"; we understand that as "a [smart [two-tone [colour scheme]]]"; although the modifiers are descriptive, they are subordinated.) I concluded that 6 of the 21 phrases would clearly have been understood as subordinating. For example, "little poor priests ... that dwell in parishes"; the phrase "that dwell in parishes" identifies the members of the group, since all parish priests were poor to Wyclif; so little and poor are descriptive. Wyclif refers to "poor priests" repeatedly in his work, contrasting them with the monks and friars, so little modifies "poor priests": "little [poor priests]", not "[little] [poor] [priests]". The other 15 of the 21 phrases with two descriptive modifiers read as if the modifiers are coordinated, but they have no conjunction, and are printed without a comma (which would have shown clearly that Wyclif intended them as coordinated). An example is, "new costly portos";  [portos = 'portable breviaries']; there is no

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contrast with old portos, or with cheap ones, and the order could well have been reversed, to "costly new portos" - as in Present Day English.

The conclusion of this analysis, then, is as follows:

• 25 of the 42 nominal phrases (about 60%) were clearly subordinating. That is:
  • the 10 phrases with both premodifiers restrictive,
  • plus the 9 phrases with the first premodifier descriptive, and the second restrictive,
  • plus 6 of the phrases with both premodifiers descriptive.
2 Appendix B: Words changing zone

1 Introduction

Function of this appendix

This appendix supplies data and argument that supplement the text of chapter 9, §6.3, “Words changing zone”.

Passages, and method of analysis

For the analysis, I took news reports from the *New Zealand Herald* for two random dates (September 12th 2005, December 31st 2007), as everyday written English; and I took spontaneous conversation from a random section of the Wellington Corpus, as everyday spoken English. From the news reports, I took successive premodifiers, with a maximum of 10 from each report, until I had 60 words; from the conversation, I took premodifiers from multi-modifier phrases, until I had 40 words. I counted repeated words only once; and I excluded words that had no SOED entry as premodifier (such as most noun premodifiers), since there was no record of meaning development.

I assigned each of the SOED numbered senses for the word to a zone (Reinforcer, Epithet, and so on); that was done by the semantic structure of the sense, not by position in a multi-modifier phrase, since it was quite impractical to find a suitable multi-modifier phrase for every sense. I also noted the period of each sense’s first recorded use. The nature of the analysis makes some degree of error likely, but I am confident that on the whole over-counting in some instances is balanced by undercounting in others.

The sample is small, and I have not used any formal statistical method of analysis. The results are presented as suggestive, not as statistically reliable.

Word histories to illustrate issues

77 Specifically: assigning a sense to a zone is somewhat subjective; and when SOED gave (within one numbered sense) several Descriptor senses and one Classifier sense (for example), I rated the sense as Descriptor, which undercounts Classifiers by one.
The history of *perfect* illustrates a conceptual word, and one that "moved" forward and back; *skinny* illustrates an expressive word; and *compulsory* illustrates a word that has not changed zone.

*(1) Perfect*

- It began as a legal term in Middle English - a Classifier in type: <1> "Of a legal act: duly completed"; now obsolete.
- It developed an Epithet-type sense in the same period: <2> "Fully accomplished", with subsenses "Prepared" and "Thoroughly learned".
- That later produced another Epithet sense (still in Middle English), with several subsenses: <3a> "Having all the essential elements... "; <3b> "Of sound mind...", now obsolete; <3c> "...exact, precise", <3d> "Accurately reproducing the...original".
- From sense <3>, more Epithet senses developed:
  - <4> "Free from any flaw" (Middle English);
  - <5> "Definite, certain" (16th century);
  - <6> "Content" (16th century; now obsolete).
- A Reinforcer sense also developed (from <3a> or <3c> presumably): <3e> "...mere, sheer" (16th century). Since it is only a subsense, it has not been counted for the statistical results; Reinforcers are thus undercounted.

Those definitions show the sense spreading gradually, and moving forward - over about four centuries; the changes presumably occurred "naturally" - in everyday use, and without deliberate intention.

Meanwhile, a range of Classifier senses was developing from <3> - senses <7> to <18> (from Late Middle English to 20th century). They include:
- <9> Grammar - as in “a perfect tense”.
- <10> Physiology: “Developed to the fullest degree” (17th century).
- <16> Bookbinding: "Designating a form of bookbinding..."; [the sheets are glued not folded and sewn] (19th century).

