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Stative adverbs in English: a study of adverbial productivity and orientation

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Part I: Background

Chapter 1: Introduction

1.1 Aims

In English, unlike many other languages, one finds adverb forms such as those exemplified in (1)-(4) below, where the base is a stative adjective that denotes a concrete physical property.

> 1   Abel sat and regarded the farm country which... rolled *greenly* up to where the silent white houses and long barns and silos nested into the tilled fields (Brown Corpus K23 59)
> 2   He rammed his mind into focus and said to the two ladies who lay *pinkly* nude beside him (Brown Corpus M06 28)
> 3   Nor in South Georgia, where the summer sun shines *warmly* and gives early life to the things growing in the flat fields (Brown Corpus: B08 9)
> 4   Lauren Landis rubbed her face against the blanket. She had cried a little because she was frightened... She smiled at him *wetly* (Brown Corpus L03 111-112, 120)

It has been claimed repeatedly that the derivation of stative adverbs is blocked (cf. Heuer 1936: 129, Krüger 1914-1917: §577, Jespersen 1942: 414-415; Thorndike 1943: 34; Dixon 1977: 43; Kjellmer 1984: 12; Quirk et al. 1985: 434, 439 note 6; Johansson & Lysvåg 1987: 259, and Nevalainen 1994a: 246).[1] I will argue that this assumption is untenable. Thus, one main objective of the present study is to map the development of stative adverbs, from Middle English to the present day, showing that the derivation of such adverbs is indeed a productive process, and that this productivity is the result of an ongoing linguistic change. The second aim of the study is to discuss the «orientation» of stative adverbs. It will be shown that the orientation of stative adverbs is highly variable. The discussion will be claimed to have two major implications. Firstly, because orientation is such

an unstable concept, it should not be used as a criterion in adverbial taxonomy, as is common practice (cf. chapter 5). Secondly, we need to revise our conceptions of what functions adverbs can have.

The discussion of the development of stative adverbs includes a semantic and syntactic analysis of the corpus adverbs and the clauses in which they occur (for details concerning this analysis, see section 1.3). The results of this analysis shed light on the use of stative adverbs in different periods, and on the development of stative adverbs.

The study also brings up some important methodological and theoretical questions. One complex of problems relates to the issue of morphological productivity. The main problem to be discussed in this connection is how to measure the productivity of low-frequency categories, such as stative adverbs. Another problem concerns our view and definition of a linguistic variety, particularly how to relate to the diversity that exists within it. Standards are typically assumed to be homogeneous; hence rules are stated categorically, with no mention of diversity. The data show, however, that with regard to the use of stative adverbs and adjectives - henceforth referred to as "stative elements" - no categorical rules can be formulated. It will be argued that the kind of variation (variability) demonstrated in this study must be incorporated into any linguistic description which aims at descriptive adequacy (realism).

1.2 Compiling the corpus: problems and solutions

1.2.1 Genre and adverbial frequency

What text types – or genres – should be used in a corpus study depends on the objective(s) of that investigation. If, for example, the aim is to compare the relative occurrence of a category over different genres, then obviously the corpus must include a number of genres. The aim of the present study, however, is not to carry out a variationist study, but to investigate the quantitative development of stative adverbs, as well as their characteristics (cf. the previous section). To make this possible, it was necessary to find a genre where the adverbs in question would be reasonably well represented. As is well known, the frequency of different morphological and syntactic types varies from genre to genre.[2] Because stative adverbs are a low-frequency category, it is likely that they will be so good as non-existent in some genres. The choice of genre was therefore very important. To find out in what text types stative adverbs occur most frequently, I carried out a pilot study of the Brown Corpus, which contains samples of 15 different prose genres. The corpus has 8 examples of stative adverbs (some examples are provided in [1]-[4] above). 7 of these occur in different kinds of novels and short stories (fiction: general, fiction: mystery, etc.), i.e. within the spectrum of texts which can be referred to as "fictional" prose. It would thus seem that this is a "genre" which is well suited for the study of stative adverbs. Another indicator to the same effect is the fact that –*ly* adverbs have been found to be much more common in novels than in many other genres, such as officialese and religious and scientific texts (Baayen 1994: 22).

That the adverbs under investigation should be more frequent in fictional than in some other types of prose must probably be related to the rhetorical structure of the texts in question. According to Biber, what characterizes fictional prose is its "extreme narrative emphasis" (1989: 30, cf. also 1988: 135-142 and 1995: 151-155). Biber also finds that such narrative texts have a high proportion of depictive details (1988: 118-119). It seems reasonable to assume that the use of stative - and other - adverbs is closely bound up with this strong emphasis on narration and depiction (cf. also Opdahl 1991: 23). In other types of text, there is more emphasis on "exposition", "argumentation" and "instruction" (Werlich 1976: 40-41). Such rhetorical structures do not encourage the use of stative and many other types of adverb. Thus, Biber (1988: 237, 246-269) finds that formal, abstract text types tend to contain prepositional phrases rather than adverbs.

1.2.2 The problem of genre in a diachronic corpus

Because of the facts explained in the previous section, the present study is primarily an investigation of stative adverbs in narrative prose. However, as is well known, it is notoriously difficult to create a diachronic corpus which is balanced with respect to genre. For one thing, genres are not static but dynamic entities which undergo a constant "drift", i.e. an internal evolution (cf. Biber & Finegan 1989 and 1992, Biber 1995: ch. 8, and Nevalainen & Raumolin-Brunberg 1993: 65-66, 61-64). Thus, the characteristics of the 18th-century novel do not completely correspond to those of the 20th-century novel. According to Biber and Finegan (1989: 487), fiction, essays and letters have "undergone a more general drift towards more oral styles - more involved, less elaborated, and less abstract". The "drift" in question involves a number of changes in the use of linguistic categories, including adverbs (cf. chapter 8).[3] However, the

most serious difficulty is not the internal development of genres, but the complete non-existence of several genres, including novels and short stories, at earlier stages of written English. Only a few centuries ago, the repertoire of prose genres was much more restricted than today. Older texts are typically structured according to a specific metre and rhyme scheme (Nevalinna et. al. 1993: 37), mainly because they are the near descendants of oral "literature", which relied on rhyme and metre for mnemonic reasons. A very large proportion of the Middle English writers uses these devices, regardless of what topic they discuss. In fact, the preference for the poetical mode is so strong in the Middle English period (c.1100-1500) that even texts on political and religious topics, social criticism and historiography commonly appear in verse (Nevalinna et al. 1993: 37, 40; Sikorska 1996: 35-37). Also in the Early Modern period we find proportionately more texts relying on metre and rhyme than what is the case today, cf. the changed structure of plays. According to Biber, "[t]he use of literacy aided the development of new literary forms" (1988: 4). The most important development in this respect is the emergence of new prose genres. Among the genres that have developed fairly recently, we find the novel and the short story. These are the two genres on which the study of 19th and 20th and partly also 18th-century English is based in the present investigation. The novel is commonly assumed to have emerged around 1700, with some precursors in the 17th century (Sikorska 1996: 145, Barnard 1984: 70). The short story is even more recent. Edgar Allan Poe is by many considered to be the first exponent of this genre, which in that case goes back only to the 1830s (Abrams 1981: 176).

By virtue of necessity, then, there is a certain discontinuity between the different corpora so far as genre representation is concerned. The Middle English corpus by necessity has a fairly high proportion of poetic texts.[4] The Early Modern English corpus is a prose corpus to a much larger extent, but not completely. Although novels and short stories are primarily a 19th and 20th-century phenomenon, a number of the texts in the corpora from the earlier periods come quite close to these in terms of rhetorical structure, for example biographies and romances (Nevalinna et al. 1993: 37). Biographies score high on Biber's narrative scale (1988: 123, 136); they follow next after fiction. Romances are not included in Biber's study, but if they were, they would no doubt obtain a high score as well. The genres in question are represented both in the Helsinki Corpus and in the part of the corpus which has been compiled for the present study. Biographies are particularly well-represented in the pre-1800 material. The proportion of such narrative texts is, however, not so large at this stage that they may constitute a large corpus alone. It has therefore been necessary to include a number of verse texts in the older parts of the corpus. This is, of course, unfortunate; yet, the problem of a mixed material can not be avoided in historical linguistics unless one either confines one's study to poetic texts only (i.e. traditional poetry), or else uses only a very small corpus from the earlier periods. Using a mixed corpus, it is important to take into consideration that some of the linguistic differences found may possibly be genre-related.

1.2.3 The problematic status of poetry as a basis for linguistic study

On the basis of the problems discussed in the previous section, one might ask whether it would not have been better to use a corpus of poetry rather than prose. Doing this, it would have been possible to secure a much higher

degree of genre continuity than what is the case in the present study. Furthermore, the *Oxford English Dictionary* supplies quite a few examples of stative adverbs which are taken from poetic texts. However, it is clear that poetry is not an ideal source for a study which focuses on linguistic form. The reason is that the metre and rhyme scheme of a poem may seriously influence both morphological shape and word order.[5] To illustrate this problem, we may take a look at Heywood's use of adverbs in his epigram 97 from 1562, which is rendered below.

97. "OF WALKING AND TALKING"

> Walk thou narrowly, walk thou nearly-
> Walk as thy walk may end cheerily.
> Talk thou basely, talk thou boldly-
> In all thy talk, talk thou coldly.
> Walk thou *wetly*, walk thou *dryly*-
> In thy walk, walk not too highly.
> Talk thou merrily, talk thou sadly-
> Talk as thy talk may take end gladly.
> Walk thou daily, walk thou weekly-
> In all thy walk, walk thou meekly.
> Talk thou softly, talk thou loudly-
> In all thy talk, talk not proudly.
> Walk thou firstly, walk thou lastly-
> Walk in the walk that standeth fastly.
> Talk or walk oldly or newly-
> Talk and walk plainly and truly. (Farmer 1966: 295)

Heywood's poem illustrates nicely what Heuer (1932: 145) must have meant in stating that *-ly* constitutes "einen bequemen und beliebten Reim".[6] Epigram 97 is more or less a word play built up around the suffix *-ly*. Most of the adverbs in the poem apparently represent the ordinary use of the time; however, we might question the status of others, notably *dryly* and *wetly*. The adverbs in question are not recorded in literal use before

Heywood, and Heywood's use of *wetly* precedes similar recorded uses by two and a half centuries, according to the *Oxford English Dictionary*. We may thus justifiably ask whether the relevant usages are at all representative of English at the time, or even of Heywood's idiolect. It may be argued that they are totally governed by the rhetorical pattern of the poem.[7] By studying prose texts rather than poetry, we do not have to confront this kind of problem. This is not to say that the language in prose texts cannot be "creative"; however, by not using poetry, we can at least be certain that the form of the stative element it is not determined solely by poetic considerations.

1.2.4 The corpus

Because stative adverbs are a low-frequency category, a study of their development requires a vast corpus. The increasing availability of electronic text has made an investigation of this type possible. There is by now a large body of electronic texts available, both on CD-ROM and on the Internet, and the major part of the corpus material is drawn from these sources. Most of the texts in the corpus are novels and short stories which have been downloaded from the Internet. However, all the texts from the latter half of the 20th century have been read in print. The reason is mainly that, due to copyright restrictions, texts from the relevant period are not available on the Internet. The corpus texts have been scanned or read in full, with the exception of the Middle English and Early Modern English sections of *the Helsinki Corpus*, which consist of excerpts of texts (for a list, see Kytö 1993: 10-17).

Table 1.1 below shows the approximate size of the corpus and its different parts. The reader is referred to the bibliography and appendix 2 for detailed corpus information.

Table 1.1: Size of the different corpora

Period	no. of words
Middle English	2 mill.
Early Modern English	1.3 mill.
18th century	1.5 mill.
19th century	2.9 mill.
20th century	2.8 mill.
total	10.5 mill.

As the figures here show, the different parts of the corpus are not balanced with respect to size; the corpora from the three earliest periods are smaller than those from the last two periods. This is due to a combination of three factors: (1) the almost complete absence of stative adverbs in the earlier texts (cf. chapter 3), (2) the scarcity of extant texts from the earlier periods, and (3) the scarcity of electronic texts from the same periods (especially from the Early Modern period and the 18th century). However, all the corpora are large enough for generalizations to be made, and normalized counts will be provided to make the figures comparable. The 19th and 20th-century corpora are balanced with respect to size and the number of authors represented; both contain about 2.8-2.9 million words, produced by 26 authors. It was not possible to balance the number of texts as well; hence, there are 29 novels (and short-story collections) in the 19th-century corpus and 33 in the 20th-century corpus. Note that the majority of the 19th-century texts are from the latter half of the century, which is only to be expected, as novel writing did not really become a popular activity until this time.

All the writers in the corpus are represented with at least one text; for some, two texts are included. The authors are primarily English and American, but there are also some texts by writers of Scottish and Irish origin, as well as one by a Canadian writer (Charles G.D. Roberts). The data thus allow some tentative comments concerning the geographical distribution of stative adverbs (cf. section 3.4.2).

1.3 Method

Stative adverbs have not been studied in isolation; rather, their development has been compared to that of the corresponding adjectives. The approach is based on two assumptions: (1) that stative adverbs and adjectives are competitors for the same functions, and (2) that an increase in the use of adverbs may be taking place at the expense of adjectives. Both assumptions are based on empirical evidence about other functional areas. The clearest example here is the area of subject modification. Here it has been shown that adjectives and adverbs have been in competition since the Old English period, and that adverbs have increasingly replaced adverbs, in a process referred to as "adverbialization" (cf. section 2.3.2). With respect to stative adverbs, they seem to be undergoing a parallel development (cf. chapters 3, 4 and 8). The development of stative adverbs has therefore been studied against the background of the diachronic use of the corresponding adjectives. In addition to contrasting stative adverbs with the corresponding adjectives, the adverbs in question will also be discussed in an adverbialization perspective, i.e. as part of the general spread of the *-ly* suffix. It will be argued that the existence of this process is an important prerequisite for the development of stative adverbs to have taken place.

Stative adjectives have a much wider use than their adverbial counterparts, as they may also occur attributively (e.g. *a blue sky*) and predicatively after linking verbs (*The sky was/turned blue*). These prototypical adjectival uses are considered irrelevant to the present study, as they are not positions or functions where adverbs could potentially occur. Instead, the focus will be on those stative adjectives which occur in the same syntactic environments where stative adverbs are found to occur, i.e. are either syntactically linked to an adjective (as a modifier) or occur in clauses where the main verb is not a copula, in the traditional sense of the word (cf. section 4.2).

In order to determine the degree of productivity of adverbial -*ly* with stative adjective stems, it was necessary first of all to find all the relevant adverb forms in the corpus. Since no machine can be programmed to select categories which are both morphologically and semantically defined in an untagged corpus, this had to be done in two operations. First all forms ending in –*ly* (or its equivalents) were sought out, regardless of word-class status. Subsequently the small subset of stative -*ly* adverbs was sorted out from the large mass of -*ly* occurrences. In the scanning of the corpus it was necessary to take into consideration the issue of spelling in earlier English. The realization of the adverbial -*ly* suffix varies greatly, both temporally and regionally, but also within the same text. According to the *Oxford English Dictionary*, the suffix has been spelt as *lice*, -*liche*, -*lich*, -*like*, -liy, -*li* and -*ly*. Nevalainen (1997: 156) adds the forms -*lik*, -*lych* and -*lyche*.[8] The realization of the suffix is most variable in Middle English; yet, the variant spellings have been checked both in the Middle English and Early Modern English corpora. From the 18th century onwards, the spelling of the suffix is assumed to have been generalized to -*ly* throughout.

The adjectives had to be selected by other means than the adverbs. While morphological marking (i.e. -*ly*) was helpful in finding the adverbs, the corresponding adjectives of course have no such marking. The only possible way of selecting the relevant items was therefore to search for each individual adjectival form. The corpus was consequently scanned for all the adjectival counterparts of the corpus adverbs. This is not a methodology without flaws, as stative adjectives which have no adverbial counterparts in the corpus will not have been found. If, for example, there are any instances of a colour adjective such as *violet* in the relevant linguistic contexts, this is not included in the data, because there is no corresponding adverb *violetly*. The discussion in chapters 3 and 4 is therefore, strictly speaking, not a comparison of stative adverbs and adjectives in general, but of the corpus adverbs and their adjectival counterparts.

Stative adjectives sometimes occur in compounds. It was therefore necessary to consider whether such compound uses should be included in the data or not. With regard to this issue, the following strategy has been applied. Compounds where the stative adjective constitutes the final element (*brick-red*, *ebony black*, *ghost-white*) are included in the database, while compounds where they constitute the first element (*red-faced*, *blue-eyed*) are not. The rationale behind this is that the latter do not normally represent potential adverb environments, as -*ly* derivation in English as a rule does not take place within lexemes. It should also be mentioned that only those stative elements which are integrated into clause structure have been included, not those which are set off by commas (sometimes referred to as "absolute" elements). The latter do not interact with the rest of the clause, as do integrated elements, but can be argued to constitute a separate clause.

The corpus adverbs and adjectives are classified according to the parameters listed below.

A) Semantic category of the element:

(1) colour/hue (*redly, pale*)
(2) radiance (*brightly, glossy*)
(3) dimension/form (*massively, tiny*)
(4) age (*oldly, young*)
(5) moisture (*wetly, damp*)
(6) temperature (*warmly, cold*)
(7) dirtiness (*dustily, dirty*)

B) Syntactic function of the element:

(1) syntactically independent elements (gleam *dark/darkly*)
(2) modifiers of adjectival elements (*dark/darkly* bright).

C) Positional distribution of the element :

1) <u>Initial position</u>: before the subject
(*Moistly* he peered out at the shining lawn.)

2) <u>Medial position</u>: immediately before the main verb
(.. the water *coldly* bubbling in St. John's well.)

3) <u>Final position</u>:

(a) immediately after the verb (including verbal particles,
    adverbials and prepositional objects)
    (The fire burned *redly*.)
    (He got up *white* and *fragile*.)
    (Beth didn't come home as *plump* and *rosy* as could be
      expected.)
    (Her eyes looked out at him *dark* and *knowing* and
      beautiful.)

    <u>also</u>: between a verb and a particle in cases of phrasal verbs:
      (The stamps peeled *moistly* off.)

(b) after the direct object [9]

> (The damp air was catching on her eyelashes, spiking
> them *darkly*.)
> (..she spread her feet *warm* and *wide*)

D) Syntactic structure of the element:

1) Single elements (*bluely, red*)
2) Co-ordinated elements (*warmly and softly, starched and white*)
3) Pre-modified elements (*more and more brightly, very red, brick-red*)
4) Post-modified elements (*dully like wax, glossily as if newly painted, blue beyond grey*)
5) Pre and post-modified elements (*so brilliantly that.., more warmly than usual, as bright as diamonds*)
6) Co-ordinated and modified elements (*not darkly, but with a clear sky; neatly, albeit a trifle dustily, all brown and yellow with paint*)

E) Semantic category of the collocating verb (situation):

1) <u>Radiance/light verbs</u>: a subtype of process/event verbs
   (*shine, gleam, burn, light up*)
2) <u>Other process/event verbs</u>: denote situations brought about by
   external forces, i.e. which are outside the control of the
   subject. These can be either durative (*grow, melt, snow*)
   or punctual (*slide, fall, be slaughtered*), or indeterminate
   with respect to the durative: punctual distinction, as in
   Dawn broke, The sun set.
3) <u>Activity verbs</u>: denote situations brought about (more or less)
   consciously by an agent, i.e. are "agentive"
   (*creep, weep, steal, play*) [10]
4) <u>State/stance verbs</u>: denote uncontrollable situations like
   sensations and emotions, and more or less permanent
   properties of the subject (*love, resemble, smell, contain*).
   Includes the category commonly referred to as stance
   (*stand, hang, sit, lie, live*)

F) Semantic category of the subject:

1) <u>-animate subjects</u>: denote lifeless objects (*a house, books*)
2) <u>+animate subjects</u>: denote living, non-human objects
     (*the fox, elves, Psyche*)
3) <u>+human subjects</u>: (*his son, she, Leonhard*)
4) <u>body parts</u>: (*his eyes, Al's teeth*)
5) <u>+nature subjects</u>: denote natural phenomena, for example weather
phenomena and features of landscape (*mountains, the sun,*
    the moonlight)

G) Date of occurrence:

1) Middle English: 1100-1499
2) Early Modern English: 1500-1699
3) 18th century
4) 19th century
5) 20th century

With regard to the semantic category of the stative elements, the subsets studied are those which are either mentioned specifically as unproductive classes (i.e. by Dixon 1977: 39-43, Kjellmer 1984: 12, and Quirk et al. 1985: 434, 439), or are exemplified in Western (1906) or Swan (1990) (cf. section 2.3.5). They all denote physical properties of things. The reason why dimension and form elements are collapsed into one category, is that in many cases the two concepts are inseparable, e.g. in items such as *thick/ly* and *fat/ly*. The only category which is not discussed or exemplified in at least one of the sources mentioned above is the category "dirt", which was added out of sheer curiosity, on the basis of a few observations.[11] There are many other stative categories that could have been included, but which are not, for example items denoting texture or consistency.

As far as verb types are concerned, the categories used are rather broad. The only exception to this is the radiance/light class, which is a fairly small subset of the process/event category. The reason why this relatively small

group of verbs is given individual treatment is that the relevant verbs appear to combine more freely with stative adverbs than do other classes of verb, and hence may have played an important role in the development of physical adverbs (cf. the discussion in sections 4.5 and 8.2.3).

Classifying verbs is notoriously difficult. In particular the task is made complicated by the numerous figurative uses found. Metaphorical uses of verbs are not easily classified by means of normal classificatory criteria. The most serious problems relate to activities on the one hand and processes/events on the other. The criterion normally used to distinguish between the two types is the agentivity criterion (cf. for example Quirk et al 1985: 207). Activities are said to be agentive, i.e. they are situations more or less deliberately initiated and controlled by an agent, typically human. By contrast, processes and events are non-agentive situations. The contrast is clear when we look at verbs out of context. For example, *sing* and *walk* are clearly activity verbs, while *melt* and *shine* denote processes. However, when we look at verbs within the context of the clause, things are often more complicated. The verbs in (5)-(7) below, for example, are all normally regarded as agentive, and thus classified as activity verbs. In the sentences below, however, they do not collocate with an agentive subject, and they hence look more like process/event verbs. Such taxonomic problems probably arise because verbs are normally treated as if they have a meaning independently of the other elements in the clause, while in reality they take their meaning from the larger context. For example, the subject often determines what reading we apply with respect to both verb and adverb. In classifying verbs within sentences, therefore, it seems most sensible to focus not on the verb alone, but to apply terms such as "activity", "process", etc. to the situation denoted by the entire clause.[12] This is the approach applied in the present study.

5   A full moon *peered* redly through the upper edges of the fog
(*Oxford English Dictionary*: 1883 Stevenson Treas. Isl. i. iv)

6   The boats *Went* sombrely upon the sombre waves
(*Oxford English Dictionary*: 1868 Geo. Eliot Sp. Gipsy 351)

7   The after-light of sunset *was lingering* rosily upon the naked
crags. (*Oxford English Dictionary*: 1893 E. H. Barker Wand.
S. Waters 7)

In the corpus sentences in (8) and (9) below, the subject nouns denote a body part.[13] Body parts do not, of course, have a will of their own, and hence the verbs they collocate with should in principle not be classified as agentive. Yet, to classify them as process/event verbs on a par with *sleep* and *fall* does not seem right either. Since there is human will involved in these situations, although the owner of this will is not referred to explicitly (at least as a whole entity), the verbs in question have been classified as activity verbs.

8   Cary's hand closed warmly over her fingers (Rogers SF)

9   He felt her arms slip warmly round him (George FSE: 59)

Stative elements which function as modifiers of adjectives will only be discussed in relation to their own syntactic and semantic category, as well as the time dimension (i.e. dimensions A, B and G). The other factors are felt to be of less interest. Positionally, modifiers always occur immediately before the adjective they modify,[14] and so far as collocating verbs and subjects are concerned, there cannot be said to be any, since these functional categories belong at a higher level of clause structure. Thus, there will be no co-occurrence restrictions obtaining between the modifier and these elements.

With regard to periodization, it is customary to break the Middle and Early Modern English periods into smaller units. The practice has not been

observed in the present study, however, because of the paucity of data from the relevant periods (cf. chapter 3).

1.4 Organization

The study is divided into 4 parts. Part I consists of the present introductory chapter. Part II gives an account of the development and use of stative adverbs. This part consists of three chapters, viz. 2, 3 and 4. Chapter 2 provides some theoretical background to three concepts which are basic to the present study, viz. productivity, stativity and adverbialization. In chapter 3 I present the corpus data, discussing the quantitative development of stative adverbs. The chapter also includes a discussion of how productivity can or should be measured. Chapter 4 provides an analysis of the syntactic and semantic context in which the corpus adverbs and adjectives occur. Part III is concerned with the orientation of stative adverbs. This part also consists of three chapters. Chapter 5 provides some background to the issues of orientation and classification. Chapter 6 discusses the orientation of the corpus adverbs, while in chapter 7 I discuss what implications the findings of chapter 6 should have for two fundamental questions: (1) the classification of adverbs, and (2) our understanding - and hence definition - of English adverbs in particular, and adverbs in general. Finally, part IV consists of two chapters: chapter 8, which attempts to explain the development of stative adverbs, and chapter 9, which provides a summary and conclusion.

Part II: The development of stative adverbs

Chapter 2: Productivity, stativity and adverbial derivation

2.1 Introduction

The present chapter discusses the concept of morphological productivity, both in general terms, and as applied to the adverbs under study here. Section 2.2 discusses some general problems relating to the definition and measurement of productivity. Section 2.3 is concerned specifically with the productivity of the adverbial -*ly* suffix, in a synchronic and diachronic perspective. Here the very important concept of adverbialization is introduced. The chapter closes with a discussion of the stative: non-stative distinction in English, and its alleged restriction on adverbial -*ly* formation, which is so central to this study.

2.2 Morphological productivity: how to define and measure it

2.2.1 Introduction

It is quite common for morphological studies not to discuss the concept of morphological productivity at all. Instead, it is referred to in a rather cursory manner, or a notion of productivity is presupposed which is more or less intuitive. Reading these accounts, one may get the impression that productivity is a largely unproblematic concept. This is, however, very far from the truth; both the definition and measurement of productivity are fraught with some serious problems. Some of these will be discussed in the next few sections. First, however, I provide two definitions of productivity, which seem to be representative of the traditional view of the phenomenon (van Marle 1985: 44, 1991: 151). These may serve as a point of departure for

a discussion of productivity because they raise, directly and indirectly, a number of fundamental and practical questions.

> By 'productive', then, I refer to a process which accounts for a speaker's ability to form and understand new words. (Thompson 1975: 332)

> Any process is said to be productive to the extent that it can be used in the production of new forms in the language. (Bauer 1992: 57)

2.2.2 Productivity and the competence: performance dichotomy

One basic distinction in linguistics is that between the possible and the actual, or in a linguist's terms, between "competence" (langue) on the one hand and "performance" (parole) on the other. This is a dimension which should also be taken into account in a discussion of productivity. It seems clear that productivity should be related to the competence component of the language, i.e. to a person's – or a language's – grammar. This view is also expressed in the two definitions provided in the introduction, cf. the formulations "ability" and "can be used". In other words, productivity depends not on actual but on potential use. However, a competence-based approach to productivity involves enormous practical problems for the student of morphology. The most serious problem is that we only have access to a speaker's competence through a limited selction of his or her performance (at least in text studies), which will not demonstrate all possible aspects of the speaker's competence.[15] In other words, the fact that some speakers do not normally put a certain morphological process to use, especially in such a limited amount of text, does not necessarily mean that it does not exist in their grammars. Perhaps these speakers do not react when they come across such derivations in the linguistic production of other

people, i.e. they are able to interpret these forms. Perhaps the speakers in question might also have coined the same or similar derivations themselves if the right context had come up. There may be a number of reasons why speakers do not make use of a certain morphological process. With respect to the feature under investigation here, many users of English probably never even write the kind of descriptive or narrative sentences which seem to be the typical host contexts of stative elements (cf. section 1.2.1), or they may simply not be interested in providing colour descriptions and the like. The derivations in question may nevertheless be possible to these non-users, but we have no access to the relevant information. Defining morphological productivity in terms of potential rather than actual usage has vast consequences for how stative adverbs and other low-frequency structures should be regarded: it implies that, in principle, we cannot write the items in question off as ungrammatical or unproductive on the basis of their low numbers.

Because we cannot gain real access to a speaker's competence, all we can do is study performance data and assume with Cedergren and Sankoff (1974) that "a theory of performance is reducible to a theory of competence as performance is a statistical reflection of competence..." (cf. Romaine 1982: 248). This is indeed the only strategy available to the historical linguist. We should, of course, all the time keep in mind that performance is not an exact mirror of competence; hence, it can never provide us with an absolute measure of productivity. This may be a considerable problem when the object of study is a low-frequency category. To compensate for the scarcity of the items under study, we need to use a large corpus.

2.2.3 Productivity or creativity?

The traditional conception of productivity, represented by the definitions of Thompson (1975) and Bauer (1992) in section 2.2.1 above, has been criticized on account of being too broad, i.e. it is said to include a number of processes which are not productive at all (Uhlenbeck 1953: 336, van Marle 1985: 43, 151). Van Marle mentions a number of Dutch formations which are claimed to be the result of such unproductive processes, e.g. *vraagbaak-in*, ('source of information + feminine suffix'), *blank-in* ('white woman') and *domm-iteit* ('stupidness') (1985: 51, 54-55). The fact that the items in question are attested, is, of course, evidence that the processes in question *can* be used to derive such words (cf. Bauer's definition above). The processes are hence productive according to the traditional definition of morphological productivity. This conclusion is, however, counterintuitive. There have been a few attempts to narrow down the definition of productivity, in order to exclude forms that seem deviant. According to van Marle, it was in the work of Uhlenbeck and Schultink that this issue "was raised to a serious level of discussion for the first time" (1985: 44). The literature in question has not acquired as much attention as it deserves, perhaps partly because much of it is written in Dutch, and hence is only accessible to a small fraction of the linguistic community. However, van Marle (1985: ch. 2) gives us access to the studies in question. In the following I refer mainly to van Marle's rendering of Schultink (1961), which is said by van Marle to contain "the most articulate theory of morphological productivity" (1985: 40), but note that in van Marles account the ideas of Uhlenbeck and Schultink are treated as if they were more or less identical.

Schultink (1961) proposes the following definition of productivity:

> Onder produktiviteit als morfologisch fenomeen verstaan we de voor taalgebruikers bestaande mogelijkheid (....) onopzettelijk een in principe niet telbaar aantal nieuwe formaties te vormen. (1961: 113)

> ['By productivity as a morphological phenomenon we understand the possibility for language users to coin, unintentionally, a number of formations which are in principle uncountable (....)'. (translation by van Marle 1985: 45)]

As can be seen, Schultink does not consider as productive any process that may give rise to new words; rather, two criteria have to be met for productivity to obtain: (1) the process must take place unintentionally, and (2) the resulting formations are potentially infinite.[16] The rationale behind the intentionality criterion is explained by van Marle (1985):

> The language user who employs such purposely coined formations, Schultink points out, has the intention to distinguish himself by means of the words he uses - often he wishes to express himself humoristically, ironically or contemptuously -, and it is particularly this fact which bestows these formations their 'intentional character'. Moreover, the effort to achieve a specific effect underlies the frequent occurrence of intentionally coined formations in those 'registers' where the word-form is or may be 'foregrounded', a phenomenon that in Schultink's view is particularly prominent in so-called 'literary language' (Scultink 1961: 115-116, translation by van Marle 1985: 46-47) [17]

As noted by van Marle, Schultink's reasoning here contradicts the second of his own criteria, i.e. the uncountability criterion, for it in fact implies that so long as there is enough emphasis on form, even non-productive processes

"may give rise to an, in principle, 'uncountable' number of newly coined words" (1985: 47). However, the fact that these types of derivation are relatively common in language does not make them productive, in van Marle's view. Van Marle criticizes both the criteria established by Schultink for being crucially bound up with performance rather than competence, to which he thinks productivity should be related (1985: 47, 50-56). In his criticism of the unintentionality criterion, van Marle argues that "the crucial distinction between 'intentional' and 'unintentional' cannot be studied without taking into account the complex factors involved in actual 'language use'..." (1985: 52). According to van Marle, any definition of productivity must be based on factors relating to "language structure", i.e. to the linguistic system itself (1985: 53). He emphasizes that regularity is a key concept in the definition of productivity, defining productive processes as "coining-devices by means of which the lexicon of a language can 'systematically' or 'regularly' be extended" (1985: 50). Thus, the new formations must form part of the coherent system which is the language; they must have parallels in the language. Regularity, then, seems to presuppose a certain level of frequency. Creative processes are defined negatively, i.e. as processes which are not "systematic" or "regular" (1985: 50). Words formed by these processes occupy an "isolated position in the system"; they are "incidental" rather than regular uses. Creative formations typically have special connotations. They may for example express an element of humour, irony or contemptuousness (1985: 46-47, 50-51). Thus, van Marle notes that *vraagbaak-in* and *blank-in* are both "stylistically marked"; the former has a strong jocular connotation, while the latter is said to be archaic (1985: 51, 55). This is claimed by van Marle to be a direct effect of the fact that "the words at issue run counter to the systematics 'normally' in force" (1985: 54). In other words, the special effects arise from the very irregularity of the

processes by which the forms in question are derived. Such effects can be achieved by intentionally manipulating the rules:

> ...usually the departure from the rules that are 'normally' in force must be conceived of as an attempt to bring about a 'special effect'. It is this fact which makes it imperative to assign these formations a synchronic position in the morphological system of modern Dutch that is fundamentally different from the position taken by newly coined words which lack such a direct and intimate link to 'language use' (van Marle 1985: 55)

We see that there is a fundamental difference between Schultink's (1961) and van Marle's (1985) approach to creativity. Scultink (1961: 115-116, see quote above) ascribes the special effects of creative uses to intentionality, i.e. an aspect of language use. By contrast, van Marle, although he recognizes that intentionality is important in the derivation of creative uses, stresses the fact that these uses must nevertheless be explained in terms of properties of the linguistic system itself. It is precisely these properties which make special effects possible in the first place. As for productive uses, they are said not to have such an intimate link with the performance side of language, but to reflect the rules of the linguistic system.

The present study adopts van Marle's understanding of productivity (and creativity), which means that in order to be productive, the process of deriving stative adverbs must be shown both to be regular and systematic, and to give rise to new forms. However, how newness is to be understood - not to mention measured - is by no means evident, as explained in the next two sections.

2.2.4 The concept of newness

There appears to be general consensus that morphological productivity somehow involves the ability to create new forms. The concept of "newness" is not entirely unproblematic, however. It has been given both a "subjective" and an "objective" interpretation. In the subjective approach, newness is linked to the competence of each individual speaker. Forms are said to be new to a speaker only insofar as they are not stored in the speaker's mental lexicon (Baayen & Renouf 1996: 74, 78). It has been maintained that once a form has been derived for the first time, it is transferred to (stored in) the lexicon (cf. Aronoff 1976: 22). From this it follows that a derivation is new to speakers only the first time it is used by them, or the first time they come across it, but not the second time. A conflicting view is proposed by Aronoff (1976: 36-37, 45, cf. also Anshen & Aronoff 1988), who claims that the words derived by productive word-formation processes are not stored in the lexicon at all, but are created anew each time they are used. If this is correct, newness can not be defined in relation to storage in the lexicon. There is, however, an intermediate position as well. Baayen & Lieber (1991: 806-807) argue that storage depends on frequency of use, in the sense that "derived formations are more likely to be stored as their token frequency increases, whatever the productivity of the underlying word-formation process may be" (1991: 807).

Who is right about this question does not really have any practical consequences, as we have no way of determining with certainty which words are stored in the lexicon, and which are not. To be sure, there have been investigations of this issue, carried out within an experimental, psycholinguistic framework (cf. Anshen and Aronoff 1988 and the studies mentioned therein). However, what implications the results of these studies

really have is uncertain, and at any rate, the methods in question are not applicable in historical linguistics. The only possible strategy for the historical linguist, therefore, is to adopt the "objective" definition of newness and productivity. The relevant definition is linked to the performance side of language. It holds that a form is new if it is not attested before. Their connection with performance necessarily implies that objective measures are not exact representations of newness, but approximations. This is also implied by the fact that no study can investigate more than a fragment of all language use. On the basis of his or her sample, the linguist generalizes about the language as a whole. This is the traditional approach to studying newness in language, as well as any other linguistic feature.

2.2.5 Measuring the productivity of morphological processes

Several measures of productivity have been suggested in the literature. Not all of these have been equally sound. A common technique has been to count up all the forms – or "types" - provided by a dictionary, on the line of reasoning that the more forms, the more productive the rule. The method has been criticized on the grounds that it is highly coincidental what words find their way into a dictionary (Baayen & Lieber 1991: 802-803, Bauer 1992: 62-65). Specifically, this depends on the linguistic experience and intuitions, as well as the editorial policy of each lexicographer (cf. also Kjellmer 1984: 7). There is also reason to believe that the more productive a process is, the smaller the chances are that words derived by the process will be entered in a dictionary (Aronoff 1976: 36-37, Kjellmer 1984: 1, Baayen & Renouf 1996: 81). The process is simply conceived of as so productive that listing all forms is felt to be unnecessary. This is probably why adverbs appear to be listed relatively infrequently in dictionaries. The type-counting technique may be applied with a better result to a corpus of texts. In corpus studies as

well there will inevitably be an element of arbitrariness, but this factor can be minimized by increasing the size of the corpus.

The method of counting types is criticized by Aronoff for not taking into account the fact that there are restrictions on word-formation rules (cf. section 2.3.3). For example, some affixes can only be applied to Latinate bases, while some do not have such restrictions, but can be applied more or less universally. A simple count of all the words derived by a rule provides us with no information about such facts. A possible way of making up for this problem, Aronoff suggests, would be to use the ratio of "actual" to "possible" words as a measure of productivity, as explained below:

> count up the number of words which we feel *could* occur as the output of a given WFR [word-formation rule, KK] (which we can do by counting the number of possible bases for the rule), count up the number of actually occurring words formed by that rule, take the ratio of the two, and compare this with the ratio for another WFR: the ratio of possible to actually listed words (Aronoff 1976: 36).

The technique described above is, however, highly problematic. The problem is the doubtful status of concepts such as "actual" or "existing" words, as pointed out by Baayen & Lieber (1991):

> Words are not 'actual' or 'existing' in any objective sense. A list of actual words always involves a subjective element: they are words compiled in the mental lexicon of some individual or other, or in a dictionary produced by certain lexicographers, or in a fixed corpus constructed in some more or less arbitrary way. The 'actual' words of any of these sources will very likely coincide in large part with the actual words of others, but perhaps never in totality. (Baayen & Lieber 1991: 802-803)

In other words, Baayen & Lieber suggest that it is simply impossible to make an exhaustive list of all the "actual" forms derived by a word-formation process (cf. also Aronoff 1976: 36). This means that we cannot compute the ratio of existing to possible words in anything like an exact manner. What is more, I would argue that the method in question is in fact based on two doubtful concepts. The concept of "possible" word is also a shaky one, as what is a possible word to one speaker may not be possible to another. Baayen & Lieber (1991: 803) argue that if we only use a corpus of texts which is large and varied enough, it is possible to agree on a stock of "existing" words which is fairly representative of the actual word stock. However, to my mind the notion of "existing" or "actual" words seems too absurd to make the effort worth while.[18] For example, if one wished to study the global productivity of the adverbial –*ly* suffix, there would be at least two problems in applying the technique. Firstly, one would have to create a list of all the existing adjectives in English, which would surely be an impossible task. Secondly, new adjectives are being coined all the time, and may in turn serve as bases for adverbial derivation. These new words may not appear in our corpus, but I would nevertheless argue that they from an early stage must be regarded as "actual" or "existing" words. In view of all the problems just discussed, it seems that there must be better ways of measuring productivity than by way using the ratio of "possible" to "actual" words.

An important objection against using any of the two methods described above is that they provide us with no tool for distinguishing between former and current productivity. Doing this is really essential. If we simply count the number of morphological types which are shown to have been produced by a process, or calculate the ratio of actual to possible words, a large figure will lead us to conclude that the process in question is highly productive. In

reality the situation may be the reverse; the affix may have almost stopped being productive, most of the attested types being the result of earlier productivity (Pinkster 1972: 12). According to the understanding of productivity developed in section 2.2.3, productive processes must both be regular and give rise to new forms. Because token rates do not distinguish between old and new types, it is insufficient as a measure of productivity. It appears, then, that to be able to measure productivity, we need to find an index of newness.

It has been argued that the number of "hapax legomena" in a corpus, i.e. types which occur only once, is a good measure of newness (Baayen 1989, Baayen & Lieber 1991). Such low-frequency items are assumed not to be stored in the mental lexicon of the language users, and hence, in Baayen & Lieber's understanding of newness, are innovations that indicate productivity for the affix in question.[19] It is assumed that while productive processes typically produce a large number of hapaxes, unproductive processes are characterized by high frequencies of a few well-established items (Baayen & Lieber 1991: 815; cf. also Anshen & Aronoff 1988 and Baayen & Renouf 1996: 74). In chapter 3 (section 3.2.4) I criticize the hapax approach for being too simplistic. I also argue that the hapax approach may not be suitable for all kinds of study, but suggest that, at least in studies of low-frequency items, we may rather use a combination of different measures. The present investigation compares the proportion of tokens, types and new types in each subcorpus, as well as the number of writers who use stative adverbs. While the new-type rate (and to some extent the type rate) is assumed to measure the ability of a process to derive new words, the type, token and user rates are all assumed to say something about the regularity with which stative adverbs are derived. Hence, if all the measures

in question are high, or indicate a rise, the process is both regular and gives rise to new words; in other words, it is productive.[20]

2.2.6 Individual productivity vs. societal productivity

A final issue to be addressed is how morphological productivity relates to the often postulated distinction between individual grammars and the language "as such". According to Bauer (1992),

> we need to distinguish between productive for the individual and productive within the speech community. Only if a particular morphological process is productive for a large enough number of members of the speech community will that process be said to be productive to the speech community. On the whole it is productivity within the speech community which is is understood by the term 'productivity', and it is this type of productivity which gives rise to listings in dictionaries and the like. (1992: 65)

Bauer's claim seems reasonable enough; however, there are great practical problems connected with it, as noted by Bauer himself:

> The main problem with making a distinction between individual productivity and societal productivity is in drawing the line between the two. Clear cases at both ends can be recognised, but there is a middle ground where it may not be clear whether there is a case where individual productivity is the same for several individuals, or a marginal case of societal productivity. (1992: 65)

We need to ask ourselves where this line between productivity and lack of such should be drawn. There is no problem so long as a process has been shown to be used only by one or two individuals. In such cases it is also likely that the derivations in question may be the result of creativity rather

than productivity, at least if there are very few of them. But how many speakers must use a process for it to acquire the status of a productive process in a variety?[21] The question must, unfortunately, be said to be unanswerable. We cannot estimate a general percentage that must be reached for productivity to obtain; rather, each case has to be evaluated separately and seen in relation to the number of speakers represented in the investigation. However, our requirements should not be too strict; if a process is shown to be used by a fairly large number of speakers, it is indeed likely that it will also be used by many other speakers, who are not represented in our corpus. Even a process used by a minority should be recognized as a part of the general grammar of the variety, so long as that minority is substantial (also an indefinable concept). Especially if the derivations under study seem to be in harmony with the general "drift" of the language (Sapir 1921), i.e. are in line with other parallel developments, they are probably signs that the process deriving them is becoming increasingly productive. (This point is discussed in chapter 8.)

2.3 The productivity of adverbial -*ly* in the history of English

The next few sections deal with the synchronic and diachronic productivity of adverbial -*ly*. Section 2.3.1 gives an account of the origin of the -*ly* suffix and its adoption as a marker of adverbial function. Section 2.3.2 discusses its subsequent spread, introducing the concept of adverbialization. Section 2.3.3 focusses on restrictions on -*ly* derivation in 20th-century English. Section 2.3.4 gives an account of the stative: non-stative dichotomy in English, while section 2.3.5 discusses the alleged implications of this dimension for adverbial derivation.

2.3.1 The origin of the -ly suffix and its adoption as an adverbial marker

The history of the -ly suffix in English is a textbook example of grammaticalization, i.e. the process by which lexical items become grammatical markers (cf. Hopper and Traugott 1993: 2). The -ly suffix is assumed to have started out, in proto-Germanic, as the noun *likom, meaning 'appearance, shape, form, body'.[22] In proto-Germanic this noun was used as a suffix, too, i.e. an adjectival one. It was added to other nouns and to adjectives to form a compound adjective. Its use as a suffix is described as follows by the *Oxford English Dictionary*:

> The original Teut. adjs. in -līko- were compounds of the n. *līkom appearance, form, body (see lich). Thus *mannlīko- ('manly') means etymologically 'having the appearance or form of a man'; gôðolīko- ('goodly') 'having a good appearance or form', or 'having the appearance or form of what is good'. The primitive force of the suffix may therefore be rendered by 'having the appearance or form indicated by the first element of the word';[23] but while in the historical Teut. langs. it has remained capable of expressing this meaning, it has in all of them acquired a much wider application. When appended to ns., the most general senses of the suffix in all Teut. langs. are 'having the qualities appropriate to', 'characteristic of', 'befitting'. (-ly, suffix1)

According to Uhler, adjective formations in -lic became so plentiful in Old English that in the end -lic lost practically all of its original meaning and "sank zu einem blossen Suffix herab" (1926: 62), i.e. it became almost completely grammaticalized.[24] When this happened, the stage was set for an even greater proliferation of -lic adjectives in Old English. Uhler in fact claims that the derivation of adjectives by way of -lic had become so common that "fast neben jedem Adjective eine gleichbedeutende Ableitung mit -lic steht" (1926: 63).[25]

The most important development in the history of the *–ly* suffix is no doubt its adoption as a marker of adverbial function. It is in this capacity that it has really acquired a wide use, as will be shown below. Old English adverbs were usually derived by way of the adverbial *-e* suffix (Uhler 1926: 62, Mustanoja 1960: 34).[26] As already mentioned, Old English had a number of adjectival doublets such as *heard-heardlic* ('hard') and *beorht-beorhtlic* ('bright'). Corresponding to these adjective pairs there were doublets of derived *-e* adverbs, e.g. *hearde-heardlice* and *beohrte-beohrtlice*.[27] Uhler (1926) claims this to have been more or less the general rule:

> Neben den meisten von Adjektiven abgeleiteten Adverbien auf *-e* steht eines auf - *lice*; dieselbe Doppelgestaltigkeit haben wir auch beim Adjektiv; nahezu jedes Adjektiv hat eine Ableitung auf *-lic* neben sich. (1926: 61)

> [Alongside most of the adverbs derived from adjectives by way of *-e* there is one in *-lice*. This kind of double formation also exists in the sphere of adjectives; practically every adjective is accompanied by a derived form in *-lic*.]

The traditional account is that this state of affairs led to a reanalysis of the ending *-lice*. According to Strang, adverb formations from *-lic* adjectives "were so familiar that *-lice* came to be isolated as a formative and thought of as *the* way of making adverbs" (1970: 272, cf. also Mustanoja 1960: 314). There is one piece of "evidence" that may support this claim, namely the fact that there are a number of adverbial formations in *-lice* from the Old English period which have no attested counterparts in *-lic*. According to the *Oxford English Dictionary*,

> In OTeut. an adv. with this suffix must have implied the existence of an adj. with the suffix corresponding to *-ly*1 [i.e. the adjectival *-ly* suffix, KK]. In OE., however, there are several instances (e.g. *bealdlíce* 'boldly'', *swételíce* 'sweetly') in which an adv. in *-lice* has been formed directly from a simple adj. without the intervention of an adj. in *-lic* (*-ly*, suffix2) [28]

A question which needs to be addressed is why *-lice* was adopted as an adverbial marker in the first place. As mentioned above, Strang points to the very high frequency of *-lice* derivations as a possible cause. I agree that the high rate of *-lice* formations could have created a more favourable climate for the change; however, quantity alone cannot explain the reanalysis which took place. In this connection we should also remember that adverbial *-e*, attaching to both bare adjectives and *-lic* adjectives, must have been even more frequent than *–lice* at some stage. In addition, the *-e* suffix was in the favourable position of already carrying the status of adverbial suffix, while *–lice* was not. Given these facts, it seems that something fundamental must have happened to the English language, which radically changed the linguistic situation, thus paving the way for a change.

The explanation which is traditionally offered is that there is some connection between the large-scale adoption of *-lice* as an adverbial suffix and the so-called "levelling process" in English. The process is normally assumed to have started in the late Old English period and to have caught momentum in the Middle English era. During this process unstressed syllables became phonologically reduced and were eventually left out from the pronunciation (and later also commonly from the spelling) of words (Baugh & Cable 1978: 158-159, Pyles & Algeo 1982: 152-153). Thus, English came to lose more and more of its inflectional and derivational endings, and the structure of the language changed from synthetic to

analytic. Among all the endings which existed in the language, final -*e's* were highly exposed to the forces of levelling. In consequence, the adverbial -*e* suffix disappeared from more and more items, leaving the adjectives and adverbs in question formally indistinguishable. According to Strang (1970: 273), this led to a certain unease, and the need for a distinct adverbial marker became pressing. -*lice* (which was being leveled to -*lic,* and subsequently would become -*li/-ly*) lent itself conveniently for the task (Uhler 1926: 64, Mustanoja 1960: 314). As noted by the *Oxford English Dictionary*,

> In ME. the number of these direct formations [i.e. without an intervening adjectival –*lic* suffix, KK] was greatly increased, and when the final -*e,* i.e. the original adverb-making suffix, ceased to be pronounced, it became usual to append -*ly* to an adj. as the regular mode of forming an adv. of manner. (-**ly**, suffix2)

There have been some attempts to date the adoption of -*ly* as an adverbial suffix more accurately, but there is very little evidence to go by, and hence there is no consensus on this point. The different estimates in fact range from Alfred the Great's time, i.e. the ninth century, *at the latest* (Uhler 1926: 65) to the Middle English period (Pulgram 1969: 384). However, the most common estimate is probably the late Old English period (i.e. somewhere between c900 and c1100, cf. for example Mustanoja 1960: 314). Strang (1970) provides the following comment:

> Although the formations in -*lice* and -*e* are in origin identical, by 1170 they were felt as distinct, -*e,* although familiar in many common words, having become inactive, while -*lice* was highly productive (1970: 272).

2.3.2 The spread of adverbial –ly: adverbialization

There is by now quite a substantial body of evidence that adverbial -*ly* has widened its area of use throughout the written history of English. It seems to be generally assumed that the original, core function of –*ly* as an adverbial marker was as a verb-modifying suffix. This is an inference based on the name of the class:

> The origin of the word (Fr. *adverbe*, L. *adverbium*) indicates that its basic use was that of modifying a verb only, and this must still be described as its primary function. (Meyer-Myklestad 1967: 374) [29]

It is also commonly held that manner adverbs are the original, and therefore prototypical, adverbs:

> ...when the final -*e*, i.e. the original adverb-making suffix, ceased to be pronounced, it became usual to append -*ly* to an adj. as the regular mode of forming an adv. of manner. (*Oxford English Dictionary*: -*ly*, suffix2)

Dalton-Puffer (1998), discussing the relationship between -*ly* adjectives (e.g. *kingly*, *lowly*) and -*ly* adverbs, makes the following note:

> Finally, Similarity can also be said to lie at the bottom of LIC/LY turning into the obligatory adverbial marker of English. After all, adverbs indicate that a verbal action is carried out in a particular manner. Put differently, a relation of similarity is established between what is predicated of a noun and what is predicated of the action(s) which this subject-noun carries out. (1998: 45-46)

The view that manner adverbs are prototypical adverbs is expressed for example by von Gross (1921: 46, cited in Heuer 1932: 112), Aitchison (1994: 106), Nevalainen (1997: 164), Swan (1997), and Ravid & Shlesinger (1999: 337). Swan takes her evidence from two sets of fact. One type is the cognitive meaning of the -*ly* suffix, which, according to Swan, "is essentially a dynamic, verb-specifying manner meaning 'as if, like'... (1997: 185). The second type of evidence is empirical, diachronic evidence. Specifically, manner adverbs appear to be historically prior to for example disjuncts (the seminal work here is Swan 1988: section 6.4, but see also Swan 1984 and Hanson 1987: 137). Furthermore, while disjuncts are claimed to have been recruited from the manner category on a large scale, Swan claims that there are no examples of the opposite development (1997: 183-184).[30] In the same vein, Ramat & Ricca (1994) argue that the priority of the manner category "is supported by both synchronic and diachronic considerations. In many languages, Manner deadjectival adverbs like *frankly* can only be Predicate modifiers, ... and for languages which allow both uses, the predicative use is attested far before the sentential one" (1994: 310). According to Ramat & Ricca, other functions of -*ly* adverbs can be understood as "extensions which keep the Manner semantics relatively stable and extend the modifier function to syntactic units other than the Verb Phrase" (1994: 310).[31]

The claims just discussed find support in a comprehensive empirical investigation of Middle English manner adverbs, or "modal adverbs", viz. Donner (1991). The corpus of this study comprises all instantiations of manner adverbs in the Middle English Dictionary (referred to as the MED in the quote below), entries A through *scheden*. On the basis of the evidence found here, Donner claims that once -*lice* had acquired the status of adverbial suffix, it was used to derive modal adverbs on a large scale:[32]

The rise in the incidence of the suffix, as a matter of fact, hardly needs tracing at all. It does indeed enjoy a great increase in use during the course of Middle English, but not, as seems generally assumed, by gradually superseding the flat form. Instead, according to the evidence of the MED, it not only is predominant throughout the period, but was already established in that role at the very outset, so that the increase simply reflects the growing number of both new Romance adoptions introduced and of further native constructions recorded in the expanding corpus of writings extant. Adding the suffix to adjectives of whatever origin or substituting it for *-ment* or *-iter* when adopting Romance adverbs evidently constituted common practice with the general run of modal adverbs from no later than the closing decades of the twelfth century on. (1991: 2)

The fact that adverbial *–ly* could be freely attached to new, foreign bases which entered the language in the Middle English period is interesting. Such a total disregard of the origin of possible base words has been taken as a sure sign of productivity (Dalton-Puffer 1996: 175). Thus, it seems that by the Middle English period the *-ly* suffix was already immensely productive, at least as far as the derivation of manner adverbs is concerned.

Following its adoption as an adverbial suffix in Old English, the *-ly* suffix appears to have been steadily gaining ground. From its assumed original use as a suffix for deriving manner adverbs, it has spread to a whole range of new items, syntactic environments and functions, showing itself to be extremely versatile. For example, *-ly* adverbs have been used increasingly to express epistemic meaning. Hansson (1987: 137-143) claims that English has no adverbs such as *probably* and *possibly* until the Middle English period (cf. also Traugott 1989: 46-47). The picture is more nuanced in Swan (1988), where it is shown that Old English in fact has a few *-ly* adverbs expressing high probability (1988: 90-91). However, in principle Swan concedes that epistemic *-ly* adverbs are not a prominent feature of Old

English. It is not until the Middle English period that the class of epistemic adverbs really begins to expand, and it is also in this period that low-probability adverbs begin to occur (Swan 1988: 131, 295-299). However, Swan's claims about adverbial change are not restricted to the category of epistemic (her "modal") adverbs; she actually shows that the whole category of sentence adverbs (or disjuncts) has undergone a similar development.[33] Sentence adverbs are defined by Swan as adverbs which express the speaker's evaluation of the propositional content of the clause (1988: 29). In addition to modal adverbs, Swan's sentence adverb category comprises the subsets evaluative adverbs (*fortunately*, *regrettably*), speech act adverbs (*frankly*, *briefly*) and subject disjuncts (*wisely*, *cleverly*) (1988: 29ff). All these classes, according to Swan, have expanded and diversified greatly from the Middle English period onwards, and particularly in the twentieth century (1988: chapter 5).

Another function which has become increasingly realized by *-ly* adverbs is subject modification. In sentences such as *Jane came merrily/determinedly towards me*, present-day English more or less as a rule uses *-ly* adverbs to describe the subject's state of mind. By contrast, Old English makes much more extensive use of other means, including different types of adverb (the *-e* adverb being the most common type), adjectives, case forms (genitives, datives), and participles with or without the *-lice* suffix attached (Swan 1990: 49-50). The two dominant categories here are adjectives and adverbs. Swan (1996: 479) finds that in Ælfric's *Lives of Saints*, subject modifiers are realized as adjectives in 27.4% and as *-lice* adverbs in 52% of the cases. The adjective rate is lower in Swan's (1998) Old English corpus, adjectives representing 13% of the subject modifiers. In Killie's (1993) prose material there are 89% adverbs in the Late Middle English corpus and 95.5% in the Early Modern English corpus (1993: 128, 135).[34] Thus, there seems to have

been a steady increase in the use of adverbs as subject modifiers between the Old English and the Early Modern English period. There is no corresponding quantative study of subject modifiers in Late Modern English or present-day English; however, there is no doubt that *-ly* adverbs still dominate this function completely.

The *-ly* adverb has also come to dominate the intensifier function. While in Shakespeare's time phrases such as *exceeding sorry* and *extreme ill* were perfectly acceptable, unsuffixed intensification is in present-day standard English normally restricted to a few adverbs and is used mainly in oral, informal discourse (Kirchner 1970-1972: 233, Quirk et al. 1972: 237, Peters & Swan 1983: 74-75). With respect to the change in question, Nevalainen (1994a: 245) claims the Early Modern English period to represent a watershed. The data provided by Peters (1993 and 1994) seem to support her claim. According to Peters, Late Middle English letters have only a limited repertoire of intensifiers, the most common ones being *right, well, full* and *sore* (1994: 274-275). In the seventeenth century "a thoroughgoing change in the inventory becomes apparent in relation to the fifteenth century" (1994: 277). Specifically, in the 17th century-material the old intensifiers have either gone out of use or they occur only in formulaic expressions, and new ones are replacing them (1994: 277-280). The new intensifiers are typically of the *-ly* type. This trend is also attested in Peters' 18th-century material (1994: 285). Nevalainen (1994a: 245) maintains that "[a] number of intensifiers were regularized towards the beginning of the Late Modern period, and the suffix -LY was being increasingly appended to such short forms as DEVILISH, DREADFUL, EXCEEDING, EXTRAORDINARY, and TERRIBLE". In the same vein, Burrows (1992) notes that the use of intensifiers such as *very, more* and *so* drops sharply around 1800. He suggests that the decreasing use of these intensifiers "seems to mark a

change from a small set of fixed forms to a much larger set, individually less common, of vogue words like *absolutely, completely, perfectly* and *totally"* (1992: 191, cf. also Strang 1970: 138-139). According to Bolinger (1972b: 24), more evidence to the same effect is provided by Pegge's *English Language*. In the first edition of this book, which appeared in 1803, Pegge claims that "The best of us, gen. use the adj. for the adv., where there is any degree of comparison to be expressed. 'How extreme cold the weather is.'". By contrast, in the 1843-1844 edition the author notes that this kind of practice is "quite out of date now". According to him, there are only a few unsuffixed intensifiers left, viz. *sure, awful, mighty, precious, whole, real.* What has replaced these adverbs, of course, is an ever growing number of *-ly* adverbs.

Finally, the *-ly* suffix seems to have become increasingly attached to present participles in adverbial function (Killie 1998, forthcoming b). Adverbs such as *smilingly* and *burningly* apparently start to occur in the 14th century, when there is an increasing, though still limited, number of new derivations to be found (Killie 1998: 120-123). That these adverbs represent the early beginnings of a new pattern is evidenced by the fact that they typically occur only once or a few times. From the 14th century on there has been a steady growth of new adverbs of this kind, but the category does not become truly productive until the 19th century (Killie forthcoming b).[35]

Investigations of the productivity of adverbial *-ly* in 19th and 20th-century English show that the suffix has become extremely productive in these periods, especially in the last century. Baayen (1994) studies the productivity of 29 affixes in 19th-century English, including common affixes such as *-ism, -able, -less, un-, re-* and *-ize*. Of all the affixes studied, *-ly* turns out to be the most productive by far, i.e. it is shown to have produced a much

larger number of hapaxes than the other morphemes studied (1994: 29, 31). Baayen & Renouf (1996) investigates the productivity of 5 affixes (*-ly*, *-ity*, *-ness*, *in-* and *un-*) in 20th-century English. The study involves two different corpora, viz. an 80-million-word corpus of text from the *Times*, and the Cobuild/CELEX database. In both of these, the *-ly* suffix is shown to be the most productive affix of the five investigated.[36] The data presented in Swan (1988: 503-505) and Killie (forthcoming b) also corroborate the hypothesis that with regard to the productivity of adverbial *-ly*, the 19th and 20th centuries represent an extremely expansive period.

To conclude, there seems to be substantial evidence that adverbial *-ly* has, throughout the history of English, become increasingly productive. The suffix has gradually widened its area of use to the extent that one considers English to have been - and still be - going through an "adverbialization process" (Swan 1990: 52, 1996: 482-484, 1997: 187-193). It is important to realize, however, that this concept, as it is used, is not a monolithic one; rather, it comprises two different, but related, processes. As regards disjuncts and subject-modifying adjuncts, for example, the addition of the *-ly* suffix to such items is assumed to turn an adjective into an adverb. The cumulative result of a number of such derivations is that the functions in question have become increasingly adverbial. It is in such cases that the term adverbialization is most appropriate. In Nevalainen's (1994a) taxonomy this kind of process is referred to as a type of "functional-semantic shift" (1994a: 243). The growing use of *-ly* adverbs as intensifiers and manner adverbs, by contrast, involves no such categorial shift, but is the result of a "morphological regularization process" which has taken place within the categories in question (Nevalainen 1994a: 243-244). In this process formerly "flat" adverbs (i.e. the levelled remnants of the Old English *-e* adverb) have taken on the *-ly* suffix to increase homogeneity with the rest of the, by that

time, *-ly* dominated class. In other words, one morphological type of adverb has been ousting another. In such cases the term "adverbialization" may seem less fitting; nevertheless, these cases are also referred to as instances of adverbialization. There are some good reasons for doing this. Firstly, it is in a sense legitimate to treat the two types of process as two sides of the same coin as they must be assumed to have reinforced each other, even though their basic syntactic characteristics are different. Secondly, in a large number of cases it is simply impossible to tell whether an item is in fact an adjective or a levelled *-e* adverb (Nevalainen 1997: 153-154). Thus, although the use of the term adverbialization "should" imply a shift of category, it is nevertheless safest to use it in a "technical" sense, i.e. as referring to the spread of the *-ly* suffix, which is a phenomenon that we can observe without too much difficulty.

2.3.3 Restrictions on -ly derivation in 20th-century English

All the studies mentioned in the previous section bear witness of an enormous increase in the productivity of adverbial *-ly* in the course of its history. As Meyer-Myklestad (1967: 379) so aptly puts it, the adverbial *–ly* suffix represents a "striking instance of linguistic mass-production". However, it is well known that word-formation processes are commonly "less than fully productive" because there may be certain restrictions on them (Carstairs-McCarthy 1992: 32). These restrictions are typically related to different properties of the base word (e.g. Bauer 1992: chapter 5). Baayen & Lieber (1991) provide the following comment on the issue:

> ... within the context of the present study the fact that one productive WFR may give rise to substantially more types than another productive rule raises the question why this should be so and in what way this may be connected with its productivity. We suggest that the number of observed types V is determined by at least three, probably interacting factors, namely (1) the pragmatic usefulness of the affix, (2) the semantic flexibility of the word-formation process, and (3) the number of base words satisfying the condition on the word-formation rule. (1991: 817-818)

With respect to the "pragmatic usefulness of the affix", Baayen & Lieber note that "some word-formation processes have a wider range of uses than others" (1991: 818). As an example of a process which is not very pragmatically useful, they mention derivation by means of the Dutch suffix -*erd*, which "is used to coin slightly pejorative personal names from adjectives, such as *natterd*, 'a wet person', from *nat*, 'wet'". The use of such specialized affixes is highly restricted; with respect to the Dutch -*erd*, it is restricted mainly to informal, oral contexts (Baayen & Lieber 1991: 818). By contrast, the adverbial -*ly* suffix is pragmatically very useful. It attaches to all kinds of bases, and words derived by way of this suffix can perform a large number of different functions. However, that the suffix as such is pragmatically useful does not necessarily imply that all the resulting -*ly* derivations are. Stative adverbs, for example, cannot be conceived of as very useful, for if they were, one would expect them (or their adjectival counterparts) to show up more often. Hence, it is not only affixes which can be characterized with respect to their pragmatic usefulness; subgroups of derivations may also be evaluated with respect to this factor.

Baayen & Lieber (1991) do not explain what is meant by the «semantic flexibility of the word-formation process», but it probably implies that there are not many semantic restrictions on the process. As an example of a

semantically flexible, and thus much used, word-formation rule, Baayen &s Lieber mention compounding (1991: 818). There is every reason to regard -*ly* derivation as semantically flexible too. The fact that the suffix has become grammaticalized to such an extent, involving a high degree of semantic bleaching, enables it to attach to adjectives of diverse semantic types. Finally, the «number of base words satisfying the condition on the word-formation rule» must to a large extent be determined by the number of restrictions on that rule. The quote by Baayen & Lieber above shows that their view of morphological productivity share much in common with that of Corbin (1987: 177), which is discussed by Carstairs-McCarthy (1992):

> A morphological process may be more or less **regular** (régulier), that is, the shape and, more especially, the meaning of its products may be more or less predictable on the basis of the shape and meaning of the bases to which it applies; it may be more or less **available** (disponible) for the creation of new derivatives, so as to fill gaps in the attested lexicon; and it may be more or less **profitable** (rentable), that is, it may apply to a greater or lesser number of bases or produce a greater or lesser number of attested derivatives. These three types of productivity are independent of one another. For example, a process may be maximally available in that it applies to all the bases which fulfil the appropriate conditions (syntactic, phonological or semantic), but may still be relatively unprofitable just because those bases are few in number. (Carstairs - McCarthy 1992: 37)

With respect to stative adverbs, it appears that the process deriving them is both regular, available and profitable; however, the derivation of each subset cannot be characterized as profitable (cf. section 3.4.3). As for the nature of the possible restrictions on a word-formation rule, Bauer (1991: 185) notes that "[b]ases may be subject to at least phonological, morphological, syntactic, semantic, pragmatic and aesthetic restrictions... or any combination of these".[37] Different restrictions have been claimed to hold for

adverbial -*ly* derivation. In Kjellmer (1984: 7) and Baayen & Renouf (1996: 88-89), the productivity of -*ly* is shown to vary greatly with the morphological structure of the base, in the sense that specific suffixes to some extent block -*ly* derivation. Kjellmer (1984) finds that suffixes such as –*oid*, -*an*, -*ian* and -*ean* do not form adverbs. He relates this fact to the semantic meaning of the suffix, viz. their stative character (1984: 6-7, 13). It has been noted repeatedly that -*ly* does not attach to adjectival bases which themselves end in -*ly* (Aronoff 1976: 37, Baayen & Renouf 1996: 83, Quirk et al. 1985: 1556).[38] Quirk et al. (1985: 1556) argue that there is a phonological restriction against attaching the -*ly* suffix to adjectives ending in /l/, as in *hostile*. According to Aronoff, -*ly* does not attach to an adjective "which already has an adverb associated with it" (1976: 37). Thus, the derivation of **goodly* is said to be "blocked" by the existence of *well* and *muchly* by *much*, etc. Finally, there is the alleged restriction on -*ly* derivation from [+stative] adjectives, which is the topic of the present study and will hence be discussed in some detail in the following.

2.3.4 The stative: non-stative distinction in English

In a well-known article from 1966, George Lakoff draws attention to an interesting aspect of English grammar; he shows that both verbs and adjectives can be divided into two types according to their occurrence or non-occurrence in certain syntactic environments (1966: 1-12, cf. also Dowty 1972: 20-21, 63-67).[39] For example, verbs and adjectives differ with respect to whether they can:

(1) occur in command imperatives [40]
(2) take the progressive
(3) take the pro-form *do something* (i.e. occur in "pseudo-clefts")
(4) occur in the complements of control verbs such as *persuade*
    and *remind*
(5) occur with the adverbial *for someone's sake*

The constructions in question are exemplified below, where the numbers of the examples correspond to the numbers in the list above. Some of the sentences are Lakoff's; the rest are patterned on his examples.

1a   Slice the salami!
1b   *Know the answer!
1c   Be careful!
1d   *Be tall

2a   George is slicing the salami.
2b   *George is knowing the answer.
2c   George is being careful.
2d   *George is being tall.

3a   What George did to please me was slice the salami.
3b   *What George did to please me was know the answer.
3c   What George did to please me was to be careful.
3d   *What George did to please me was to be tall.

4a   I persuaded George to slice the salami.
4b   *I persuaded George to know the answer.
4c   I persuaded George to be careful.
4d   *I persuaded George to be tall.

5a   George sliced the salami for my sake.
5b   *George knew the answer for my sake.
5c   George was careful for my sake.
5d   *George was tall for my sake.

At first glance, the constructions in (1)-(6) may appear unrelated; however, Lakoff claims that the ability (or inability) of verbs and adjectives to occur in the different syntactic frames correlates closely with a syntactic property

referred to as "stative" (Lakoff 1966: 5). Specifically, verbs and adjectives with the feature [-stative] can be used in all the frames, while [+stative] ones can not. According to Lakoff, the grammatical stative: non-stative dichotomy is the syntactic reflex of a semantic distinction. "In an overwhelming number of cases", he maintains, "STATIVE verbs and adjectives have the property NON-ACTIVITY, and NON-STATIVE verbs and adjectives have the semantic property ACTIVITY" (1966: 12).[41] Thus, the (a) and (b) sentences above are said to be acceptable because both *slice* and *careful* and the constructions in which they occur share an element of activity. By contrast, the (b) and (c) sentences are ungrammatical because there is a discrepancy between the dynamism of the clause pattern and the lack of such dynamism in *know* and *tall*.

Lakoff's hypothesis has been criticized on different grounds.[42] Among other things, it has been claimed that Lakoff's conception of what semantic property underlies the distinction is incorrect, or at best imprecise. Ljung (1975: 132) suggests that we replace the feature [+/-activity] with [+/-control]. According to this hypothesis, situations which can be controlled by the subject are non-stative, while uncontrollable situations are stative. Rogers (1971: 207, 209) and Dowty (1972: 64-65) hypothesize that the underlying semantic notion is intentionality/volition. This proposal is related to that of Ljung (1975), as control presupposes volition/intentionality. Dowty (1976), by contrast, regards the distinction permanent: obligatory as the essential discriminating feature, claiming that stative items denote permanent properties and non-stative items temporary properties. Most of these hypotheses seem to contain some grain of truth; however, none of them are able to explain the behaviour of all types of items with respect to their occurrence or non-occurrence in the test frames. It has therefore been suggested that stativity is a notion which is too complex to be explicable in

terms of one single semantic feature, and that underlying the syntactic stative: non-stative distinction there may rather be a bundle of such features. Kuno (1970: 352 n. 9) maintains that there are two features at the bottom of the distinction, viz. [+/-self-controllable] and [+/-active]. These two features are said to operate independently of each other; for example, only [+self-controllable] items can occur in the imperative, while [+active] elements may occur in the progressive. A rather similar proposal has been put forth by Dik (1975: 100), only in his view the underlying features are [+/-change] and [+/-control]. It is beyond the scope of the present study to evaluate the various proposals mentioned here. They are important, however, and several of the citations below make reference to ideas expressed in some of them (i.e. controllability, temporal restrictedness), rather than to Lakoff's ideas. In the following I will explain in some more detail the alleged relationship between stativity and adverbial derivation, which is not an issue in Lakoff (1966).

2.3.5 The stative: non-stative distinction and adverbial derivation

Dixon (1977: 31) divides English adjectives into seven semantic types, as shown below:[43]

> 1) VALUE: *good, bad* and a few more items (including *proper, perfect* and perhaps *pure*, in addition to hyponyms of *good* and *bad* such as *excellent, fine, delicious, atrocious, poor*, etc.).
> 2) SPEED: *fast, quick, slow* and a few more items.
> 3) HUMAN PROPENSITY: *jealous, happy, kind, clever, generous, gay, cruel, rude, proud, wicked*, and a whole range of other items.
> 4) AGE: *new, young, old*.
> 5) COLOUR: *black, white, red*, and so on.

6) DIMENSION: *big, large, little, small; long, short; wide, narrow; thick, fat, thin,* and a few more items.
7) PHYSICAL PROPERTY: *hard, soft; heavy, light; rough, smooth; hot, cold; sweet, sour* and many more items.

According to Dixon, there is a connection between the semantic category of an adjective and its adverb-forming capacity in the sense that "adjectives differ as to whether or not they form adverbs; and whether the adverb carries the full range of meaning associated with the adjective" (1977: 39). Specifically, adjectives denoting value, speed and human propensity are said to form adverbs that cover the same semantic range as their adjectival sources. By contrast, age adjectives are claimed to be totally unproductive, while some dimension and colour and most physical property adjectives have adverbial derivatives with metaphorical meanings (1977: 39-43). Dixon's examples of such metaphorical meanings are *drily remark, hotly deny, coldly assert, coolly consider, sweetly request, sourly reject, bitterly protest, darkly frown* and *darkly hint* (1977: 43 and 1991: 80). In addition, Dixon claims that "most occurrences of *warmly* correspond to the metaphorical sense of *warm* - we have a *warm recommendation* and *warmly recommend* but seldom a sense of *warmly* corresponding to *a warm fire* or *a warm day*" (1977: 39). In other words, according to Dixon neither age nor dimension, colour and physical property adjectives form adverbs with literal meanings.[44]

Dixon does not explain what causes the alleged differences in adverbial productivity to occur. Kjellmer (1984), however, suggests an answer to the problem.[45] His hypothesis draws heavily on Lakoff's ideas:

> ...the "adverb-productive" behaviour of Dixon's semantic types will receive a natural explanation if viewed in the dynamic: stative perspective. VALUE, SPEED and HUMAN PROPENSITY adjectives (which are the ones that form derived adverbs with the same meaning as the adjectives) mostly refer to controllable and hence dynamic properties, whereas DIMENSION, COLOUR, STATIVE PROPERTY and AGE adjectives mostly do not. (Kjellmer 1984: 12)

According to Kjellmer, then, the -*ly* suffix is used to derive adverbs only from adjectives which are non-stative; hence, derivations such as *blondely*, *bluely* and *Minoanly* are claimed to be blocked.[46] In the same vein, Quirk et al. maintain that the ability of an adjective to form an adverb in -*ly* is "closely related to the dynamic quality of the adjective" (1985: 439 n. 6). Derivation is claimed to be possible only from adjectives which "denote qualities that are thought to be subject to control by the possessor and hence can be restricted temporally" (1985: 434).[47] This, they say, would explain why adjectives such as *cheerful*, *jelaous*, *suspicious* and *reasonable* form adverbs, while adjectives like *French*, *big*, *red*, *tall*, *blonde* and *young* do not. There are, however, some studies which supply examples that are in disagreement with the view expressed here. Western (1906: 92-93), a study of adverbs in 19th-century English, provides a number of sentences with stative adverbs, most of these denoting colour. Swan (1990: 40, 46, 1997: 190, 1999) gives several examples from 20th-century English, where different categories are represented. In the next chapter I present the data of the present study and on the basis of this evidence I will claim that English grammar has changed to allow the kind of adverb derivation in question.

Chapter 3: The productivity of stative adverbs

3.1 Introduction

The present chapter presents evidence that the derivation of stative -*ly* adverbs is a productive process in English, and has been so since the 19th century. The relevant data are provided and discussed in section 3.2. This section also contains a discussion of how low-frequency phenomena can or should be measured. It will be argued that the hapax approach is not a well-suited method for studying productivity, and particularly not the productivity of low-frequency phenomena such as stative adverbs. In section 3.3 it will be shown that not all semantic subsets are equally productive. Section 3.4 compares the use, i.e. token frequency, of stative adverbs to that of the corresponding adjectives. Here it will be argued that adverbs are expanding at the expense of adjectives, and that this fact suggests that the items in question are undergoing adverbialization. Finally, section 3.5 provides a summary and conclusion.

Before I present the data, some comments on the statistics are in order. Firstly, I provide both raw and normalized counts. As explained in section 1.2.4, normalizing the figures is necessary because the different corpora are not all of the same size, and hence the raw figures are not directly comparable. The frequencies have been normalized to a basis of one million words. Secondly, co-ordinated stative items have been treated as separate units in the statistics, i.e. counted separately. Thirdly, two of the tables (tables 3.8 and 3.10) provide percentages that show the proportion of adverbs to adjectives. Some of the categories included in the tables are, however, very rare. In such cases, calculating percentages is not meaningful, as the figures may not be representative. I have nevertheless

supplied percentages for all categories, rather than leaving open slots in the tables. This has been done also in chapter 4. I trust it that the reader will have the common sense to take the figures in question for what they are, viz. possible but far from safe indications of some aspect of use.

3.2 The productivity of stative adverbs

As stated in section 2.2.3, productivity only obtains if a process (1) can be said to be put to use regularly, and (2) gives rise to new words. Below I will argue that the process of deriving stative adverbs meets the two criteria, i.e. is productive. I present different indices which all seem to show that this is the case, viz. the number of tokens, types, hapaxes, new types and users attested in the corpus (cf. section 2.2.5). Section 3.2.4 provides a critique of the hapax approach. As mentioned in section 2.2.5, the hapax rate has been claimed to be a reliable index of productivity. It will be argued that this is not such a perfect index of productivity after all, and that the number of new types in a corpus may be a better measure, in combination with other indices, for example those used in the present study.

3.1.1 The token rate

With regard to the number of tokens attested in the different corpora, the relevant figures are provided in table 3.1 below.[48] As shown in the table, the number of stative adverb tokens is extremely low prior to the 19th century; in fact, stative adverbs are so good as non-existent in the texts from the first 3 periods. By contrast, the 19th-century corpus contains 59 tokens and the 20th-century material as many as 140. Normalizing the frequencies does not change this picture. The normed figures show that

there are almost 20 times more tokens per million words in the 19th than in the 18th-century material and almost 30 times more tokens per million words in the 20th than in the 19th-century material. This means that stative adverbs are about 50 times more frequent in the 20th than in the 18th-century material. In other words, the large number of stative adverb tokens in the texts from the 19th and 20th centuries is not an effect of greater corpus size, but most probably bears witness of an increase in the use of stative adverbs. This rise must be assumed to reflect a change in linguistic competence (cf. section 2.2.2).

Table 3.1: Number of adverb tokens in the corpus

Period	Approx. no of words	Raw count	Normed count per mill. words
ME	2 mill.	0	0.0
EModE	1.3 mill.	3	2.3
18th ct	1.5 mill.	1	0.7
19th ct	2.9 mill.	59	20.6
20th ct	2.8 mill.	140	49.0
total	10.5 mill.	203	

The data cannot be tested for statistical significance, because of the many low figures. The chi-square test, for example (which is probably the most commonly used test in historical linguistics), requires that no cells contain figures lower than 5. Only the data from the 19th and 20th centuries meet this requirement, but two periods are of course not enough to test a historical trend for statistical significance. Nevertheless, there is an attested increase over several periods, which suggests that there has been a change with respect to the use of stative adverbs. Firstly, the process of deriving stative adverbs has clearly become increasingly regular in English. 59 and 140 derivations cannot be written off as "nonce formations", but must

indicate a change in the grammar. Secondly, in this particular case the token rate cannot only reflect increasing regularity; since stative adverbs were so uncommon before the 19th century, a fairly large number of the tokens attested after this time must logically be innovations. Hence, in a sense the token rate is basis enough to claim that the derivation of stative adverbs is a productive process in English. Nevertheless, I will present several other figures which demonstrate this fact as well.

3.2.2 The user rate

When we investigate an assumed change in the grammar, it is not enough to study diachronic differences in token rates between different corpora. We also need somehow to measure the extent to which the new feature is used by the population (i.e. the "corpus population"). By this I mean both how many speakers are found to use the feature, and the extent to which the feature is used by individual speakers. This is important because degree of use clearly sets the limits for what claims we can make. If, for example, a large proportion of the corpus speakers use a morphological process, we can assume that the process is applied fairly generally by the speakers of the language. If, on the other hand, the process is attested in the grammar of only a few speakers, the claims that we make must be of a more modest nature. We may well maintain that the process is productive in the grammars of the individuals in question, but we do not have sufficient grounds for claiming "societal productivity" for the process (cf. section 2.2.6).

In order to determine the degree to which stative adverbs are used in the corpus population, I have broken the data down text by text. Table 3.2 below shows the relevant data.

Table 3.2: Distribution of stative adverbs in the 19th and 20th-century texts

19th century:	Adverb tokens	20th century:	Adverb tokens
Alcott, LW	1	Allingham, FFJ	3
Alcott, BM	2	Amis, DB	11
Alger, FH	0	Amis, OPMS	6
Austen, SS	0	Barnes, The porcupine	1
Bierce, CSTB	2	Bennett, GBH	1
Brontë, WH	1	Brooks, LC	1
Collins, WW	3	Buchan, TNS	0
Cooper, LM	0	Burroughs, BT	1
Crane, RBC	1	Cabell, CH	3
Davis, PA	1	Christie, FLP	0
Dickens, CC	0	Daviess, EM	0
Dickens, GE	3	Dexter, SWNQ	2
Eliot, Middlemarch	2	Dexter, WTW	2
Eliot, SM	2	Ferber, BSD	3
Hardy, JO	1	Forrest, DTP	1
Hawthorne, SL	2	Forster, HE	1
Melville, BS	3	George, GD	5
Morris, NN	0	George, FSE	2
Ouida, DFOS	5	Gunn, SE	10
Poe, MRM	0	James, TD	13
Roberts, FF	6	Joyce, PAYM	4
Scott, Ivanhoe	1	Joyce, Ulysses	18
Shelley, Frankenstein	1	Lawrence, LCL	8
Stevenson, JH	3	Lawrence, SL	4
Stoker, Dracula	9	Lewis, OMR	7
Trollope, AA	1	MacLaverty, TD	5
Twain, ATS	1	MacLaverty, SOS	1
Wells, TM	7	Murdoch, SH	4
Wilde, PDG	1	Rendell, POC	4
total	**59**	Rogers, SF	3
		Sharpe, PB	5
		Sharpe, Wilt	2
		Woolf, VO	9
		total	**140**

As shown in the table, 20 out of 26 (77%) 19th-century writers use stative adverbs, while in the 20th-century corpus 23 out of 26 (88%) do. This must imply that the derivation of stative adverbs is by no means exceptional, but is established in both 19th and 20th-century English.

The use of stative adverbs does not seem to be regionally conditioned. English, American, Canadian, Scottish and Irish writers alike use such adverbs. This may indicate that standard English generally allows the derivation of stative adverbs in the linguistic contexts under study, though in the case of Canadian English we should be a bit careful in drawing too categorical conclusions, since there is only one writer represented (viz. Roberts).

The figures show that the 20th-century writers use stative adverbs more frequently than do the writers of the previous century. If we count the authors who are found to use stative adverbs 5 times or more in the course of a novel (or collection of short stories), we find that there are 4 in the 19th and 10 in the 20th-century corpus. Only one 18th-century author uses stative adverbs 8 times or more, while 6 of the 20th-century writers do. None of the 19th-century writers use 10 or more stative adverbs in one work, while 4 of the 20th-century writers do. This would seem to imply that in the course of the last two centuries, stative adverbs have become increasingly regular in the grammar of an growing number of speakers.

3.2.3 The type rate

Diachronic differences in the number of attested types may reflect changes in the productivity of a process, both in terms of its regularity and its ability to derive new forms. Table 3.3 below displays the type rates for the different periods represented in this study. The differences between in type rates are considerable. There are, of course, hardly any types in the texts from before the 19th century. By contrast, there are 6-7 more types per million words in the 19th than in the 18th-century material, and almost 10 more types in the 20th than in the 19th-century corpus. These differences again speak of a change in the use of stative adverbs; they show that the rise in the token rate was not simply the result of an increase in the use of a few types, but that the category of stative stative adverbs has diversified enormously.[49]

Table 3.3: Number of adverbial types in the corpus

Period	Approx. no of words	Raw count	Normed count per mill. words
ME	2 mill.	0	0.0
EModE	1.3 mill.	3	2.3
18th ct	1.5 mill.	1	0.7
19th ct	2.9 mill.	21	7.3
20th ct	2.8 mill.	49	17.2
total	10.5 mill.	58	

Table 3.4 below shows the occurrence rates of the various adverbial types in the 19th and 20th-century corpora. The data show that there are huge differences between the frequencies of the various types. Some types are fairly frequent, while others occur only once or twice. For example, among the temperature adverbs, *warmly* occurs 12 times, while there are 5

occurrences of *hotly* and 4 of *coldly*. In the colour/hue category there are two "high-frequency" items (i.e. in relative terms), viz. *darkly* and *palely*, which occur 25 and 15 times, while the rest of the types appear at a rate of 1 to 3. Among the radiance adverbs, *brightly*, with its 30 tokens, is much more frequent than the others. *Brilliantly* is also commonly used, figuring 17 times in the data. The rest occur 1 to 4 times. As for dimension/form adverbs, the most common type is *massively*, with its 7 tokens, the other members of the class occurring at a rate of 1 to 4. Within the rest of the categories, i.e. moisture, dirt and age, all the attested types are highly infrequent.