Those last senses are movement back, towards the head. They came, it seems, from a rather different process: the change is abrupt, not a smooth transition; it was presumably made by an educated writer who needed a word for a new sense, and redefined an existing word at the moment of writing. That is typical of the backward movements in the sample analysed, and in the other word histories I have observed. There are exceptions: "a short story" had a Descriptor sense at first - describing what a story was like - and only gradually came to be
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taken as identifying a literary genre, with short as a Classifier; but such gradual development of Classifier senses is unusual.

The movements are represented in diagram 3, in chapter 9, §6.3.

(2) Skinny.

- It is first recorded in Late Middle English, as a referential, Classifier-type word: <1> “Of, pertaining to ... skin”.
- In the 16th century, it developed a perceptual, Descriptor sense, <2> “...resembling skin”.
- In the 17th century, it developed an Epithet sense: <3> “Thin, emaciated”. Emaciated is more abstract, with its concepts of causation, and changes though time. This use has THIN as its necessary meaning, and EMACIATED as possible meaning.
- The word then developed the expressive Epithet sense: <4> “Mean, miserly”, (19th century).
- Then it developed the Epithet sense <5> “... tight-fitting”, of clothes (20th century), which I presume to be colloquial or slangy. I also presume that in this use it has THIN, EMACIATED, and MEAN as possible meanings which the user can invoke by building appropriate other words into the context.

In my analysis, that history counts as moving steadily “forward”, from Classifier to Epithet; and it has one Classifier sense, one Descriptor sense, and three Epithet senses. All five senses survive, though <1> is rare, and <4> is chiefly dialectal. The period from the Classifier sense <1> (LME) to the Descriptor sense <2> (16th century) is about 200 years; from Descriptor to the first Epithet is about 100 years; then about 200 years and 100 years to the later Epithets. The changes in zone are changes in the type and dimensions of meaning, as set out in chapter 4.

(3) Compulsory. It has two Epithet senses:

- <1> “Produced by compulsion...” (16th century), and -
- <2> “Compelling...” (17th century).

That counts in my analysis as not changing zone, or "no movement". Note that sense <1> is perhaps of the Classifier type; perhaps I have overcounted Epithet senses, and undercounted Classifier senses here. ("Compulsory recent acquisition" or "recent compulsory acquisition")

2 Results of analysis
Results (1): Data

The words

Diagram 1 illustrates the sample by giving half of the words; examples from the written and spoken texts are separate, and in alphabetical order down the columns.

Diagram 1: table of words in sample for words changing zone

<table>
<thead>
<tr>
<th>Words from the written sample</th>
<th>Words from the spoken sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>additional free recent bloody long</td>
<td></td>
</tr>
<tr>
<td>average ill regulatory bright nice</td>
<td></td>
</tr>
<tr>
<td>basic important residential cheapo pedigree</td>
<td></td>
</tr>
<tr>
<td>big key secondary compulsory regular</td>
<td></td>
</tr>
<tr>
<td>cheap little social disgusting skinny</td>
<td></td>
</tr>
<tr>
<td>defective massive tiny extreme special</td>
<td></td>
</tr>
<tr>
<td>economic new tough funny top</td>
<td></td>
</tr>
<tr>
<td>familial old urgent ginger twin</td>
<td></td>
</tr>
<tr>
<td>financial progressive vast goddam wee</td>
<td></td>
</tr>
<tr>
<td>fast psychological wholesale great white</td>
<td></td>
</tr>
</tbody>
</table>

The list seems to be a fair sample of English vocabulary: it has referential words, descriptive words, and empty, emotive words; concrete and abstract words; formal, informal and slang ones; native and borrowed; everyday and rather technical. So it appears to be representative enough for analysis, as well as having been selected randomly.

The movement of words with change of meaning

The table in diagram 2 (below) presents data from the analysis of premodifier zone-change, as outlined above; it should be read in the light of the word histories just given. I analyse the data in the following subsections. All figures are numbers of words; but since there were 100 words, they can be read as percentages. The columns give progressive subtotals and totals.