Table 3.4: Occurrence rates of the different adverbial types in the corpus

	EModE	18th ct	19th ct	20th ct	total	first attestation	first attestation in corpus
colour:							
blackly	0	0	0	1	1	1563 Mirr. Mag.	1989 George GD
bluely	0	0	1	0	1	1647 H. More	1893 Bierce CSTB
blushingly	0	0	1	1	2	1598 Florio	1861 Eliot SM
brownly	0	0	0	1	1	c1825 Beddoes	1992/93 Dexter WW
colorfully	0	0	0	1	1	only figurative uses	1909 Cabell CH
darkly	0	0	8	17	25	1509 Hawes	1850 Hawthorne SL
frostily	0	0	0	1	1	1851 Hawthorne	1984 Amis DB
glaucously	0	0	0	1	1	unattested	1978 Sharpe, Wilt
goldenly	0	0	0	2	2	c1825 Beddoes	1922 Joyce, Ulysses
greengoldenly	0	0	0	1	1	unattested	1922 Joyce, Ulysses
greenly	0	0	0	1	1	1583 Stanyhurst	1981 Amis OPMS
greyly	0	0	0	2	2	1818 Keats	1916 Joyce PAYM
mellowly	0	0	0	1	1	1806 J. Grahame	1937 Allingham FJ
palely	0	0	2	13	15	a1548 Hall	1856 Melville BS
pallidly	0	0	2	0	2	1656 Artific. Handsom.	1856 Melville BS
redly	0	0	3	0	3	1814 Byron	1860 Collins WW
rosily	0	0	0	3	3	1852 M. Arnold	1912 Ferber BSD
ruddily	0	0	1	0	1	1816 Byron	1872 Ouida DFOS
whitely	0	0	0	1	1	1398 Trevisa	1992/93 Dexter WW
total	**0**	**0**	**18**	**47**	**65**		

	EModE	18th ct	19th ct	20th ct	total	first attestation	first attestation in corpus
radiance:							
brightly	0	0	15	15	30	a1300 Cursor M.	1818 Shelley, Frankenstein
brilliantly	0	0	9	8	17	1815 Scribbleomania	1860 Collins WW/Dickens GE
clearly	1	0	0	0	1	c1350 Will. Palerne	1592 Chettle KHD
dimly	0	0	2	0	2	a1225 Ancr. R.	1856 Melville BS
dully	0	0	1	2	3	1626 Bacon	1872 Ouida DFOS
faintly	0	0	2	1	3	1695 Blackmore	1895 Wells TM
fierily	0	0	0	4	4	1626 Bacon	1913 Lawrence SL
glazily	0	0	0	1	1	1858 Faber	1922 Joyce Ulysses
glitteringly	0	0	0	1	1	1820 Moir	1909 Cabell CH
glossily	0	0	0	2	2	1727 Bailey	1986 James TD
total	**1**	**0**	**29**	**34**	**64**		
dimension/							
form							
bulkily	0	0	0	2	2	1886 Stevenson	1914 Lewis OMR
corpulently	0	0	0	1	1	1986 Merriam-Webster	1984 Amis DB
fatly	0	0	0	3	3	1866 Howells	1914 Lewis OMR
flatly	0	0	1	1	2	1797 Holcroft	1871-2 Eliot, Middlemarch
formlessly	0	0	1	0	1	1888 Howells	1886 Stevenson DJMH
hugely	0	0	0	1	1	only figurative uses	1981 Amis OPMS
jaggedly	0	0	0	1	1	1698 Wallis	1984 Brooks LC
lankly	0	0	1	0	1	1924 C. Mackenzie	1847 Brontë WH
massively	0	0	2	5	7	1858 Hawthorne	1871-2 Eliot, Middlemarch
plumply	0	0	0	1	1	1860 Lever	1922 Joyce, Ulysses
shapelessly	0	0	0	1	1	unattested	1981 Rendell PC
starkly	0	0	0	2	2	1850 Merivale	1922 Joyce, Ulysses
steeply	0	0	0	1	1	1772 Pennant	1941 Gunn SD
stockily	0	0	0	1	1	1892 Harper's Mag.	1986 James TD
thickly	0	0	1	3	4	only other senses	1872 Ouida DFOS
tinily	0	0	0	3	3	1862 Temple Bar. Mag.	1922 Joyce, Ulysses
total	**0**	**0**	**6**	**26**	**32**		
age:							
oldly	0	0	0	1	1	c1200 Ormin	1922 Joyce Ulysses
youngly	0	0	0	1	1	c1530 More	1922 Joyce Ulysses
total	**0**	**0**	**0**	**2**	**2**		
moisture:							
damply	0	0	1	3	4	1887 American XIV	1897 Stoker, Dracula
dankly	0	0	0	2	2	1818 Shelley	1976 Sharpe PB
moistly	0	0	0	4	4	1905 H.G. Wells	1984 Amis DB
scummily	0	0	0	1	1	unattested	1984 Amis DB
wetly	0	0	0	4	4	1562 J. Heywood	1984 Amis DB
total	**0**	**0**	**1**	**14**	**15**		
temp:							
coldly	0	0	1	3	4	a1240 Wohunge	1896 Roberts FF
hotly	0	0	1	4	5	?1592 Shake., V & A	1896 Roberts FF
warmly	1	1	3	7	12	1591 Sylvester	1667 Milton PL
total	**1**	**1**	**5**	**14**	**21**		
dirt:							
dirtily	1	0	0	0	1	1777 W. Dalrymple	17th ct, Strype (Hels.)
dustily	0	0	0	2	2	1863 Cornh. Mag.	1937 Allingham FJ
greasily	0	0	0	1	1	1607 Beaum. & Fl.	1978 Sharpe Wilt
total	**1**	**0**	**0**	**3**	**4**		

The fact that there are such large variations in the occurrence rates of the different types suggests that the spread of stative adverbs has been - and is - taking place by way of "lexical diffusion" (cf. Wang 1969; Labov 1981, 1994: chapter 15). This means that the -*ly* suffix has not spread to all members of a subset at the same time, but from one type to another. The items which are currently most frequent were probably affected first, and these have thus spread to the largest number of speakers. The more infrequent items are later developments. The concept of lexical diffusion is normally applied to phonological change; however, as noted by Bauer (1994: 21), it should in principle be applicable to morphological change as well. To my knowledge, there is no principled reason why morphological change should be more abrupt than sound change, or any other type of linguistic change for that matter.

3.2.4 The hapax rate and its ability to measure productivity

As explained in section 2.2.5, Baayen and Lieber (1991: 815) suggest that we use the number of hapax legomena as an index of morphological productivity. In this approach, all the hapaxes in a corpus are counted as innovations. An interesting aspect of the present study is to test this methodology, particularly with respect to its use in historical investigations of low-frequency categories. I will argue that the hapax approach is not a reliable index of morphological productivity. I begin by providing, in table 3.5 below, the hapax rates for the different corpora of the present study.[50]

Table 3.5: Number of hapaxes in the corpus

Period	Approx. no of words	Raw count	Normed count per mill. words
ME	2 mill.	0	0.0
EModE	1.3 mill.	3	2.3
18th ct	1.5 mill.	1	0.7
19th ct	2.9 mill.	11	3.8
20th ct	2.8 mill.	25	8.8
total	10.5 mill.	40	

The hapax rate, just like the other measures just discussed, is higher in the last two centuries than before this time. This suggests a rise. However, the increase indicated by the hapax rate is much more modest than that suggested by the token and type rates. Furthermore, there is a discrepancy between the hapax rates in table 3.5 and the type rates in table 3.3. The problem is that there are 58 types in the corpus; yet, only 40 (or strictly speaking, 37, cf. note [50]) are shown to have been hapaxes, although all the types in question must be assumed to have been new once.

What creates this problem becomes clear if we study the figures in table 3.4. These show that some adverbial types simply do not occur as hapaxes in any one period; in fact, 22 of the 58 recorded types, or 38 %, never do. This is of course a substantial proportion. As many as 12 types occur twice, while 4 types appear 3 times and 3 types 4 times, without any previous hapax uses. The use of the types *darkly*, *brilliantly* and *brightly* literally "explodes" in the 19th century, these items being recorded respectively 8, 9 and 15 times in their first period of appearance. If single occurrence in any one period is made a criterion for newness, then it follows that adverbial forms which do not appear as hapaxes have never been innovations; yet, these forms must also at some stage have been new, to individual speakers

as well as to the language "as such". The problem with the hapax approach is that it presupposes a similar course of development for all new forms, and assumes that this trajectory can be traced in any corpus. Specifically, at stage (1) new forms occur singly. They remain at this stage for a relatively long period of time, before they at some later point, which we may call stage (2), begin to multiply. This is the general assumption behind the hapax approach (cf. section 2.2.5); however, as we have seen, the claim is not borne out by the evidence. Instead, new forms quite commonly appear in clusters. For example, a form may occur in the work of several writers at approximately the same time, rather than in the writings of just one single person.[51] Also, an innovation may appear several times in a single work by the same author. For instance, both uses of *glossily* in the corpus occur in the novel by P.D. James, as do two of the four recorded uses of *wetly*. The hapax approach does not leave scope for such paths of development. This is a fact which severely downtones its usefulness in measuring productivity.

The problem under discussion is of course magnified in studies of low-frequency categories, where the occurrence of any new type is so important to the development and productivity of the category as a whole. Here we would miss a considerable proportion of the interesting new derivations if all items are excluded which do not appear as hapax legomena. One may argue that to studies such as those of Baayen & Lieber (1991) and Baayen (1994), which investigate the global productivity of *-ly*, as well as other affixes, there is not so much importance connected with individual forms, and hence it does not matter that much if some of them are not counted. On the other hand, we may not only be talking about a few forms. When we consider the fact that almost 40% of the adverbs recorded in the present study never appear singly, but in clusters, we may ask if this kind of

development must not be fairly common. If this is so, the basic assumption behind the hapax approach (i.e. about the early distribution of new types) is incorrect, in which case the hapax rate must be said to be a highly unreliable measure of newness, and hence productivity.

There are ways of reducing the problem to a minimum, such as dividing the time span under study into very short intervals, for example decade-long ones. This strategy would undoubtedly allow more items to appear as hapaxes; however, it would also create new problems. One is that it would be extremely difficult to find enough texts (not to mention machine-readable ones) from each period. Secondly, there would be a proliferation of periods and corpora, which would inevitably render historical studies much more intractable. The periodization of the present study is in line with standard practice in diachronic linguistics, which typically refers to entities of one to several hundred years. If the hapax approach can only be applied to much smaller temporal entities, then this seriously reduces its applicability to historical linguistics. However, the problem concerns not only diachronic linguistics. Synchronic studies commonly cover a whole century as well, and in any corpus which spans such a relatively long period of time, there will most probably be a number of new formations which never have hapax status.

3.2.5 The new-type rate

Because of the problem pointed out above, the hapax rate is not a good index of productivity; it will indicate a too low productivity rate for the morphological process under study.[52] I therefore suggest that we should find another and better measure of newness than the hapax rate. Such a measure may be found in the number of types which are new to each

period, i.e. do not occur in any corpus previous to that period. In contradistinction to the hapax rate, this index allows all the types represented in a diachronic productivity study to be innovations at some point. In our case, it takes into account the large number of types occurring twice, as well as the smaller number occurring 3-15 times in their first period of appearance. Table 3.6 below provides the new-type rates for the corpus adverbs. If we compare the figures here with those in table 3.5, we see that the new-type rate indicates a higher degree of productivity for stative adverbs than does the hapax rate. Both the 19th and the 20th-century figures are higher. The contrast between the 18th and 19th-century figures is also much sharper; while the two rates are both close to zero in the material from the former period, the new-type rate is almost twice as high as the hapax rate in the texts of the latter period. The new-type rate hence shows more clearly how innovative the 19th century is with respect to the derivation of stative adverbs. Also the 20th-century rate is much higher for the new types than for the hapaxes. The new-type rate is more in agreement with the token and type rates, and would consequently seem to be a better indicator of productivity than the number of hapaxes.

Table 3.6: Number of new types in the corpus

Period	Approx. no of words	Raw count	Normed count per mill. words
ME	2 mill.	0	0.0
EModE	1.3 mill.	3	2.3
18th ct	1.5 mill.	0	0.0
19th ct	2.9 mill.	20	7.0
20th ct	2.8 mill.	35	12.3
total	10.5 mill.	58	

The data presented in the present section show that the process of deriving stative adverbs is both regular and gives rise to new words. It is therefore productive, according to the definition of productivity adopted in this study. In the next section I discuss to what extent the various subsets of stative adverbs are productive.

3.3 The productivity of the various subsets of stative adverb

In order to determine whether all the semantic subsets under study are productive, or just some of them, we may try to test each category with respect to the two criteria for productivity, viz. regularity and innovativeness. These two aspects will be tested by way of the token and new-type rates of the various classes. Table 3.7 below provides the relevant data.[53] The figures show that the colour and radiance categories are fairly frequent in both the 19th and 20th-century material. They are the two most common categories by far, each comprising approximately one third of the recorded adverb tokens. There are some distributional differences between the two classes, however. While the derivation of radiance adverbs appears to have been as regular in the 19th century as in the 20th, colour adverbs seem to be much more regularly derived in the 20th century. The figures may be evidence that radiance adverbs were the first category to become established - i.e. to be derived regularly (cf. the discussion in section 3.4.3.). This development may have taken place in the first half of the 19th century. Unfortunately, this hypothesis cannot be tested since most of the novels in the 19th-century corpus are written in the last half of the century (due to the factors explained in section 1.2.4).

Table 3.7: Token and new-type rates by semantic subset for the 19th and 20th-century adverbs

	colour	radiance	dim/form	age	moisture	temp	dirt
tokens							
19th ct	18	29	6	0	1	5	0
20th ct	47	34	26	2	14	14	3
total	65	63	32	2	15	19	3
new types							
19th ct	7	5	5	0	1	2	0
20th ct	12	4	11	2	4	0	2
total	19	9	16	2	5	2	2

Having claimed that both radiance and colour adverbs are derived regularly in 19th and 20th-century English, we should also ask to what extent the processes deriving them give rise to new words. If we look at the relevant figures, we see that both the colour and radiance category have acquired new members in both periods. It appears, then, that the derivation of colour and radiance adverbs are processes which, in addition to being regularly applied, create new derivations. Thus, according to the understanding of morphological productivity applied in this study, they are both productive classes both in 19th and 20th-century English. The most productive of the two in present-day English is apparently the colour category, which has given rise to three times as many new formations as the radiance category.

The categories dimension/form and temperature show roughly the same distribution in terms of token numbers; they are both rare in the 19th-century material, but 3-4 times more frequent in the texts from the 20th century. The 20th-century figures are high enough to suggest that the derivation of dimension/form and temperature adverbs are regular processes in present-day English. However, with respect to the recruitment of new types, the two classes are highly different. The dimension/form

category has acquired a number of new recruits, especially in the 20th century. In fact, it can be compared to the colour category so far as innovativeness is concerned. The temperature category, by contrast, does not seem to have acquired any new members at all. Temperature adverbs, then, are an established adverb class, but not a productive one. Of all the subsets studied, moisture adverbs apparently represent the latest addition to the stative adverb category. The class is so good as non-existent in the 19th-century material, but is not uncommon in the texts from the 20th century. With respect to recruitment, the category has acquired some new members in the present century, and hence must be said to show some degree of productivity. Finally, adverbs denoting dirt and age are extremely rare in the corpora of both periods. They are neither derived regularly, nor do they give rise to new derivations; hence, both categories must be said to be so good as unproductive.

There is one thing which needs to be pointed out, and that is that a comparison such as the one carried out above is strictly speaking not "fair". The problem is that not all classes are as potentially productive (as others). There are some categories that cannot possibly recruit new members, simply because there are too few adjectival bases to which the adverbial suffix could potentially be attached. For example, English does not have a whole range of adjectives that denote temperature; rather, the adjective stock within this cognitive field is very limited, and hence the group of adverbs derived from this stock must also be small. By contrast, English has quite a few colour and dimension/form adjectives, which again explains how there can be such a relatively large number of colour and dimension/form adverbs. As mentioned in section 2.3.3, this situation is given a terminology by Corbin (1987: 177), who claims that morphological processes which should in principle be productive need not give rise to a

large number of words. Instead, processes are more or less "rentable" (i.e. 'profitable', according to Carstairs-McCarthy 1992: 37), that is, they give rise to many or few new derivations according to the number of base words available. Using Corbin's terminology, we may say that not all the subsets of physical adverbs are rentable; however, the process of deriving stative adverbs as such definitely is.

The data just presented may be evidence that the development of stative adverbs involves a spread from subset to subset. The two subsets radiance and colour/hue are fairly well-established in 19th-century English, while the dimension/form, moisture and temperature categories become so only in the 20th century. This is not to say that there are no earlier occurrences of any of these categories; table 3.4 (the rightmost column) shows that the first attestations of many forms date several hundred years back in time. Although there are scattered uses of stative adverbs in earlier periods, however, the category is not really part of English grammar at this stage. The forms in question seem to have occurred only in the writings of very few authors, and the majority of them will probably have been completely ungrammatical to most users of the language. As noted by Emonds (1973: 187), if we take such scattered precursors as evidence that a grammatical change has taken place, we will set the time of the change too early (cf. also Donner 1986: 395 and Lass 1997: 281-289). That there are forerunners to the change under investigation is nothing special, but is a fact that makes the development of stative adverbs similar to other kinds of linguistic change.[54]

3.4 The proportion of adverbs to adjectives in the corpus

3.4.1 Introduction

As mentioned in section 1.3, the present thesis has not studied stative adverbs in isolation, but in a contrastive adverb: adjective perspective. In the following I compare the use of stative adverbs to that of the corresponding adjectives. I present adverb: adjective ratios both for the category of stative elements as a whole (in section 3.4.2), and for the different subsets (section 3.4.3). The discussion below is, for methodological reasons, not a comparison of stative adverbs and adjectives generally, but rather of the corpus adverbs and their direct adjectival counterparts (cf. section 1.3). A further restriction is that only the corpora from the Early Modern era onwards have been scanned for adjectives, due to the wide range of spelling variants in Middle English.[55]

3.4.2 The proportion of adjectives to adverbs for the whole category

Table 3.8 below shows the proportion of adjectives to adverbs in the corpus. Interestingly, there are 20% more adverbs than adjectives in the data. The figures demonstrate large variations in the ratio of adjectives to adverbs between the Early Modern period and the 20th century. The number of stative elements in the Early Modern and 18th-century corpora is not impressive, but what data there are suggest that adjectives are used much more frequently than adverbs at this stage. In both the 19th and 20th-century corpora, the situation is the reverse; here adverbs outnumber adjectives by 10 and 30%, respectively. The figures bear witness of an increased preference for adverbs in the relevant linguistic contexts. Considering that linguistic changes are assumed as a rule to proceed very

gradually (cf. Lass 1997: §6.2), this particular change seems to have taken place extremely fast.

Table 3.8: Relative distribution of adjectives and adverbs in the Early Modern English to 20th-century corpora

		ADJ			ADV			total
	no. of words	tokens	%	normed count per mill. words	tokens	%	normed count per mill. words	
EModE	1.3 mill.	6	67	4.6	3	33	2.3	9
18th ct	1.5 mill.	8	89	5.3	1	11	0.7	9
19th ct	2.9 mill.	48	45	16.8	59	55	20.6	107
20th ct	2.8 mill.	74	35	26.0	140	65	49.1	214
total	8.5 mill.	136	40		203	60		339

One interesting aspect of the data in table 3.8 is that they show that it is not only the use of stative adverbs which has increased greatly; the use of the corresponding adjectives also shows a marked - though less dramatic - rise. In other words, there has been a general increase in the use of stative elements in the syntactic contexts under study. Prior to the 19th century, both stative adverbs and stative adjectives seem to have been used extremely rarely in the ways described in this study; there are only 6.9 and 6 tokens per million words in the Early Modern and 18th-century corpora, respectively. By contrast, the 19th-century material contains 37.4 and the 20th-century texts 75.1 tokens per million words. This means that the 19th century is a breaking point not only with regard to the use of stative adverbs, but also with respect to the use of stative elements generally. The trend of using stative elements in the manner in question has been further strengthened in the 20th century, and the new uses have spread much more rapidly than what is said to be common in language.

If we look at the 19th and 20th-century data text by text, we see that there are considerable variations in the use of adjectives and adverbs. Table 3.9 provides the relevant figures.

Table 3.9: Ratio of adjectives to adverbs in the 19th and 20th-century texts

19th century:	ADV	ADJ	20th century:	ADV	ADJ
Alcott, LW	1	5	Allingham, FFJ	3	0
Alcott, BM	2	0	Amis, DB	11	0
Alger, FH	0	0	Amis, OPMS	6	0
Austen, SS	0	0	Barnes, The porcupine	1	0
Bierce, CSTB	2	3	Bennett, GBH	1	2
Brontë, WH	1	2	Brooks, LC	1	0
Collins, WW	3	4	Buchan, TNS	0	2
Cooper, LM	0	2	Burroughs, BT	1	0
Crane, RBC	1	1	Cabell, CH	3	1
Davis, PA	1	0	Christie, FLP	0	0
Dickens, CC	0	2	Daviess, EM	0	0
Dickens, GE	3	4	Dexter, SWNQ	2	0
Eliot, Middlemarch	2	2	Dexter, WTW	2	0
Eliot, SM	2	0	Ferber, BSD	3	0
Hardy, JO	1	1	Forrest, DTP	1	0
Hawthorne, SL	2	3	Forster, HE	1	0
Melville, BS	3	0	George, GD	5	0
Morris, NN	0	0	George, FSE	2	0
Ouida, DFOS	5	4	Gunn, SE	10	1
Poe, MRM	0	0	James, TD	13	2
Roberts, FF	6	2	Joyce, PAYM	4	1
Scott, Ivanhoe	1	0	Joyce, Ulysses	18	3
Shelley, Frankenstein	1	0	Lawrence, LCL	8	10
Stevenson, JH	3	0	Lawrence, SL	4	21
Stoker, Dracula	9	7	Lewis, OMR	7	0
Trollope, AA	1	0	MacLaverty, TD	5	4
Twain, ATS	1	3	MacLaverty, SOS	1	6
Wells, TM	7	2	Murdoch, SH	4	5
Wilde, PDG	1	1	Rendell, POC	4	1
total	59	48	Rogers, SF	3	6
			Sharpe, PB	5	2
			Sharpe, Wilt	2	0
			Woolf, VO	9	7
			total	140	74

As shown in the table, some of the texts contain neither stative adverbs nor adjectives, some both, while others make use of one of these options only. Among those which have examples of both parts of speech, the relative proportion of each varies a great deal.

The fact that there is variation not only between but also within grammars is interesting. That idiolects are in fact not homogeneous is shown by Gauchat as early as in 1905 with respect to phonology (Romaine 1982: 257-258), and it is a point which has been demonstrated repeatedly since that time (cf. Romaine 1982: 257-258 for an account). On the basis of his data, Gauchat hypothesizes that one way in which a change in the linguistic system can take place is by oscillation between old and new forms (Romaine 1982: 258-261).[56] The figures provided in table 3.9 indicate that this is the case for stative adverbs and adjectives as well; the proportions are gradually shifting in favour of adverbs. It should be added, however, that although the proportion of adverbs is increasing, it is by no means evident that adjectives will disappear from these functions in the future.

The choice of form does not seem to be regionally conditioned. There are no discernable differences between the English written by English and American writers; the two varieties are both extremely variable with respect to the use of stative elements. The texts by the Scottish and Irish writers, and the one by the Canadian writer Roberts, are also characterized by the same kind of variability. This may indicate that standard English generally allows both adjectives and adverbs in the linguistic contexts under study.

3.4.3 The proportion of adjectives to adverbs for each subset

Table 3.10 below shows the realization of the various semantic subsets in the 19th and 20th-century corpora. First we may note that if age and dirt adverbs are infrequent in the data, the corresponding adjectives are nonexistent. The subsets in question simply do not seem to be used in the relevant syntactic contexts. With respect to the 19th-century material, the categories dimension/form, moisture and temperature are so rare that it is impossible to say anything meaningful or certain about their realization in this period. Only colour and radiance elements are well enough represented to allow generalizations to be made. Of these, the radiance category is the class which is by far most frequently realized by adverbs. The category is almost completely dominated by adverbs at this stage. This may be evidence that the subset in question was the first to become adverbialized, as was suggested in section 3.3. By contrast, the colour category is dominated by adjectives; however, adverbs are quite common as well. With regard to the realization of the different subsets in the 20th-century data, we see that the proportion of adverbs is generally higher than it was in the 19th-century data. This is, again, a fact which indicates adverbialization (though some figures must, of course, be taken with reservations because they are low, both in the 19th and in the 20th-century data).

Table 3.10: Realization of the various subsets in the 19th and 20th-century corpora

	ADV		ADJ		
	tokens	%	tokens	%	total
19TH CT:					
colour	18	36	32	64	50
radiance	29	85	5	15	34
dimension/form	6	67	3	33	9
age	0	0	0	0	0
moisture	1	33	2	67	3
temperature	5	45	6	55	11
dirt	0	0	0	0	0
total	**59**	**55**	**48**	**45**	**107**
20TH CT:					
colour	47	47	54	53	101
radiance	34	87	5	13	39
dimension/form	26	93	3	7	29
age	2	100	0	0	2
moisture	14	88	2	12	16
temperature	14	58	10	42	24
dirt	3	100	0	0	3
total	**140**	**65**	**74**	**35**	**214**

Finally, we may note how a contrastive adverb: adjective perspective changes our ideas of the use of stative adverbs. If we had only studied the behaviour of adverbs in the relevant linguistic contexts, we would have assumed that colour items carry the -ly suffix much more often than the members of the other subsets. However, the data in table 3.10 show that this is not the case at all, but that in the 20th-century material, the colour category is realized by adverbs to a much *lesser* extent than any of the other classes under study. Thus, the high number of colour adverbs in the data is in part an effect of a generally high frequency of colour elements in the relevant functions, i.e. including both adverbs and adjectives.

The sentences in (1)-(7) below show examples of adjectives and adverbs of the various semantic categories under investigation. The (a) examples have adjectives and the (b) examples adverbs. Exceptions here are the age and dirt categories, for which there are no adjectival realizations in the corpus.

Colour:

1a ...her dress showing very *white* in the sun (Woolf VO)

1b ...with the unpainted nails immaculately manicured, the half-moons arching *whitely* over the well-tended cuticles. (Dexter WW: 17)

Radiance:

2a ...her eyes sparkled as *bright* as diamonds (Brontë WH)

2b ...but the fire burst out again *brightly* (Wells TM)

Dimension/form:

3a ...*white* and *massive* it [i.e. the hotel] stood in the early light (Woolf VO)

3b ...the simple lines of her dark-brown hair parted over her brow and coiled *massively* behind (Eliot, Middlemarch)

Age:

4a He raised his forefinger and beat the air *oldly* before his voice spoke (Joyce, Ulysses: Nestor)

4b Yes, Mr. Best said *youngly*, I feel Hamlet quite young (Joyce, Ulysses: Proteus)

Moisture:

5a Beyond town, we found a heavy mist out, and it fell *wet* and thick (Dickens GE)

5b Agnes began to snore *wetly*, her head pitched forward on to her chest (MacLaverty TD: 87)

Temperature:

6a They arrived *hot* and panting (Twain ATS)

6b The midday sun which Hirst had foretold was beginning to beat down *hotly* (Woolf VO)

Dirt:

7a   Books, clothes and manuscripts were there stacked together neatly, albeit a trifle *dustily* (Allingham FJ: 168)

7b   The battered '78 Chevrolet sweeps up the pebbled, semi-circular approach and drifts *dustily* to a halt, sending a squirt of gravel into the oblong rosebed five yards from the front door (Amis DB: 48)

3.5 Summary and discussion

To sum up, section 3.2 shows that there has been a change in the use of stative adverbs. There has been a notable rise in all the factors which have been used as indicators of productivity, viz. the number of tokens, users, types, hapaxes and new types. The data show that the process of deriving stative adverbs is both regular and gives rise to new forms; in other words, it meets both criteria for productivity which were established in section 2.2.3. This has not always been the case, however. Before the 19th century, the process is neither regular, nor does it give rise to new formations. All the different indices suggest that the 19th century represents a watershed with regard to the productivity of the process.[57] The 20th century is apparently a period of consolidation and further spread of the process from individual to individual. It is also a period of diversification. In this respect stative adverbs are similar to sentence adverbs (cf. Swan 1988) and adverbs derived from present participles (cf. Killie forthcoming b). Section 3.2.4 offered a discussion of what methodology is appropriate in a study of morphological productivity in general, and of low-frequency categories in particular. It was argued that the hapax rate is not a good measure of productivity, but that it may be advisable to use a combination of different measures, as done in the present study.

The data presented in section 3.3 shows that there is considerable variation within the different subsets of stative adverb, with respect to how productive they are. While colour and radiance adverbs seem to be productively derived both in 19th and 20th-century English, dimension/form and moisture adverbs have become productive only in the latter period. Temperature adverbs have become fairly commonly used in the 20th century; however, the category has not acquired any new recruits, and must hence be said to be unproductive. Age and dirt adverbs are both unproductive. It was suggested that the radiance class may have played a crucial role in the development of stative adverbs. This is a hypothesis which will be discussed in sections 4.5 and 8.3.3.2.

The quantitative evidence presented in section 3.4 shows that the development of stative adverbs should not be viewed as an isolated phenomenon. Instead, it should be seen against the background that there has been an increase in the use of stative elements generally - i.e. both adverbs and adjectives - in the relevant linguistic contexts. The use of adverbs and adjectives in the functions in question is rare before the 19th century, but increases rapidly in the course of this period. There is a doubling in frequency between the 19th and 20th centuries. The proportion of adverbs in the data is about 20% larger in the 20th than in the 19th-century corpus. This may indicate that adverbs are replacing adjectives in the relevant contexts, which seems also to be indicated by the fact that each semantic subset is realized by adverbs to a larger extent in the 20th than in the 19th-century material.

The change in the occurrence rates of stative adverbs - as well as adjectives - must be assumed to bear some relation to the competence of the language users. However, in discussing this issue we should keep in mind the fact

that rates and figures can never be an exact representation of linguistic competence, but that they also to some extent mirror linguistic preferences, or even creativity and playfulness.[58] There is no way of telling to what extent the figures presented in this chapter reflect what is grammatically acceptable - or unacceptable - to the writers represented.[59] We must, however, be justified in assuming there to be a rather high degree of correlation between the rising adverb rates and competence, to the effect that a large increase in frequency can be interpreted as reflecting a change in grammaticality. In this connection we may note Cedergren and Sankoff's (1974) claim that "performance is a statistical reflection of competence..." (cf. Romaine 1982: 248 and section 2.2.2). With this in mind, the figures presented in the present chapter are assumed too bear witness of a change in standard English, the derivation of stative adverbs having become possible in the grammar of an increasing - and by now large - number of speakers. Thus, those linguists who maintain that stative adverbs are ungrammatical in present-day standard English (cf. sections 1.1 and 2.3.5) are mistaken, for the texts included in this study must surely be said to be written in the standard that these scholars are claiming to describe. This clearly shows how dangerous it can be to rely too much on one's own linguistic intuitions, to the exclusion of real language data, as I assume the linguists in question must have done. One may therefore argue that the corpus-based approach should not be reserved for historical studies, but should also be the basis of synchronic descriptions of the language.

Chapter 4: The syntax and semantics of clauses with stative elements

4.1 Introduction

The present chapter provides a syntactic and semantic analysis of the context in which stative elements occur. In section 4.2 the corpus elements are analyzed with respect to their syntactic function. The rest of the parameters studied, viz. the positional distribution and syntactic structure of the elements, as well as the semantic category of the collocating verb and subject, are only relevant for the elements with an independent function in the clause (cf. section 1.3). These parameters will be discussed in sections 4.3-4.6, and section 4.7 provides a summary and conclusion.

As mentioned in section 1.1, the purpose of the analysis is to shed light not only on the synchronic use of stative adverbs but also on their diachronic development, i.e. on their origin and spread. On the basis of the data presented, I will put forward some suggestions concerning the diachronic development of stative adverbs. These will be developed into a coherent explanation in chapter 8. The tables show the figures for the 19th and 20th-century corpora only, since there are so few examples from before this time.

In the analysis, stative adverbs are compared with the corresponding adjectives. A contrastive adverb: adjective perspective was shown in chapter 3 to put the development of stative adverbs into perspective, showing that it is part of two larger tendencies: the changed use of stative elements generally, and the adverbialization process. The contrastive data presented in this chapter seem to strengthen the adverbialization hypothesis

further. Note that although I discuss both adverbs and adjectives, the emphasis will all the time be on the adverbs, since these are the focus of the present study. The adverbs are also most interesting to a student of historical morphology as they represent new forms in the language, while the adjectives are merely old items with new uses.

4.2 The syntactic function of the stative elements in the corpus

Table 4.1 below shows the ratio of modifiers to independent elements for both adverbs and adjectives in the 19th and 20th-century corpora.

Table 4.1: Proportion of modifiers to independent elements

	ADV		ADJ	
	tokens	%	tokens	%
19TH CT:				
modifier	23	39	3	6
independent	36	61	45	94
total	59	100	48	100
20TH CT:				
modifier	36	26	1	1
independent	104	74	73	99
total	140	100	74	100

With respect to the adverbs, the figures show that the most common function of these is as an independent clause element, i.e. an adverbial. The proportion of adverbials is much larger than the proportion of modifiers in both corpora. There are, however, proportionately more modifiers in the 19th than in the 20th-century texts. Whether this fact is just an accident of the data, or if modifiers play an important role in the development of

stative adverbs is difficult to tell. In view of the history of pre-adjectival position, it is not, however, unlikely that modifiers have played a role. As explained in section 2.3.2, intensifiers, which also occur in the relevant position, began to be adverbialized - or regularized - centuries ago, and now appear in unsuffixed form only in less formal styles. It seems that pre-adjectival position is a *-ly* position to such an extent that it may have helped cancel the stative restriction on adverbial derivation. Adjectives apparently are not felt to be acceptable as modifiers of other adjectives. This is evident also from the fact that practically all the adjectives in the corpus have an independent function in the clause, in both the 19th and 20th-century corpora. However, if the modifier function were the only original locus for the development of stative adverbs, one would expect modifiers to outweigh adverbials in the data, especially in the 19th-century corpus. The fact that both modifiers and adverbials are so relatively common in the data may suggest that stative adverbs have a dual origin. This is an issue that will be taken up in chapter 8.

That the modifier function is a typically adverbial function, and has strengthened its position as such, is also demonstrated by the data in table 4.2, which show how the modifier and independent functions are realized in the two corpora.

Table 4.2: Realization of modifiers and independent elements

	ADV		ADJ		ADV/ADJ
	tokens	%	tokens	%	tokens
19TH CT:					
modifier	23	88	3	12	26
independent	36	44	45	56	81
total	59	55	48	45	107
20TH CT:					
modifier	36	97	1	3	37
independent	104	59	73	41	177
total	140	65	74	35	214

The figures in table 4.2 show that for both functions, the proportion of adverbs is higher in the 20th-century corpus. Specifically, the 20th-century corpus has 8% more adverbial modifiers and 15% more adverbial elements in independent function than has the 19th-century material. This seems to suggest that *-ly* adverbs are increasingly taking over both syntactic functions.

The corpus sentences in (1)-(4) below provide examples of stative elements with an independent and a modifier function. In the (a) examples these are realized by adjectives, in the (b) examples by adverbs.

Independent elements:

1a   The Maritime Alps rose sharp and *white* against the blue Italian sky (Alcott LW)

1b   The fingers holding the paper, Morse noticed, were quite slim and sinuous, like those of an executant violinist, with the unpainted nails immaculately manicured, the half-moons arching *whitely* over the well-tended cuticles (Dexter WW: 17)

2a   ...and roofs loomed *black* against them (Ouida DFOS)

2b   His bulbous nose flexed its nostrils *blackly*
     (George GD: 164)

Modifiers:

3a   And Mrs. Bolton... flushing *bright* pink in her excitement
     (Lawrence LCL)

3b   ...small eyes which..opened to reveal irises as *brightly*
     brown as polished pebbles (James TD: 355)

4a   ...a slender maid with a lily face, and hair gleaming *dark*
     red in the full sun that streamed upon her (Roberts FF)

4b   ...two eyes as *darkly* bright as loves own star
     (Joyce, Ulysses: Penelope)

4.3 The positional distribution of stative elements

Table 4.3 below categorizes the independent elements in the 19th and 20th-century corpora with regard to their position in the clause. As for the adverbs, they show a clear preference for final position. This tendency is particularly strong in the 19th-century texts. The word order is somewhat freer in the texts from the 20th century, but also here final position is clearly preferred. The corpus adjectives almost without exception appear finally. The fact that both adjectives and adverbs show a very strong preference for final position in both the 19th and 20th-century data demonstrates that it is meaningful to treat the two parts of speech as "competing" elements. It also indicates that final position may play a crucial role in the development of stative adverbs. This is an idea which will be developed in chapter 8.

Table 4.3: Positional distribution of the independent elements

	ADV		ADJ	
	tokens	%	tokens	%
19TH CT:				
initial	1	3	2	4
medial	0	0	0	0
final	35	97	43	96
total	36	100	45	100
20TH CT:				
initial	1	1	0	0
medial	10	10	0	0
final	93	89	73	100
total	104	100	73	100

Examples of the various positional variants are given in (5)-(8) below. Again, adjectives are found in the (a) examples and adverbs in the (b) examples. An exception is medial position, as there are no adjectives occurring here.

Initial:

5a   ...*white* and *massive* it [i.e. the hotel] stood in the early light (Woolf VO)

5b   *Moistly* he peered out at the shining lawn (Amis DB: 120-21)

Medial:

6   ... Celia's breasts - depressing items that *flatly* splayed in the direction of her armpits... (Amis DB: 72)

Final:

Post-verbal:

7a   ...the lights burn *blue* and *dim* (Stoker, Dracula)

7b   The sun came out *fierily*, stinging their eyes (Gunn SD: 325)

Post-object:

8a   ...she... spread her feet *warm* and wide
      (MacLaverty TD: 117)

8b   His bulbous nose flexed its nostrils *blackly*
      (George GD: 164)

4.4 The structure of the stative element

In the present section I consider the structure, i.e. syntactic make-up, of the phrases in which the individual elements in the corpus appear. As mentioned in section 1.3, the corpus elements either occur in a bare adjective or adverb phrase, or in different types of co-ordinated and modified structures. The various categories are exemplified in (9)-(14) below.

Simple:

9a   ...the lamp burned *blue* (Alcott LW)

9b   René flushed *darkly* (Ouida DFOS)

Co-ordination:

10a   Her face showed *pale*, and soft, and glad (Cabell CH)

10b   He sneezed loudly, *wetly*, and quite unforgivably into the woman's face (George GD: 1)

Pre-modification:

11a   He thought for a moment, then flushed very *red*
      (Lawrence LCL)

11b   ...the sun shining more and more *brightly* as it sank down towards the far mountain tops (Stoker, Dracula)

Post-modification:

12a   His eyes flamed *red* with devilish passion
      (Stoker, Dracula)

12b   I contemplated her sallow cheek which shone *dully* like wax (Murdoch SH: 119)

Pre and post-modification:

13a ...her eyes sparkled as *bright* as diamonds (Brontë WH)

13b Happily the sunshine fell more *warmly* than usual on the lilac tufts the morning that Eppie was married (Eliot SM: 171)

Co-ordination and modification (pre or post):

14a The night fell not *darkly*, but with a clear sky (Roberts FF)

14b Books, clothes and manuscripts were there stacked together neatly, albeit a trifle *dustily* (Allingham FJ: 168)

Table 4.4 below shows the distribution of adjectives and adverbs across the different syntactic types represented. The data show that there are some distributional differences between the adjective and adverb phrases in the corpus with regard to their syntactic make-up. While the corpus adverbs typically occur singly, the adjectives are most often found in more complex structures. More than half of the adjectives are co-ordinated with one or more other adjectives. If we compare the categories "simple" and "co-ordinated" to see how they are realized, we find the same pattern. In the 19th and 20th-century corpora, respectively 65% (26 out of 40 tokens) and 78% (91 out of 116 tokens) are adverbs. By contrast, 86% (25 out of 29 tokens) and 84% (38 out of 45), of the co-ordinated structures have adjectival heads. A difference of this magnitude is hardly a coincidence, but must be assumed to say something about the nature of the two parts of speech.

Table 4.4: Distribution of adverbs and adjectives over the structural types

	ADV		ADJ		total
	tokens	%	tokens	%	
19TH CT:					
Simple	26	72	14	31	40
Co-ord.	4	11	25	56	29
Pre-mod.	3	8	2	4	5
Post-mod.	0	0	3	7	3
Pre and post-mod.	2	6	1	2	3
Co-ord. and mod.	1	3	0	0	1
total	36	100	45	100	81
20TH CT:					
Simple	91	87	25	34	116
Co-ord.	7	7	38	52	45
Pre-mod.	2	2	5	7	7
Post-mod.	2	2	3	4	5
Pre and post-mod.	1	1	0	0	1
Co-ord. and mod.	1	1	2	3	3
total	104	100	73	100	177

The reasons why adverb derivation appears to take place less frequently in more complex syntactic environments may be many. It probably often has to do with "heaviness" considerations. Constructions which involve modification or co-ordination are "heavy" in themselves; the -*ly* suffix would make them even heavier, perhaps awkwardly so in many cases. For example, the premodified structures in (15) and (16) below would be odd with the –*ly* suffix attached.

15   three of them float *ghost-white* against the black rock
     (Gunn SD)

16   She flushed *brick-red* (Rendell PC)

It is, however, important to note that the distributional pattern shown in table 4.4 may also reflect other characteristics than thematic ones. There may well be a number of such factors involved. One interesting aspect of co-ordinated structures is that users tend to generally prefer both - or all - of the co-ordinated elements to have the same form, i.e. there is a wish for form symmetry. According to Jespersen, exceptions to this rule are "exceedingly rare" (1942: 416). Jespersen's claim is probably too strong; yet, the tendency seems clear. With respect to the apparent preference for using adjectives in co-ordinated structures, the form of the stative adjective may in some cases be determined by the characteristics of the element with which it is co-ordinated. Specifically, if the collocating adjective cannot for some reason be suffixed, the stative adjective will normally be unsuffixed as well. The restrictions on suffixation may be many. In (17) and (18) below there may be a semantic restriction. If we add *–ly* to the adjectives *high* and *open*, the derived adverbs acquire metaphorical meanings instead of the concrete ones which are intended. The same kind of meaning transfer arises in (19) and (20). Here the resulting *–ly* derivations will not be adverbs either, but adjectives; the existence of the adjectives *lowly* and *deadly* simply blocks adverb derivation in these cases. In (21)-(25) the collocating adjectivals are *-ed* participles, and, as explained in section 2.3.3, these seem to be more resistent to *-ly* derivation than plain adjectives. In (25) the particle *about* constitutes a further barrier to *-ly* derivation.

17	Scrooge observed that its light was burning high and *bright* (Dickens CC)
18	...his mouth hanging *black* and open in a cry which... (MacLaverty SOS: 24)
19	The fire burned low and *red* in the grate (Lawrence LCL)
20	...the flowers hung *lank* and dead (Stoker, Dracula)
21	Jude stood *pale* and fixed (Hardy JO: 193)
22	She came to him starched and *white* (MacLaverty SOS: 57)

23 ...lying relaxed and *warm* in the bright multi-coloured shell... (Murdoch SH: 27)

24 ...two anchored mineral barges, which lay *black* and deserted about fifty yards from the Surrey shore (Bennett GBH)

25 I just simply stood *pale*, silent, bayed about (Joyce, Ulysses)

The reader may have noticed that many of the sentences above, in addition to containing co-ordinated structures, also have a stative verb. As shown in the next section, such verbs co-occur much more often with adjectives than with adverbs; hence, in many of the examples above adjectives may also be chosen for this reason, or possibly for a combination of reasons. However, it is clear that this factor alone cannot explain the structural properties of the stative elements in the corpus. A count showed that half - i.e. 33 out of 65 - of the co-ordinated adjectives collocate with state/stance verbs. Thus, there are many examples which must be explained with reference to other factors. Most of these can not be accounted for by pointing to some characteristic of the collocating adjective either. Examples are given in (26)-(32) below.

26 ...though Beth didn't come home as plump and *rosy* as could be expected, she was much better (Alcott LW)

27 ...tramped past me *black* and ponderous (Ouida DFOS)

28 ...the lights burn *blue* and *dim* (Stoker, Dracula)

29 ...sometimes a light glimmered out of the physician's eyes, burning *blue* and ominous (Hawthorne SL)

30 ...the physician having been introduced into the king's cell, had come forth *pale* and trembling (Hope PZ)

31 They built into strata, glowing *red* and *black* (MacLaverty SOS: 38)

32 I saw a little wood spreading wide and *black* before me (Wells TM)

4.5 The semantic type of the collocating verb

A factor which may probably influence the form of the stative element is the semantic category of the collocating verb. The verb is the clause element to which at least the adverbs are syntactically linked. It is also in most cases the only clause element which is adjacent to the stative element, immediately preceding it (cf. section 4.3). Table 4.5 below categorizes the verbal collocates of the corpus elements with respect to their semantic type.

Table 4.5: Verbal collocates of the corpus elements

	ADV		ADJ	
	tokens	%	tokens	%
19TH CT:				
radiance/light	18	50	12	27
other process/event	8	22	12	27
activity	6	17	6	13
state/stance	4	11	15	33
total	36	100	45	100
20TH CT:				
Radiance/light	20	19	12	16
other process/event	25	24	20	27
activity	44	42	7	10
state/stance	15	15	34	47
total	104	100	73	100

As the table shows, the corpus adverbs co-occur with a number of different verb types. In the 19th-century data, radiance/light verbs are the most common category by far; half of the adverbs co-occur with a verb of this type. This is quite a high share for a fairly restricted number of verbs. The next most common classes are process/event and activity verbs, which appear at approximately the same rate. State/stance verbs are, not

surprisingly, the least frequent category. None of the other categories are nearly as frequent as the radiance/light category. The distribution of verb types is different in the 20th-century material. Here the radiance/light class has no prominent position. The most common category by far is activity verbs, which are, in fact, more than twice as frequent as radiance/light verbs. Other process/event verbs are also more frequent than radiance/light verbs, though not by much. Also in the 20th-century material, state/stance verbs are the least frequent collocate for the adverbs. With respect to the adjectives, these most frequently collocate with state/stance verbs in both corpora. However, radiance/light and other process/event verbs constitute two major categories as well. Activity verbs provide the least common context for stative adjectives, in both the 19th and 20th-century material.

The fact that radiance/light verbs so commonly co-occur with adverbs in the 19th-century data may be evidence that this is a key context in the development of stative adverbs. However, the proportion of radiance/light verbs is not large enough to justify the claim that this was the only context in which the derivation of stative adverbs originally took place. The fact that the other dynamic verb types are so relatively common as well may indicate that dynamicity is the most important adverb-promoting factor; yet, radiance/light verbs may have played an important role at one stage. I will come back to this issue in chapter 8.

Table 4.6 below shows the distribution of adverbs and adjectives over the different verb types. We see that all the verb types show a stronger tendency to co-occur with adverbs in the 20th than in the 19th-century corpus. The data may be evidence that stative items occurring in the syntactic environments under study are undergoing adverbialization. They may also be another indication that radiance/light verbs represent a

particularly adverb-promoting environment; in the 19th-century corpus they are the only verb category which collocates more often with adverbs than with adjectives. In the 20th-century material, this is also the case for the categories other process/event verbs and, in particular, activity verbs.

Table 4.6 Distribution of adverbs and adjectives over the verb types

	ADV		ADJ		total
	tokens	%	tokens	%	
19TH CT:					
radiance/light	18	60	12	40	30
other process/event	8	40	12	60	20
activity	6	50	6	50	12
state/stance	4	21	15	79	19
total	18		33		51
20TH CT:					
radiance/light	20	63	12	37	32
other process/event	25	56	20	44	45
activity	44	86	7	14	51
state/stance	15	31	34	69	49
total	84		61		145

The three dynamic verb types are exemplified in (33)-(35) below, where they collocate with both adjectival and adverbial elements.

Radiance/light:

33a   ...the lamp burned *blue* (Alcott LW)
33b   Now and then some light gleamed *ruddily* through the crevices of house-shutters (Ouida DFOS)

Event/process:

34a   Susan flushed *red* (Lawrence SL)
34b   Rachels eyes lit up *brightly* (Woolf VO)

Activity:

35a ...the physician having been introduced into the king's cell, had come forth *pale* and trembling (Hope PZ)

35b When he and she came out on to the riding, there was Mrs Bolton faltering *palely* towards them
(Lawrence LCL)

The only category which is most common with adjectival collocates in both corpora is the state/stance class. It is, however, interesting to note that as many as 31% of the state/stance verbs in the 20th-century corpus occur with adverbs. This is an unexpectedly high figure, given the general assumption that manner or process adjuncts, to which stative adverbs have been referred (cf. section 5.4.3), do not normally collocate with such verbs (Quirk & Greenbaum 1973: 220). That even stative verbs occur so relatively frequently with adverbs strongly suggests adverbialization. The sentences in (36)-(41) below have examples of stative adverbs that collocate with stance verbs (36 and 37) and other stative verb types (38-41). We see that even the most stative verbs of all, such as *be* and *remain*, are represented.

36 Russ glanced at Alan, who now stood *palely* in his alcove doorway (Amis OPMS: 87)

37 He sits *tinily* on the piano stool (Joyce, Ulysses: Circe)

38 *Darkly* they [the stars, KK] are there behind this light (Joyce, Ulysses: Proteus)

39 Like an ominous watchman, he remained there *darkly* on the crest (Gunn SD: 54)

40 ... the flesh stood *darkly* out against the whitening hair (Stoker, Dracula: 403)

41 ...the Universal, a sooty Gothic structure which hovered *massively* over the second-hand car showrooms and ramshackle eateries that littered its surrounds (Amis DB: 100)

4.6 The semantic type of the collocating subject

Table 4.7 below shows the distribution of subject types in the corpus.

Table 4.7 The semantic type of the collocating subject

	ADV		ADJ	
	tokens	%	tokens	%
19TH CT:				
inanimate	12	33	13	29
animate	1	3	0	0
human	4	11	13	29
body part	5	14	7	15
nature	14	39	12	27
total	36	100	45	100
20TH CT:				
inanimate	22	21	22	30
animate	2	2	1	2
human	36	35	17	23
body part	25	24	14	19
nature	19	18	17	23
no subject	0	0	2	3
total	104	100	73	100

It appears that neither the adjectives nor the adverbs show any clear preference for one single subject type, but commonly co-occur with several types. With respect to the adverbs, the most common categories in the 19th-century corpus are subjects denoting natural phenomena and inanimate objects, while in the 20th-century material human and human-related subjects are most frequent. This, of course, goes hand in glove with the fact that the majority of the verbs in the 18th-century corpus are radiance/light verbs, while a much larger part of the verbs in the 20th-

century texts are activity verbs. For the adjectives there is no similar difference in subject distribution; rather most of the categories are fairly well represented in both corpora. The only subject type which can be said to be rare in the data is animate (i.e. non-human) subjects. These are rare both with adjectives and adverbs.

The sentences in (42)-(46) have examples of the various categories of subject found in the corpus.

Inanimate:

42a ...and roofs loomed *black* against them (Ouida DFOS)

42b The Dean turned and went out, his gown billowing *darkly* behind him (Sharpe PB: 87)

Animate, but non-human:

43a ...once, by some trick of reflected light, Finn saw three of them [i.e. gulls] float *ghost-white* against the black rock (Gunn SD: 574)

43b ... there was one tiny, tiny perky chicken *tinily* prancing round in front of a coop (Lawrence LCL)

Human:

44a But he would lie there *cold* and *white* and make no sign (Twain ATS)

44b The waggoner, throned aloft, rolling *massively* in his seat, was not so much below Paul's eye (Lawrence SL)

Body part:

45a His eyes flamed *red* with devilish passion (Stoker, Dracula)

45b Her pink face flushed *rosily* (Rendell PC: 169)

Nature:

46a   ...the primeval forest... stood so *black* and dense on either side (Hawthorne SL)

46b   The sun had been shining *brightly* all day on the roof of my attic (Dickens GE)

4.7 Summary and discussion

The discussion in the preceding sections demonstrates both differences and similarities between clauses with stative adverbs and clauses with adjectives. The similarities between the two parts of speech lie in their positional distribution; both occur first and foremost in final position. The major differences concern the syntactic function and structure of the stative elements, as well as the semantic type of the collocating verbs. Functionally, a fairly large proportion of the adverbs are modifiers, while the corpus adjectives very rarely have this function. Structurally, the phrases with adverbs tend to be simple, while those with adjectives are more complex. As explained above, there may be many reasons for this. With respect to verb types, adverbs tend to co-occur with dynamic verbs, while the most common collocate of the adjectives are stative verb types. So far as subject types are concerned, neither the adjectives nor the adverbs show any clear preference for one specific category. Having studied the figures presented above, one important point to make is that none of the factors which seem to favour the use of adjectives represent an absolute restriction on the derivation of stative adverbs. In fact, there may be no such restrictions, only more or less favourable linguistic contexts.

That there are no absolute restrictions on the use of stative elements is demonstrated by the sentences in (47)-(56) below. Here the nouns and verbs (and in many cases the stative element) in each pair or cluster are

matches, or near-matches, with regard to semantic category. In many of the cases they are even the same; yet, the form of the stative element varies.

47a   The moon shone *bright* (Brontë WH)
47b   The sun shone *brightly* (Davis PA)

48a   ...the lamp burned *blue* (Alcott LW)
48b   A lamp burned *dully* under the cross (Ouida DFOS)
48c   The fire was now low, the flames burning *bluely* and petulantly (Bierce CSTB)

49a   Paul flushed *hot* (Lawrence SL)
49b   And I was astonished to feel my face flush *hotly* as I did it (Roberts FF)

50a   Susan flushed *red* (Lawrence SL)
50b   René flushed *darkly* (Ouida DFOS)

51b   The nearer flakes fell *white* (Murdoch SH: 48)
51c   Moonlight, in a familiar room, falling so *white* upon the carpet (Hawthorne SL)
51a   The night fell not *darkly*, but with a clear sky (Roberts FF)

52a   ...and roofs loomed *black* against them (Ouida DFOS)
52b   ...Wolfson College, London, a huge post-modern matchbox which loomed *starkly* over Golders Green bus depot (Amis DB: 86)

53a   ...the sun lying *red* on the rim of the hill opposite (Lawrence SL)
53b   For two or three hours the sun lay *warmly* in the high window (Alcott LW)

54a   ...his hair... lay slick and *black* (MacLaverty TD: 104)
54b   A few hairs lay *damply* across her forehead (James TD: 257)

55a   ...she ventured from her sister's to stand *pale* and nervous in our path (MacLaverty SOS: 16)
55b   Russ glanced at Alan, who now stood *palely* in his alcove doorway (Amis OPMS: 87)

56a ...the tower of St. Botolph's, Mr. Farebrother's church, which stood out *dark*, square, and *massive* against the starlight (Eliot, Middlemarch)

56b ...the flesh stood *darkly* out against the whitening hair (Stoker, Dracula)

On the whole, then, we may safely conclude that the point of the grammar under discussion here is a "weakly codified area", in Nevalainen's (1997: 146) terminology. There simply seem to be no categorical rules which regulate the use of stative adverbs and adjectives, in any one period. However, it is of course possible that there is some crucial factor at work which has not been investigated here, as noted by Rydén (1979):

> In language there are, generally speaking, no pure synonyms. This is also true of variants within a syntactic paradigm. However, disregarding here individual usages, there may be stages of great syntactic instability where variants are used in what at least appears to be - for want of controlled observation .... - free variation. On the other hand, there may always be some unknown or dormant factor at work, in context or situation, which is beyond our power of observation (Rydén 1979: 17)

There are at least two ways of interpreting the seemingly chaotic character of the data just discussed. One possible explanation is that the factors investigated play no role in the development of stative adverbs. By this I mean that they neither serve as a locus - or catalyst - of change, nor determine the path by which the change proceeds. However, there is another possible - and in fact quite opposite - scenario, i.e. that the factors in question indeed play a role in the change, but that this fact is obscured by the nature of the process itself. It seems to be fairly widely accepted that "change in an environment need not take place by categorical innovations, but may take place by changes in the relative proportions of variant realizations" (Romaine 1982: 261, cf. also Lass 1997: 140). If this is the

way in which linguistic change normally proceeds, i.e. if innovations spread gradually from category to category, it is only to be expected that the data will be as mixed as they are. Another reason may be that the form of the stative element is co-determined by both semantic, syntactic and stylistic factors, as has been claimed to be the case with other *–ly*: non-*ly* pairs (Opdahl 1990).

Part III: The orientation of stative adverbs

Chapter 5: Adverbial orientation and classification

5.1 Introduction

As stated in chapter 1, one of the main aims of the present study is to come closer to an understanding of what elements adverbs can modify, i.e. what "orientation" they can have. This aspect of adverbs has been described as their orientation. As adverbial orientation is a very central notion in this study, it needs to be discussed in some more detail. This will be done in section 5.3. Before that, in section 5.2, I explain the concept of adverbial "scope". Scope is the term which has traditionally been used to describe the modifying properties of adverbs. It appears, however, that the concept – at least as it has traditionally been conceived of – is not able to sufficiently account for the properties of adverbs. Orientation is a better tool in this respect. Section 5.3 provides an account of some studies which are central to our understanding of adverbial orientation. Section 5.4, shows how the concept of orientation has been applied in adverbial classification. Particular attention is paid to those categories which are assumed to be relevant to the present study, viz. manner adjuncts and subject adjuncts. It will be pointed out that the existing taxonomy is insufficient, as it falls short of classifying a number of adverbial uses. Finally, section 5.5 provides a brief summary.

5.2 Adverbial scope

The term "scope" is taken from formal logic, and scope was originally, i.e. in the early 1970s, conceived of as a purely logical phenomenon. In this framework, semantics is much more important than syntax, and scope was hence defined in terms of semantic properties; specifically, it was defined

as the "semantischer Einflußbereich" of a linguistic item (Ungerer 1988: 4). In the beginning, the concept was typically discussed in connection with quantifier structures and negators such as *all, every, some* and *not*. These were said to function much like logical operators, i.e. to "operate on" some other element, which was again said to be in the scope of the operator. In the early 70s it seemed only natural to assume logical scope for adverbs as well, since they also appeared to have a "Wirkungsbereich" (Ungerer 1988: 82). Thus Thomason & Stalnaker (1973) explain modal adverbs like *necessarily* and *certainly* in terms of *necessity operators* and *possibility operators*, and there are also a number of other studies which discuss logical scope in relation to adverbs.[60]

There were linguists, however, who felt that the scope of adverbs was essentially different from logical scope, and therefore developed an alternative way of looking at adverbial scope. The new approach emphasized the importance of word order in scope selection, i.e. adverbial scope was assumed to be essentially syntactic (cf. Bolinger 1972a, Huang 1975). This was in sharp contrast to the purely logico-semantic notion of scope, which held that "[w]ord order in general is not a very reliable clue to adverbial scope" (Thomason & Stalnaker 1973: 217). In the syntactic approach, adverbial scope is taken to depend on distribution in the sense that an adverb is said to modify all the elements to its right (cf. Bolinger 1972a: 34). This generalization has been referred to as the "linearity principle" (Ungerer 1988, 1989). The linearity principle explains neatly why *sadly* in (1) qualifies the whole of the following predication, whereas in (2) the same adverb modifies only the adjectival participle *mistaken*.[61]

    1   *Sadly*, Alex lost the election.
    2   Max was *sadly* mistaken.

As a consequence of linearity, adverbs which occur to the left of the clause are said to have large scope, while those further to the right have narrow scope (Bolinger 1972a, Ungerer 1989: 340). From these two different scope types, two main adverb categories were derived (cf. for example Huang 1975: 70): sentence adverbs or disjuncts, which are said to modify the whole of the following clause, and verb-phrase adverbs or adjuncts, which modify a smaller part of syntax (cf. for example Huang 1975: 70). I will come back to this issue in section 5.4.1.

Adverbial scope, then, has come to be conceived of as a predominantly syntactic notion; however, views on how syntactic, or linear, scope actually works vary to some extent. Thus while Ungerer sees scope as an exclusively rightward-working phenomenon (1989: 340), Bolinger (1972a: 34) holds it that linear scope works in both directions. According to Bolinger, an adverb to the left "overshadows" everything to its right, while an adverb to the right of the verb "splits" the verb (1972a: 34, cf. also Johansson & Lysvåg 1987: 240). A leftward-working scope seems to be required if we are to explain, in syntactic terms, how a manner adverb can modify the verb it normally follows. Bolinger's conception of the linearity principle explains nicely the different scopes of *wisely* in (3a) and (3b) below. In (3a) *wisely* is able to modify both Sheila and the activity of answering the question by virtue of being placed between the two elements, i.e. both leftward and rightward scope are at work. In (3b), by contrast, the adverb only modifies the verb to its left, as there are no elements to the right.

3a   Sheila *wisely* answered the question.
3b   Sheila answered the question *wisely*.

During the last couple of decades, however, linguists have become increasingly aware that syntactic scope cannot account satisfactorily for the modifying properties of adverbs. It is not possible, for example, to explain in syntactic terms the fact that *sadly* in (4) below may be given a different interpretation than *sadly* in (1) when what we seem to be faced with is simply two identical items occurring in the same position.

4   *Sadly*, Terry opened the letter.

What we need, apparently, is a non-syntactic explanation for the fact that *sadly* ascribes sadness to the speaker in (1) but to the subject in (4). A useful tool in this respect is the concept of orientation, which will be discussed in the next section.

5.3 Adverbial orientation

Orientation is a concept which, in contradistinction to adverbial scope, focuses on the semantic properties of adverbs rather than their syntax. At least this was the case when adverbial orientation first came under discussion in the early 1970s, within the framework of the Extended Standard Theory. The concept was introduced by Jackendoff (1972), refined by Bellert (1977), and further developed by McConnell-Ginet (1982), Ernst (1983), and Swan (1982, 1988, 1990). The relevant publications will be discussed in the following.

5.3.1 Jackendoff and Bellert

Jackendoff (1972) notes that adverbs differ in terms of their semantic properties, or to be more precise, they differ with respect to what clause elements they relate to, or are "oriented to". The orientation of an adverb can, according to Jackendoff, normally be inferred from the paraphrase(s) of the clause in which the adverb occurs.[62] On the basis of paraphrases, Jackendoff derives formulae for the semantic (i.e. logical) structure of sentences containing different types of adverbs. The formulae are the basis of his adverb taxonomy, which contains four main types: adverbs which are (1) speaker oriented, (2) subject oriented, (3) verb-phrase oriented, and (4) adverbs such as *merely*, whose orientation it is difficult to pinpoint (1972: 69-73). About the latter type Jackendoff has nothing significant to say, and it will not be discussed any further here.

Jackendoff's speaker oriented adverbs are exemplified in (5a) below. They express the speaker's evaluation of the content of the whole clause. The paraphrases of such adverbs often contain a noun phrase (NP) whose reference is the speaker, but not necessarily, as shown in (5b)-(5d). Common to all the paraphrases is that the adjective from which the adverb is derived is contained in a copula clause, while the rest of the original clause is embedded as the complement of the copula clause. The semantic structure of the sentences in (5a) is shown in (5e) and (5f), where (5e) represents the paraphrase type with a noun phrase in the main clause (as in 5b and 5d), and (5f) the nounless version (as in 5c). The semantic structure predicates ADJ (i.e. adjective) of the embedded clause and possibly the speaker. With respect to the role of the speaker, I disagree with Jackendoff, who claims that adverbs which do not include the speaker in the paraphrase, such as *certainly*, are more "neutral" than those which do

(1972: 69). In my view Jackendoff relies too blindly on his paraphrases.[63] I take *certainly* to be just as speaker-oriented as *evidently* and *happily*, and it should consequently have the same semantic structure as these two adverbs, irrespective of how it is paraphrased. Thus to my mind, the semantic structure in (5f) is superfluous, (5e) being the appropriate semantic structure for all such speaker oriented adverbs.[64]

5a *Evidently/certainly/happily* Frank is avoiding us.
5b It is evident (to me) that Frank is avoiding us.
5c It is certain (*to me) that Frank is avoiding us.
5d I am happy that Frank is avoiding us.

5e ADJ (SPEAKER, $f(NP^1, ..., NP^n)$)
5f ADJ ($f(NP^1, ..., NP^n)$)

Subject oriented adverbs, according to Jackendoff, are adverbs such as those in (6a), where the subject is evaluated on the basis of some activity s/he has carried out. In the paraphrases Jackendoff provides for (6a), the adjectives from which the adverbs are derived predicate something of the subject, thus showing the subject orientation of the adverbs. Correspondingly, in the semantic structure in (6e), ADJ is predicated of the subject noun phrase.

6a *Carefully/clumsily* John spilled the beans.
6b John was careful to spill the beans.
6c It was clumsy of John to spill the beans.
6d John was clumsy in spilling the beans.

6e ADJ ($NP^i, f(NP^1, ..., NP^n)$)

It should be noted here that the adverbs in (6a), in addition to being subject oriented, are speaker oriented. They express the *speaker's* evaluation of the subject, and the paraphrases in (6b)-(6d) might as well have included the

phrase *I think....* As far as Jackendoff is concerned, this fact appears to have gone unnoticed; however, it has been noted by others (cf. for example Swan 1988: 57-60)

As for Jackendoff's verb-phrase oriented adverbs, the group is very large and heterogeneous. It encompasses adverbs denoting manner, time, place, means, instrument, degree, etc. Common to them all is that they modify some aspect of the situation denoted by the verb phrase. Examples of verb-phrase oriented adverbs are provided in (7a) below. The paraphrases in (7b)-(7d) consist of a main copula clause, where the adjective from which the adverb is derived constitutes the subject complement. The subject consists of an noun phrase with a prepositional relative clause embedded. Inside this embedded clause, we find the original clause minus the adverbial modifier. The semantic structure, as shown in (7e), does not contain an adjectival element, but simply attaches the adverb as additional specification on the function corresponding to the verb.[65]

7a   Jill wrote the letter *yesterday/slowly/manually*.
7b   The time at which Jill wrote the letter was yesterday.
7c   The rate at which Jill wrote the letter was slow.
7d   ?The means by which Jill wrote the letter was manual.

7e
$$\begin{bmatrix} f \\ ADV \end{bmatrix} (NP1,..., NPn)$$

Orientation, as conceived of by Jackendoff, is a semantic notion. Adverbs are said to be marked in the lexicon as to which possible semantic

structures they can enter into. Thus *evidently* will be marked as being a predicate over a clause and the speaker, while *slowly* will be listed as a semantic marker which modifies a function. However, there must be a mechanism that helps us assign the correct semantic interpretation to an adverb. The task is taken care of by a set of "projection rules", i.e. semantic interpretation or mapping rules. Jackendoff postulates a projection rule for each of the adverb types mentioned above. For speaker-oriented adverbs there is $P_{speaker}$, which embeds the functional structure of the clause as the single unspecified argument of the adverb.[66] For subject-oriented adverbs there is $P_{subject}$, which embeds the functional structure as the sentence argument of the adverb and the subject of the sentence as the noun-phrase argument.[67] The projection rule that interprets adverbs such as *yesterday*, *slowly* and *manually* is P_{manner}, which adds the adverb as an additional set of semantic markers on the function. However, semantics does not operate independently of syntax; there is a connection between the two in the sense that the various projection rules are associated with specific clause positions. $P_{speaker}$ and $P_{subject}$ are said to apply to adverbs in initial and medial position (or more correctly, to adverbs dominated by the S node), and P_{manner} to adverbs in medial and final position (i.e. positions dominated by the VP node). An adverb which occurs in a position where the wrong projection rule applies is uninterpretable. Thus, in *Jill wrote the letter fortunately*, an adverb which must be interpreted by $P_{speaker}$ occurs in a position where only P_{manner} applies; hence, no interpretation is available. Jackendoff's analysis involves a correlation between the semantics and syntax of adverbs to the effect that if we know the meaning of an adverb, we can predict in what positions it can occur (1972: 67).

Bellert's (1977) most important contribution to adverbial studies may be her refinement of the sentence adverb/disjunct category.[68] However, her analysis of the difference between manner adverbs on the one hand and subject and speaker-oriented adverbs on the other is rather similar to that of Jackendoff. One aspect of Bellert's analysis which should be mentioned, though, is her discussion of the different adverbs in terms of propositions. Specifically, she points out that while subject-oriented and speaker-oriented adverbs constitute propositions in themselves, to the effect that clauses with such adverbs contain two propositions, this is not the case for clauses with manner adverbs (1977: 339-340). Manner adverbs are said to "add something or modify the meaning of the verb. In other words, they function as predicates of predicates, and therefore they constitute part of just *one* proposition expressed by the sentence or clause in which they appear" (1977: 339). This difference between manner and subject-oriented adverbs is implied by Jackendoff's analysis, though it is not spelt out. I will come back to the issue in the next chapter.

5.3.2 Mc-Connell-Ginet and Ernst

McConnell-Ginet (1982) and Ernst (1983) see the same fundamental problem with Jackendoff's analysis, i.e. that it forces homonyms where a unified approach would seem preferable (1983: 18).[69] As an example we may take the adverb *wisely* in (3), repeated below. This adverb, which has a sentential reading in (3a) and a non-sentential one in (3b), must be interpreted by way of two different rules - $P_{subject}$ and P_{manner} - although the semantic content of both *wisely*s is precisely the same. This is, according to McConnell-Ginet and Ernst, an unnecessary and unwanted complication to the system. They therefore offer analyses which achieve

the same thing, viz. unity between the two readings, but which do this in essentially different ways.

3a   Sheila *wisely* answered the question.

3b   Sheila answered the question *wisely*.

According to McConnell-Ginet (1982), there is no essential difference between *wisely* in (3a) and (3b). They are in her view both verb-phrase modifiers, the difference lying only in what verb they modify. While in (3b) *wisely* modifies the verb *answered*, in (3a) it modifies a higher verb *act*, i.e. a verb which is not expressed in the clause, as shown in (3c) below. The reading in (3c) is arrived at via the meaning postulate or word-formation rule in (3d).

3c   Sheila acted wisely to answer the question.

3d   Let E be a lexical member of the category AD-V. Define E′
        in IV/IV (an adverb whose operand is a VP), formally
        identical with E, so that for ß, an expression in IV, E′ß is
        synonymous with <u>act E to ß</u>.

Ernst (1983) recognizes McConnell-Ginet's attempt to avoid homonyms and come up with a unified analysis. However, in his view, McConnell-Ginet's system creates as many problems as it solves. According to Ernst, the problematic point of McConnell-Ginet's analysis is the phrase *act E to ß* (1983: 44- 49). It is unclear what this formulation is intended to signify. *to ß* apparently expresses either purpose or a causal relation; yet none of these two interpretations are applicable in all cases. The fact that the interpretation of *to ß* is unclear is problematic since the phrase "is responsible for relating <u>act</u> + the adverb to the rest of the sentence" (Ernst 1983: 44-45). Furthermore, the verb *act* is problematical as it seems to imply some sense of intentionality or control which is incompatible with

many verb types, for example *fall* in (8) below. Also, it is a problem that the relationship between the adverb and the rest of the clause - denoted by to ß - is unclear.

8   Bertram had *stupidly* fallen down the mineshaft.

In addition to the problems pointed out above, Ernst claims that just by using rules such as that in (3d), we signal that we are indeed dealing with two different words. The difference, Ernst says, lies precisely in the presence or absence of the component *act* (1983: 49).

Because of the weaknesses just discussed, Ernst refutes McConnell-Ginet's theory and proposes a system where there is "true lexical unity, and all differences in meaning are introduced by other means" (1983: 49). To achieve this, Ernst sets up a limited number of lexical categories and posits one template for each class. The template is formulated generally enough to encompass the different readings of the adverb. This effect is obtained by using the variable , which is allowed to span all logical types. To take the case of *wisely*, it is referred to by Ernst as an "agent-oriented" adverb (1983: 37), which can, whether its scope is wide or narrow, be interpreted by way of the template in (9) below (1983: 52).[70]

9   The agent can be judged ADJ because of α .

Applying this to the sentences in (3a) and (3b), we may say that α represents the grounds on which the judgement is made. In (3a) α corresponds to the whole situation, i.e. Sheila was wise because of her answering-the-question, while in (3b) she is judged wise because of some *attribute of* her answering, e.g. what she said, the way she formulated her

answer, etc. In establishing the meaning of an adverb, factors such as the lexical meaning of the various clause constituents, adverbial position and pragmatics play important roles. By making use of templates such as that in (9), we do not need two entries for *wisely* in the lexicon; instead we have two instances of *the same adverb*.

Ernst shows that his approach works for a whole range of adverbial types. He discusses categories as different as agent-oriented adverbs (*wisely*, *tactfully*), evaluative adverbs (*fortunately*, *amazingly*), mental attitude adverbs (*merrily*, *determinedly*), domain adverbs (*linguistically*, *geographically*), and epistemic adverbs (*clearly*, *probably*). Of all the adverbial types discussed, many have two readings - one sentential and one oriented to the verb phrase - and most of these can be fitted into a unified analysis. The most problematic type is the epistemic category (i.e. modal adverbs), where only a few items allow a unified approach.[71]

The approach developed by Ernst is referred to by him as a "Loose-Fit Theory" because there is no exact fit between word-senses and compositional rules. Instead "α allows a measure of unspecificity in the lexicon", leaving the exact interpretation of an adverb in a clause up to syntactic, semantic and pragmatic factors (1983: 18). In Ernst's system "individual adverbs <u>may</u>, but <u>need not</u>, be specified for particular readings derived by particular rules" (1983: 360). Jackendoff's approach, by contrast, is a "Tight-fit Theory", i.e. a theory which "requires an exact fit between the adverbs' lexical marking on one hand, and the associated interpretation rule on the other" (1983: 18). It is precisely this tight fit between the semantic and syntactic aspects of adverbs which forces us to treat the two *wisely*s in (3a) and (3b) as homonyms, a result which is avoided in Ernst's approach.

5.3.3 Swan

First of all it should be noted that Swan uses the term "scope". Her notion of scope is, however, completely different from those discussed in section 5.2; it is neither purely logical, nor is it exclusively syntactic. It is a much more complex notion, more akin to Ernst's concept of orientation. Swan basically holds the same view as Ernst,[72] i.e. that the scope or orientation of adverbs is determined by both syntactic, semantic and pragmatic factors. Swan's contribution, however, lies not so much in the development of theoretical formalisms as in empirical studies. Safely anchored in real language data, she provides a thorough discussion of the determinants of adverbial scope/orientation and the relationship between them. The following examples are taken from Swan (1982).

10a *Obviously* he left town.
10b *Obviously* he left town because he lost the election.

11a They *happily* weren't killed by the avalanche.
11b They *happily* did their chores.

The adverbs in (10a) and (10b) may seem to have the same scope: the truth of the adjoined clause. However, Swan claims that the difference in grammatical structure influences scope relations. In (10b) it is the truth of the following proposition which is assessed by the adverb. By contrast, what is modified in (10b) is the causal relationship between main clause and subclause (both of which are presupposed to be true). *Happily* in (11a) has the whole clause and the speaker in its scope, while *happily* in (11b) predicates happiness of the subject. According to Swan, this difference in scope may be caused by several factors, such as the difference in

grammatical construction (passive/active), subject status/role, and verbal meaning (1982: 131).

At this point we may have another look at the sentences from Swan which were rendered in (1) and (4) above. For convenience sake, they are repeated below. (Her discussion of them is found in 1982: 132-137).

1   *Sadly*, Alex lost the election.
4   *Sadly* Jane opened the letter.

Swan claims that what makes us interpret the two *sadly*s differently, i.e. that in (1) as a speaker-oriented adverb and that in (4) as a subject-oriented one, has to do exclusively with semantic and pragmatic factors. As for (1), the verb here is a so-called "achievement verb" (in Vendler's 1967 classification), i.e. it denotes the result of an activity and not the activity itself. An adverb co-occurring with a verb of this type thus cannot characterize the subject while s/he is involved in a situation. Consequently, it must be the fact that he lost rather than Alex himself which is characterized as sad in (1). *Sadly* in (4) may be said to modify either the whole clause (i.e. the proposition expressed by the clause) or the subject. The latter is the most plausible interpretation; it takes a great deal of contextualizing to make the former possible. It appears, then, that in interpreting adverbs we seem to a large extent to make use of semantic and pragmatic cues, or more generally, we choose what Enkvist (1976) refers to as the "preferential interpretations" (1976: 52-53).

Having gone through a whole number of possible and impossible *sadly* sentences and discussed the orientation of *sadly* in these, Swan concludes that:

Adverbial scope is an extremely complex notion. We may, perhaps, define the scope of an adverb as that which an adverb modifies, and expand the definition to cover not only linear modification (to the right and to the left) but also a great many relations (semantic and pragmatic) holding between an adverb and various other meta-linguistic and extra-linguistic elements. The most complex adverbs, sentence adverbs (and adverbial clauses), can be said to modify not only semantemes (cf. Bolinger 1972a) but also entire "pragmatemes": including felicity conditions, causal relations, etc. (1982: 131).[73]

From Swan's comprehensive (1988) study we gain some further understanding of why adverbial scope - or orientation - is such an extremely complex notion:

Adverbs may probably be described with reference to various levels of grammar, syntactically, e.g. in terms of surface position or realization elements; semantically, e.g. in terms of cognitive content; or, finally, pragmatically, e.g. in terms of various discourse functions as well as in terms of functions in relation to a great many extra-linguistic factors and elements. Although there is, of course, interaction at all levels it is the complexity of the interaction of the semantic and pragmatic levels, particularly in some adverbs, which is the reason for the problems of accounting for adverbial scope (cf. Heny 1973) (1988: 10-11).

In Swan (1990) these ideas are developed further. Here scope is referred to as a multi-level concept, where the levels interact in various ways. Swan recognizes three scope levels, corresponding to the syntactic, semantic and pragmatic levels of language. They are referred to as "linear scope", "cognitive scope", and "metascope":

These scope levels are effective in different areas. Thus linear scope is mainly effective at the discourse level, and operates on discourse organization. It is well-known, for

instance, that initial position has a peculiar importance with respect to discourse organization, e.g. as the space for theme, the point of departure (Halliday 1985: 50). Cognitive scope on the other hand operates on the meaning of individual words/sentence elements (or blocks thereof), sentence structure, negation, etc. Metascope basically means speaker perspective (or pragmatic information of other kinds), cf. Swan (1982: 131). If one sees adverbial scope as a multi-level concept, one can allow linear scope its importance and still account for differences at the cognitive level... (1990: 17)

Speaker orientation (i.e. what is often referred to as subjectivity) is part of metascope because it expresses an additional proposition outside the structure of the modified clause itself, a proposition which comments on the rest of the clause (Swan 1982: 137). Subject and verb-phrase orientation are conceived of by Swan as fundamentally different as adverbs with these orientation types are intergrated in the clause. Such adverbs are considered to be part of cognitive scope. The concept of orientation (cf. Jackendoff 1972 and Ernst 1983) thus involves both Swan's cognitive scope and her metascope.

Swan's model is schematized in (12) below (Swan 1990: 18, figure 11):

12   MULTI-LEVEL SCOPE

       LINEAR SCOPE: discourse organization/emphasis

       COGNITIVE SCOPE: psychological/meaning-related/

                  logical structures

       +/- METASCOPE: speaker perspective and pragmatic

                 factors

It becomes clear from the discussion above that Swan considers the role of adverbial position to be mainly restricted to discourse organization or thematics (theme, focus, old and new information, etc.), i.e. it is not considered to be a major determinant of orientation or scope. This asumption is to a large extent supported by the discussion in the next chapter. Before I embark on that discussion, however, I will explain how adverbial orientation has been used as a criterion in adverbial taxonomy.

5.4 The use of orientation in adverbial classification

5.4.1 Introduction

In the last few decades the concept of orientation has been applied increasingly in adverbial classification. In section 5.4.2 I show the usefulness of the concept in the definition of the so-called adjunct-disjunct dichotomy, where it has been applied first and foremost. Then, since the adverbs under study here - to the extent that they are recognized at all - have been classified as manner adverbs or as subject adjuncts, sections 5.4.3-5.4.5 provide a discussion of the two categories and their relation to the concept of orientation. It will be shown that although manner adverbs are assumed to be verb-phrase oriented, while subject adjuncts are subject oriented, the division line between them is far from clear-cut. In section 5.4.6 it will be demonstrated that, in addition to the well-known orientation types, there are other less known ones, which do not fit into any of the established adverb categories.

5.4.2 Adjuncts vs. disjuncts

The notion of speaker orientation is commonly used to distinguish between what has been considered the two major classes of adverbs, viz. adjuncts/verb-phrase adverbs on the one hand and disjuncts/sentence adverbs on the other. Before the concept of orientation was developed, distribution, or syntactic scope, was the only distinguishing criterion. Thus, all the adverbs in (13)-(18) below - in spite of their very different semantic and pragmatic properties - were commonly referred to as sentence modifiers because they, by virtue of occurring initially, had wide scope, i.e. were said to colour the whole of the following clause in some way (cf. section 5.2).

13   *Slowly* he climbed the stairs.
14   *Ideally*, everybody should earn a decent living.
15   *Suddenly* the roof fell down.
16   *Clumsily* he spilt all the milk onto the ground.
17   *Sadly* he lost the election.
18   *Sadly* she walked down the road.

Although it was assumed that adverbs occurring in front position all had the same wide scope, the realization that initial adverbs may have different semantic and syntactic properties did not go completely unnoticed. Even scholars writing at the beginning of the century note that some adverbs seem to involve the speaker in some way.[74] Thus, the notion of speaker orientation was conceived of long before Jackendoff (1972), even though it was not really exploited or formalized until Jackendoff did it. During the last few decades, however, it has become increasingly common to define a disjunct as a speaker oriented adverb with the whole clause as scope (cf. for example Quirk et al. 1985: 440, Johansson & Lysvåg 1987: 234, and Swan 1988: 29, 1991: 410).

5.4.3 The traditional manner category: an orientational ragbag

In spite of an increasing interest in adverbs over the last few decades, a great amount of work remains to be done in this field. Many of the adverbial classes established have not been studied in sufficient detail. Among the adjuncts, the manner category has been sadly neglected; in-depth studies of this class are few and far between.[75] We consequently have very little detail knowledge of manner adverbs; in fact, we hardly know much more about this category than what we are told by reference grammars.[76] Roughly, what grammar books tell us is the following. Manner adverbs modify the way or manner in which something is done. They typically occur in post-verbal position (Quirk & Greenbaum 1973: 220; Johansson & Lysvåg 1987: 240, 266; Swan 1990: 22). They can be questioned by way of *how* and paraphrased as *in an ADJ manner/way*, where *ADJ* denotes the adjective from which the adverb is derived (cf. for example Quirk et al 1972: 460-61).[77] As examples of manner adverbs we commonly find items such as *slowly* and *loudly*, both of which fit the tests just mentioned (cf. example 19 below). Unfortunately, these tests are not always applicable, even when it is clear that the adverb in question must be a manner adverb (cf. for example Ernst 1983: 33-34 and chapter 6 of the present study).

19   a. She talked *slowly/loudly*.
       b. How did she talk?
       c. She talked in a slow/loud manner/way.

Ralph Long noted a long time ago that "the adverbs make up the most miscellaneous of the part-of-speech categories" (1961: 269). This is undoubtedly true. The list provided in (20) below may serve to illustrate the hotch-potch character of the traditional manner class. *Willingly, calmly,*

redly, and *badly*, for example, must indeed be said to denote highly different characteristics (mental mode/volition, mental state, stative property and ?evaluation); yet all the items listed have been classified as manner adverbs.[78] Note that *fatly* and *redly* belong to the class of stative adverbs. These are, to the extent that they are treated in the literature at all, referred to as manner adverbs. This is for example the general, implicit policy in Meyer-Myklestad 1967, Nilsen 1972 and Karlsen 1990, and probably most other discussions of manner adverb(ial)s.

20

> actively, badly, beautifully, boldly, bravely, calmly, carefully, cheaply, distinctly, easily, enthusiastically, equally, fatly, foolishly, gladly, intentionally, justly, kindly, knowingly, promptly, quickly, quietly, rapidly, recklessly, redly, simply, sincerely, suddenly, sweetly, together, vehemently, willingly, wisely, wrongly.

It seems fair to say that the manner class has functioned as a ragbag for all kinds of adjuncts which do not fit into any other established adjunct category.[79] However, even though it is recognized that manner adverbs are semantically very heterogeneous, they are commonly taken to be orientationally homogeneous. Thus, according to Dik (1975: 97), "all manner adverbials can be said to characterize the manner in which an event goes about". Jackendoff has a more nuanced view of the topic; according to him, manner adverbs "exhibit differences of orientation. For example, *John opened the door slowly* asserts that the motion of the door is slow...; but *John opened the door enthusiastically* attributes enthusiasm to John" (1972: 58). Jackendoff unfortunately does not discuss the orientation of manner adverbs any further but limits himself to this single comment. Other linguists have also noted that some manner adverbs seem to ascribe a quality to the subject rather than describing the way in which something

goes about. Some scholars have taken the consequence of this and established a new adverbial category alongside the manner class, i.e. they have split the old manner category into two (see for example Ernst 1983, Huang 1975, and Quirk et al. 1972). The new category is commonly referred to as "subject adjuncts" because its members attribute a property to the subject. In section 5.4.5 I give an account of the subject adjunct category; first however, I discuss Ernst's explanation of why the manner category has come to be so very heterogeneous, as well as his new definition of the category.

5.4.4 The old and a new definition of manner adverbs

As discussed in section 5.3.2, Ernst (1983) shows that a large number of adverbs from a variety of lexical categories have both sentential and non-sentential readings. Examples of adverbs with both types of reading are given below. (The examples are either Ernst's or are inspired by his examples.)

21a   *Tactfully*, he took leave of the Duchess (Ernst 1983: 49)
21b   He took leave of the Duchess *tactfully* (Ernst 1983: 49)

22a   *Morally*, the administration's policies are bancrupt
      (Ernst 1983: 59)
22b   They have been living quite *morally*.

23a   Fernando burped more *obviously* than he would have
      liked (Ernst 1983: 84)
23b   *Obviously*, Fernando burped (Ernst 1983: 84)

24a   *Shamefully*, the whole fourteenth floor had been in on that
      gambling scheme, from the mailboy right up to the senior
      execs (Ernst 1983: 96)
24b   He sat *shamefully* on the sofa, awaiting his sentence.

25a　Chester *delightedly* had abandoned the search
(Ernst 1983: 112)

25b　Chester sang *delightedly* (Ernst: 1983: 112)

All the adverbs in the (b) sentences go unproblematically into the traditionally defined manner category. However, according to Ernst, they actually belong to a number of lexical classes, viz. agent-oriented adverbs, domain adverbs, epistemic adverbs, evaluative adverbs, and mental attitude adverbs, respectively. In Ernst's view, the manner category should be defined more narrowly, so as to exclude adverbs such as these:

> The traditionally-defined class of Manner adverbs can now be seen as a collection of VP-readings of adverbs from several diverse lexical classes, many of which have other readings (particularly sentential ones). But there are some adverbs which only have a VP-reading. When this is a manner reading, we have the only true representatives of a (lexical) class of manner adverbs. (1983: 138)

By seeing the majority of the traditional manner adverbs as "VP-readings of adverbs from several diverse lexical classes", Ernst is able to account for the extreme heterogeneity of the traditional manner class. Because they belong to various lexical classes, some "manner adverbs" exhibit subject orientation, some speaker orientation, etc. Ernst argues that if we accept as manner adverbs only those adverbs which modify the verb phrase in a strict sense, and have a manner reading, the manner category is reduced enormously. Ernst's examples of "true" manner adverbs are rendered in (26)-(32) below (1983: 138-139):

26　Several of the mourners were singing *softly*.
27　The goons in the post office handled my package *roughly*.
28　The frammis must be held *tightly* in your left hand.
29　His bald pate shone *brilliantly* in the noonday sun.[80]
30　Philo sings *beautifully*.

31 Someone had *deftly* snatched the folder away at the last second.[81]

32 Prunella sneezed *loudly*.

Apparently, Ernst thinks that the adverbs in (26)-(32) above in a sense constitute a more "natural" verb specification than do for example adverbs such as *sadly* and *merrily*. Yet, in combination with for example the verb *sing*, the adverbs in question may be argued to be as verb-modifying as the prototypical manner adverb *loudly*. In collocation with *sing*, both *merrily*, *sadly* and *loudly* would primarily specify the sound. In my view, it is therefore rather artificial categorically to characterize *loudly* as a verb-phrase oriented adverb and *sadly* and *merrily* as subject-oriented adverbs. That this is problematic is demonstrated by the discussion in the next chapter as well. In chapter 7 I sketch a rough outline of an alternative approach to adverb classification, which takes into consideration the problems pointed out here and in chapter 6.

5.4.5 Subject adjuncts

As mentioned above, it has become more and more common in adverbial classification to recognize a category which ascribes a quality to the subject while s/he is involved in some situation.[82] In the present study the relevant category will be referred to as "subject adjuncts", but it has been given various different names in the literature, such as mental attitude adverbs (Ernst 1983) and state-of-mind adverbs (Huang 1975) [83]. As the latter two terms indicate, the items normally associated with this category have mostly been adverbs which denote mental conditions, e.g. *sorrowfully*, *merrily*, *thoughtfully*, etc. Swan (1990: 39), however, includes a completely different type, viz. adverbs that characterize the subject externally. She

refs to the subset as "appearance/attribute adverbs". Swan's taxonomy is shown below (cf. also Swan & Breivik 1997: 405).