Diagram 2: number of words in sample which did, and did not, change zone

| Some change of zone | Forward only | 38 | Forward + back | 12 | Backward only | 14 | No change of zone | 36 | 36 | Total | 100 | 100 |

Results (2): scale of the changes of zone
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The table shows that in this sample of premodifiers in everyday English, 64% have developed a sense in at least one new zone, during their lives; 36% have not.

- Of the 36 words that did not develop a sense in a new zone, 25 are Epithets, leaving a remainder of 11.
- Words take a long time to develop new senses - commonly a couple of hundred years (as will be shown more fully below). Of the 11 remainder just referred to, 7 were new in English in the last two centuries (remainder 4).
- Of that 4, 1 is a modal (proposed), which does not belong in a zone at all (see section §4 of chapter 5), so that could not change zone.
- Thus three words could reasonably be expected to have changed zone but have not: injured, a Descriptor since 17th century; Russian, a Classifier since 16th century; and twin, a Descriptor since Old English.

Results (3): direction of movement

The table shows that of the premodifiers that moved to another premodifier zone, roughly 60% moved forward only (38 of the 64), roughly 20% had some movement each way, and 20% moved back only. The forward movement is dominant - about 80% of words that change zone move forward. As I explained in the history of perfect, forward movement is gradual and continuous - the evolutionary norm. Backward movement is abrupt, and relatively fortuitous; but it is frequent - only one quarter of the premodifiers started with a Classifier sense, but (on average) each premodifier now has a Classifier sense.

For words moving from premodifier position to head position, I counted the words in the sample that developed a noun use from the adjective use. (SOED does not show clearly which words are used as heads while being "adjectives" - e.g. "He helped the injured"; and where it gives examples of such uses - e.g. "the walking wounded" - it does not date them.) By that criterion, about half of the words moved from premodifier position back to head position; allowing for uses SOED does not document, we conclude that the proportion is higher.

Results (4): number of senses

For each word in the sample, I counted the number of senses of each type that the word has (Epithet, Descriptor, and so on), and averaged the totals. The table in diagram 3 (below) shows the result: the average number of senses of each type, for the words in the sample.

Diagram 3: rounded average number of senses for each zone type, in the sample
Appendixes

<table>
<thead>
<tr>
<th>Classifier senses</th>
<th>Descriptor senses</th>
<th>Epithet senses</th>
<th>Reinforcer senses</th>
<th>Total: senses per word</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.4</td>
<td>2.4</td>
<td>0.03</td>
<td>4.9</td>
</tr>
</tbody>
</table>

The notable features in the result are as follows.

- Very few Reinforcer senses develop.
- The number of Classifier senses is significantly increased by the backward movement noted above under "Results (3)".
- If we allow for that addition of Classifiers from the backward movement as an exception to the regular evolution of sense, we see that as words move forward, the number of senses increases, as far as the Epithet zone. Since many premodifiers do not start as Classifiers, idealised figures for average number of senses would be: Classifiers .25; Descriptors 1.0, Epithets 3.0. Premodifiers are far more polysemous as Epithets than as Classifiers.

**Results (5): differences between written and spoken English**

In my analysis, I counted senses for written and spoken English separately; but I have aggregated the results for the tables, because the differences do not seem to me to be significant. That is because the differences themselves are small, and because the variation between samples was sometimes greater than the variation between speech and writing; for example, 2 out of 20 premodifiers moved back, in one sample of speech, versus 4 out of 20 in the other -100% variance from the lower figure; but the total for speech was 6 out 40 (15%), and the total for writing was 6 out of 60 (10%) - 50% variance.

**Results (6): speed of the changes**

I calculated the time it has taken premodifiers to develop a use in a new semantic type, using SOED’s periods. For example, from SOED’s Old English period to its Middle English period was rated as 300 years; from Middle English to Late Middle English was rated as 200 years, and so on. A word with both Classifier and Descriptor uses in Old English may well have developed the distinction slowly over a previous and unknown time; words taken from French or Latin in Middle English, and having Descriptor and Epithet uses in that period, may well have developed the distinction in the source language, over an unknown period; so such words were not counted. The sample for this purpose is therefore quite small - 43 movements between zones.
For moving forward, the results were much the same for the three common moves (between Classifier, Descriptor and Epithet): the average was about 200 to 250 years; the range was from 100 years to 650 years.

The average time before a word gained a Classifier use after appearing in the language in another use was about 200 years, ranging up to 700 years.