(A) Mental state/emotion (*angrily, bitterly, cheerfully, sadly*)
(B) Volition/mental mode (*consciously, honestly, reluctantly, willingly*)[84]
(C) Appearance/attribute (*expressionlessly, redly, wetly, wordlessly*)

The two most common paraphrases for subject adjuncts are given in (33) and (34) below.[85]

33a SUBJ be ADJ when/while doing X.
33b Lisa was mournful while looking at her dead friend.
33c Lisa *mournfully* looked at her dead friend.

34a SUBJ do X with NP.
34b Harry bumped into Sally with deliberation.
34c Harry bumped into Sally *deliberately*.

As can be seen from the paraphrases, subject adjuncts express a separate proposition, which means that clauses with subject adjuncts contain two propostitions: the one expressed by the adverb, and the one expressed by the rest of the clause. This is in contrast to manner adverbs, whose lexical markers are simply added to the verb (cf. section 5.3.1). The paraphrase in (33a) indicates that the main function of subject adjuncts is to impute a characteristic to the subject, as is commonly assumed. However, as was argued above, the adverbs in question often seem to function as verb modifiers as well (cf. Swan 1990 and Killie 1993: chapter 3). Many of Swan's appearance/attribute items are of the type referred to in the present study as "stative adverbs" Whether Swan is right in her claim that these are exclusively subject oriented is a topic which will be discussed in the next chapter.

5.4.6 Object orientation and clause-external orientation

So far I have focused on the three types of orientation which have been discussed to any extent in the literature, viz. orientation to the speaker, subject and verb phrase. However, it has been shown that adverbs can have other less-known types of orientation as well. Heuer (1932: 122-123, 127-128) introduces the concept of "Objektbezüglichkeit" – i.e. 'object orientation' - claiming that "Bei gewissen Adverbien wird weniger die Handlung als deren Wirkung auf das von ihr betroffene Objekt bezeichnet". [With certain adverbs, what is modified is not so much the activity as the effect which that activity has on the object affected by it.] Here it may sound as if object orientation is exclusively a matter of describing the result of an action on a patient. However, object-oriented adverbs may also attribute characteristics which are not posterior to but simultaneous with the situation denoted by the verb (Killie 1994: 52-54). Examples are provided in (35)-(37) below. Here the adverbs apparently characterize the objects *it*, *her finger*, and *them*. Object orientation is not the commonest of orientation types, but it occurs.[86]

> 35   He bought it *cheaply* (Quirk et al. 1972: 463)
>
> 36   Agnes lifted her stubby finger and wobbled it *wetly* against her lips (MacLaverty TD: 91)
>
> 37   The damp air was catching on her eyelashes, spiking them *darkly* (George FSE: 410)

(38)-(46) show instances of another little discussed orientation type, viz. orientation to an entity which is not explicitly mentioned in the clause. This will be referred to as "clause-external" orientation. Some examples of the phenomenon have been given in the literature on adverbs (Johansson & Lysvåg 1987: 260, Swan 1990: 45-46 and Killie 1994: 54-55), cf. the sentences in (38)-(44) below. In (38) it is the journey or train ticket which

is expensive, i.e. an entity that is not overtly realized. What is modified by the adverbs in (39)-(41) is, in a sense, the whole situation; being parked by a moon-lit lake is said to be romantic, relaxing in one's bath is delicious, and reading dancing print is tiresome. The meaning of sentence (42) is presumably that the announcement was superfluous, i.e. the adverb is oriented to a noun phrase which is implicit in the verb. The discussion in the next chapter shows that the this of orientation is fairly common. In (43) and (44) it must be the (unexpressed but implied) owners of the relevant body parts that are characterized as listless and thoughtful.

38	This is the Blue Train, which runs *expensively* between .... and Pretoria (From Pole to Pole 7. BBC production. Narrator Michael Palin)
39	Nobody would decide on an important business transaction while parked *romantically* beside a moon-lit lake (Johansson & Lysvåg 1987: 260)
40	He relaxed *deliciously* in his bath, his nose and toes just sticking out of the water (Johansson & Lysvåg 1987: 260)
41	The rocking train made the print dance *tiresomely* before his eyes (Johansson & Lysvåg 1987: 260)
42	It's empty,' he announced *superfluously*. (Quirk et al. 1972: 463)
43	Her hand....fell by her side *listlessly* (Western 1906: 96)
44	His kind, strong mouth said *thoughtfully* and *deliberately* (Fitzgerald, cited in Swan 1990: 46)

In some cases it is extremely difficult to determine the orientation of an adverb. For example, what *absurdly* in (45) modifies is not at all clear.[87] It can hardly be the mode of thinking or the referent of the subject which is absurd; thus we have ruled out verb phrase and subject orientation. Two possibilities remain: what is characterized as absurd is the thought itself, or alternatively, the fact that a thought like this was conceived of in the first place. In both cases we would have some kind of clause-external

orientation. As shown in the next chapter, the kind of orientational indeterminacy demonstrated by *absurdly* here is in fact quite common.

45   As if on a given cue we both raised our glasses; synchronised drinking, I thought *absurdly* (Holt 180)[88]

Traditional practice is to classify adjuncts such as those discussed here as "manner adverbs" (cf. section 5.4.3). However, the paraphrase *in an ADJ manner* does not work for these examples. Nobody wobbles their finger "in a wet way ", park "in a romantic way ", or think "in an absurd way ". We may hypothesize that this is because the traditional paraphrase is unable to cover all instances of manner adverbs (cf. section 5.4.3 above). However, it should be clear that in the cases just described, the adverbs do not constitute a further specification of the verb. Consequently, there is a need to extend the orientational and classificatory inventory further.

5.5 Summary

The present chapter has explained the concepts of adverbial scope and orientation, and how these have been used in the classification of adverbs. It appears that the interpretation or function of an adverb only partly depends on its distribution, and therefore syntactic scope is insufficient as a tool for describing the interplay between adverbs and other clause elements (as well as clause-exxternal factors). The notion of orientation - as conceived of in a framework such as that of Ernst (1983) - is a much more promising concept since it recognizes that both syntax, semantics and pragmatics play a role in the interpretation of adverbs. Both Ernst (1983) and Swan (1982, 1988, 1990) give many examples of how semantic and pragmatic factors influence our interpretation of adverbs.

It has been demonstrated that adverbs can have a whole range of orientation types, many of which are not very well understood. The types which are normally discussed in adverbial accounts are orientation to the verb phrase, subject or speaker, as discussed for example in Jackendoff (1972), Bellert (1977), and Ernst (1985). However, it has been shown in subsequent studies that these are not the only possible orientation types. For example, Swan (1990) and Killie (1993) discuss instances of orientation to the direct object, and also to elements which are not overtly expressed in the clause. Orientation is therefore a notion that needs to be explored more thoroughly, to arrive at a better understanding of the phenomenon. In the next chapter I explore the orientational potential of stative adverbs, i.e. try to determine what elements of discourse these items may modify. I also discuss which factors - syntactic, semantic, or pragmatic - determine the orientation of stative adverbs.

Chapter 6: The orientation of the corpus adverbs

6.1 Introduction

This chapter discusses what types of orientation stative adverbs can have, and what factors determine their orientation. It will be shown that stative adverbs can have many different types of orientation, and that consequently they cannot rightfully be referred to as a uniform group of manner adverbs or subject adjuncts, as they have been (cf. sections 5.4.3 and 5.4.5). The discussion is organized according to the semantic subset of the adverbs and structured around a large number of corpus examples.

Note that no quantitative evidence is offered in this chapter. The reason is that the orientation of the corpus adverbs is found to often be extremely vague, and hence to a considerable extent depends on the interpretation of each individual.[89] This prominent subjective element makes (the concept of) orientation unsuited as an object of quantification. The account below is therefore a discussion of what interpretations are possible in each case, without any categorical claims being made as to what is the "correct" analysis. In trying to express the different possible - or impossible - ways of interpreting the sentences under discussion, I have made extensive use of paraphrases with adjectives, as is common in adverbial studies. The organization of the chapter is as follows: section 6.2 through 6.6 discuss the orientation of the various subsets of stative adverb. Age and dirt/dust adverbs are not discussed because of their low numbers. Finally, section 6.7 provides a summary and conclusion.

6.2 Colour/hue adverbs

An overwhelming majority of the colour/hue adverbs in the corpus function as subject modifiers. In the examples rendered in (1)-(5) below, for example, it cannot possibly be anything but the subject which is characterized as dark, rosy, white, etc. Even though the adverbs in question occur in the prototypical manner adverb position, i.e. post-verbally, they are not manner adverbs (cf. the asterisked manner paraphrases). As noted by Western (1921: 549), a manner reading is ruled out in principle because there is a lack of semantic (i.e. lexical/cognitive) congruity between adverb and verb; a manner simply cannot have a colour. Thus, colour/hue adverbs must necessarily characterize some other aspect of the clause than the verb, most commonly the subject, as in (1)-(5). As shown by the paraphrases, the adverbs in question express a separate proposition, in addition to the proposition expressed by the rest of the clause. This was argued in chapter 5 to be the case also with other types of subject-oriented adverb (cf. sections 5.3.1 and 5.4.5).

1 The Dean turned and went out, his gown billowing *darkly* behind him (Sharpe PB: 87)

*His gown billowed in a dark manner.
(His gown billowed and) his gown was dark.

2 The benign forehead of the quaker librarian enkindled *rosily* with hope (Joyce, Ulysses: Scylla and Char)

*The forehead enkindled in a rosy manner.
(The forehead enkindled and) the forehead was rosy.

3 The fingers holding the paper, Morse noticed, were quite slim and sinuous, like those of an executant violinist, with the unpainted nails immaculately manicured, the half-moons arching *whitely* over the well-tended cuticles (WTW: 17)

*The half-moons arched in a white manner.
(The half-moons arched and) the half-moons were white.

4 The drizzle of rain drifted *greyly* past upon the darkness (Lawrence LCL)

*The drizzle of rain drifted in a grey manner.
(The drizzle of rain drifted and) the drizzle of rain was grey.

5 ...where fruit lay heaped in costly dishes, and wine shone *redly* in half-emptied goblets (Alcott BM)

*The wine shone in a red manner.
(The wine shone and) the wine was red.

Also other kinds of non-manner readings are possible. In (6)-(8), for examples, it is neither the manner nor the subject which is described by the adverb, but the direct object. In (6) and (7) it must be the eyelashes and nostrils which are described as dark and black. Again, this reading derives from the lexical meaning of the individual clause elements in the sense that eyelashes and nostrils are commonly dark or black, while none of the other clause elements can be characterized as such, as shown in the paraphrases. How important semantics is to orientation becomes evident if we, for example, substitute *quickly* for *darkly* and *blackly*. The effect is that the adverb becomes oriented to the verb as there is no longer lexical congruity between adverb and object, while the verb and adverb meanings are compatible. The adverb in (8) is also object oriented, on the assumption that the adverb characterizes the reflexive rather than being linked to the subject position.

6 The damp air was catching on her eyelashes, spiking them *darkly* (George FSE: 410)

*Her eyelashes were spiked in a dark manner.
*The air was dark.
(The damp was spiking her eyelashes, and) her eyelashes were dark.

7 His bulbous nose flexed its nostrils *blackly* (George GD: 164)

* His bulbous nose flexed its nostrils in a black manner.
*The nose was black.
(His nose flexed its nostrils and) his nostrils were black.

8 He could already see the two magnificent beeches which stood in this big level lozenge in front of the house, detaching themselves *darkly* in the dark air
(Lawrence LCL)

*The two magnificent beeches detached themselves in a dark manner.
*The detachment/detaching was dark.
(The beeches were detaching themselves and) the beeches (themselves) were dark.

In the examples in (9)-(14) below, the orientation of the adverb *palely* may be said to vary, between subject orientation and a kind of verb-phrase orientation. (As is usual with colour adverbs, no manner reading is available, cf. the asterisked paraphrases.) In (9) and (10) the adverb may be argued to be subject oriented. However, it is also possible to see *palely* as oriented to a noun which is implicit in the verb phrase, viz. *smile* in (9) and *look* in (10). In this case, the verb-adverb collocations *smile palely* and *look palely* are related to the adjective-noun pairs *(a) pale smile* and *(a) pale look*. The nouns *smile* and *look* must be interpreted widely in these sentences, i.e. as referring to the whole face, as the mouth or eyes of a person cannot be pale. Apparently, *stare* in (11) cannot be used in the same

wide sense, judging from the awkwardness of the phrase *a pale stare*. The adverb in (12) can be argued to be oriented to a noun *shine* within the verb. It could also be the subject which is described as pale, though. Some similar examples are discussed in section 5.3 (examples 28-31). For the adverbs in (13) and (14), no such interpretation is available. As shown by the paraphrases, here it must be the subject which is modified by the adverb.

9 Giles looked up, smiling *palely* (Amis DB: 155)

   *Giles smiled in a pale manner.
   Giles's smile was pale (cf. a pale smile)
   (Giles smiled and) Giles was pale.

10 Sharon looked at Mary *palely* (Amis OPMS: 47)

   *Sharon looked at Mary in a pale manner.
   Sharon's look was pale (cf. a pale look).
   (Sharon looked at Mary and) Sharon was pale.

11 ...all through that Sunday Alan was either staring *palely* into her face from close quarters or actually holding her hand (Amis OPMS: 129)

   *Alan was staring in a pale manner.
   *Alan's stare was pale.
   (Alan was staring into her face and) Alan was pale.

12 the evening was so dark that lights shone *palely* from first-floor drawing rooms as if it were already night (James TD: 390)

   *Lights shone in a pale manner.
   The shine was pale (cf. a pale shine).
   (The lights shone and) the lights were pale.

13 Russ glanced at Alan, who now stood *palely* in his alcove
doorway (Amis OPMS: 87)

*Alan stood in a pale manner.
*Alan's standing was pale.
(Alan stood in his alcove doorway and) Alan was pale.

14 When he and she came out on to the riding, there was
Mrs Bolton faltering *palely* towards them
(Lawrence LCL)

*Mrs Bolton faltered in a pale manner.
*Mrs Bolton's faltering was pale.
(Mrs. Bolton was faltering towards them and) Mrs.
    Bolton was pale.

The kind of relationship which was said to hold between verb and adverb in (9), (10) and (12) is not an idiosyncrasy of the adverb *palely*, but is fairly common with colour adverbs generally. In (15) below, for example, redness is attributed to the explosion - or the flames - and not to the shell. Similarly, in (16) darkness is referred to the dress or clothes and not to the people wearing them.

15 A shell screaming like a storm banshee went over the
huddled heads of the reserves. It landed in the grove, and
exploding *redly* flung the brown earth (Crane RBC)

*The shell exploded in a red manner.
*The shell (exploded and it) was red.
(The shell exploded and) the explosion/flames were red.

16 Both were dressed *darkly*, shabbily and without
distinction (Rendell PC: 23)

*Both were dressed in a dark.... manner.
*Both were (dressed and they were) dark....
(Both were dressed and) their dress/clothes were dark....

The phenomenon under discussion is not special to English. Western (1921), in his discussion of Norwegian adverbs, remarks that:

> Ofte står det et adverb henført til verbet, skjønt det i virkeligheten logisk hører til subjektet *eller til et substantiv som kan utdrages av verbet...* [1921: 548, emphasis added]
>
> [Often an adverb is syntactically joined to the verb, although logically it belongs to the subject *or to a noun which can be inferred from the verb...*]

Swan & Breivik (1997: 418, n. 7) make a similar observation in their discussion of English verb-adverb collocations such as *speak/invest wisely* and *dance beautifully*:

> Examples such as *She spoke/invested wisely* or *She danced beautifully* are problematic in that it is unclear what precisely is modified (is, for instance, the subject also modified in *She spoke wisely?*), even though in general terms it is possible to say that the activity denoted by the verb is what is being modified (i.e. is in the scope of the adverb). However, *invest wisely* can clearly be seen as more closely related to an NP like *wise investments* than to *invest in a wise manner*; different verbs are specified in different ways by adverbs. (Swan & Breivik 1997: 418, n. 7, cf. also Swan 1990: 24).

What term we wish to use to refer to the phenomenon discussed here may be more or less a matter of taste. We could look at it as an kind of clause-external orientation, since the entities modified by the adverbs are, after all, not explicitly expressed in the clause. However, I will be referring to this kind of orientation as a type of verb-phrase orientation since there is a link between the adverb and what is at the surface realized as a verb. By this I mean that we somehow seem to access the underlying noun phrase via the

verb. The fact that the adverbs in question can be said to be verb-phrase oriented does no turn them into manner adverbs, however.

We may ask ourselves what conditions have to be met for an adverb to be oriented to a noun phrase implicit in the verb. Again, semantic compatibility between the relevant elements is a necessary condition for this kind of orientation to obtain. In other words, the semantic relation which can be said to hold between the understood noun phrase and the adjective from which the adverb is derived also holds within the derived verb-adverb cluster.[90] In some cases the orientation must necessarily be to a noun within the verb phrase simply because this is the only element with which the adverb is semantically compatible. The sentences in (15) and (16) above are two examples of this. In (15) the meaning of the adverb can not be reconciled with that of the subject as shells are normally of a less conspicuous colour than red, and in (16) *darkly* is more natural as a characterization of the clothes than of the people wearing them.[91] However, a verb-phrase oriented reading may occur even when it is *not* the only possible interpretation. The sentence in (17) below provides an example of this. (This is not a corpus sentence; yet it is used because it provides a good illustration of the point just stated.) Here the meaning of the adverb is fully congruent with that of the subject; tapers may well be blue. In spite of this, the adverb appears to be oriented to a noun which is not even mentioned in the clause, viz. to the flame of the taper. We may wonder what makes us - or at least me - interpret *bluely* here as verb-phrase oriented rather than subject oriented. A possible answer is that it is the syntactic link between verb and adverb (i.e. the *-ly* suffix and post-verbal placement) that creates a verb-phrase oriented reading in such cases. This link seems to have been gradually weakened in the grammars of English speakers. The native-speaker intuitions reported in Killie (forthcoming a) show that the extent to

which speakers feel that there is such a link varies greatly. The weakening of the link between adverb and verb is probably a result of the adverbialization process, which has caused -*ly* adverbs to have a variety of functions that are not verb-related (cf. section 2.3.2).

17   The taper burning *bluely*
      (*Oxford English Dictionary*: 1844 Hood Haunted Ho. lxiii)

      *The taper burned in a blue manner.
      *(The taper was burning and) the taper was blue.
      (The taper was burning and) the flame was blue.

In most of the cases discussed here the implicit noun is morphologically related to the verb: we have verb - noun pairs such as *smile - smile, look - look, shine - shine, explode - explosion* and *dress - dress*. This morphological link is also present in Swan & Breivik (1997)'s example *invested wisely*, where we have the pair *invest - investment*. However, morphological relatedness is not required for this type of orientation to take place. In (17), for example, the modified entity, viz. the flame, is not directly retrievable from the verb *burned*; yet, the semantic relation is intuitively clear. The same is the case in collocations such as *said wisely* or *said quickly*. Here it is clear that it must be the utterance or words which are wise and the rate of speaking which is quick, but we do not arrive at this interpretation by way of morphological relatedness, as there is none. As the kind of verb-phrase oriented reading just discussed appears to be fairly common, all the examples which follow below will be discussed in relation to this phenomenon.

In the examples with modifiers in (18) and (19) below, orientation to a noun implicit in the verb is the only plausible interpretation. With respect to (18), one may argue that if the carpet that covers the earth is brown, then

the earth must be brown too; however, this is not because the noun *earth* is directly modified by the adverb. The brownness of the earth simply follows from the rest of the predication: the earth is covered by a brown carpet; hence the earth is brown. In (19) it must be the implied noun phrase *beard* which is characterized by the adverb.

18   ...to dig several spits out of the *brownly* carpeted earth where the bones had lain (Dexter WW: 164)

*The earth was carpeted in a brown manner.
(The earth was carpeted and) the carpet was brown.
   (Hence: The earth was brown)

19   A swarthy, *darkly* bearded man lay asleep on a tiger skin, in the shadow of a tent (Alcott BM)

*The man was bearded in a dark manner.
*The man was dark.
(The man was bearded and) the beard was dark.

In the examples just discussed, the adverb was said to be oriented to a noun phrase contained in the participle. However, this kind of orientation is not obligatory in cases with an adverbial modifier and a participle, as should be clear from the examples in (20) and (21) below. Here the adverb is also syntactically subordinated to a participle, i.e. by way of position; yet, it does not characterize any aspect of the participle, but is instead oriented to a higher noun phrase. In (20) the entity modified is the head of the noun phrase within which the adverb occurs, viz. *lips*. In (21), where the adverb is not part of a noun phrase, the adverb is oriented to the subject of the main clause. Again, why we get orientation to an overtly realized noun phrase in all these cases must be understood in terms of the lexical interplay of the various clause elements; the adverb is semantically incompatible with the adjectival elements to which they are linked

syntactically, but compatible with one of the noun phrases. The examples in (19) and (21) again demonstrate that as far as orientation is concerned, syntax must be subordinate to semantics. We may ask why the writers of these sentences have in fact chosen to link - or subordinate - the adverb to the adjectival (formally verbal) element when there is no corresponding semantic link between the two. In other words, why have they not simply used structures where the adverbial and adjectival elements are syntactically at the same level, i.e. structures with two co-ordinated adjectives? This would bring the syntax more into line with the cognitive content of the sentences, as shown by the paraphrases below the examples. The answer is perhaps of an aesthetic or stylistic nature, the construction with -*ly* being perceived as more catchy, modern, elegant, etc. At any rate, the fact that such constructions are conceived of as possible at all cannot be explained without reference to the high degree of adverbialization in English. As a result of this process, practically "anything" can be expressed by way of a -*ly* adverb, and -*ly* adverbs can be syntactically linked to almost any kind of element.

20   ...at night Eddie's dreams were haunted by whole rows of
      rosily pursed lips, and seas of upturned, adoring eyes
      (Ferber BSD)

      *The lips were pursed in a rosy manner.
      *The pursing of the lips was rosy.
      (The lips were pursed and) the lips were rosy.

21   ...his hands hanging loosely in front of him, *palely*
      disembodied (James TD: 72)

      *His hand were disembodied in a pale manner.
      *The disembodiment was pale.
      (His hands were disembodied and) his hands were pale.

In the sentences in (22) and (23) below, the adverb is linked syntactically to a plain adjective. The adverb in (22) functions more or less as a degree word. In (23) a degree reading does not obtain, as *palely* cannot be used to specify degrees of attractiveness. However, also here it can be argued that the use of a syntactic dependency construction reflects a semantic relationship. Specifically, the adverb-adjective cluster may be said to express some kind of mixed quality rather than two separate ones. The two qualities expressed are contingent on each other, in the sense that Monica Height's attractiveness is somehow bound up with, perhaps partly derives from, her paleness.

22   A low bank of heavy cloud...lay, *palely* crimson, like a colour-wash carefully laid against the richer blue-black of the night (James TD: 156)

*The low bank of heavy cloud was crimson in a pale manner.
(The bank lay like a.... and) its crimson colour was pale.

23   ...Monical Height looking *palely* attractive
(Dexter SWNQ: 153)

*Monica Height was attractive in a pale manner.
?(Monica Height was attractive and) Monica Height was pale.
? Monica Height was pale, and her paleness made her attractive.

In sum, colour adverbs are not rightly referred to as manner adverbs, as they in fact cannot characterize a manner. Most of the colour adverbials in the corpus modify the subject, i.e. are similar to subject adjuncts (cf. section 5.4.5). Some also modify the direct object, i.e. can be classified as "object adjuncts". A fairly large number of the colour adverbs in the corpus can be said to be linked to a noun semantically connected to the verb. This kind of orientation can be referred to as a species of verb-phrase

orientation, since the noun modified is an entity we get at via the verb. The modifiers are oriented to the adjectival - normally a past participle - to which they are syntactically joined, to the head of the noun phrase within which they occur, or to the subject of the clause.

6.3 Radiance adverbs

A large number of the radiance adverbs in the corpus are oriented to the subject. Examples are rendered in (24)-(27) below. Here it is only the subject which is semantically compatible with the adverb; to attach the adverb to any other entity in the clause is simply not possible, as shown by the paraphrases. Again, the fact that all the adverbs in question occur post-verbally does not cause a manner, or other verb-phrase oriented, reading to occur so long as the semantics of verb and adverb does not allow such a reading.

24   ...the lights were springing up *brilliantly* in the shop windows (Dickens GE)

      *The lights were springing up in a brilliant manner.
      *The springing up was brilliant.
      (The lights were springing up and) the lights were brilliant.

25   In that half hour the sun had slipped just around the corner, and was now beating *brightly* and uselessly against the brick wall a few inches away (Ferber BSD)

      *The sun was beating down in a bright manner.
      *The beating down was bright.
      (The sun was beating and) the sun was bright.

26   ...in a golden glitter the sun came up, dribbling *fierily* over the waves in little splashes (Lawrence SL)

*The sun dribbled in a fiery manner.
*The dribbling was fiery.
(The sun was dribbling over the waves and) the sun was fiery.

27   The mountain-ash berries across the fields stood *fierily* out from the dark leaves, for a moment (Lawrence SL)

*The mountain-ash berries stood out in a fiery manner.
*The standing out was fiery.
(The mountain-ash berries stood out from the dark leaves and) the mountain-ash berries were fiery.

The corpus has a number of instances of radiance adverbs co-occurring with radiance/ light verbs. Examples are provided in (28)-(31) below. The orientation of these adverbs is unclear, as shown by all the question marks in front of the paraphrases. There are several entities which could in principle be modified by the adverb, viz. the subject, the verb or perhaps both (Heuer 1936: 85, Meyer-Myklestad 1967: 380). For some reason, the radiance adverbs below seem to be more like manner adverbs (or perhaps degree adverbs) than are the members of the colour/hue category. This is indicated by the question marks in front of the manner paraphrases.

28   ...the sun, which shone *brightly* on the white ground (Shelley, Frankenstein)

?The sun shone in a bright manner.
?The shine was bright.
?(The sun shone and) the sun was bright.

29   ... the sunset shone *fierily* through the glass-inclosed layer-like upper floors (Lewis OMR)

?The sunset shone in a fiery manner.
?The shine was fiery.
?(The sunset shone through and) the sunset was fiery.

30   Sir Cathcart's eyes were gleaming *brightly* now (Sharpe PB: 132)

?Sir Cathcart's eyes were gleaming in a bright manner.
?The gleam (in Sir Cathcart's eyes) was bright.
?(Sir Cathcart's eyes were gleaming and) Sir Cathcart's eyes were bright.

31   In their light the Pre-Raphaelite face of the Madonna with her flare of crimped and yellow hair under the high crone shone *glossily* as if newly painted (James TD: 386)

?The face of the madonna .... shone in a glossy manner.
?The shine (on the face of the madonna) was glossy.
?(The face of the madonna shone and) the face of the madonna was glossy.

Western (1906) provides the following comment on the orientation of the radiance items *bright* and *brightly* in clauses with radiance/light verbs:

> To characterize how something looks or sounds, it does not make any great difference whether we employ an adjective or an adverb. *The moon shines bright* and *the moon shines brightly* really tell the same thing; only in the first of these the brightness is referred to the moon itself, while in the second case it is referred to its shine. But as it is impossible that a thing which is not bright can shine brightly, this difference in expression does not correspond to a difference in meaning. It is quite another thing if we say. E.R. I 272: *The wood was burning brightly.* Here *bright* would be wrong, as it is not the wood, but the flame, that is bright. We therefore find in cases like those mentioned above adjectives and adverbs used promiscuously... (Western 1906: 92)[92]

Note that Western's sentence *The wood was burning brightly* (from George Eliot's *Ramola*) is more or less parallel to the example in (17), *The taper burning bluely*. His analysis of the adverb *brightly* in this sentence is in line with my interpretation of *bluely*; the adverb is said to characterize *the flame*, i.e. a noun phrase which is implicit in the lexical verb, as explained above.[93] The most important aspect of Western's discussion, however, is his recognition that, although in principle we may distinguish between interpretations which are purely linguistic, i.e. syntactic, and interpretations which take into account real-world knowledge, this is probably a practice which bears no relation to how natural language processing proceeds. In real life, we probably never leave our extra-linguistic knowledge behind when we interpret linguistic structure. In the light of this realization, to propose a distinction between the strictly linguistic and the extra-linguistic seems counterintuitive, even misleading. The distinction in question is probably what causes our problems in interpreting the sentences under discussion here, as well as many of the other examples discussed in this chapter. With respect to sentences such as *The moon/sun shines brightly*, for example, Western points out that what is bright is in actual fact both the moon and its shine as it is impossible for an object which is not bright to shine brightly. For the same reason it is also counterintuitive to distinguish between a shining object such as the moon or the sun and the shine itself; they are the same, so to speak, in the sense that these are objects whose main characteristic (at least from a human point of view) is to shine, and which always do this. Hence, as was also pointed out by one of my colleagues, if an adverb modifies the shine, it also modifies, by way of close implication, the object emitting the shine. That radiance adverbs collocating with radiance/light verbs may modify more than one element is pointed out by Heuer (1936: 85), who notes that in these cases "Verb- und Subjektbestimmung gleich stark sind". In many of the examples discussed

below the adverb may also be seen as being oriented to several elements at the same time.

The radiance modifiers in the corpus are typically oriented to the element to which they are joined syntactically, i.e. the adjectival. In other words, none of them are orientated to a higher noun phrase, as was shown to be the case with the colour modifiers in (20) and (21). The modifiers in (32)-(34) are all syntactically linked to a participle. The prototypical environment of the radiance modifiers in the corpus is exemplified in (33) and (34), i.e. the radiance modifiers are most commonly joined to a past participle. The adverb in (32) may be argued to describe the manner of glittering, or one may say that it is the glittering, i.e. a noun inherent in the participle, which is faint. A manner reading is less likely in (33), which has a passive construction denoting a state. Here it must be the illumination, i.e. a noun within the participle, which is brilliant. Similarly, in (34) it is the colours which are described as bright, syntactically speaking. However, it follows that the parasol must be bright too. The adverbs in (35) and (36) syntactically modify regular colour adjectives. Also in these cases the syntactic link indicates an orientational relationship; the adverbs characterize the adjectives, or a noun within them, as shown by the paraphrases below the examples. For (35), and particularly (36) a degree reading seems to be possible.

32   ...*faintly* glittering brass and ivory (Wells TM)

?The brass and ivory glittered in a faint manner.
?The glitter was faint.
*(The brass and ivory were glittering and) the brass and
    ivory were faint.

33   ...the room was *brilliantly* illuminated (Wells TM)

*The room was illuminated in a brilliant manner.
The illumination was brilliant.
*(The room was illuminated and) the room was brilliant.

34   The *brightly* coloured parasols (Wilde PDG)

*The parasols are coloured in a bright manner.
The colours are bright.
*(The parasols were coloured and) the parasols were
    bright.

35   He studied her firm thin *brilliantly* red lips (Lewis OMR)

*Her lips were red in a brilliant manner.
The red(ness) was brilliant.
*(Her lips were red and) her lips were brilliant.

36   the edges of them [i.e. the wounds, KK] are *faintly* white
    (Stoker, Dracula)

*The edges are white in a faint manner.
The white(ness) is faint.
*(The edges are white and) the edges are faint.

To sum up, radiance adverbs may have different kinds of orientation. The corpus has examples of subject-oriented and verb-phrase oriented adverbs, and the modifiers characterize the element which they modify syntactically, or, to be more precise, they modify a noun related to this element. Hence, radiance adverbs are not simply a group of manner adverbs, as they have been claimed to be, but are much more heterogeneous than what this characterization would seem to imply.

6.4 Dimension/form adverbs

As was the case with colour and radiance adverbs, dimension/form adverbs may have different kinds of orientation. The orientation of adverbs such as *fatly*, *bulkily*, *corpulently*, etc. is in many cases unclear. These are all adverbs which denote both large size and a fat figure. (They correspond to those borderline adverbs which made me collapse dimension and shape adverbs into one category, cf. section 1.3). According to the *Oxford English Dictionary*, they are manner adverbs. The dictionary paraphrases *corpulently* and *bulkily* as 'in a corpulent/bulky manner', *massively* as 'in a massive manner or form', and *fatly* as 'like a fat person, clumsily'. A manner interpretation seems most likely in clauses with verbs of movement, as in (37)-(40) below, where the implication must be that fatness may influence one's movements (cf. the paraphrase 'like a fat person, clumsily'). On the other hand, as the subjects of these sentences are in fact overweight, it is also possible to argue that fatness is primarily ascribed to the subjects of the clauses.

> 37   ...when he found himself skipping *corpulently* across the
>   drive (Amis DB: 55)
>
>   * He was skipping across the drive in a corpulent manner.
>   ?He was skipping across the drive in the manner of (like)
>   a corpulent person.
>   *His skipping was corpulent.
>   ?(He was skipping across the drive and) he was corpulent.

38   Ben Dollard *bulkily* cachuchad towards the bar, mightily praisefed and all big roseate, on heavyfooted feet, his gouty fingers nakkering castagnettes in the air
(Joyce, Ulysses: Sirens)

* Ben Dollard cachuchad in a bulky manner.
?Ben Dollard cachuchad in the manner of (like) a bulky person.
*The cachucha was bulky.
?(Ben Dollard cachuad and) Ben Dollard was bulky.

39   ... Mrs. Zapp swung *bulkily* about and slammed the door
(Lewis OMR)

* Mrs. Zapp swung about in a bulky manner.
?Mrs. Zapp swung about in the manner of (like) a bulky person.
*The swinging about was bulky.
?(Mrs. Zapp swung about and) Mrs. Zapp was bulky.

40   Miss Higgins sailed *massively* up the stairs as Gavin Gray silently and swiftly sped up to talk to Mr Meen
(Forrest DTP: 13)

* Miss Higgins sailed up the stairs in a massive manner.
?Miss Higgins sailed up the stairs in the manner of (like) a massive person.
*The/her sailing-up-the-stairs was massive.
?(Miss Higgins sailed up the stairs and) Miss Higgins was massive.

Note that the traditional manner paraphrase does not work here; one simply does not do something 'in a fat manner'. A better alternative is 'in the manner of a fat person', as shown by the paraphrases. The reason may be that the comparison here is not strictly with a characteristic but with people who carry this characteristic. The fact that we need to use this kind of paraphrase is interesting. It makes the adverbs in question similar to adverbial prepositional phrases of the type *like an expert* and *like her mother*, which are commonly classified as manner adverbials (Quirk et al.

1985: 557-558, Chalker 1984: 195). A parallel can also be drawn with denominal adjectives such as *kingly* and *gentlemanly*. These are typically paraphrased as 'like a king/gentleman'; thus, their semantic paraphrases are indeed very similar to those suggested for the adverbs discussed here. Here we seem to have a case where the common origin of adjectival and adverbial *-ly* can be discerned. While the adverbial *-ly* suffix has (so good as) lost all its original lexical meaning in most of the adverbs discussed in the present study (and indeed in most *-ly* adverbs?), the adverbs in (37) to (40) above show that this is not the case for all *-ly* adverbs. In adverbs denoting fatness the *-ly* suffix has more or less retained the meaning of the adjectival suffix from which it originally derives (cf. section 2.3.1). However, this is the case only if we are correct in interpreting the adverbs in question as manner adverbs. The ability to include reference to a human agent is a property which is alien to most of the adverbs in the corpus; *blackly*, for example, cannot be paraphrased 'in the manner of/like a black person'.

Movement verbs are not the only possible verbal collocates of "fatness adverbs". The corpus contains some examples of *fatly* in collocation with completely different verb types, as shown in (41)-(43) below. These are indeed curious usages. The adverb in (41) may be argued to be exclusively subject oriented. However, it is in principle possible to establish a connection between adverb and verb here, in which case *fatly* refers to Keith's (a truly obese person) utterance or reaction as a whole, i.e. he acted as he did because he was fat, or he acted as a fat person would do. In (42) it is difficult to find a semantic relation between the adverb and the verb; here the adverb must be interpreted exclusively as a subject modifier. The adverb in (43) can be said to modify either the subject, i.e. the hair is massive, or a noun *coil* within the participle.

41   ...Giles had stolen into Trims, a healthfood cafeteria, where it took him an hour and three-quarters to eat an almond rissole, sorting and grading each item with his tongue before letting it pass down his throat.)
'No, I won't,' he said. 'No, I really don't feel like anything.'
'Well, I'd better have some then,' Keith said *fatly*.
(Amis DB: 19)

?...Keith said in the manner of a fat person.
*Keith's utterance was fat.
?(Keith said.... and) Keith was fat.
?Keith's reaction was like that of a fat person.

42   ... but Mrs. Arty chuckled *fatly*, and continued
(Lewis OMR)
*Mrs. Arty chuckled in the manner of a fat person.
*The chuckling was fat.
(Mrs. Arty chucled and) Mrs. Arty was fat.

43   when she came into the drawing-room in her silver-gray dress, the simple lines of her dark-brown hair parted over her brow and coiled *massively* behind
(Eliot, Middlemarch)

*The simple lines of her dark brown hair were coiled in a massive manner.
?(The simple lines of her hair were coiled behind and) the coil was massive.
? The simple lines of her dark brown hair were massive.

Interestingly, *thickly* does not seem to be used in a similar way as *fatly*, *corpulently*, *massively* and *bulkily*. In none of the corpus examples does it refer to people's figure. For example, in (44) below it is the layer of lipstick on Mrs. Biggs' lips which is said to be thick. In (45) the subject, i.e. the white liquid, is no doubt thick; however, this does not seem to be the point here. The adverb seems to establish a cognitive link between the tilting and the liquid, expressing that there is something about the sound of the tilting

which is reminiscent of the tilting of thick fluids. We may thus argue that *thickly* functions as a manner adverb in this case.

44   Mrs. Biggs' lipstick gleamed *thickly* (Sharpe PB: 37)

*The lipstick gleamed in a thick manner.
*The gleam was thick.
(Mrs. Bigg's lipstick gleamed and) Mrs. Bigg's (layer of)
    lipstick was thick.

45   She moved to the kitchen and took her magnesia, not
     bothering with the spoon but skugging the blue bottle back,
     hearing the white liquid tilt *thickly* (MacLaverty TD: 149)

*The white liquid tilted in a thick manner.
?The white liquid tilted in the manner of thick liquids.
*(The white liquid tilted and) the white liquid was thick.

The sentences in (46)-(48) have adverbs that denote small size. These are much more rare than adverbs denoting large size. With respect to orientation, the adverbs in (46) and (47) must be interpreted as subject modifiers, as it is impossible to imagine any way that tininess can influence one's way of prancing or sitting. The adverb in (48), by contrast, is probably oriented to a noun *smile* within the verb phrase, i.e. the smile is tiny and the smile is sweet. However, the subject of the sentence appears to be small and could possibly be modified by the adverb(s), too.

46   ... there was one tiny, tiny perky chicken *tinily* prancing
     round in front of a coop (Lawrence LCL)

*The chicken was prancing in a tiny manner/in the
    manner of a tiny chicken.
*The prancing was tiny.
(The chicken was prancing and) the chicken was tiny.

47   He sits *tinily* on the piano stool and lifts and beats handless sticks of arms on the keyboard, nodding with damsels grace, his bowknot bobbing (Joyce, Ulysses: Circe)

*He sits in a tiny manner.
*His sitting is tiny.
(He sits on the piano stool and) he is tiny.

48   She raised her small gloved fist, yawned ever so gently, tiptapping her small gloved fist on her opening mouth and smiled *tinily*, sweetly (Joyce, Ulysses: Wandering rocks)

*She smiled in a tiny manner.
Her smile was tiny.
*(She smiled and) she was tiny.

Most of the dimension/form adverbs in the corpus appear to be subject oriented. Examples are provided in (49)-(52) below. Here it is difficult to imagine ways of performing the actions that can be reconciled with the semantics of the adverb, in contrast to what was the case with the dimension/form adverbs discussed in (37)-(41) above. There are several reasons for this. In many of the sentences below the verbs denote a state. This normally precludes a manner reading. As shown by the paraphrases, orientation to a noun within the verb phrase is impossible too. Again, these facts must be related to the semantics of the various clause elements rather than to syntactic factors, as all but one of the adverbs in question occur post-verbally, in the unmarked prototypical manner position. With regard to the specific use of *hugely* attested in (50), it is not recorded by the *Oxford English Dictionary* [94]. Here *hugely* is only recorded in the function of degree adverb; however, a degree reading is obviously not possible in (50), where hugely must indicate tallness or fatness. Which reading is the correct one is not clear. With respect to the sentence in (52), the type of the subject appears to influence our interpretation of the adverb. The sentence

is about a train, and it is difficult to imagine different ways for trains to lumber; hence the content of the adverb is referred to the subject itself. Note again that most of the adverbs below are post-verbal; yet, their orientation is not to the verb phrase.

49   ...the Universal, a sooty Gothic structure which hovered
      massively over the second-hand car showrooms and
      ramshackle eateries that littered its surrounds
      (Amis DB: 100)

      *The structure hovered in a massive manner.
      *The hovering was massive.
      (The structure hovered and) the structure was massive.

50   ...Sharon hovered *hugely* in the corner of her eye
      (Amis OPMS: 29)

      *Sharon hovered in a huge manner.
      *The hovering was huge.
      (Sharon hovered and) Sharon was huge.

51   ... Celia's breasts - depressing items that *flatly* splayed in
      the direction of her armpits (Amis DB: 72)

      *...depressing items that splayed in a flat manner...
      *The splaying was flat.
      (Celia's breasts splayed in the direction of her armpits
         and) Celia's breasts were flat.

52   ...until the London train came lumbering *massively*
      alongside the platform and finally broke the spell
      (Dexter SWNQ: 109)

      *The London train was lumbering in a massive manner.
      *The/its lumbering was massive.
      (The London train was lumbering and) the London train
         was massive.

The sentences in (53)-(56) contain modifiers. In (53)-(55) the syntactically modified elements are past participles, and it seems that the adverbs are oriented to these participles, or to nouns contained in them, as shown by the paraphrases. In (56) the syntactically modified element is not a participle, but a regular adjective. Here it is difficult to pin down the exact meaning of the construction by using a paraphrase. It seems that adverb and adjective express a kind of mixed quality, which could not be expressed by using a co-ordinate construction, i.e. with two adjectives (thus the star in front of the last paraphrase).[95]

53   There are countries, I have heard, where women go always *thickly* veiled, hiding their beauty from all men's eyes save those of husband or father (Ouida DFOS)

*Women are veiled in a thick manner.
(The women are veiled and) the veils are thick.
*The women are thick.

54   Buck Mulligan sighed and having filled his mouth with a crust *thickly* buttered on both sides, stretched forth his legs and began to search his trouser pocket (Joyce, Ulysses: Telemacjus)

*The crust was buttered in a thick manner.
(The crust was buttered and) the (layer of) butter was thick.
*The crust was thick.

55   ...she wore her brown hair *flatly* braided and coiled behind (Eliot, Middlemarch)

*Her brown hair was braided in a flat manner.
(Her hair was braided and) her/the braid was flat.
*Her brown hair was flat.

56   His voice was tremendous, and he was *fatly* immovable (Lewis OMR)

*He was immovable in a fat manner.

?He was immovable in the manner that fat people often
  are.

*His immobility was fat.

*He was immovable and he was fat.

Summing up, it has been demonstrated that dimension/form adverbs, just like colour and radiance adverbs, may be oriented to different kinds of element. A fairly large number of the corpus adverbials can be argued to function as manner adverbs. This is also the interpretation of the *Oxford English Dictionary* (cf. the paraphrases discussed in connection with the sentences in (37) to (41) above). However, there are no adverbial types which function exclusively as manner adverbs; the orientation of the adverbs in question varies according to the type of the verb with which they co-occur. Some of the dimension/form adverbs in the corpus modify some noun related to the verb; others modify the subject. The modifiers typically characterize the element to which they are joined syntactically, or if this is a participle, they modify a noun related to the participle. On the basis of the discussion in this section, it is clear that dimension/form adverbs are not simply a group of manner adverbs, but belong to several classes of adverb.

6.5 Moisture adverbs

Moisture adverbs may be verb-phrase oriented provided that the collocating verb denotes a situation which can be meaningfully characterized as wet, moist, etc. Examples are provided in (57)-(59) below. The adverbs in question may be interpreted as regular manner adverbs; however, they may also be analyzed as modifying a noun within the preceding verb. At any rate, they must be seen as verb-phrase oriented.

This is also the interpretation of all the native speakers participating in the investigation presented in Killie (forthcoming a), with respect to the example in (57).

57   He sneezed loudly, *wetly*, and quite unforgivably into the woman's face (George GD: 1)

?He sneezed in a wet.... manner.
?(He sneezed and) the sneeze was wet.
*He was wet.

58   He sniffed *wetly* (Amis DB: 213)

?He sniffed in a wet manner.
?(He sniffed and) the sniff was wet.
*He was wet.

59   Agnes began to snore *wetly*, her head pitched forward on to her chest (MacLaverty TD: 87)

?Agnes snored in a wet manner.
?(Agnes snored and) the snore was wet.
*Agnes was wet.

The adverbs in (60) and (61) below may be said to be subject oriented. However, it is also possible to argue that the wetness denoted by the adverbs here contributes something to the verbal force. In the sentence in (60), it is conceivable that the wetness of the skirt in fact influences the nature of its flapping (it flaps with a "wet" or "heavy" sound or with slow, heavy movements). As shown by all the proposed paraphrases below, however, it is difficult to tell exactly what is characterized by the adverb here. The native-speaker judgements attested in Killie (forthcoming a) include both verb-phrase oriented and subject oriented readings. With regard to the sentence in (61), dampness may be said to affect the manner in which hairs lie across one's forehead, making them stick. Thus, one may

argue that there is a certain semantic relation between verb and adverb in this case as well, although the traditional manner paraphrase does not work.

60   ....her navy-blue skirt flapping *wetly*
    (Moyes 2/19, cited in Swan 1990: 40)

    *The skirt was flapping in a wet manner.
    ?The skirt was flapping in the manner of (like) a wet skirt.
    *The flaps/flapping was wet.
    *The sound of the flapping was wet.
    ?The sound of the flapping indicated wetness.
    ?(The skirt was flapping and) the skirt was wet.
    ?The skirt *and* its manner of flapping were wet.

61   A few hairs lay *damply* across her forehead
    (James TD: 257)

    *The hairs lay across her forehead in a damp manner.
    ?The hairs lay across her forehead in the manner of (like) damp hairs.
    *The lying-across-her-forehead was damp.
    ?(The hairs lay across her forehead and) the hairs were damp.

The adverbs in (62)-(65) below are all clearly subject oriented. There simply is no way in which the adverbs can be related to the verbs here, while they seem to represent a natural characterization of the subject noun phrases.

62   He looked at us over her bowed head, with eyes that blinked *damply* above his quivering nostrils
    (Stoker, Dracula)

    *His eyes blinked in a damp manner.
    *The blink was damp.
    (His eyes blinked and) his eyes were damp.

63   Beyond the rain-washed panes the heavy swathes of the
      sycamores drooped *dankly* in the drenched air
      (James TD: 404)

      *The heavy swathes of the sycamores drooped in a dank
         manner.
      *The droop(ing) was dank.
      (The heavy swathes... drooped and) the heavy swathes...
         were dank.

64   Their lips joggle *scummily* (Amis DB: 174)

      *Their lips joggle in a scummy manner.
      *The joggle/joggling was scummy.
      (Their lips joggle and) their lips are scummy.

65   I stared at the sleeve of my pyjamas which protruded
      damply from under my jacket (Murdoch SH: 182)

      *The sleeve of my pyjamas protruded in a damp manner.
      *The protruding was damp.
      (The sleeve... protruded and) the sleeve... was damp.

Also in (66) and (67) the adverb appears to ascribe a characteristic to the subject. However, this does not necessarily mean that there is no relation between verb and adverb in these sentences. In (66) there seems to be a causal relationship between the verb and the adverb; the adverb provides the cause or reason why the situation denoted by the verb takes place, i.e. the stamps peeled off because they were moist.[96] The same kind of causal relationship may be argued to exist between verb and adverb in (67), i.e. the faces gleamed because they were dank. This causal relation does not, however, make the adverbs in question verb-phrase oriented; the fact remains that what is characterized as dank and moist are *the stamps* and *their pale faces*, i.e. the subjects of the sentences.

66   The stamps peeled *moistly* off (MacLaverty SOS: 33)

*The stamps peeled off in a moist manner.
*The peeling-off was moist.
?(The stamps peeled off and) the stamps were moist.
?(The stamps peeled off because the stamps were moist.

67   Behind him in the darkness the lesser College servants clustered backwardly and gaped at the brilliant scene below them, their pale faces gleaming *dankly* in the reflected glory of the occasion (Sharpe PB: 11)

*Their pale faces were gleaming in a dank manner.
*The gleam was dank.
?(Their pale faces were gleaming and) their pale faces were dank.
?(Their pale faces were gleaming because they were dank.

In the example in (68) below it must be the eyes of the subject which are moist. Since these are entities which are not explicitly mentioned, the usage in question may be seen as an instance of clause-external orientation. One might perhaps also analyze this adverb as subject oriented, arguing that the lexical content of the adverb is referred to the eyes via the subject, since the eyes are, after all, objects which are inalienably possessed by the subject.

68   *Moistly* he peered out at the shining lawn
       (Amis DB: 120-21)

*He peered out at the shining lawn in a moist manner.
*The peering was moist.
*He was moist.
(He peered out of at the shining lawn and) his eyes were moist.

There are two examples in the corpus of what I take to be object-oriented moisture adverbs. The examples are given in (69) and (70) below. Here the

adverbs immediately follow the direct object which they appear to modify. In both cases the direct object is the pronoun *it*, which refers back to *her stubby finger* and *the sodden litter*, which function as the direct objects of the preceding clauses. The objects are of course also semantically compatible with the adverbs. With respect to *wetly* in (69), this is an adverb which may potentially have a number of figurative meanings, such as 'weakly, ineffectually, effetely, limply', etc. As shown in Killie (forthcoming a), some speakers take *wetly* in (69) to carry one of these meanings, rather than a literal one. The interpretations of the sentence in question in fact vary enormously, both with respect to the literal: figurative dimension and with regard to what entity the adverb is assumed to characterize. Killie (forthcoming a) reports both subject, object and verb-phrase orientated readings, and one speaker even suggests that the adverb ascribes wetness to *her lips*, i.e. a noun contained in a prepositional phrase at the end of the sentence (functioning as a place adverbial). This dissent clearly shows what a fuzzy concept adverbial orientation is, perhaps especially when the adverbs in question have both literal and figurative meanings.

69   Agnes lifted her stubby finger and wobbled it *wetly* against her lips (MacLaverty TD: 91)

*Agnes wobbled her finger in a wet manner.
*The wobbling was wet.
*Agnes was wet.
?(Agnes wobbled her stubby finger against her lips and) the finger was wet.

70   A wind was blustering around Notting Hill Gate, shaking
      out the sodden litter from the raised flower-beds and
      swirling it *damply* against her ankles (James TD: 424)

*...swirling it against her ankles in a damp manner.
*The swirling was damp.
*The wind was damp.
(A wind swirled the sodden litter against her ankles and)
      the litter was damp.

We may compare the sentences in (69) and (70) with the object-oriented colour adverbs discussed in section 6.3, i.e. the examples in (6)-(8) (repeated below for convenience sake, but without paraphrases). Doing this, we see that they are structurally identical, in the sense that the adverb directly follows the direct object which it modifies.

6   The damp air was catching on her eyelashes, spiking
     them *darkly* (George FSE: 410)

7   His bulbous nose flexed its nostrils *blackly*
     (George GD: 164)

8   He could already see the two magnificent beeches which
     stood in this big level lozenge in front of the house,
     detaching themselves *darkly* in the dark air
     (Lawrence LCL)

It has been stated repeatedly in this chapter that positional distribution is not the most important determinant of adverbial orientation, but that it is subordinate to semantics. However, position may be a very important factor in cases where the adverb is semantically compatible with more than one entity. In chapter 5 it was demonstrated that in such cases adverbial position can be a disambiguator between adjunct and disjunct readings. In the case of stative adverbs, which are all adjuncts, the placement of the adverb may determine whether we get a subject, object or verb-phrase oriented reading. This is demonstrated in Killie (forthcoming a). Here

speakers are (among other things) presented with several versions of the sentences in (57), (60) and (69), where the only variable is the position of the adverb *wetly*. The results show that speakers' interpretations tend to change when the adverb is moved around in the clause. The likelihood of a subject-oriented (often figurative) interpretation increases when the adverb is placed to the left, i.e. away from the verb and object and closer to the subject. By contrast, verb phrase and object-oriented readings are more likely to occur in the positions to the right of the verb. Thus, position may be an important determinant of adverbial orientation. However, it should be emphasized that even where this is the case, semantics is nevertheless basic; it is the semantics of the various clause elements which allows position to play a role.

The corpus contains only two instances of moisture adverbs used as modifiers, boh found in the novel by P.D. James. The two examples are rendered in (71) and (72) below. They both contain the adverb-adjective pair *moistly open*, but the surrounding structure is different. In (71) the adjective phrase in which the adverb occurs is contained within a noun phrase. The noun *mouth* is the head of this phrase, and it is to this element the adverb is oriented. In (72) the adverb is not part of a noun phrase, and it is separated from the noun phrase *the boy's mouth* by the main verb *was*; however, this "stative barrier" does not prevent the adverb from being oriented to the subject noun rather than to the adjective to which it is syntactically joined. There simply is no way in which *moistly* can characterize the adjective *open*. This fact demonstrates, again, how structure is subordinate to semantics so far as adverbial orientation is concerned.

71 A thin line of lipstick outlined the *moistly* open mouth from which a blob of mucus ballooned and fell
(James TD: 82)

*The mouth was open in a moist manner.
*The openness was moist.
*The thin line of lipstick was moist.
The mouth was open and moist.

72 The boy's mouth was *moistly* open (James TD: 402)

*The mouth was open in a moist manner.
*The openness was moist.
(The mouth was open and) the mouth was moist.

Summing up, we have seen that the orientation of moisture adverbs is extremely variable. The adverbials may function as manner adverbs, or be oriented to a noun that can be inferred from the verb. They may also modify the subject or the direct object, or possibly a clause-external object. The two moisture modifiers in the corpus characterize a higher noun, either the subject or the head of a noun phrase within which the adverb occurs. On the basis of these facts, we may safely conclude that to simply characterize moisture adverbs as manner adverbs or subject adjuncts is misleading.

6.6 Temperature adverbs

Most of the temperature adverbs in the corpus are clearly subject oriented. Examples are provided in (73)-(79) below. As shown by the paraphrases, it is not possible to construe the adverbs in question as modification of the verbs to which they are syntactically linked. The reason is, again, that adverb and verb are simply not semantically compatible. The subject

nouns, by contrast, all denote objects that are naturally described as hot, warm or cold.

73   The candles had burnt down and the wax now splashed
     hotly on the thumbs that gripped them
     (Barnes, The Porcupine: 6)

     *The wax splashed in a hot manner...
     *The splash was hot.
     (The wax splashed and) the wax was hot.

74   And I was astonished to feel my face flush *hotly* as I did
     it (Roberts FF)

     *My face flushed in a hot manner.
     *The flush was hot.
     (My face flushed and) my face was hot.

75   The midday sun which Hirst had foretold was beginning
     to beat down *hotly* (Woolf VO)

     *The midday sun began to beat down in a hot manner.
     *The beating-down (of the sun) was hot.
     (The midday sun was beginning to beat down and) the
        midday sun was hot.

76   For two or three hours the sun lay *warmly* in the high
     window, showing Jo seated on the old sofa (Alcott LW)

     *The sun lay in the high window in a warm manner.
     *The lying-in-the-high-window was warm.
     (The sun lay in the high window and) the sun was warm.

77   He felt her arms slip *warmly* round him (George FSE: 59)

     *Her arms slipped round him in a warm manner.
     *The slipping-around-him was warm.
     (Her arms slipped around him and) her arms were warm.

78   Again she went by where the pots lay *coldly* on the floor,
      and she glanced at the dish furtively, pretending not to
      (Lawrence SL)

      *The pots lay on the floor in a cold manner.
      *The lying-on-the-floor was cold.
      (The pots lay on the floor and) the pots were cold.

79   ... the water *coldly* bubbling in St. John's well
      (Lawrence LCL)

      *The water was bubbling in a cold manner.
      *The bubbling was cold.
      (The water was bubbling in St. John's well and) the water
          was cold.

The corpus in fact contains only three temperature adverbials which are not clear instances of subject orientation. These are rendered in (80)-(82) below. One possible interpretation of the sentence in (80) is that *warmly* refers to the blankets or covers in which the subject is tucked up, i.e. items which can be analyzed either as purely clause-external or as inferred on the basis of the lexical verb. On the other hand, it is also possible to interpret the adverb here as characterizing the direct object *her*. The example in (81) is more or less parallel to the sentence in (80), though in (81) the verb has a morphologically related noun *hap* (a Scottish word meaning 'cover'), which can be said to be characterized by the adverb. The orientation of the adverb is, however, very vague; also here it could be the object *her* which is characterized by the adverb. In (82) *warmly* could be referring to the agent's breath, i.e. either a clause-external entity or one implicit in the verb. However, it could also be oriented to the element *him*, i.e. the *I* character breathed at *him*, and as a result this other person got warm. In this case we have another instance of object orientation. The sentences in (80)-(82) all demonstrate again the fact that adverbs are items whose precise orientation is often elusive.

80   I did not wake her, but tucked her up *warmly*
     (Stoker, Dracula)

*I tucked her up in a warm manner.
*The tucking up was warm.
?I tucked her up in warm covers.
?The covers were warm.
?(I tucked her up and) she became warm.

81   She... washed Kirsty's mouth and body tenderly but
     firmly, then happed her *warmly* and hurried out to bury
     the bedcloth (Gunn SD: 231)

*She happed her in a warm manner.
?The hap was warm.
?(She happed her and) she became warm.

82   ... then I breath'd him so *warmly*, and kept him so at bay,
     that before he had made any sensible progress in point of
     penetration, he was deliciously sweated (Cleland FH)

*I breathed him in a warm manner.
?My breath was warm.
?(I breathed him and) he became warm.

Finally, the sentences in (83) and (84) below have examples of temperature modifiers. The sentence in (83) is a curious usage. Here the adverb is syntactically linked to the present participle of a linking verb, and adverb and verb are contained in a noun phrase. It is clear that in this case the adverb must be interpreted as modification of the head of the noun phrase, *dawn,* i.e. the adverb seems to function as a subject complement within the noun phrase (cf. the third paraphrase). The curious nature of this adverbial usage is reflected in the oddnes of the first two paraphrases. Here the verb must be immediately followed by the adjective *cold* to satisfy the criteria on linking verbs. The result is that the adjective in question occurs twice in the two paraphrases. The adverb in (84) is not contained within a noun phrase, but is syntactically linked to an adjectival participle. The adverb

does not, however, seem to modify the adjectival participle, but rather the subject of the sentence. However, there appears to be a causal relationship here, i.e. *they* were warm because they had been "drugged" by the sun. Thus, the adverb denotes a resulting state.

83   In the *coldly* growing dawn her hair and lips were colourless, the whiteness of her arms shadowy and spectral (Roberts FF)

*The dawn was growing (cold) in a cold manner.
*The growing (cold) was cold.
The dawn was (growing) cold.

84   (The sun came out fierily, stinging their eyes.) So they closed them, heads back, drinking in the light, lips apart, *warmly* drugged (Gunn SD: 325)

*They were drugged in a warm manner.
*The drug was warm.
?They were warm (and drugged).
?They were warm because they were drugged by the sun.

In conclusion, temperature advberbs are normally subject oriented, but may characterize other entities as well, possibly the direct object or a noun related to the verb. The modifiers discussed are oriented to a noun, either the head of the noun phrase in which the adverb is contained, or the subject of the sentence. Hence, temperature adverbs cannot rightly be put into one category. With respect to the label manner, this is particularly misleading as there are no examples of temperature adverbs with this function in the corpus.

6.7 Summary and discussion

6.7.1 The orientation of stative adverbs

The above discussion has shown clearly that stative adverbs are not basically manner adverbs. In fact, the vast majority of the corpus adverbs have other functions than this. A large number of orientation types have been demonstrated. The most frequent type seems to be subject orientation, which is common for all the different subsets. Stative adverbs can also be oriented to the direct object, though this happens less often (perhaps partly because only a minority of the clauses with stative adverbs have a direct object). Verb-phrase oriented adverbs were argued to be of two different types: those which can be said to strictly modify the manner in which something is done, and those that modify some other aspect of the situation denoted by the verb. In both cases the verb - adverb cluster can be reduced to an adjective - noun cluster, where the adjective from which the adverb is derived modifies the nominal element. Thus, even verb-phrase oriented adverbs can be said to be noun phrase modifiers at a "deeper" - or more abstract - level. Of course, it is also possible to regard the adverbs in question as oriented to a clause-external element since the nominal that they modify is not overtly realized, in the strict sense of the word, i.e. they "surface" as verbs rather than nouns. It may in many cases be argued that a stative adverb is oriented to several elements at the same time. In this respect they are similar to for example mental state adverbs, which, according to Western (1906: 91), "though modifying the predicate, may yet at the same time characterize the subject".

As regards stative adverbs that function as modifiers of participles, these can also be oriented to a nominal inherent in the participle. In addition to this kind of orientation, modifiers can be oriented to a higher nominal. The

nominal in question may be the subject of the main clause or, if the adjective phrase is contained within a noun phrase, the adverb may modify the head of this noun phrase.[97] On the basis of the discussion in the present chapter, we may conclude that stative adverbs can be oriented to a number of different clause elements, and hence cannot be subsumed under a single label, be it manner adverbs or subject adjuncts or anything else.

6.7.2 Determinants of adverbial orientation

With respect to what determines the orientation of an adverb, it is clear that the primary determinant must be the lexical meaning of the various clause elements, and the interplay between these. It is this which determines what interpretations are possible, and which reading is the most plausible one. Of primary importance is the adverbial semantics (cf. Valera 1998). It should be noted that by adverbial semantics is meant the semantics of each individual adverb, and not the semantic subset of the adverb. Admittedly, category membership may in some cases seem to be a relevant dimension. For example, no colour adverb can function as a manner adverb because the concept of colour simply cannot be reconciled with that of manner. However, as shown above, other categories show an internal split. For instance, some members of a category may probably be said to modify the manner (e.g. *fatly* and *corpulently* in the dimension/form category), while others clearly do not have this potential (*starkly*, *tinily* in the same subset). Hence orientation is a concept which may cut across semantic category membership, belonging at the level of the individual adverb. The same generalization can be made about the other clause elements. In other words, it is not the semantic category of the verb, subject or object which is important to adverbial orientation, but the specific lexical meaning of these elements. The orientation of an adverb results from the combination of a

specific adverb meaning with a specific verb meaning, a specific subject meaning, etc. The adverb normally modifies the element whose lexical meaning is compatible with its own. There are, however, cases where the semantics of the adverb is compatible with more than one element. It is in such cases that position has a role to play as a determinant - or disambiguator - of adverbial orientation.[98] This is parallel to the role of position in sentences such as *(Clearly) Rupert signed the will (clearly)* and *(Naturally) I want my wife to behave (naturally)*, where initial placement results in a speaker-oriented reading and post-verbal placement in a verb-phrase oriented reading (cf. also examples [21]-[25] of section 5.4.4). Although position may function as a determinant of adverbial orientation in some cases, it is clear that this factor is subordinate to semantics. This is for example demonstrated by the fact that there are so many post-verbal adverbs in the corpus; yet so few of them have manner or other verb-phrase oriented readings. On the basis of the data discussed above, I conclude that the role attributed to position in studies of adverbial orientation and function has been over-estimated. At least the orientation of stative adverbs is only exceptionally determined by this factor. The view proposed here is similar to that of Valera (1998).[99] In evaluating the relative importance of, respectively, adverbial semantics and position, he makes the following claim:

> Only the former of these stands as a plausible constraint on the potential subject-relatedness of *-ly* adverbs. One reason is that some adverbs can never be subject-oriented, regardless of their position in the sentence. That is, position alone cannot qualify or disqualify some adverbials (and not others) with respect to subject-orientation. In fact, position is not only a nonsufficient condition for subject-orientation to obtain (semantic compatibility is also necessary), but, as we will see below, it may also be nonessential in certain cases. A second reason is that certain *-ly* adverbs can

always become subject-oriented, at least potentially, except that this potential is fully realized in some positions, but not in others. That is to say, certain –*ly* adverbials have the potential to become subject-oriented, regardless of whether they actually do so or not, which is really a question of position... Subject-orientation must of necessity be primarily governed by the capability of the base adjective on which the –*ly* adverb is formed to be predicated of the co-occurring noun phrase subject. (1998: 268-269)

Valera also notes that the fact that subject orientation is not tied to a specific syntactic function, but can obtain both in modifiers and "subjuncts" (referred to in the present study as adjuncts), is evidence that orientation is not syntactically motivated (1998: 270). According to Valera (1998),

Orientation is a semantic property of certain adverbs favoured by certain positional and morphological factors, but ultimately dependent on the lexical semantics (and probably also pragmatics) of the units involved, and in any case independent of any syntactic function. (1998: 278)

This is a view which is embraced wholeheartedly by this writer, and it may suitably serve as a conclusion to the present discussion.

6.7.3 Adverbial indeterminacy and interpretation

Perhaps the most important point to be made in this section is that orientation is an extremely fuzzy notion. In a very large number of the cases discussed above, it turned out to be simply impossible to determine precisely what was modified by the adverb. There were many possible interpretations, and any statement to the effect that what is *really* modified is A or B seemed completely arbitrary. The very vagueness of adverbial orientation seems to have at least two important implications. Firstly, as is shown in Killie (forthcoming a), speakers may arrive at different

interpretations of the same sentence.[100] Secondly, the vagueness of adverbial orientation most probably has consequences for how adverbs are interpreted. Specifically, I assume that the interpretation of adverbs must, at least in many cases, take place on a rather abstract and holistic level, leaving the exact orientation of the adverb unspecified.[101] In other words, the cognitive content of the adverb is decoded and somehow included in the interpretation of the clause as a whole, no specific attention being paid to what precisely is modified by the adverb. This kind of strategy would simply seem to be necessitated by the nature of the data, as well as the relative speed at which linguistic processing normally takes place. Certainly, when speakers come across adverbs, be it in speaking, writing or reading, they do not normally pause to reflect on what precisely is modified the adverb. Indeed, if we think about it, even what is normally considered to be "straightforward" manner adverbs may not necessarily be fully understood by the speaker. What does, for example, the adverb in *speak clearly* refer to: the pronunciation, the formulations, the content, or what? The fact that we cannot always know precisely what is meant by the sender of a message forces us to accept a certain degree of vagueness in language generally, and in adverbial interpretation specifically. I am not claiming that the interpretation of adverbs always takes place at such an unspecified level; however, many of the examples discussed above indicate that this must at least be one of the strategies applied. Thus, distinguishing between the shining object and the shine in a sentence such as *The sun shines brightly*, as a linguist may try to do, is perhaps a practice so subtle as to be completely at odds with what language users actually do when they interpret the same structure. Also, in trying to make such distinctions in language, we are among other things attempting to draw a distinction between the linguistic and the extra-linguistic (i.e. inferences made on the basis of linguistic and other information). This is most likely something

that speakers do not do when they interpret language. The actual decoding of language probably involves interpretation at a more general, less specific level, making use of more holistic strategies, and taking into account both the linguistic and extra-linguistic context.

6.7.4 The function of adverbial -ly

Finally, it should be noted that although a large proportion of the adverbs discussed above were claimed not to be verb-phrase oriented, it is probably not correct to say that there is no relation between the verb and the adverb in such sentences. The fact that the property denoted by the adverb is syntactically and morphologically attributed to the verb, i.e. by way of position as well as the adverbial -ly suffix (which is commonly felt to link the adverb to the verb), in a sense creates a cognitive link between these two as well. The effect is that the propositions denoted by the verb and the adverb are conceived of as part of one and the same process or situation. It has also been claimed that -ly, even when it does not promote orientation to the verb phrase, at least has the effect of adding dynamism to the situation denoted by the clause. A note to this effect is provided by Heuer, who, discussing collocations of stance verbs and mental state adverbs (i.e. the type *stonden dredfully*), concludes that here we get «[e]ine Vermengung statischer und dynamischer Vorstellungen» (1932: 109, cf. also Swan 1997: 191). Heuer's point is explained in more detail in the quote below:

> Das *-ly*-Adverb dient zum Ausdruck einer dynamisch-empfundenen Zuständlichkeit. Daher vermittelt es Imperfektivität, Subjektivität, Zirkumstanzialität. Das Kurzadverb bezeichnet in halbadjektivischer Verwendung, wenn es Zuständlichkeit bezeichnen soll, etwas Statisches. Wenn eine Imperfektivität von ihm bezeichnet werden soll (the sun shines bright), so ist diese viel farbloser und

statischer empfunden als beim -*ly*-Adverb, das gern an eine
deutlicher hervortretende Verbalität anknüpft. (1932: 117)

[The -*ly* adverb is used to express a situation which is
perceived as dynamic. It thus expresses imperfectivity,
subjectivity and circumstantiality. In semi-adjectival use,
i.e. when it is used to describe a state of affairs, the flat form
describes something static. When it is used to describe an
imperfective situation (the sun shines bright), this situation
is perceived as much more colourless and static than in the
case of the -*ly* adverb, which tends to link up with a much
more prominent element of dynamism.]

The -*ly* suffix has been claimed to have a number of stylistic values. It is
said to be dynamic, subjective and colourful.[102] By contrast, unsuffixed
forms (referred to by Heuer as "Kurzadverb", although many of his
examples are clearly adjectives) carry the opposite values. This seems to
apply also to stative adjectives vs. adjectives. In addition, adverbs are
probably felt to be more modern and catchy than adjectives, which have
been claimed to represent a more old-fashioned means of expression. The
old-fashionedness of adjectives is said to make them more "poetic", as
pointed out by Meyer-Myklestad:[103]

But apart from compounds, in which the shorter form is
normally employed, the two forms, even when synonymous
or slightly differentiated in meaning, as in the examples just
quoted [among them *The sun shines bright/brightly*, KK],
cannot be used indiscriminately in all types of English. They
belong to different spheres of style. The shorter form, being
the oldest and commonly the rarest, usually has an archaic
or a poetic stamp (1967: 380).

Chapter 7: The classification and definition of adverbs: implications of the data

7.1 Introduction

The discussion and conclusions drawn in the preceding chapter are not facts that concern stative adverbs only; rather, they may be shown to have implications for two major issues within the field of adverbs. First, the data may be argued to have consequences for the way we use orientation in adverbial classification; specifically, they suggest that orientation is a concept which is not suited as a classificatory criterion. This topic will be discussed in some length in section 7.2. Secondly, the data show that we need to revise our conceptions of what functions English adverbs may have in a clause, and hence our definition of adverbs, which has been too narrow to embrace all the different functions. It is clear that at least English adverbs no longer fit the traditional description of this part of speech. What is more, the English data will have implications for universal definitions of adverbs or adverbial function, i.e. unless they are formulated within a prototype framework.

7.2 Using orientation in adverbial classification

As mentioned in section 5.4.5, Swan (1990), who briefly touches on stative adverbs (her "appearance/attribute" class) refers to the adverbs under discussion as "subject adjuncts", i.e. adverbs which are characterized as being oriented to the subject. The most common strategy is, however, to refer such "untypical" adjuncts to the manner category (cf. section 5.4.3).

In the following I am going to argue against both these views, and against any use of orientation as a criterion in adverbial taxonomy.

One major argument against using orientation in adverbial classification is the fact that the classification of stative adverbs as either subject adjuncts or manner adverbs simply does not tally with the facts. As demonstrated in chapter 6, stative adverbs, rather than being exclusively subject modifiers or manner adverbs, differ widely with respect to orientational potential. There are differences between subsets as well as within them. Subject orientation is indeed the most common type of orientation for stative adverbs,[104] but to refer to the category as subject adjuncts, or subject modifiers, clearly is to underestimate their functional or orientational potential and flexibility. To classify them as manner adverbs is also wrong, for the same reason. There simply is no general feature of the category stative adverbs which makes its members pre-programmed to modify one particular type of clause element or one specific aspect of discourse, and for this reason orientation should not be used as a criterion in the classification of such adverbs.

A large number of adverbs from other classes are equally impossible to fit into one category. *Sadly*, for example, commonly characterizes both the speaker, the subject and the activity denoted by the verb (cf. Swan 1982). Thus, it seems counterintuitive to classify the adverb as either speaker, subject or verb-phrase oriented. There are, of course, adverbs which only have one type of orientation, such as Ernst's lexical manner adverbs. However, if we wish to achieve consistency in our taxonomy by applying the same set of criteria in the classification of all adverbs, it is clear that orientation cannot be used as a criterion in adverbial classification.

A second argument against the use of orientation in adverbial taxonomy is the fact that the orientation of adverbs may be extremely vague, as demonstrated repeatedly in the previous chapter. Thus, using orientation as a criterion makes adverbial classification even more complicated than it needs to be.

A third argument relates to the problem of homonymy. The use of orientation as a criterion in adverbial classification forces us to treat as homonyms adverbial forms which have precisely the same lexical content. This implies multiple membership and thus an enormous homonymy problem for many adverbs. A nice illustration in this respect is provided by the different orientation types shown by the adverb *wetly* in the sentences in (1)-(4) below, of which (3) and (4) are taken from the *Oxford English Dictionary*. (The examples in [1] and [2] are discussed in section 6.5, the example in [4] in section 1.2.4.)

1   Agnes began to snore *wetly*, her head pitched forward on to her chest (MacLaverty TD: 87)
2   Agnes lifted her stubby finger and wobbled it *wetly* against her lips (MacLaverty TD: 91)
3   The immense beast, black, shining *wetly* (Oxford English (Dictionary: 1893 J. A. Barry Steve Brown's Bunyip 3)
4   Walke thou *weatly*, walke thou dryly: In thy walke, walke not hyly (*Oxford English Dictionary*: 1562 J. Heywood Prov. & Epigr. Dd iv b)

The adverb in (1) may be argued to be a manner adverb, while those in (2) and (3) appear to be oriented to the direct object and subject, respectively. In (4) the adverb apparently attributes a property to some clause-external entity (the terrain?). In a taxonomy based on orientation, we need at least four categories to classify this single adverbial type: manner adjunct, subject adjunct, object adjunct, and "externally orientated adjunct". This is

surely a very uneconomical system, not only because instances of the same adverb would belong to several categories, but also because every adverb would have to be investigated closely in a whole range of different syntactic and semantic environments before we can make any statement about the different category memberships of the adverb. We could, of course, in the spirit of Ernst (1983, cf. section 5.4.4 of the present thesis) choose to regard a specific use of an adverb as the "basic" or "primary" one, while the others are seen as more "peripheral" or "secondary". This is done by Swan (1990: 37, 1997: 181), who regards *wetly*, and the rest of the adverbs she discusses, as basically subject adjuncts but with possible manner readings. Ernst (1983) notes that adverbs such as *clearly, obviously, wisely* and *sadly* have two readings, one "VP-reading" and one "S-reading". He concludes that the S-reading is more central, to the effect that "lexically" *clearly* is said to be an epistemic adverb, *obviously* an evaluative adverb, *wisely* an agent-oriented adverb, and *sadly* a mental attitude adverb. The verb phrase-oriented readings are taken to be secondary, or derived, uses of these adverbs. The approach is clearly problematic, for who is to say which reading of an adverb is the primary one, and what criteria should be used in making such decisions? Ernst seems to take it more or less for granted that the "S-reading" is somehow basic, an analysis which he does not justify. Swan (1988), by contrast, generally regards adjunct readings as basic. As explained in section 2.3.2, her arguments are all of a historical nature. Firstly, the original meaning of the adverbial *–ly* suffix is assumed to be a manner meaning. Secondly, adjuncts occur prior to, and may well have served as a source for, disjuncts. If, in Ernst's account, the term "basic" is meant to be related not to historical status, but rather to current frequency, Ernst should have provided evidence that his S-readings are more frequent than the VP-readings. No such evidence is offered. In any event, the whole idea of some

adverbial uses being more basic than others is clearly a problematic one.

For the reasons explained above, we should not use terms such as manner adjunct, subject adjunct, subject disjunct, etc. in adverbial taxonomy. This does not necessarily mean that we should not use the terms at all; we may still keep them as labels which describe the function of adverbs in concrete sentences. However, they should not be seen as denoting inherent lexical properties of the adverbs in question. Instead, our taxonomy should rest exclusively on semantic foundations, i.e. be based on what is clearly the lexical or cognitive content of the adverbs.

If we dispense with classificatory labels such as manner adverb, subject adjunct, subject disjunct, etc., we do not have to determine whether an item, say *clearly* is "lexically" a modal (epistemic) adverb or a manner adverb, and whether *obviously* is really an evaluative adverb or a manner adverb. Neither do we have to consider whether *wisely* in *answer wisely* or *sadly* in *sing sadly* are true manner adverbs, or whether they are a subject disjunct and a subject adjunct with manner, or verb phrase-oriented, readings. We do not have to classify adverbial types with respect to the adjunct-disjunct dichotomy at all, but could simply refer to e.g. *wisely* as e.g. an evaluative adverb, or a mental capacity adverb, with the potential to evaluate different aspects of the discourse. Similarly, *sadly* would be a mental state adverb, which in some cases ascribes sadness to the speaker, while it in other cases characterizes the subject or some aspect of the verbal activity, or perhaps even both. Thus, in a sentence such as *Sheila sang sadly*, we could admit the adverb a large degree of verb-phrase orientation without having to take up the discussion whether it is a true manner adverb or not. Indeed, mental state adverbs very frequently occur in sentences like this. It therefore seems counterintuitive to classify *sadly* as primarily a

subject-oriented adverb with other "less basic" manner uses. In other words, by applying exclusively lexical labels, we avoid the whole complex of homonymy problems with which Ernst (1983) struggles. Using a purely lexical taxonomy, we can allow syntactic, semantic and pragmatic factors to decide the orientation of each adverb in each individual case, which they clearly do anyway. The suggested approach also has the additional advantage of creating parallelism with adjectival classificatory systems, which are normally lexically based.

There are, of course, disadvantages to a lexical classification system as well. The most serious drawback is that there could potentially be an enormous proliferation of categories. For example, Palsgrave (1969), in his classification of French adverbs from 1530, establishes 24 different categories. The use of labels such as manner and subject adjunct have the advantage of subsuming a large number of adverbs under relatively few umbrellas. However, this does not help much when the predictions made by the system are often positively wrong. Therefore, I still find that a semantically-based system would be better. Like the present system, the new one would have to be hierarchical in structure; a "flat" structure with dozens of categories belonging on the same level, and no "supercategories", would be rather chaotic. Hence, the challenge would be to establish a restricted number of such supercategories, under which the numerous subcategories can be subsumed. The new taxonomy would thus be structurally similar to the old one, in the sense that there are a large number of lexical categories which are subordinated to some larger categories. In the present system, the larger categories carry names such as manner, process, subject adjunct, disjunct, etc.; in the new one, these categories would be purely lexically defined. For example, colour adverbs would in the current system be a subset of the categories manner or subject adjunct.

As explained in section 6.2, however, the former label would make the wrong predictions about the function of the adverbs in question, as a manner reading is precluded for the whole class. The latter term would be more appropriate, though it would not cover all uses, as colour adverbs were shown to also function as for example object modification. In a lexically-based taxonomy, terms such as subject adjunct and manner adverb would not be used. Instead, the class of colour adverbs could for example be subsumed under a larger category called "physical property", or some such general term. The category physical (property) adverb might well be suited as a hypernym for many different classes, including all the categories discussed in the present study. "Mental state/mode adverbs" could perhaps be another larger category. It is, however, far beyond the scope of the present study to create a whole new classification system for adverb(ial)s; the sole aim of the discussion here has been to point out the problems which arise when we mix the concept of orientation into adverbial classification.

7.3 The concept of adverb

With respect to the concept of adverb, Pinkster notes that "[t]he definition of the adverb given in most modern handbooks is based to a large extent on what Priscian, Charisius and others have said about it. In their turn, they were heavily indebted to their Greek predecessors" (1972: 35). The definition given by Priscian runs as follows, in Pinkster's translation: "the adverb is an invariable part of speech that modifies the verb" (1972: 18). This definition involves a morphological as well as a syntactic criterion. Morphologically, adverbs are said to be different from for example nouns by not being inflected; syntactically, adverbs are claimed to function as verb modifiers. As for the semantics, i.e. lexical meaning, of adverbs,

Priscian notes that the adverb "expresses the quality or quantity or number or time or place of a verb" (Pinkster 1972: 37). In other words, whatever semantic value an adverb has, this is added as a semantic specification on the verb. Adverbs, then, are said to be, inherently and per definition, verb-phrase oriented.

That the Latin definition of adverbs should be adopted for use in grammars describing other languages than Latin is not surprising, since there was a tradition for this. However, as was so commonly the case when Latin grammar served as a model for other languages, the definition of adverbs could not adequately account for the characteristics of the category in all these other languages. Thus, the morphological criterion has been claimed not to hold universally. Tesnière, for example, notes that French adverbs are not necessarily invariable (1959: 184). With respect to the orientation of adverbs, Pinkster notes that Priscian's definition does not cover even the Latin data: "Most surprising in the definition is the fact that it is not mentioned that some adverbs can modify adjectives and certain other adverbs" (1972: 42). The fact is baked into the definition which became common in 19th-century grammars, where adverbs are defined as items that may modify verbs, adjectives or other adverbs (Pinkster 1972: 45, Willis 1972: 27). This extended version of the Latin definition has been commonly used since its conception (cf. Wilmet 1997: 421). However, scholars have increasingly realized that the revised definition is not complete either, but that adverbs can have more syntactic functions than those enumerated here (cf. Willis 1972: 28). The problem is to a large extent due to the fact that adverbs - and adverbials - have been treated in a stepmotherly manner from the very beginning of linguistic history. Very few thorough studies have been carried out; instead, the term adverb has

been treated as a rag-bag, as noted in the quotes below (taken from Wilmet 1997: 420):

> Il semble que l'on ait mis dans les grammaires sous la rubrique "adverbes" touts les mots dont on ne saivait que faire. La liste n'en est jamais close, et on n'en donne pas de définition intégrante (Pottier 1962: 53)

> [It seems that in the grammars one has put under the label "adverbs" all those words with which one does not know what to do. The list is never closed, and no attempt has been made to derive an integrated definition from it. KK]

> [La catégorie de l'adverbe] devient peu à peu la classe poubelle, celle où l'on relègue les invariables que l'on ne sait pas plus où caser (Chervel 1977: 251)

> [[The category adverb] has developed, little by little, into a rag- bag, the place where one relegates those invariable words which one does not know where to put. KK]

For English, the discrepancy between the traditional definition and linguistic reality has become more glaring than for most other languages, due to the adverbialization process, which was shown in section 2.3.2 to have widened the functional area of adverbs dramatically. As a result of this, students of English adverbs have increasingly rejected the traditional definition of adverbs, taking a wider view of what the elements in question can do in a clause. In more recent descriptions, adverbs are commonly said to modify an adjective or another adverb within a phrase, or to function as adverbials. The category adverbial, although it has perhaps never been described satisfactorily - i.e. exhaustively, is at least acknowledged to comprise some adverbs which are not verb modifiers, such as the different categories of disjuncts. Although adverbs have been admitted to have a number of functions that were not acknowledged earlier, there are still some functions which are not normally mentioned in accounts of adverbial

function. For example, it is rarely noted that an adverb may modify the direct object or some clause-external element. It seems also to have gone more or less unnoticed that in many cases adverbs may need to be interpreted holistically, as they simply do not seem to be related to any elements in particular, but rather to the whole situation, as expressed by the clause (cf. section 5.4.6, sentences (39)-(41) for some examples).

Because of all the facts just mentioned, it is clear that we need to revise our definition of adverbs. To describe the function of adverbs in brief terms is not an easy task. This must have been the conclusion of the authors of the *Code (belge) de terminologie grammaticale*, which was published in 1984.[105] According to Wilmet (1997: 422) the "chapter" on adverbs provides the title only, followed by a tellingly blank page... In view of the magnitude of the task, this is understandable; however, we cannot all adhere to this policy if we wish to gain some understanding of what adverbs can do in a clause. An attempt at a definition is made by Buyssens (1975: 74), who proposes two criteria, one positive and one negative. The positive criterion is a syntactic one: any adverb fills the role of a "complément". The negative criterion holds that no adverb can have an adjective subordinated to it. To my mind, the choice of the term "complément" is not very fortunate, in view of its different uses in various linguistic frameworks. What is important with Buyssens' contribution is that rather than simply trying to enumerate the various different functions an adverb can have, he aims at a unified definition, one that will encompass all the various uses of adverbs. Buyssens seems to be on the right tack here. The strategy of listing functions is not very revealing if what we wish to do is gain some understanding into the nature of adverbs. Our goal must be to find a definition which both states one overall function of adverbs, and is able to encompass all the data. Such a definition must necessarily be very

broad. We might perhaps define an adverb as a "qualifier" which may modify (syntactic) units of diverse nature,[106] in fact practically any type of element (cf. Killie 1994 and Eldri 1997, the latter being referred to in Ravid & Shlesinger 1999: 336).

The extensive functional overlap which has been demonstrated between adverbial and adjectival functions (cf. Poutsma 1928: 344-345; Swan 1984, 1997; Killie 1993: chapter 5 and chapters 4 and 6 of the present study) makes it necessary to try and draw a distinction between adjectives and adverbs. It is easy to see that the two parts of speech have a common denominator. Specifically, they both serve to qualify some other element, and this has been - and still is - their main function. The parallel between adjectives and adverbs has been pointed out at all times, as noted by Pinkster (1972):

> The relation that exists between adverb and verb is considered the same as the one found between adjective and substantive... This was a common idea. The Stoics, Priscian reports... called adverbs 'as it were adjectives of verbs' (quasi adiectiva verborum). The meaning of the adverb is added (adicere, cf. nomen adiectivum) to that of the verb, or, as we would say with a similar vagueness, the adverb modifies a verb... The parallelism between prudens homo and prudenter agit) ('the wise man' - 'acts wisely') seemed to confirm this idea. This parallelism still plays an important role. Pottier (1962: 52ff.) even uses the terms 'adjectif de verbe' and 'adjectif de substantif' (Pinkster 1972: 37).

The same parallelism is pointed out by Indian grammarians. According to Cardona (c1973: 85), "[a] parallelism is recognized between adjectives and adverbs: the latter function with respect to verbs as the former do with respect to nouns..". This is the traditional account, and it has been assumed

for English as well. So far as English is concerned, the description is obviously out of step with the actual linguistic situation. It should be clear by now that in English the neat division line which is traditionally drawn between adjectives as noun modifiers and adverbs as verb modifiers has broken down. English adverbs have come to increasingly function as noun modifiers, thus encroaching on the functional sphere of adjectives. There is thus a functional area where the two parts of speech overlap. It is nevertheless possible to establish a demercation line between adjectival and adverbial functions, for although adverbs are commonly used as subject modifiers, they apparently do not occur in what has been referred to as the prototypical adjective positions. In other words, they do not occur in attributive position, modifying a noun within a noun phrase,[107] or in predicative position, i.e. in the function of subject or object complement when the main verb is a typical linking verb (*be, remain, seem, turn, feel, look*, etc.). The examples in (5) and (6) below may at first sight seem to represent evidence against this claim, since the adverbs here in fact appear to collocate with a linking verb. However, if we look more closely at the relevant sentences, we see that the collocates of the verbs here are in fact not the colour adverb *darkly*, but the place adverb *there*, i.e. the real collocations here are *be there* and *remain there*, not *be darkly* and *remain darkly*. What we have here, then, are traditional collocations of existential verbs and place adverbs. The lexical content of the stative adverb is added only as a secondary description, as is typically the case with adverbs. If the place adverbs in (5) and (6) had been removed, the clauses would have been ungrammatical, unless the adverbs were replaced by adjectives. It thus seems that adverbs are allowed to occur also with linking verbs only insofar as they represent a secondary modification, i.e. are not subject or object complements.