For words moving from premodifier position to head position, the time varied, and accelerated. In the earliest period, it took roughly 300 years (e.g. *left*, from Old English to Middle English); then about 200 years (e.g. *large*, from Middle English to Late Middle English), and roughly 100 years recently (e.g. *nuclear*, from 19th to 20th centuries).
References

Aarts, Bas

Adamson, Sylvia

Al-Karabsheh, Aladdin

Altenberg, Bengt

Anderson, John M.

Baars, Bernard J.

Bache, Carl

Barsalou, Lawrence W.

Bates, E., and J. Goodman

Bauer, Laurie
1998 “When is a sequence of two nouns a compound in English?” English Language and Linguistics 2: 65-86.
References


Bouchard, Denis 2002 Adjectives, Number and Interfaces. Amsterdam: Elsevier.


References

Burnley, David

Bybee, Joan

Bybee, Joan, and Paul Hopper

Bybee, Joan, Revere Perkins, and William Pagliuca

Byrne, Brian

Carlton, Charles

Chafe, Wallace

Chatman, Seymour

Chomsky, Noam

Cinque, Guglielmo

Cinque, Guglielmo (ed.)

Clark, Eve
References

Coates, Jennifer

Coates, Richard

Corbett, Greville G., Norman R. Fraser, and Scott McGlashan

Crisma, Paola

Croft, William
2000 *Explaining Language Change*. Harlow; Longman.

Croft, William, and D. Alan Cruse

Cruse, Alan

Crystal, David

Curme, George O.

Cuyckens, Hubert, and Britta Zawada (eds.)
References

Dahl, Östen

Dalrymple, Mary

Danks, Joseph H., and Sam Glucksberg

Denison, David

Dixon, R. M. W.
1982 *Where Have all the Adjectives Gone?* Berlin: Mouton de Gruyter.

Downing, Pamela

Du Bois, John W.

Eble, Connie

Eckardt, Regine

Ferris, Connor

Fillenbaum, Samuel, and Amnon Rapoport

Fillmore, Charles J., Paul Kay, and Mary Kay O’Connor

Firbas, Jan

Finegan, Edward
References

Fischer, Olga

Fischer, Olga, Muriel Norde and Harry Perridon (eds.)

Fischer, Olga, Ans van Kemenade, Willem Koopman, and Wim van der Wurff

Frawley, William

Fries, Peter H.

Geeraerts, Dirk (ed.)

Gentner, Dedre, and Boroditsky, Lera

Gibbs, Raymond W., and Herbert L. Colston

Giegerich, Heinz J.

Givón, Talmy
1988  “Pragmatics of word order: predictability, importance and attention.” In Hammond et al. (eds.), 243-284.

Goldberg, Adele E.
References

Görlach, Manfred
1999 "Regional and social variation”. In Roger Lass (ed.), 459-538.

Goyvaerts, D. L.

Gundel, Jeannette K.
1988 “Universals of topic-comment structure”. In Hammond et al. (ed’s.), 209-242.

Haegeman, Liliane

Haiman, John

Haiman, John, and Sandra A. Thompson

Halliday, M. A. K.
2000 "Grammar and daily life". In David Lockwood, Peter H. Fries, and James E. Copeland (eds.), 221-238.

Halliday, M. A. K., and Ruqaiya Hasan

Hammond, Michael, Edith Moravcsik, and Jessica Wirth (eds.)

Haspelmath, Martin
2004 "On directionality in language change with particular reference to grammaticalization." In Olga Fischer, Muriel Norde and Harry Perridon (eds.), 17-44.

Hawkins, John A.

Hetzron, Robert
References


Himmelmann, Nikolaus P.  2004  "Lexicalization and grammaticalization: opposite or orthogonal?" In Walter Bisang, Nikolaus P. Himmelmann, and Björn Wiemer (eds.), 21-44.


References

Katz, Jerrold J.

Keenan, Edward L. and Bernard Comrie

Keller, Rudi

Kemmerer, David
2000 "Selective impairment of knowledge underlying pronominal adjective order: evidence for the autonomy of grammatical semantics". *Journal of Neurolinguistics* 13, (1), 57-82.

Kemmer, Suzanne
2003 “Human cognition and the elaboration of events: some universal conceptual categories”. In Michael Tomasello (ed.), 89-118.