5   (Why not endless till the farthest star?) *Darkly* they are
there behind this light (Joyce, Ulysses: Proteus)

6   Like an ominous watchman, he remained there *darkly* on
the crest (Gunn SD: 54)

The conclusion to the discussion here must be that adjectives still have their prototypical functions intact. Adverbs have not encroached upon these, but only upon the less clear adjectival functions, i.e. as they may function as subject and object modification in clauses where the modified noun phrase collocates with a non-linking verb. In Norwegian grammar, this function is typically referred to as "fritt predikativ" ('free predicative') or "fjernere predikativ" ('[more] distant predicative').[108] The difference between a "regular" predicative and a "free" predicative is said to lie in the function and meaning of the (main) verb. In the regular type, the main function of the verb - a linking verb - is to connect the subject (or object) and the predicative, i.e. the subject (or object) complement. By contrast, with free predicatives, the lexical content of the verb constitutes an important part of the propositional content of the clause. In other words, in a free predicative, the connection between verb and predicative is much looser than it is with linking verbs (Western 1921: 111-112, Vinje 1970: 108-109). This loose bond is what makes the free predicative a secondary modification.

Part IV: Explanation, summary and conclusions

Chapter 8: Explaining the change

8.1 Introduction

As shown in chapter 3, the adverbial -*ly* suffix has been increasingly attached to stative adjectives. The present chapter tries to account for the change which has taken place. The chapter is divided into two main parts, a general and a more specific one. Section 8.2 discusses the nature of language and linguistic change. Here I explain both how these phenomena have traditionally been viewed, and how I personally conceive of them. Section 8.3 focuses on the development and spread of stative adverbs, in terms of the tenets and principles discussed in section 8.2.

8.2 Preliminaries: the nature of linguistic change

The main focus of the present section is the role of the language user in linguistic change. Section 8.2.1 gives an account of the long-standing controversy between those who believe language to be a more or less self-regulating entity (the autonomous approach), and those who believe the language user to be the driving force in linguistic change (the speaker-based approach). The topic of section 8.2.2 is the problematic, but important issue of consciousness in language use and change. Section 8.2.3 discusses a major principle of language use which is considered important to the change under study, viz. the "principle of economy". Section 8.2.4 addresses the complicated issue of how it is at all possible for an innovation to spread to such an extent that it can be referred to as a change. Finally, section 8.2.5 discusses the use of the terms causes, conditions and effects, arguing that the distinction between them may not be as clear-cut as is commonly assumed.

8.2.1 Autonomous versus speaker-based approaches

Traditionally, there are two main ways of looking at language and linguistic change, i.e. either as autonomous, or as speaker-based.[109] One version of the former is the "organic" - or biological - approach which dominated (historical) linguistics in the latter half of the 19th century. How language and linguistic change were conceived of in this framework is expressed in the following quote from August Schleicher, who is probably the best-known proponent of the organic approach:

> Languages are natural organisms that came about independently of the will of man, grew according to certain laws which also determine their development, ageing and death... (Schleicher 1863: 6-7, translation by Seuren 1998: 85)

We see that in the organic approach, speakers are attributed no role in linguistic change; rather, language is assumed to have its own life and growth, independent of its speakers. This is a view which arose in the period when Darwinian ideas were finding their way into most intellectual thinking. We can see that the credos of biology made themselves felt with full force also in linguistics.

The biological view lost ground towards the turn of the century, and has not been very strong in the 20th century.[110] However, what replaced the biological approach was not a speaker-based model, but yet another system-centred one, i.e. structuralism. In the structuralist framework, whose "founding father" was Ferdinand de Saussure, language is regarded as some kind of mechanical system, existing independently of its speakers:

> The language system .... is a self-contained whole and a principle of classification. Once we assign it pride of place among the facts of 'langage' we introduce a natural order in a complex of facts that admit of no other classification. (de Saussure 1916: 25, translation by Seuren 1998: 148)

In the structuralist enterprise, the focus was placed firmly on the study of the language *system*. In de Saussure's words, the most important goal for the structuralist was to "take from the very first the point of view of the language system, and take that as the norm for all other manifestations of the 'langage'" (de Saussure 1916: 25, translation by Seuren 1998: 148).

As for the speaker-based approach, it gained adherents already in the late 1800s, as a reaction to the strong Darwinian element in linguistics (which was essentially historical linguistics at this time). Scholars such as Whitney, Bréal and Wegener could not accept the fact that the organic view of language completely deprived the language user of any role in language change. They argued that language is not self-governed but speaker-governed, and that consequently every linguistic change has to go through the individual in some way or other (Nerlich 1990: 30-31, Keller 1994: 52). However, the criticism raised against the biological approach did not at this stage result in a change of paradigm. In the 20th century, by contrast, the speaker-based view has become a major paradigm.[111] It is also the paradigm used in the present study. However, it is important to note that the speaker-based approach does not include just one linguistic school, but is an umbrella under which a number of approaches can be subsumed, e.g. sociolinguistics, psycholinguistics, discourse analysis, etc. Common to these is that they share the important idea that linguistic structure is somehow formed and changed by its users. Where they differ is in their emphasis or research object. Sociolinguistics, for example, studies the role that social factors (e.g. social class, age, gender, social networks, etc.) play

in language use and change. Sociolinguists see language primarily as a social object, and consequently linguistic change is assumed typically to have a social origin. Psycholinguistics, by contrast, is concerned with the role of psychological - or psycholinguistic – processes in language use and change, focusing on language as a mental object.[112]

The different approaches to language are by no means incompatible or contradictory; rather, they complement each other, as they may shed light on different linguistic phenomena, or on different aspects of the same phenomenon. However, some scholars, be they sociolinguists, generativists or whatever, are very categorical in their claims about the ontology of language. For example, generative accounts often seem to imply that language is only a biological, or mental, object, with no social function at all. By contrast, many sociolinguistic accounts appear to suggest that language has no biological or mental existence, but exists *only* as a social phenomenon, and therefore that all linguistic change must be social (Lass 1987: 152-155). If somebody really holds such views, they are clearly mistaken. It is important to realize that language has many ontologies and functions: it is a social, mental and possibly biological object, etc., and it is a system in its own right. Consequently, there must be many possible causes of language change. According to Keller, the premisses or antecedent conditions ("ecological conditions") of our linguistic actions may be of a social, historical, linguistic, and possibly biological origin (1994: 83, 92).

8.2.2 Consciousness and linguistic change

The present section addresses the issue of consciousness in language. This is a point which has made many scholars sceptical to the speaker-based approach. Specifically, the approach has been criticized for making linguistic change sound "too active, too intentional" (Keller 1994: 9). The criticism seems warranted, for much literature on linguistic change does leave the impression that speakers actively and deliberately change the language. Hence, Heringer (1985: 272) notes that language is typically regarded as "an instrument that man has created in order to solve his environmental problems; it is an instrument which he commands, which he can change and reconstruct as he needs it". Lass (1997: 352-365) levels some really harsh criticism against this kind of functionalism (cf. also Lass 1980: chapter 3). In fact, he outright ridicules it, because, in his view, it presupposes cognitive abilities which are simply too complex to be feasible. In a functionalist framework, Lass claims, language users must be capable of deliberating various courses of action with great care, foreseeing the various implications they might have (1997: 360-361). Specifically, they must be able to reason along lines such as "If I drop /s/ in the future it will merge with the present: better not" and "Let's unmerge present and future, since we can't tell them apart any more.", etc. (1997: 359). The idea that speakers carry out such complicated cognitive processes of course seems more or less ludicrous to most of us; yet, it does not follow that language users have no role to play in linguistic change. Lass seems to think that this conclusion is inevitable (1997: 361). His line of reasoning probably derives from the unfortunate coupling of the speaker-based approach with the traditional conception of functionalism, which implies deliberate intention. However, this is not the only possible interpretation of functionalism, as it is clear that our brains are able to carry out functional -

i.e. rational - operations *unconsciously*, or at least at a level below full consciousness. In fact, I would claim that most linguistic processing takes place at such a level, or by way of processes which are less than fully conscious. A similar assumption is made by Sapir (1921), in his explanation of the notion of "drift", where he claims that "[t]he drift of a language is constituted by the *unconscious* selection on the part of its speakers of those individual variations that are cumulative in some special direction" (1921: 155, emphasis added, cf. also Andersen 1989: 7).[113] Note that I am not claiming that language use is never intentional, as in many cases it may well be. In some situations language users become extremely form-focused, for example in situations which involve a high degree of social prestige, in communication where language-learners participate, or in writing a poem. In such cases, they may process language at a fairly conscious level (though this need not imply that they control all aspects of their linguistic production). However, it is clear that in most situations we do not consciously control our linguistic output. As shown below, there are good arguments to support this view.

The main argument is that full attention simply does not seem to be possible in language processing. This is to a large extent due to the circumstances under which linguistic production normally takes place. As noted by Keller (1994: 109) "speakers usually communicate in a situation where there is a shortage of time or energy". Thus, in normal speech situations there simply is a limit to how much attention we pay to the form of our utterances. I would argue that this is most frequently the case when we write a text as well, even if there is no shortage of time and energy. The obvious exception here is poetry, where we must assume that poets pay so good as full attention to the form of their poems.

More variable factors such as emotional stress, absentmindedness, intake of alcohol, etc. also reduce the level of consciousness involved in linguistic processing, at least in speech situations. In addition, we may be thinking of a number of things while using language, in which case full attention is precluded. The factors just mentioned must be seen as reducing the level of consciousness involved in language processing; yet, they do not make us unable to process language. Thus, language processing can definitely take place without full attention being paid.

There are also other facts which indicate that the control we have over our linguistic production is limited. For instance, the history of English abounds in examples of linguistic items which have caused enormous public outrage (and in modern times, thousands of letters to the editor), but which have nevertheless made their way into the language (cf. Bailey 1996: ch. 5 for examples). A good example of this is the adverb *hopefully*, which was formed on the basis of a completely regular pattern, but which nevertheless has met with massive resistance (cf. for example Trudgill & Chambers 1991: 262-263 and Swan 1991: 418). Another well-known example is the passive progressive (Denison 1998: section 3.3.3.4). If we were really able to fully control our linguistic production, we would not expect these much hated linguistic items to "creep" into the language. We would also expect linguistic change to be rare, as it seems that people generally dislike such change. However, it seems that all natural languages are constantly undergoing different types of change. The implication is that many (most?) of us must be involved in at least some of these changes, whether we like it or not; yet, we normally are not aware of partaking in any change at all. Instead, we seem to believe that all aspects of our linguistic production conform perfectly to the traditional patterns of usage, the "rules". This is evidenced in two quite illuminating quotes from the

literature on the history of the progressive. The first one comes from Mossé (1938). It is quoted and commented on by Denison (1998):

> J.H. Newman, a friend and colleague of Froude, wrote in a letter *c.* 1871: 'but this I do know, that, rationally or irrationally, I have an undying, never-dying, hatred to *is being...*' (Mossé 1938: section 279) (though in fact over thirty years previously he had more than once used the progressive passive himself!). (Denison 1998: 155)

The second example is from Jørgensen (1991):

> About the use and non-use of the progressive of this verb (i.e. *understand,* KK) R. A. Close... makes the following rather enigmatic remarks: 'It is also a fact – or so at least I was assured by my audience listening to me a few days ago – that at a certain moment and in a certain context I said: "Do you understand me?" and that at another moment and in a slightly different context I said: "Are you understanding me?" The average learner would do well to accept that fact without trying to puzzle out the reason (sic!) and to believe that on both occasions I was speaking my own language correctly'. (1991: 178)

Jørgensen's comment on the above is the following:

> Nobody, and of course least of all a foreigner (whether 'average learner' or not), will presumably call in (sic) question Mr. Close's command of his own language, but it might be allowed to take note of the fact that the audience had apparently found the shift from the simple tense to the progressive rather peculiar, and also that Mr. Close himself had apparently needed the assurance of his audience in order to realize that he had made it. (1991: 178)

Both the speakers referred to above apparently took part in a linguistic change: Newman in the development of the passive progressive, Close in

the spread of the progressive to stative verb types. Yet, none of the two had any awareness of having produced the relevant sequences, even though they must both be regarded as highly conscious users of the language. I would assume that these two users are not special in any way, but that they represent the norm. We may cry out against the use of a certain innovative construction, while in the next instance we produce the exact same structure ourselves. This is strong evidence that linguistic processing and change are often unconscious phenomena.

With respect to consciousness and medium, we may note that Newman's uses must have occurred in writing, or else we would not know about them today; Close's usage occurred in speech. This is evidence that there is no clear-cut distinction between writing and speech to the effect that everything which is written is conscious, while in speech it is not. Probably, there is a great deal of unconscious processing taking place in both media. This assumption is made also by Arnaud (1998: 141), who claims, with respect to the spread of the progressive, that "[i]t was usually unconscious even for people who, as writers, were sensitive to language".

The conclusion to this discussion must be that the degree to which we control our linguistic production is generally not impressive. Hence, so far as language change is concerned, human volition appears to be subordinate to other, less conscious but apparently more powerful controlling agents, i.e. mechanisms and processes characterized by lower degrees of awareness. The "success" or "failure" of a new linguistic item, then, does not crucially hang on our conscious decision to use or not use it; rather some less conscious part of our minds must somehow become convinced of the legitimacy or assets of the relevant feature. Consequently, if we wish to say that all changes are functional, which they in a sense are (e.g. they may

have a structural, social, pragmatic, etc. function), we need to make the qualification that functionalism does not imply consciousness. If we assume that most of linguistic use - and hence change - takes place at a level below full consciousness (though not necessarily *un*consciously), we can still maintain that, at this level, linguistic acts are rational, or "functional".[114] I should add, though, that the generalizations made here are not meant to concern all types of linguistic processing and change. We probably need to distinguish between different types of change. The use of unfamiliar lexical items – and hence also lexical change – probably takes place at a more conscious level than does structural change, which is the type of change under discussion here. In addition, as will be argued in section 8.3.4, it is feasible that both conscious and unconscious processes may contribute to the same change.

Regarding the question of consciousness in linguistic change, Heringer (1985) puts forward a view which sounds reasonable:

> The single individual as well as the community is not in an active position towards the language. Although he actively makes use of it, he experiences its change passively. Language does not change by sense-giving, but it changes by understanding. Without wishing to make an etymological pun, I believe that linguistic intelligence consists in interpretation - of the speaker and even more of the hearer. Although we are always tempted to give over-active presentation of linguistic processes, we must see that understanding is not an act. It happens to us. A certain understanding will follow, if certain prerequisites are fulfilled. And even the prerequisites are not subjected to our will. I cannot decide on what occurs to me right now, what comes into my mind. For instance, I do not change my belief intentionally. I can investigate and seek answers and believe those answers. But it sounds funny to say I decide to believe something. Even if we put the question p to ourselves and come to an answer, it will arrive. To try to

> believe not-p, if I believe p, is something similar to Moore's
> paradox. (1985: 271)

In Heringer's account, speakers are ascribed a crucial role in linguistic change; yet, notions such as consciousness, intention or human will have no place here. Speakers are pictured not as active creators of language, but more as passive participants or experiencers. The passiveness described by Heringer concerns most of all the decoding of linguistic strings, which is conceived of as a process over which we have no influence. This stage is crucial in linguistic change, for it is here that analogy/extension and such structure-changing phenomena take place. The processes that occur at this stage, then, are conceived of by Heringer as completely unconscious.[115] On the other hand, the role played by language users in the next step is an active one, in the sense that they go out and communicate with people, thereby spreading the evidence (i.e. the surface realization) of their newly acquired rule. "Active" here does not imply, however, that the processing of the new structure takes place consciously, as argued above. I will come back to the question of consciousness in section 8.3.4, where the issue is discussed in relation to the particular change under study here.

8.2.3 The principle of economy

Among the principles which have been claimed to govern language use – and hence change – we find the "principle of economy". It is formulated as follows by Keller:

> Principle of economy:
> - Talk in such a way that you do not expend superfluous energy (1994: 101).

Keller claims that among the maxims that drive language use - and hence change - the principle of economy «probably has a special status» (1994: 107, cf. also Haiman 1983, 1985). He seems to be correct in claiming this; however, Keller's conception of economy does not fully coincide with mine. Keller seems to conceive of economy mainly in terms of the expenditure of articulatory energy (1994: 107), while I take the principle of economy to concern any type of energy involved in the production of linguistic strings, articulatory, cognitive, etc. Thus, this one principle can be said to motivate different types of linguistic simplification - phonological, morphological or syntactic. Jespersen (1922) propounds a similar view:

> The fact remains that there is such a 'tendency' in all human beings [i.e. a tendency to economize, KK], and by taking it into account in explaining changes of sound we are doing nothing else than applying here the same principle that attributes many simplifications of form to 'analogy': we see the same psychological force at work in the two different domains of phonetics and morphology. (1922: 263)[116]

We may ask to what extent economizing processes are conscious. I take the view that such processes, like most other processes which take place during the production of linguistic strings, are generally not conscious. A similar opinion is expressed by Harris (1982):

> Put at its simplest, speakers will, in general, prefer - *unconsciously, of course* - to organise the material which comprises their language in a maximally regular and economic fashion, a preference which manifests itself in the changes captured by the various generalizations and taxonomies diversely formulated by diachronic linguists of various persuasions for many decades, from 'structural pressure' though [sic.] 'rule simplification' to 'typological consistency'. (1982: 4, emphasis added)

According to Harris, then, speakers have an unconscious desire – as well as the ability - to maximize regularity in language.[117] This simplification mechanism is assumed to operate on all levels of linguistic organization. It turns structures which are perceived as deviant or opaque, or difficult to process for other reasons, into line with the more regular patterns of the language. In other words, linguistic structure should ideally be regular and transparent for ease of processing.[118] If it does not meet these requirements, it presents a "cognitive cost" to the language user, a fact which may set off some economizing process, changing the structure into a more regular one. Note that this kind of process must necessarily take place at a level below full consciousness, for once we start consciously to evaluate what the most economical structure would look like, we are no longer economizing with our energy.

One premise which has to be accepted if one wants to apply the principle of economy to the written language is that the need or want to simplify linguistic structure does not necessarily arise only in situations where "there is a shortage of time and energy", as was typically assumed in the past (Keller 1994: 107). Of course, such pressures may increase the likelihood that we start to economize; however, they are not prerequisites for this to happen. Rather, economizing processes can be independently motivated by a desire to maximise simplicity and symmetry in language.

The idea of economy in language is not a new one; however, it is – and has been - a much disputed one (cf. Jespersen 1922: 261-264 for an account of its status in 19th-century linguistics). The perhaps severest criticism comes from Lass (1997). Lass rejects any explanation in terms of simplicity and consistency on the grounds that there are many examples in the histories of languages of structures where such processes "ought to" have taken place

but never did (1997: 342-352, cf. also Crowley 1987: 243 and Joseph 1992: 133, 140). However, in my opinion objections of this kind show that the scholars in question must have unrealistic expectations with respect to what kinds of explanations we can find for linguistic phenomena. It is not without reason that both Jespersen and Harris speak of psycholinguistic "tendencies", and not of "laws". The latter term is one that belongs to the Neogrammarian era, with all the optimism and certitude that that period involved. Modern linguists ought to be more cautious in their characterizations and use of terminology because now we know more about language and its complexities than did our ancestors. Specifically, all the linguistic data and analyses that have accumulated over the last century or so, ought to have told us that there are very few – if any - fixed laws in language. In most cases where such "laws" have been postulated, it has soon been discovered that there are many exceptions to them; hence, they turned out not to be "laws" after all. The fact that there are so many forces - social, psychological, etc. - which operate on the human mind makes it unlikely that we can ever hope to find any one principle which applies exceptionlessly (Samuels 1987: 239). Thus, Jespersen claims that all-or-nothing views are a fallacy, and that the truth lies in-between them; "the tendency towards ease may be at work in some cases, though not in all, because there are other forces which may at times neutralize it or prove stronger than it" (1922: 262). The only strategy to take, therefore, is to regard linguistic principles as tendencies, and not as laws or fixed rules.[119]

The principle of economy has been applied both in linguistic and other human-related research; however, as pointed out by Hopper & Traugott (1993: 64), its practical application is by no means unproblematic:

> There are great difficulties in defining the notion of economy in anything like rigorous terms. We know very little about what does and does not take "effort" in producing or interpreting utterances, and still less about what would constitute economy of mental effort on either speaker's or hearer's behalf, although we probably know more about simplicity of perception than of production. Nonetheless, there seem to be useful, if sometimes intuitive, notions involved.

Hopper & Traugott make an important point here. It is clear that the definition of notions such as "economy", "simplicity" and "least effort" is rather vague in many cases.[120] However, this is nothing new, but rather the ordinary state of affairs so long as we are dealing with a discipline such as linguistics, or any other discipline whose object of study is human beings or human-related phenomena. The vagueness of the concept does not imply that we should reject it; on the contrary, the fact that economy is a poorly understood phenomenon makes it even more important that we study it. The only way of coming closer to an understanding of the concept, it seems, is by studying how it applies in individual cases. This may eventually enable us to say something general about the phenomenon.

In an account of economy in language, it should be pointed out that the principle of economy applies only "locally" and not "globally over vast expanses of data" (Joseph 1992: 140). This implies that a process which creates order in one area or component of the language may well create disorder in another. Vennemann (1993: 322-323) claims that there is an antithesis between the phonological and morphological components of the language, in the sense that phonological simplification often causes morphological distinctions to become blurred. It is probably partly because of the limited scope of such simplification processes that linguistic structure does not steadily grow simpler (cf. also Bartsch 1987: 197-198),

in combination with the fact that language is subjected to so many competing forces, as explained above.

Last but not least, note that the principle of economy is not conceived of as a specifically linguistic principle, but as a general psychological tendency (cf. Zipf 1949, who uses the term "principle of least effort"). The approach taken here may thus be said to have the asset of relating linguistic facts to conditions which belong in another sphere. This has been claimed by a number of scholars to be a requirement for explanatory adequacy. Keller, for example, maintains that "[t]o be explainable, a fact in the history of language has to be at a suitable distance from the explanatory basis" (1994: 158; cf. also page 76).[121] By requiring the explanans and the explanandum to belong in two different domains, we avoid circular explanations to the effect that one linguistic phenomenon is explained in terms of another and vice versa.

8.2.4 The spread of linguistic innovations

In order for a linguistic change to take place, an innovation has to acquire some kind of currency in the linguistic community.[122] The process by which linguistic innovations come to be "members of the language" is, to my mind, the most problematic aspect of any explanation of linguistic change. It is also a highly neglected one, as pointed out by Keller:

> Histories of language generally state that certain words 'displaced others' or 'replaced' them; that they 'spread', 'advance', 'penetrate', and whatever hypostatising metaphors may be found. Very seldom is a link established with the language behaviour of the speaking individuals who produce these 'spreads', 'advances', and 'replacements'. That is to say, one either forgoes any

attempt at explanation and is satisfied with describing the
facts or mistakenly believes the description to be the
explanation (1994: 69).

To explain how linguistic innovations can become part of the language "as
such", we must assume that humans are extremely susceptible to influence
from others. Stative adverbs, for example, are much too infrequent for any
massive influence to have been possible; thus, it seems that only a very few
occurrences may be enough for us to be influenced. However, this does not
imply that innovations necessarily originate in just one language user, then
spread from individual to individual, one by one. We must assume that we
are all of the same mental constitution, and that therefore, the processes
that lead to an innovation may take place in a number of speakers
independently. The idea is expressed by Andersen (1989):

It is through innumerable acts of innovation - of acceptance,
adoption, and acquisition - that any new entity gains
currency and enters into competition with traditional entities
in the usage of a speech community. (1989: 14)

Here Andersen speaks of "innumerable acts of innovation". In other words,
there is not just one or a restricted number of innovations or innovators, but
many. This seems to be a necessary premise for explaining the
development of stative adverbs. Because of the infrequent occurrence of
the adverbs in question, it is hardly conceivable that all their users have
been recruited via other users. Also, if a spread from user to user were the
only explanation, the quantitative development of stative adverbs could not
have been as rapid as has been shown to be the case (cf. chapter 3). It
seems much more likely that the new feature appeared in the writing of a
whole range of authors independently, in addition to spreading via the
readers of their texts.[123] It is important here to note that the use of the term

"independently" in the previous sentence does not imply that the different coinages are completely separate developments. As will be explained in section 8.3.3.1, the innovations in question are not coincidental, but are all conditioned by the adverbialization process in English.

Trudgill (1986: 40-41), discussing the role of the media in linguistic change, maintains that it is face-to-face communication which promotes change in linguistic systems (cf. also Milroy 1992: 42). The reason is that it is in this type of situation accommodation occurs, and accommodation is the mechanism by which linguistic change is said to take place. Consequently, the effect of the media in linguistic change is claimed not to be as great as has been generally believed, except in the spread of vocabulary, new idioms and fashionable pronunciations of individual words. Milroy and Milroy (1985, cited in Bauer 1994: 7-8) agree with this view; the media, they say, can make people aware of an innovation, but cannot make them adopt it: that requires some kind of social pressure. This is just one more of many generalizations made in historical linguistics, whose validity has been claimed far too categorically. Clearly, social pressure and accommodation are not requirements for (non-lexical) innovations to spread. The adverbs discussed in the present study are just one example of a grammatical feature which has spread without the help of these factors. On the whole, it seems reasonable to claim that social pressure is not a major force so far as changes in the written language are concerned.[124] Thus, we must be susceptible to influence even if there is no social benefit to be gained by adopting a new linguistic feature. In such cases, structural rather than social pressure must be assumed to play an important role. The idea seems to apply to stative adverbs, cf. section 8.3.

8.2.5 Causes, conditions and effects

Keller (1994: 83, 92) discusses the "antecedent conditions" of our linguistic actions (cf. section 8.2.1 above). The fact that he uses the term "condition" is interesting, for it draws attention to a very important problem in most science, i.e. how to draw the distinction between the "*cause* of an event" and "what are merely *conditions* that make for, or permit, its occurrence" (Mandelbaum 1977: 67). It is commonly assumed that there must be such a distinction, and researchers typically search for *the* cause of a change or phenomenon. Linguists are no exception in this respect. However, as shown by Mandelbaum (1977: 68, 89), the distinction between causes and "accompanying conditions" is sometimes extremely difficult to draw, and it may in many cases be more or less arbitrary what is referred to as the cause of an event and which factors are classified as conditions (cf. also Stein 1990: 333-334 and Gerritsen 1992: 355). Thus, it seems wiser to take the cause of an effect to include " all of the so-called conditions that were essential to the occurrence of the effect to be explained" (1977: 84). Doing .this, we allow for explanations to be "polycausal", not only "monocausal" (cf. Grzega 1999: 35). This kind of approach indeed seems appropriate in a field such as linguistics, both because of the complexities of the linguistic system itself, and because language has so many different types of function or ontology, and hence so many interfaces, as explained in section 8.2.1. It is, for example, possible that the same state of affairs may have been brought about by both "intra-linguistic" and "extra-linguistic" conditions (cf. Gerritsen 1992). Such a view is held for example by Milroy (1992):

> ...the causes of change (like the causes of illness) are multiple; therefore, we need to take both speakers and systems into account and, if possible, specify the link between speaker activity and change in language systems. (1992: 24)

Mossé's (1957) explanation of why the gerundive suffix –*ing* and the present participle suffix(es) –*inde/-ande/-ende* fell together is an example of a polycausal explanation. In his account, Mosse takes into consideration both structural, psychological and social factors, which are all claimed to have contributed to the change. The change under discussion here may also require a polycausal explanation, cf. section 8.3.3.

A final point to be made in the present section is that also the distinction between different causes or conditions on the one hand and their assumed "effects" on the other may sometimes be rather artificial. It seems that in many cases the two are only "conceptually distinct", i.e. they are not really separate, or temporally distinct, but are all interacting and interdependent factors in a process which is in fact continuous:

> ...in each case the effect to be explained is some particular state of affairs that has been singled out for attention. In these causal attributions, such a state of affairs is viewed not as an isolated event, but as the end-point of a process; what we take to be the cause of that state of affairs is the process leading to it, out of which it eventuated. We may, of course, distinguish various phases and various components within that process, but in our examples these were not seen as a series of separate and discontinuous events. (Mandelbaum 1977: 57)

That the "state" we are describing is not an end result is not really a problem, so long as we are aware of the fact. What is most interesting in the quote above is the claim that it is the process as a whole which in fact

causes a change to occur. In other words, there may be many individual factors contributing to a change, but these often act in concert rather than independently. It may nevertheless be epistemologically useful to dissect a change into its constituent parts, to the extent that this is possible. An attempt to do so will be made in section 8.3.3.2 below.

8.3 The development of stative adverbs

8.3.1 Introduction

In the present section I try to explain the development of stative adverbs. The explanation offered is a polycausal one; the change is argued to be conditioned by several linguistic and psychological factors. The linguistic factors in question are both "local" and "global". By local factors I mean aspects of the immediate linguistic context; by global I mean the large-scale development referred to as adverbialization (cf. section 2.3.2). Inevitably, the change must also be psychologically conditioned, as linguistic facts are, of course, meaningless until they are processed by our brains.

In what follows, stative modifiers and stative adverbials are treated separately. This is done because the linguistic context and function of the two syntactic types are different, which makes their development in some respects dissimilar. The two syntactic contexts are seen as representing two different loci for the development of stative adverbs. It must, however, be emphasized that stative modifiers and adverbials are not seen as completely separate developments; rather, they are both products of adverbialization. Stative modifiers and independent elements are the focus of sections 8.3.2 and 8.3.3, respectively. Section 8.3.4 discusses whether stative adverbs are

a result of conscious or unconscious processes, while section 8.3.5 relates the development of stative adverbs – as well as adverbialization as such – to a change in writing styles, which involves a shift from more "literate" to more "oral" styles. Finally, section 8.3.6 sums up section 8.3.

8.3.2 Modifiers

In section 4.2 I argued that stative elements which function as modifiers are realized by adverbs to a much larger extent than are elements in independent function. In fact, stative modifiers seem to have been realized almost exclusively as –*ly* adverbs from the start. I would suggest that this is because the position in which they occur, i.e. the dependent pre-adjectival position, has become a –*ly* position per definition, at least in written English. Thus, the global force of adverbialization has turned this local context into a -*ly* context. There is strong evidence to support this hypothesis. Specifically, the most common type of modifier, namely intensifiers, which also typically occur in this position, must be said to be almost completely adverbialized in present-day standard English, zero forms being used only in more colloquial or non-standard contexts (cf. section 2.3.2). This seems to have been the case also in the 19th century, when stative modifiers began to occur at some rate. Thus, it appears that stative modifiers were recruited into a fixed -*ly* pattern.

8.3.3 Independent elements

With respect to stative elements with an independent function in the clause, these were shown in section 4.2 to be much more unstable morphologically; there is a fair proportion of both adjectives and adverbs in the corpus. To understand this variability, it is probably necessary to

consider the orientation and function of the elements under discussion. As shown in chapter 6, stative adverbs are extremely variable so far as orientation is concerned. This is a characteristic that they share with a range of other adjectival-adverbial items or functions. Interestingly, these other elements have traditionally been morphologically unstable, too. Thus, it seems sensible to regard all the items in question as similar phenomena. I will try to explain their interrelationship in terms of an adjectival-adverbial gradient.

8.3.3.1 The adjectival – adverbial gradient and adverbialization

We may say that with respect to adjectival and adverbial functions, as with so many (most?) linguistic phenomena, there is a gradient. At one end we find the functions which are clearly adjectival, at the other those which are clearly adverbial. In the middle of the gradient, there is a functional sphere which is less clearly defined (cf. Heuer 1932: 84-112, Swan 1990: 37-38). Thus, Heuer remarks that "Zwischen den Grundfunktionen des Adjektivs und Adverbs befindet sich eine Grenzzone, in der die Unterschiede verschwimmen" (1932: 84). Looking at the adjectival side of the gradient, there are two functions which are invariably singled out as the prototypical adjectival functions (both of which protptypical nouns are said to have). One is to modify a noun within a noun phrase (i.e. so-called "attributive" adjectives), as in (1) below. The second typically adjectival function is to complement the subject or object in clauses where the main verb is a linking (copula) verb. In this case the adjective is said to be "predicative", i.e. it normally comes after the verb, and it has an independent syntactic function in the clause. The function is exemplified in (2) and (3) below, where (2) contains a subject complement and (3) an object complement. The functions which are said to be clearly adverbial are many and

extremely diversified. For example, adverbs are used to express notions such as manner, means, instrument, time, place, speaker comments, etc. The sentences in (4) and (5) provide examples of the kinds of adverb which have been claimed to be the original and prototypical adverbs, namely manner adverbs (cf. section 2.3.2). Note that forms such as *loud* and *quick* are claimed to be relatively common in American English, especially in informal discourse (cf. Kirchner 1970-1972: 233, Quirk et al. 1972: 237, Ross 1984, Opdahl 2000: 152-154) [125].

1	Look at those angry/*angrily men.
2	Leslie was/became angry/*angrily.
3	I consider him nice/*nicely.
4	Harold spoke *loud/loudly.
5	Jane walked *quick/quickly.
6	Grandmother spoke *sad/sadly.
7	Harry bumped into Sally *deliberate/deliberately.
8	Sally helped her grandmother *willing/ willingly.
9	Jenny sat sad/sadly in the corner.
10	Duncan stood angry/angrily at the doorstep.

Among the functions which cannot be so clearly defined as either adjectival or adverbial, especially in a diachronic perspective, the most studied categories are mental state and mental mode items in clauses where the main verb is not a linking verb.[126] Examples of this are given in (6)-(10) above. Swan, in discussing these items, claims that they are inherently, i.e. lexically, subject oriented, and hence function primarily as subject modification (1990: 37, 1997: 181). However, it is clear that in many cases the items in question may modify the manner as well, as in *He sang sadly.*[127] This may be the reason why, throughout most of the written history of English, mental states and modes in such sentences have been commonly expressed by both adjectives and adverbs (Mustanoja 1960: 314-316, 648-650; Swan 1990: 37, 1996: 482; Killie 1993: chapter 3), as is

currently also the case in German and Norwegian (Swan 1990: 49). According to Poutsma (1928), the vacillation between the two parts of speech may also be due to the fact that the function of the items in question is frequently indeterminate:

> It is, indeed, often difficult to decide whether the adjunct is meant to describe particulars of the subject or of the predicate, and it is not surprising, therefore, that there should be frequent hesitation as to the choice between forms with or without the suffix *ly* in the case of words that have two forms according to their twofold function (1928: 344)

Adjectives are relatively common as subject modifiers in Old English. Since this time, there has been a dramatic rise in the proportion of adverbs; thus, a function which has been claimed to be basically adjectival (cf. Swan 1997: 181) has become increasingly adverbialized (for quantitative data, cf. section 2.3.2). Western (1906), in discussing adverbs of the relevant kind, notes that

> this tendency of referring to the predicate what might just as well be referred to the subject of the sentence, is carried much further in English. It is in fact the rule, especially when the predicate is made up of an imperfective or durative verb, to use an adverb instead of an adjective. (1906: 94)

That adverbs are more or less the rule in present-day English is indicated by the asterisks in (6) to (8) above. There is, however, still some vacillation between adverbs and adjectives in English (Poutsma 1928: 344). Killie (1993: 152-157) suggests that the adverbialization of mental mode and mental state items started in more dynamic environments. There are different indices that this may be the case. For example, in Swan's Old English data a large number of the adjectival elements are found with

dynamic verb types such as verbs of speaking and verbs of movement (1984: 53- 54). In present-day English, by contrast, such verbs very rarely collocate with adjectives, cf. the examples in (6) and (7) above and Western's claim in the quote above. Apparently, the only verbs which are common with both adjectives and adverbs in present-day English are stance verbs (cf. the examples [9] and [10] above), though adverbs seem to be gaining ground with this type of verb as well.

Stative elements must also be seen as belonging to the functionally indeterminate sphere of the adjectival-adverbial scale. As shown in sections 3.4.2 and 4.7, the corpus data display a great deal of variation between adjectives and adverbs, even with identical verbs, and even within the same texts. The status of stative elements thus resembles that of mental state and mental mode items in earlier English. As with mental state and mental mode elements, the formal instability of stative elements must be ascribed to their functional indeterminacy and variety. Stative elements are similar to mental state and mental mode elements in the sense that they have no one orientation type, and no singular function in the clause. As demonstrated in chapter 6, stative adverbs are in some cases oriented to a noun phrase, like a prototypical adjective, in other cases to a verb phrase, like a prototypical adverb. In addition, they are often functionally indeterminate; thus, Poutsma's hypothesis about the functional and formal indeterminacy of mental state and mental mode items is assumed to apply to stative elements as well. The variability and indeterminacy of stative elements may have caused a great deal of confusion with respect to what form the stative element should have. We can see this from the fact that those writers who use both adjectives and adverbs do not use adjectives solely as noun modifiers and adverbs as verb modifiers; rather, they use both forms in both functions. This may be precisely the kind of

"purposeless variety" that the human mind, and as a result of this also "language", has been claimed to "shun" (Anttila 1989: §§5.21, 9.2). The type of construction under discussion here is a kind of "hybrid", or in Hermann Paul's words, «ein Mittelding zwischen Attribut und Adverb» (1920: 128).[128] It thus violates "Humboldt's principle", which says that "human language would be conceptually ideal if it were entirely iconically isomorphic, with one form always corresponding to one meaning" (McMahon 1994: 90, cf. also Vennemann 1978: 259, 1993: 323). Consequently, the constructrion may have been - and still be - felt to represent an obstacle to efficient language processing, involving a "cognitive cost". To save (processual) energy, therefore, language users may have felt an urge to resolve the "conflict". As suggested in chapter 3, the resolution seems, again, to be in favour of the adverbial alternative.

Probably, verb type and the position of the stative elements may be important factors in the derivation and spread of stative adverbs, in the sense that they may have furthered the adverbial "solution". I am here thinking of the fact that many of the verbs which have been shown to collocate with stative elements – adjectives and adverbs – are also regularly found with manner adverbs and other types of adverbial adjunct. In addition, the adjuncts in question and stative elements both typically occur in final position (cf. sections 4.3 and 5.4.3). Thus, clauses with stative elements are rather similar to clauses with manner and other types of adjuncts, both structurally and semantically. The similarities should be evident from the sentences in (11)-(15) below. (Note that the only function of the analogues below the examples is to suggest possible associative patterns, not concrete analogies.) It may have been – and still be - difficult to keep the two types apart, i.e. to remember which lexical classes should be realized as an adjective, and which as an adverb, in linguistic contexts

which are otherwise identical. The adverbialization of stative elements may have been, in Andersen's words, the result of a desire to "maximize homogeneous syntagmatic relations" (1990: 18).[129]

11 ... wine shone *redly* in half-emptied goblets
  (Alcott BM)
  <u>possible analogues</u>: shone intensely/incessantly

12 A living figure... passed *darkly* along the outer edge of
  the mist (Collins WW)
  <u>possible analogues</u>: passed quickly/draggingly

13 A shell... exploding *redly* flung the brown earth
  (Crane RBC)
  <u>possible analogues</u>: exploding violently/loudly

14 ... but Mrs. Arty chuckled *fatly*, and continued...
  (Lewis OMR)
  <u>possible analogues</u>: chuckled happily/dispiritedly

15 ...when he found himself skipping *corpulently* across the
  drive (Amis DB: 55)
  <u>spossible analogues</u>: skipping blushingly/ determinedly

That adverbs seem to be gaining ground is a fact which must be understood against the background of adverbialization. It is highly likely that the processes of adverbialization and their effect on the language are what tipped the scale in favour of adverbs.[130] This is in line with Smith's (1996) claim that "'failure' in grammatical change, like 'success', is to do with the way in which an innovation correlates with the larger contextual drift of the language" (1996: 153, cf. also p. 151).[131] The "larger contextual drift" is in our case the adverbialization process. Smith conceives of such drifts in terms of "non-teleological directionality" (1996: 151, 159, 161). The same kind of effect has been described under different terminology. Aitchison (1987) uses the term "snowballs", which she defines as

...situations in which different rules conspire to produce the same outcome, which becomes a surface structure target for future rules. At this point, certain types of rules proliferate, and language is like a snowball rolling down a hill, accumulating snow, and virtually unable to alter its course. (1987: 29)

The same kind of phenomenon is described by Lass (1997) as a "flow-path" towards an "attractor":[132]

More generally, there are historical patterns where systems appear to head, with respect to some category X, towards a state where there is more and more X. This could be imaged as a kind of positive feedback: the coming into being of X produces more and more X as time goes on, i.e. what chemists call autocatalysis... In particular, if we assume a system moving towards an attractor, then in the normal way of things once it has started (for whatever reason) along the appropriate flow-path, the likelihood of 'attractor-friendly' change will increase... (1997: 300, 301)

Applied to –*ly* adverbs, the idea is that the more such forms there are in the language, the greater is the likelihood that innovative -*ly* derivations will emerge.[133] Hence, the more adverbialized state towards which English is heading is an "attractor", which pulls an increasing number of linguistic structures in the same direction. Psychologically, what happens during a drift such as adverbialization is probably that when speakers witness new –*ly* adverbs appear at a high rate, they become more inclined to accept such forms, and even to derive them themselves, normally unconsciously. We may say that as a result of adverbialization, users of English have become "tuned in" to adverbs to a much larger extent than are speakers of many other languages, including speakers of earlier varieties of English.[134] In fact, it has probably become so common to attach the -*ly* suffix to

adjectives of practically any semantic type that users of English simply do this without realizing that the adverb they just derived represents something unusual.[135] Joseph (1992: 131) even claims that under specific circumstances a particular analysis may be " almost forced on" the speakers of a language:

> Speakers can and do come up with analyses that make sense and to a certain extent are almost forced on them by a certain configuration of facts, and such reanalyses often tell the linguist just what is, or will be, going on in the language.

It seems reasonable to claim that the highly adverbialized state of English, because of which speakers come across –ly adverbs "all the time", represents a "configuration of facts" which may exert the kind of pressure described by Joseph. The phenomenon in question does not even seem to require independent syntactic motivation, but can be accounted for in terms of the general cognitive process known as "priming". Crudely, priming is the fact that former experience influences our way of acting. With respect to language production, it has been demonstrated that earlier exposure to a specific type of linguistic item significantly increases the chances that we will use the relevant item in our own linguistic production, even if there is a time lag between the exposure and the subsequent production. There is evidence of both lexical and syntactic priming (Bock 1982, 1986; Boyland 1998, forthcoming). For example, Boyland (forthcoming) shows that speakers who are exposed to passive priming clauses are prone to use passives when they, in a subsequent conversation, describe an event. By contrast, those who hear active clauses tend to choose active structures. It should come as no surprise, therefore, that speakers who repeatedly come across sentences with –ly adverbs, tend to prefer –ly adverbs to adjectives in cases where both parts of speech are possible.