Lamb, Sydney M.

Langacker, Ronald W.

Lass, Roger (ed.)

Leech, Geoffrey

Lees, Robert B.

Lehmann, Christian
1995 *Thoughts on Grammaticalization*. (Revised and expanded version; first available in 1982.) Munich / Newcastle: Lincom Europa.

Levi, Judith

Löbner, Sebastian
References


MacMahon, Michael K. C. 1998  “Phonology”. In Suzanne Romaine (ed.), 373-535.

Malt, Barbara C., Steven A. Sloman, Silvia P. Gennari, Meiyi Shi and Yuan Wang 1999  "Knowing versus naming: similarity and the linguistic categorization of artifacts". *Journal of Memory and Language* 40: 230-262.

Malt, Barbara C., Steven A. Sloman and Silvia P. Gennari 2003  "Speaking versus thinking about objects and actions". In Dedre Gentner and Susan Goldin-Meadow (eds.), *Language in mind: advances in the study of language and thought*, 81-112. Cambridge, Mass.: MIT.


References

Martin, James E., and Thomas E. Ferb

Matthews, P. H.

Mel’cuk, Igor A.

Mervis, Carolyn B.

Miller, Jim
2004  "Perfect and resultative constructions in spoken and non-standard English." In Olga Fischer, Muriel Norde and Harry Perridon (eds.), 229-246.

Mitchell, Bruce

Mithun, Marianne

Morton, Eugene S.

Mossé, Fernand

Mustanoja, Taino

Myhill, John

Neisser, Ulric (ed.)

Nelson, Katherine

Nevalainen, Terttu

OED.
References

Oller, John W., and B. Dennis Sales

Paradis, Carita

Partee, Barbara
2000 "Some remarks on linguistic uses of the notion of 'event' ". In Carol Tenny and James Pustejovsky, *Events as Grammatical Objects: the Converging Perspectives of Lexical Semantics and Syntax*, 483-496. Stanford, Ca.: CSLI Publications.

Partington, Alan

Peeters, Bert (ed.)

Prince, Ellen

Pustejovsky, James
2001 “Type construction and the logic of concepts.” In Pierrette Bouillon and Federica Busa (ed's), 91-123. Cambridge: Cambridge University Press.

Quirk, Randolph, Sidney Greencbaum, Geoffrey Leech, and Jan Svartvik

Radford, Andrew

Raumolin-Brunberg, Helena

Rhodes, Richard
References

Rijkhoff, J.

Romaine, Suzanne (ed.)

Rosenbach, Anette
2006 “Descriptive genitives in English: a case study on constructional gradience”. *English Language and Linguistics* 10: 77-118.

Rosenbach, Anette, Dieter Stein, and Letizia Vezzosi

Ross, Woodburn O.
1940 *Middle English Sermons*. London: Oxford University Press. (For Early English Texts Society.)

Ruimy, Nilda, Elisabeth Gola, and Monica Monachini

Rumelhart, David E., and James L. McClelland

Ryder, Mary Ellen

Salmon, Vivian
1999 “Orthography and punctuation”. In Roger Lass (ed.), 13-55.

Schiffrin, Deborah

Schreuder, Robert, and Giovanni B. Flores d'Arcais.

Schreuder, Robert, Giovanni B Flores d'Arcais, and Ge Glazenborg
References

Schwanenflugel, Paula J.

Scott, Gary John
2002 "Stacked adjectival modification and the structure of nominal phrases". In Guglielmo Cinque (ed.), 91-120.

Seuren, Pieter S

SOED

Spamer, James B.

Sproat, Richard, and Chilin Shih

Strang, Barbara M. H.

Stubbs, Michael

Sussex, Roland

Svoboda, Aleš

Sweetser, Eve

Tabor, Whitney, and Elizabeth Closs Traugott
References

Talmy, Leonard

Taylor, John R

Teyssier, J.

Tognini-Bonelli, Elena

Tomasello, Michael

Tomasello, Michael (ed.)

Traugott, Elizabeth Closs

Traugott, Elizabeth Closs, and Richard B. Dasher

Tucker, Don M.

Vachek, Josef
van Donzel, Monique Elisabeth

Varantola, Krista

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Warren, Beatrice

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Whorf, Benjamin Lee

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