8.3.3.2 Phases and components of the process

In line with the discussion in section 8.2.5, one may argue that the cause of a state of affairs is really the whole process leading up to it, and not some single factor within it. However, this does not mean that we cannot distinguish "phases" and "components" within this process (cf. Mandelbaum 1977: 57). As noted by Andersen (1990), drift has structure. In the specific case under discussion here, it seems that certain linguistic contexts may have been more adverb-promoting than others. The categories which have probably been most important in the initial phases of the change may be those which figure prominently in the data from the 19th century, as this was the time when stative adverbs began to appear with a certain regularity (cf. chapter 3). As shown in chapter 4, however, different categories appear to have been dominant at different times. Thus, the spread of stative adverbs does not involve the spread of a single, constant "rule" from speaker to speaker; rather, the rules themselves seem to have undergone constant change. I would suggest that (as was said to be the case for mental mode and mental state items, cf. the preceding section), the adverbialization of the function under discussion probably started in more dynamic environments, later to spread to more stative ones. The data presented in tables 4.5 and 4.6 of section 4.5, repeated below for convenience sake, may be seen as supporting this view. The figures in table 4.5 show that only 11% of the adverbs in the 19th-century corpus collocate with stative verb types. This means that 89% co-occur with dynamic ones. In the 20th-century data there are 15% stative and 85% dynamic verbs. This may suggest a shift in the proportion of stative and dynamic verbs. Stronger support for such a shift seems to be provided by the data in table 4.6. Here we see that the proportion of stative verbs that collocate with adverbs is considerably higher in the 20th-century corpus than in the

material from the 19th century, the figures being 31% and 21%, respectively. 31% is indeed a very high figure, considering that manner-like adjuncts are assumed to normally only collocate with dynamic verbs (cf. Quirk & Greenbaum 1973: 220). It thus seems as if the forces of adverbialization are so strong as to override any constraints there might have been on adverbial derivation, both with respect to what types of adjectives can serve as the base of such derivation, and with respect to what linguistic contexts allow this process to take place.

Table 4.5: Verbal collocates of the corpus elements

	ADV		ADJ	
	tokens	%	tokens	%
19TH CT:				
radiance/light	18	50	12	27
other process/event	8	22	12	27
activity	6	17	6	13
state/stance	4	11	15	33
total	36	100	45	100
20TH CT:				
Radiance/light	20	19	12	16
other process/event	25	24	20	27
activity	44	42	7	10
state/stance	15	15	34	47
total	104	100	73	100

Table 4.6 Distribution of adverbs and adjectives over the verb types

	ADV		ADJ		total
	tokens	%	tokens	%	
19TH CT:					
radiance/light	18	60	12	40	30
other process/event	8	40	12	60	20
activity	6	50	6	50	12
state/stance	4	21	15	79	19
total	18		33		51
20TH CT:					
radiance/light	20	63	12	37	32
other process/event	25	56	20	44	45
activity	44	86	7	14	51
state/stance	15	31	34	69	49
total	84		61		145

Among the dynamic verb types, it is quite possible that radiance/light verbs may have represented a very important context for the derivation and spread of stative adverbs. If we look at the data in table 4.5, we see that in the 19th-century corpus as many as 50% of the adverbs collocate with this kind of verb. This is a very large proportion for a relatively limited set of lexemes. Furthermore, table 4.6 shows that 60% of the radiance/light verbs in the 19th-century material collocate with adverbs. This is an adverb rate which no other verb type can equal (until the 20th-century, when activity verbs apparently represent the most adverb-promoting class). Additional evidence for the role played by radiance/light verbs may come from Western (1906), which is a study of adverbs in 19th-century English. Here Western provides 18 examples of stative adverbs. Of these, 12 collocate with a radiance/light verb (1906: 92-93).[136] If we assume that radiance/light verbs constitute a very adverb-promoting context, this would also explain

why radiance and colour adverbs were the first subsets to emerge; these are the subsets which most typically collocate with radiance/light verbs. Out of the 70 radiance/light verbs in the corpus, 65 occur with a colour or radiance adverb. The prevalence of such verb-adverb combinations is suggested also by Western's (1906) data; as many as 11 of the 12 radiance/light verbs in his material collocate with a colour or radiance adverb.

There may also be some cross-linguistic evidence for the role played by the radiance/light category. The evidence comes from modern Norwegian. This is a language which is less adverbialized than present-day English (Western 1906: 97-98; Swan 1990: 47-49, 1997: 186-187; Killie 1993: 122-123). For example, stative adverbs are rare. It is therefore probably significant than when they do occur, it is typically in collocation with radiance/light verbs. Western (1921: 549) provides 8 examples of colour/hue adverbs from Norwegian fictional prose. Of these, 6 co-occur with radiance/light verbs. In fact, in this kind of context adverbs appear to represent the "unmarked" alternative, the unsuffixed alternative being stylistically marked as old-fashioned (Vinje 1970: 158). As shown in section 6.6, this has been claimed to be the case in English as well (Meyer-Myklestad 1967: 380). Thus, it is possible that both English and Norwegian are in the process of adverbializing the items under discussion, but that English has advanced further in this process. (For example, Norwegian does not use stative adverbs with stative verbs.) If we assume that the adverbialization process proceeds more or less along the same lines in the two languages, this would imply that we can learn something about its earlier stages in English by studying its present state in Norwegian.[137]

8.3.4 The development of stative adverbs and the issue of consciousness

An interesting question is whether the change under discussion is a conscious phenomenon or not. To come closer to an understanding of this, I sent a letter to six of the 20th-century authors who are found to use stative adverbs most extensively. In the letters I listed the relevant adverbial uses, asking if the authors had any recollection of having created these adverbs consciously or not. The answers I received strongly suggest that in fact even stative adverbs, which may appear to be highly creative forms, are not normally processed consciously. Indeed, four of the writers claimed not to think about their adverb use at all, no matter what type of adverb was in question. They therefore assumed that the stative adverbs in their novels must have been used "instinctively"; the adverbs in question just "occurred", so to speak. Even the writer whose usage may be said to be the most creative of all was of this opinion. This flies in the face of the assumption that adverbs are very salient elements (partly because they often occur in the highly focused final position), which are typically used for special effect, and therefore must be processed consciously. One of the authors tries to account for his use of stative adverbs in terms of his "general policy" concerning the use of adverbs. He says that he tries to write "as vividly as possible", and "adverbs are a way to make an image come alive". He then hypothesizes that this is probably why he used the adverbs in question. Only one of the five authors had any specific thoughts about at least some of the stative adverbs he had used. These were all instances where the adverbs were meant to be literal and figurative at the same time. Most of them were instances of colour adverbs, where the colour denoted by the adverb was meant to have a symbolic meaning. Two of the examples involved the adverb *darkly*, and here the adverb would

suggest "something menacing". However, apart from this one writer, none of the others thought that they had created the adverbs in question deliberately.

What this seems to suggest is that the processes deriving stative adverbs are largely unconscious, though they may not all be. There are probably both conscious and unconscious elements involved, and this may even be true of the usage of the same speaker. Partly because of this possibility, Andersen (1989: 11-13) suggests that rather than approaching a change as a whole, it should be analyzed in terms of its smaller components. In other words, what we should study is the various innovations, or individual usages, which form the basis of the change. By going about the problem in this manner, we can allow for the possibility that some uses are intentional, while some are not, and generally that surface representations which otherwise look similar may be differently conditioned (1989: 13, 14-15). This appears to be a wise strategy at least so far as the conscious: unconscious issue is concerned, since the data suggest that there is no unitary answer to the problem. In addition to the statements of the authors which were discussed above, "common sense" (I take the liberty to make use of this faculty, though some would view this as unscientific) suggests that specific uses must, by their nature, be conscious, while others are not. As an example of the former I may mention the adverb *greengoldenly* from Joyce's *Ulysses* (*Proteus*). The adverb in question is simply so unusual in itself that it is hard to imagine that it could have been derived unconsciously. As an example of processing which I assume to be unconscious, I may mention adverbs that collocate with radiance/light verbs (cf. the discussion of phases and components in section 8.3.3 above). In these cases adverbs were claimed to represent the unmarked alternative. I am quite certain that I would produce such sentences in Norwegian

without paying attention to the form of the stative element, and I assume that the same would be the case for speakers of English, whose language is much more adverbialized than mine (cf. footnote [134]). In conclusion, the spread of stative adverbs in English is conceived of primarily as an unconscious, but partly also as a conscious, affair.

8.3.5 Adverbialization and the development of new literary genres

It may well be the case that the adverbialization process, including the development and diversification of stative adverbs, goes hand in glove with some general changes in the style of some genres in English. Specifically, it has been found that for all "popular, non-expository registers" (dialogue, letters, fiction, and essays) there has been a general "drift" from more "literate" to more "oral" styles (Biber 1995: 288, 297; Biber & Finegan 1989: 489, 507).[138] This drift seems to have been going on for centuries, with a setback in the 18th century, when writers made use of extremely formal, or "literate" styles (Biber & Finegan 1989: 498-499). The new fictional genres, such as the novel and the short story, are said to be a product of the change in question, and in addition, after these new genres came into being, they have continued to become more and more "oral".

The drift from more literate to more oral styles is said to involve a shift along three textual dimensions (cf. Biber & Finegan 1989, Biber 1995: ch. 8):

> (a) a change from more informational to more involved
>   production
> (b) a change from more abstract to more non-abstract styles
> (c) a change from more elaborate(d) to more situation-
>   dependent styles

The first dimension draws a distinction between texts which have an informational focus and texts which have "an involved, non-informational focus, related to primarily interactive or affective purposes and highly constrained production circumstances" (Biber & Finegan 1989: 491). Linguistic indicators of the informational type are frequent use of nouns, prepositional phrases, and attributive adjectives. Another factor with a positive weight is word length (1989: 490). Indicators of the involved type include private verbs (e.g. *think*, *feel*), present tense verbs, 1st and 2nd person pronouns, *wh*-questions, etc. The informational type of text is characterized as "nominal", while the involved type is said to be "verbal" (1989: 491). The drift from more literate to more oral styles includes, as one of its ingredients, a drift towards the involved pole of the informational-involved dimension.

The features which distinguish between texts along the abstract vs. non-abstract dimension are the use of conjuncts, agentless passives, past participal adverbial clauses, *by*-passives, past participal WHIZ deletions (e.g., *the textbook [which was] used in that class*), and other adverbial subordinators. Texts which show frequent use of these features are said to be "abstract and technical in content", while low occurrences indicate a "non-abstract" style (1989: 492). The drift towards more oral styles involves a decrease in the use of the features in question.

The third dimension is the most interesting one for our purposes here, as it is the only one which involves the use of adverbial adjuncts. Here the primary positive factors are three different categories of relative clause, i.e. *wh*-relative clauses on object positions, *wh*-relative clauses on subject positions, and pied-piping constructions. These are said to "serve as devices for the explicit, elaborated identification of referents in a text" (1989: 492).

Consequently, texts characterized by these features are said to belong at the "elaborated" pole of the elaborated-situation-dependent dimension. About the other side, Biber & Finegan write the following:

> Three features have large negative weights...: time adverbials, place adverbials, and other adverbs. Place and time adverbials are used for locative and temporal reference (e.g. *above*, *behind*; *earlier*, *soon*); these forms typically mark exophoric reference to places and times outside the text itself, often serving as deictics that can be understood only by reference to an external stative and temporal situation. The class of 'other adverbs' includes manner and other adverbials. (1989: 492)

The drift from more literate to more oral styles is said to involve a decrease in the use of relative clauses and a concomitant increase in the use of adverbials.[139] This is consistent with Baayen's (1984: 26) finding that novels written by authors born after 1850 have a considerably higher number of -*ly* adverbs than novels written by authors born before 1850. It is quite possible that the general spread of the -*ly* suffix - including the development and diversification of stative adverbs - is somehow bound up with the development of the new fictional genres, and the subsequent drift within these genres from more literate to more oral styles. Biber & Finegan make no attempt at explaining how the class of "other adverbs" fits into the situation-dependent dimension. It seems reasonable to claim that they do, however. Adverbs typically specify the circumstances around a situation; hence most types of adverbs can be characterized as "situation-dependent", just like time and place adverbs.

Interestingly, it is not only the development of stative adverbs and the increased use of (-*ly*) adverbs which appear to be bound up with the genre and style developments just described. There are indications that the same

holds for the development of the progressive. Dennis (1940: 860-862) reports a generally low rate of progressives in her 18th-century corpus, and a much higher one in the material from the 19th century. This is explained in terms of the formality of 18th-century texts and the much more colloquial style of the texts from the subsequent century. Dennis also finds that progressives are more frequent in "colloquial prose", i.e. prose fiction, than in more formal prose. In the same vein, Strang (1982: 472) suggests that the use of the progressive in 18th-century English is "conversational". She also finds that the rate of occurrence is particularly high in "regional" (i.e. Scottish and Irish) novels from the 18th and early 19th centuries (1982: 437, 450, 471). Strang's explanation for this fact is that the language found in the regional novels "must be an approximation to the usage of ordinary people in both Ireland and Scotland" (1982: 450). By contrast, the "non-regional" novels written by the same Irish and Scottish authors are found to have much lower progressive rates. The reason is, according to Strang, that the language in these is more conservative, more in line with the usage typically found in the 18th-century literary models to which writers of standard English were normally "subservient" (1982: 450).

8.3.6 Summary and discussion

In chapter 3 it was shown that stative adverbs can function either as modifier of an adjectival element or as an independent clause element, i.e. adverbial. In the present chapter I have argued that stative adverbs must have been recruited via both these functions. The development of stative modifiers was seen as connected with the general regularization of intensifiers, whose position is immediately before the adjectival they modify. As explained in chapter 2, intensifiers have become increasingly realized by –ly adverbs during the last few centuries. This trend has been so

strong that the pre-adjectival position has developed into a –*ly* position per definition in written standard English. Hence, the fact that stative elements occurring in this position take the form of –*ly* adverbs hardly needs an independent explanation.

The adverbialization of stative adverbs in independent function was hypothesized to be the result of certain cognitive economizing processes, which are largely unconscious. One complicated aspect of stative elements is their orientational or functional variability and indeterminacy. Logically, stative elements should be realized as adjectives when they modify nouns and as adverbs when they modify verbs. However, determining precisely what a physical element modifies may be extremely difficult, or at least taxing, and it may therefore have seemed like a better solution to use just one type of element in all cases. The postulated economizing processes may be said to "maximise homogeneous syntagmatic relations" (Andersen 1990: 18), thereby making linguistic processing easier. It was argued above that the processes in question also create homogeneity with another type of clause, viz. clauses with manner and other adverbial adjuncts. These were said to resemble clauses with stative elements in that the verbs in the two types of clause are often identical, and both stative elements and adjuncts in general typically occur in final position. In addition, many of the adverbs in the corpus have a manner – or a manner-like – function. It may thus have been difficult to keep the two types separate, perhaps particularly when they collocate with highly dynamic verbs. Thus, clauses with stative elements have become assimilated to clauses with other kinds of adjunct, the stative element increasingly appearing as an adverb. That this should happen is not a surprise. The adverbialization process in English is a powerful force and must have exerted a massive pressure in that direction. The process was said to have a snowball effect; the more -*ly* adverbs there

are in the language, the more we are likely to get. Psychologically, speakers get so used to adverbs occurring in all kinds of functions that they are much more inclined to prefer adverbs where speakers of less adverbialized languages would use adjectives or some other alternative. It has also been suggested that the development of stative adverbs may be bound up with the drift from more literate to more oral styles which has been attested in "popular, non-expository registers".

Chapter 9: Summary

9.1 The development of the stative adverb category

It has been argued in the present thesis that the role played by the stative: non-stative distinction in English adverb formation is decreasing in the sense that to a growing number of people the feature [- stative] is no longer a precondition for adverb formation to take place. Thus, English grammar has been – and is - undergoing a change, throwing off a restriction and establishing a new class of adverbs. The new adverbs are derived from [+ stative] adjectives and in their adverbial form they keep the concrete meaning of the source adjective.

The change has been dated to the 19th century. Between the 18th and 19th centuries there is a considerable increase in the number of tokens, types, hapaxes, new types and users of stative adverbs, and there is an even sharper rise between the 19th and 20th centuries. The data indicate that stative adverbs are a productive category in 19th and 20th-century English. The 19th century is the period when the class became productive. In the 20th century its productivity has increased further, and as a consequence, the category has diversified considerably.

The extent to which stative adverbs are used by different authors is extremely variable. Some writers make quite extensive use of such adverbs, while others use them once or twice in the course of a novel (or short story collection). There are also writers who do not use them at all (that is, at least not in the texts included in the present study). However, the use of stative adverbs is widespread enough to justify the claim that the adverbs in question are indeed a feature of standard English grammar from the 19th

century onwards; they are not just the idiosyncrasies of a few writers.

9.2 The orientation of stative adverbs and related issues

The corpus sentences clearly show that stative adverbs cannot be classified once and for all as manner adverbs or as subject adjuncts. Their orientation varies from clause to clause. They may be oriented to the subject, direct object or verb phrase. Verb-phrase oriented adverbs were found to be of two different types: those which can be said to strictly modify the manner in which something is done, and those that modify some other aspect of the situation denoted by the verb. In both cases the verb - adverb cluster can often be reduced to an adjective - noun cluster, where the adjective from which the adverb is derived modifies the nominal element. Thus, even verb-phrase oriented adverbs can be said to be noun phrase modifiers at some level. It may be argued that the adverbs in question are oriented to a clause-external element since the nominals that they modify are not overtly realized, in the strict sense of the word, but "surface" as verbs rather than nouns. Stative adverbs that function as modifiers of participles are often oriented to a nominal inherent in the participle. It is possible to argue that many stative adverbs are oriented to several elements at the same time. Stative adverbs are no doubt extremely variable so far as orientation is concerned. Even the same adverbial form may show different kinds of orientation depending on the linguistic context.

With regard to what determines the orientation of an adverb, it has been argued that the main factor is the semantic interplay between the various clause elements. Position was said to be important only in cases where the semantics of the clause could potentially allow more than one reading.

Another claim which has been made is that although a large proportion of the adverbs discussed above are not verb-phrase oriented, this does not mean that there is no relation between the verb and the adverb in such cases. The grammatical connection between the two may be said to create a cognitive link; thus, the propositions denoted by the verb and the adverb are conceived of as part of the same situation. It has also been maintained that *-ly*, even when it does not promote orientation to the verb phrase, at least has the effect of adding dynamism to the situation denoted by the clause.

The data clearly demonstrate that the orientation of adverbs may be extremely vague. In many of the corpus examples it is simply impossible to determine what precisely was modified by the adverb. There are many possible interpretations, and any statement to the effect that what is *really* modified is A or B would be completely arbitrary. This fact was said to have at least three important implications. Firstly, if not always, then at least in many cases, the interpretation of adverbs must take place in a rather holistic manner. If not, the processing of many clauses would simply be too taxing and inefficient. Secondly, the orientational indeterminacy of many adverbs also suggests that different speakers may arrive at different interpretations of the same adverb or clause (as is demonstrated in Killie fortcoming a). Thirdly, orientation should not be used as a criterion in adverbial taxonomy. Instead, adverbial taxonomy should rest on less variable foundations, such as the lexical meaning of adverbs.

9.3 Adverbs vs. adjectives: adverbialization

Interestingly, it is not only stative adverbs which have multiplied; the corresponding adjectives have also been used increasingly in non-prototypical adjective positions. Contrasting the use of adjectives and adverbs, it was shown that adverbs are clearly preferred as adjectival modifiers. However, both adjectives and adverbs are commonly used as independent elements with non-linking verbs. In this use, there are no categorical distinctions between the two parts of speech; both may be used in the same syntactic and semantic contexts. However, there are some differences in their proportional representation with various types of verbs. Specifically, adverbs tend to co-occur with dynamic verbs and adjectives with stative verbs. It is possible that radiance/light verbs may have promoted the use of adverbs, as the proportion of such verbs in the 19th-century material is very high. The use of stative adverbs in present-day Norwegian also seems to support this view.

It has not been possible to trace any clear lines of development for stative adverbs, but it has been suggested that they developed in two types of context: (1) in the modifier position, and (2) as independent elements with dynamic verbs. It has further been suggested that because of their multiple and often indeterminate orientation, stative elements may have represented a problem in language processing. It may often have been difficult for speakers to know whether they should use an adverb or an adjective in a given context. To avoid the problem, clauses with stative elements may have been subjected to "streamlining", the stative element being increasingly realized as an adverb. That adverbs should increase at the expense of adjectives should come as no surprise; knowing what we know about the history of adverbs, the opposite development would have been

unexpected. The adverbialization process, which has been changing the language for the last millennium or so, is a very strong force. It can be likened to a snowball rolling down a hill. Just as the snowball catches more and more momentum as it moves downhill, so the power of the adverbialization process increases as more and more constructions are adverbialized.

The multiple orientation of stative adverbs may be understood as a result of the adverbialization process. Stative adverbs nicely illustrate how the adverbialization process has led to an expansion in adverbial orientation; adverbs presumably used to be verb-phrase oriented, but have acquired the potential to modify a number of different elements.

9.4 The meaning of –*ly* and adverbialization

So far as the original meaning of the -*ly* suffix is concerned, the corpus adverbs clearly show that it has been seriously affected by the adverbialization process. Apparently, the suffix in most cases carries practically no lexical meaning at all. Thus, the original meaning 'in the form of, like' is preserved only in relatively few adverbs. With respect to the corpus adverbs, it can possibly be traced in some of the dimension/shape adverbs which denote fatness, such as *fatly* and *corpulently*, given that we are correct in assuming that these can be paraphrased 'in the manner/like of a fat/corpulent person'. If this is the case, the adverbs in question are semantically parallel to adjectives such as *manly* and *kingly*. However, for the most part it seems fair to say that the -*ly* suffix does not contribute extra meaning when it is added to a base adjective; in fact, in practically all the corpus examples the suffix seems to be completely void of meaning. Thus, the development of the noun -*lic* into

a grammatical marker seems to have been accompanied by an almost complete degree of semantic bleaching.

The fact that the meaning of the adverbial suffix has become bleached to such an extent may have furthered the spread of the *-ly* suffix. Many derivations which were formerly blocked may have become possible because the meaning of the adverbial suffix no longer represented a semantic restriction on *-ly* derivation. As the present study will have shown, also other semantic restrictions, such the stative restriction on adverb formation, has disappeared. Indeed, the development of new adverbial classes has gone so far that there appear to be very few restrictions on *-ly* derivation in present-day English. The suffix can be tacked on to practically any adjective, including stative ones, i.e. it is almost fully productive.[140] As a result of this, English adverbs have come to modify practically "anything". It is difficult to find one or a few common functions for the collection of elements referred to as adverbs, except for the very general characterization that they are all used as some kind of qualifier. What is certain is that, because of the enormous spread of the *-ly* suffix, English adverbs are no longer simply ad-verbs.

Notes:

[1] A fuller discussion of this topic is provided in section 2.3.5.

[2] Cf. Tottie (1986: 144), Biber (1988, 1989, 1995), Biber & Finegan (1989), Burrows (1992), Baayen (1994), and Baayen & Renouf (1996: 90).

[3] In fact, it is suggested in chapter 8 that the development and spread of stative adverbs may be bound up with this genre drift.

[4] In principle, it would have been possible to compile a Middle English corpus with a higher proportion of prose texts. However, the choice of texts has also to a considerable extent been determined by the availability of texts on the Internet. As explained below, the present study would hardly have been feasible without the aid of computerized texts.

[5] Cf. for example Uhler (1926: 3-4), Heuer (1936: 118-128), Youmans (1983), Donner (1991: 7-8), Killie (1993: 128-131), Lass (1997: ch. 2), and Rice (1997a and 1997b).

[6] He also claims that the suffix may serve other metrical and poetical functions; among other things it is said sometimes to be used as a «metrischer Steigerungsmittel (Enjambement, Cäsur)» (Heuer 1932: 110, 144ff.).

[7] This is, for example, one of Emonds' (1973: 191) and Donner's (1986: 396-397) main arguments for claiming that respectively Chaucer's idiolect and Middle English do not have a gerund.

[8] The form *-liy* is reported to be used in the *Ormulum*; however, this form has not been investigated due to practical problems. Specifically, the yogh is rendered in different ways in the various texts, depending on the preferences of the editor. At any rate, the use of *-liy* appears to have been very modest; hence, this is considered to be a minor problem.

[9] As is well known, there is a syntactic constraint in modern English against letting an adverb intervene between a verb and its object (Meyer-Myklestad 1967: 398, Jackendoff 1972: 68, Huang 1975: 79). Hence, in clauses with transitive verbs, the stative element cannot normally occur immediately after the verb, but must occur in post-object position. It has not been deemed necessary to give post-verbal and post-object position separate treatment; they are counted as one, as they are both the normal focus positions with respectively intransitive and transitive verbs.

[10] I use the term "situation" in the same sense as Lyons (1977: 483) and Dik (1975), i.e. it denotes any "state of affairs" or "Sachverhalt" (Dik 1975: 100).

[11] Both Kjellmer (1984: 13) and Quirk et al. (1985: 439) also mention nationality adjectives. Whether these form adverbs is an issue that will not be addressed, as they do not denote physical properties.

[12] In the same vein, Quirk et al. (1985: 178) refer to stative or dynamic *meanings* rather than stative or dynamic *verbs* (cf. also Schopf 1969: 92-92). A rather similar approach is suggested for adjectives by Givón (1970: 835), who discusses "the necessity for dealing, in studies of this kind, with SENSES of lexical items rather than with the ill-defined lexical item as a whole".

[13] For full titles of the corpus texts, cf. Appendix 2.

[14] The extent to which this position is conceived of as the modifier position is demonstrated by the fact that past participles, which can be interpreted as either verbal or adjectival, seem typically to be given an adjectival reading when they occur immediately after an adverb, and hence the adverb acquires the function of modifier rather than adverbial, as in the examples in (i) and (ii) below.

i	The hall, when they entered it, was brightly lighted up (Stevenson DJMH)
ii	The room was brilliantly lighted (Bennett GBH)

[15] If one is conducting a synchronic study of some feature of the language, it is possible to carry out an intuition study, using native speakers. However, this has proven not to be a reliable method of gaining access to a speaker's competence, and at any rate, the methodology in question is not possible if the object of investigation is earlier stages of English, or the grammar of authors.

[16] The uncountability criterion is proposed by Karcevsky (1932: 184).

[17] Similar views are held by Uhlenbeck (1953: 3, 1977: 381), Zimmer (1964: 87), and Leech (1974: 211).

[18] Kjellmer (1984: 2-4) provides a discussion of the relationship between "potentially existing" and "actually lexicalised" adverbs, where he notes that "the dividing line between potentially existing and actually lexicalised is less sharp in actual practice than it is in theory" (1984: 4).

[19] According to Baayen & Renouf (1996: 78), experimental studies of word recognition indicate that words with a frequency of one per million words are likely not to be found in the lexicon of most speakers.

[20] A completely different approach from those described in the present section is taken by Aronoff (1980), who uses a lexical-decision task to measure productivity. That kind of measure is, of course, not applicable in historical or other textual studies.

[21] This question is closely connected to one of the most difficult questions in historical linguistics, viz. when has an innovation spread widely enough through a population to justify our speaking in terms of a linguistic change.

[22] For the origin and history of the -ly suffix, see for example Uhler (1926: 62), Peters (1968: 168-172), Pulgram (1968: 384), Strang (1970: 272-273), Guimier (1985), and the Oxford English Dictionary (entries -ly, suffix1 and -ly, suffix2).

[23] This is the standard conception of the original meaning of such compounds. Kluge (1886), however, presents an alternative view. According to him, it is the suffix which was the centre of meaning in the new compound, which was a bahuvrihi compound, i.e. a possessive adjective. Kluge mentions examples such as liubaleiks and samaleiks from Gothic, whose meaning is rendered as 'lieben Körper habend' and 'gleichen Körper habend' (1886: §237).

[24] In this respect the -ly suffix is very much like the French adverbial suffix -ment, which is derived from the Latin noun mente, i.e. 'mind' + ablative case (Hopper and Traugott 1993: 130-132).

[25] Whether the two adjectival forms actually had the same meaning and application is a matter of dispute; at least McIntosh (1991) disagrees with Uhler in this respect (cf. also Dalton-Puffer 1998: 45 and Killie 2000).

[26] Other suffixes were used too, such as -(l)unga, -(l)inga, and -a, and case forms such as genitives, datives, accusatives and instrumentals also served adverbial functions. However, the most common marker of adverbial function by far was the -e suffix, supplemented in later Old English by -lice (Uhler 1926: 1-2, Lass 1994: 207-208).

[27] Detges (1998 and 1999) suggests that the adverbs markers -lice and -e were not originally identical; rather, -e was used to express non-attitudinal meaning, while -lice expressed attitudinal, or subjective, meaning, much in the way really does when used as an intensifier. That there is a distinction subjective/figurative: "objective"/literal, which applies to many such pairs of adverbs is well known (cf. Jespersen 1942: 46-51 and

Donner 1991). However, this distinction is not systematically observed neither in Old English (Uhler 1926) nor in Early Modern English (Nevalainen 1994a: 251); consequently, if there ever was a systematic distinction of this sort, it must have been a purely Middle English phenomenon.

[28] It should be noted that the statement that the *-lice* adverbs in question have been "formed directly from a simple adj. without the intervention of an adj. in *-lic*" is not a "hard fact". The only real fact here is that we have no recorded evidence of the forms in question. Of course, this may simply be an effect of a deficient data base. However, it could well be the case that the *Oxford English Dictionary* is correct in its assumptions about the derivation of these adverbs in Old English. At any rate, it is a commonly held view (cf. for example Mustanoja 1960: 314 and Strang 1970: 272).

[29] The ultimate source of the term *adverb* is the Greek *epirrhema*, of which *adverb* is a translation (cf. Pinkster 1972: 35).

[30] In this respect it can be added that degree adverbs are also claimed to be commonly recruited from the so-called manner category (Partington 1993: 2-4, Peters 1994: 269-270).

[31] On the other hand, if prototypicality is to be determined by way of frequency criteria, there is no support for the claim that manner adverbs are the prototypical adverb category, as manner adverbs are not the most frequent adverb type (Ramat & Ricca 1994: 315-318).

[32] Donner's claims are substantiated by Nevalainen's (1994b) findings.

[33] Borst (1910: 361) speculates in this fact; however, he does not present any empirical evidence to support his hypothesis.

[34] There are quite extensive differences between prose and poetry, adjectives being used much more frequently in the latter genre (1993: 128-131, 134-135).

[35] Compared to the other adverbial categories discussed above, then, present participles seem to have been adverbialized relatively late. Support for this claim may come from Bolinger (1972b: 25), who notes that present participles functioning as intensifiers appear more frequently without the *-ly* suffix than do other kinds of intensifier.

[36] Aronoff (1976: 36) maintains that adverbial *-ly* is "far and away the most productive WFR [word-formation rule, KK] in English". In the spirit of generative grammar, Aronoff's claim is based on intuition rather than empirical data; however, his intuition is in accord with the empirical data provided by Baayen (1994) and Baayen & Renouf (1996). To my knowledge, the claims of these scholars have been contested only by Ross (1984) and Cannon (1988, discussed in Baayen & Renouf 1996: 81-82). While Ross claims that the productivity of the *-ly* suffix is decreasing, at least in American English, Cannon maintains that it has stopped being productive. However, Ross provides no quantitative data to support her claim, and, as argued by Baayen & Renouf (1996: 81-82), Cannon's methodology is so questionable that it invalidates his conclusions completely. Most seriously, Cannon's database is a dictionary, and, as explained in section 2.2.5, dictionaries are not a well-suited source for productivity studies. Because of this, Cannon's results, which are indeed quite counterintuitive, cannot be trusted.

[37] For more information on this issue, cf. Zimmer (1964), Aronoff (1976), Isitt (1983), Kjellmer (1984), van Marle (1985: section 2.3.1), Kastovsky (1986: 596-597), Baayen & Lieber (1991: 809), Bauer (1992: chapter 4), and Baayen & Renouf (1996: 93).

[38] This has traditionally been assumed to be a phonotactic restriction (Baayen & Renouf 1996: 90). However, Bauer claims it to be not so much phonological as semantic. The claim is based on his conclusion that two of his five semantic types of *-ly* adjectives

show some degree of productivity (1991: 187-190). However, Bauer's investigation can be criticized on the same grounds as Cannon (1988) (cf. note [36]), i.e. it is a dictionary-based study, with all the weaknesses that this implies. Curiously, Bauer claims to be fully aware of the shortcomings of his mehodology (1991: 188, 191); yet, he chooses to use it. Baayen & Renouf (1996: 83) find only two occurrences of adverbs ending in -lily in their 80-million-token corpus, and conclude that the pattern is unproductive.

[39] His ideas were originally presented in his dissertation *On the nature of syntactic irregularity* from 1965; however, it is his article from the following year which is best known, and all references in the exposition below are to that publication.

[40] I have used the term "command imperatives" (Lakoff's "true imperatives", 1966: 5) in order to distinguish these from the so-called "pseudo-imperatives", such as the conditional use of the imperative, where the real meaning is 'if you do (not)..., you will...'. Examples of this type, which are excluded from Lakoff's frames, are provided in (iii) and (iv) below.

iii   Know the answer or you'll flunk.
iv   Be tall, or you won't make the basket ball team.

[41] The term *dynamic* is normally used instead of *non-stative* (cf. for example Kjellmer 1984: 8ff., Quirk et al. 1985: 178 and many others). *Active* is another term that has been used (e.g. by Frawley 1992: 146), though less frequently.

[42] Cf. Kuno (1970: 352-353), Rogers (1971), Dowty (1972: 62-68, 1976), Lee (1973), Sag (c1973), Dik (1975: 99-102), Ljung (1980: first two chapters). A discussion of all the problems connected with the hypothesis is beyond the scope of the present study, but see Killie (forthcoming c).

[43] Dixon's (1977) study comprises only monomorphemic, i.e. underived, adjectives (1977: 31). However, in his (1991) study, Dixon includes derived adjectives and makes the same claims for them. In this latter publication Dixon also extends his adjective classification to include the semantic categories "difficulty", "qualification" and "similarity" (1991: 78-85). Adverbs derived from these categories will not be discussed here, however, as they are not stative adverbs that denote physical properties.

[44] Cf. also Krüger (1914-1917: §577), Jespersen (1942: 414-415), Thorndike (1943: 34), Kjellmer (1984: 12), Quirk et al. (1985: 434, 439 note 6), Johansson & Lysvåg (1987: 259), and Nevalainen (1994a: 246).

[45] Thorndike (1943: 34) briefly discusses adverbs which are derived from "adjectives which describe sensory qualities", such as *redly*, *whitely* and *blackly*. These are rare, according to him, and this "fact" has a cognitive explanation, i.e. that "we often need to state that an object can produce that sensation or has that quality, but relatively seldom need to state that anything is acting in that way". Thorndike's explanation does not have much credibility, as it seems to presuppose that the only function of adverbs - or at least adjuncts - is to modify the manner in which something is done. As shown in chapters 5 and 6, this is far from being the case.

[46] The same restriction has been claimed to exist in Latin (Pinkster 1972: 26) and Italian (Scalise 1990: 87-88). It is also operative in Norwegian, but in this language the restriction is not absolute, and may be weakening (cf. section 8.3.3.2).

[47] Apparently, Quirk et al. have collapsed Ljung's (1975) and Dowty's (1976) definitions of what semantic feature underlies stativity, viz, control and temporal restrictedness (cf. section 2.3.4). By contrast, Kjellmer, in the quote above, applies Ljung's (1975) control definition only.

[48] The figures presented in this and the next chapter are either exact or they have, for convenience' sake, been rounded to include only one digit. In rounding the figures, I have adopted the common convention of ignoring a digit less than five and adding one in the next place for a five or more. According to this practice, the values 5.34 and 5.35 will be rounded to 5.3 and 5.4, respectively.

[49] The reason why the individual type rates do not add up to the total provided at the bottom of the table is that some of the types recur in several of the periods.

[50] Three of the attested types, viz. *blushingly*, *warmly* and *flatly*, occur singly in two consecutive periods (cf. table 3.4). One may ask whether these should be treated as hapaxes in both periods, or only in the first period of attestation. I have taken the former approach. In the case of the latter alternative, the total number of hapaxes would be reduced to 37.

[51] How this can be the case is a question that will be discussed in chapter 8 (section 8.2.4).

[52] This tendency to set the productivity rate too low will to some extent be counteracted by the fact that some forms which are not new will be counted as such. We may divide the relevant elements into two categories. Firstly, there are forms which are both infrequent and innovative, but nevertheless not productive. These were characterized as "creative" in section 2.2.3. Secondly, some forms are rare, but not innovative, and hence not productive. This second category could potentially be relatively large. It comprises for example rarely occurring forms which are derived by formerly productive processes (cf. van Marle 1991: 157), and forms which are not new, but which are used infrequently because they are highly specialized technical terms (Renouf 1993: 132). Other types may be infrequent because they have special connotations. Unfortunately, the types in question will also be included in the new-type rate, which is suggested below to be an alternative to the hapax rate. To distinguish between types which are infrequent because they are new and types which are rare for other reasons will be a difficult task whatever index we use. When the kinds of forms just mentioned are counted as evidence of productivity, this will inevitably inflate the hapax rate to some extent, though presumably not enough to counterbalance the lowering effect that the hapax approach was said to have on the productivity rate. On the whole, therefore, the hapax approach is assumed to normally set the productivity level too low.

[53] Here, and in other cases where data from the 19th and 20th-century corpora are compared, I do not provide normalized counts. This is deemed unnecessary, as the two corpora are of the same size and should hence be comparable.

[54] For example, Elsness (1993: 14-15) reports a use of the passive progressive in the Early Modern English period, about 200 years before the construction was really put to use.

[55] To illustrate the degree of varibility at this stage, I may mention the number of Middle English spelling variants for the adjective *white*. According to the *Oxford English Dictionary* (2nd edition), there are more than 60 such variants!

[56] This prospect challenged the Neogrammarian view of a linguistic system as a set of uniform and homogeneous rules, which changes discretely from generation to generation (Romaine 1982: 257).

[57] Additional support for this claim may be the fact that both the *Oxford English Dictionary* and Webster (1986) supply a fairly large number of examples of stative adverbs from the 19th and 20th centuries, but only a few from before this time.

[58] Thus, Sapir (1927) claims that speech (and, we must assume, also other kinds of linguistic expression) is to a large extent a "personality trait".

[59] This problem is not special to the study of stative adverbs in English, but is inherent in any study of productivity, as there is normally more than one structure that can be used to express roughly the "same" semantic content.

[60] Cf. for example Keenan (1971), Lakoff (1971), Bartsch (1976), and McCawley (1983). In 1970 there was intense discussion about the logical scope of adverbs between Thomason (1970), Stalnaker (1970a and b), and Lakoff (1970a and b). However, as noted by Heny (1973: 217), the discussion took place in unpublished manuscripts which are not readily accessible to the public, and it thus did not have much impact on the theory of adverbial scope.

[61] The sentences in (1), (2) and (4) are from Swan (1982: 132).

[62] Nakamura (1997) refers to this type of approach as "semantic paraphrase analyses".

[63] As will be argued in chapter 6, adverbial paraphrases are not reliable in all instances. Thus, Koktova (1986: 7) seems to be right in maintaining that "such paraphrases should not be viewed as synonymous to the paraphrased adverbial expressions".

[64] It seems like an odd decision to include *certainly* and the like among the speaker-oriented adverbs when they are not considered to be speaker oriented at all. According to Jackendoff, it is done "for convenience" (1972: 69).

[65] This is to bring out the similarity between *break violently* and *smash*, which, according to Jackendoff, have similar semantic structures, "the former having semantic markers about violence added to *break* by projection rules, the latter having these markers already incorporated in its lexical entry" (1972: 71).

[66] The formulation of this rule is apparently coloured by the assumption that some "speaker-oriented adverbs" are not speaker oriented at all, but rather neutral (cf. above). In line with my argumentation that this is not the case, I should like to formulate P$_{speaker}$ so as to make it embed the clause as one argument and the speaker as the other. In other words, speaker-oriented adverbs are taken by Jackendoff to be one-place predicates, while in my view they are two-place predicates.

[67] Here I should like to add the speaker as a third argument, since I, as mentioned above, consider these adverbs to be both subject *and* speaker-oriented. Thus, adverbs of the *wisely* type are - when they have wide scope - in effect three-place predicates.

[68] Bellert finds Jackendoff's classification to be too broad. By taking into account a number of syntactic and semantic properties (for example the contribution of the adverb to the truth conditions of the clause, its ability to occur in negative and interrogative clauses, etc.), she subdivides Jackendoff's speaker-oriented adverbs into a number of subsets. However, this aspect of Bellert's analysis is of little consequence to the present study and will therefore not be discussed any further.

[69] In addition, Ernst discusses some other problems with Jackendoff's analysis, such as the fact that it makes a number of false predictions. For a discussion of this, cf. Ernst (1983: 337-359).

[70] In fact, the full template reads "The agent can be judged ADJ because of α, given normal assumptions about α and in the context of the situation designated by the sentence" (1983: 57). The bit following the comma is included to exclude "faking readings" and generic readings. For the purposes of this presentation it is not necessary to go into these issues, but cf. Ernst (1983: 53-57) for a discussion.

[71] Even in the cases where a unified approach is not possible because both readings will not fit into the same schema, the two readings may intuitively have something in common, however difficult it may be to pinpoint the shared aspect. I should think it is theoretically possible to come up with a unified approach to most adverbs, perhaps with the exception of cases where semantic abstraction processes have moved one of the

readings too far away from the adverb's original meaning.

[72] She even started to publish them before Ernst, as early as in 1982.

[73] Cf. also Swan (1988: 9 and 12).

[74] Cf. Mätzner (1860-1865: volume 1: 422, volume 3: 126), Western (1906: 76, 81), Poutsma (1926: 163 and 1928: 35), Heuer (1932: 120, 123), and Kruisinga (1932: 353). The idea also underlies Greenbaum's (1969) classification, though he does not use the term orientation.

[75] Notable exceptions are Dik (1975), Ernst (1983), and Ungerer (1988).

[76] Note that I am in this section discussing the manner category as traditionally described in the literature, and not all adverbs which are interpreted by Jackendoff's P_{manner} rule. The latter class, as mentioned in section 5.3.1, includes adverbs of the categories time, place, means, instrument, degree, etc., i.e. all adverbs that characterize the verb phrase in some way.

[77] According to Katz and Postal (1964), manner adverbs are actually derived from *in-an-ADJ-manner* structures. This claim, however, has been refuted several times, for example in Kuroda (1979).

[78] The examples are taken from Meyer-Myklestad (1967: 397-400), Lakoff (1970c: 157-167), Nilsen (1972: ch II), Karlsen (1990: 135-144) and Givón (1993: 71-73).

[79] This is a tradition not only in English grammar; the practice is followed by for example Helbig & Buscha (1986: 346) in their description of German adverbs.

[80] This is an example of the category I have termed a radiance adverbs, cf. section 1.3.

[81] In this sentence it seems that Ernst mixes up his own definition somewhat, since *deftly* is in fact not a semantic manner adverb, but ascribes a quality not only to the verb phrase but also to the subject.

[82] Cf. for example Quirk et al. (1972: 465-69, 1985: 574), Huang (1975: 30), Jacobson (1978: 31, 37-38), Swan (1982, 1990), Ernst (1983:), and Johansson & Lysvåg (1987: 250-251). Western discusses this category as early as the beginning of the century (1906: 87, 91), so the idea is not new. In spite of this, manner adjuncts and subject adjuncts are lumped together in many modern classifications, cf. for example Karlsen (1990).

[83] Quirk et al. (1985: 572-578) refer to the items in question as subject-oriented "subjuncts".

[84] Some divide the mental state and mental mode categories into more than two subsets; cf. for example Ernst (1983: 110-130), who splits the mental mode adverbs into two groups: mental mode adverbs and volitionals. Cf. also Quirk et al. (1972: 466-468, 1985: 574-75), who divide subject adjuncts into a "general group", which is an open class, and a "volitional group".

[85] Some subject adjuncts require other paraphrases, though (cf. Swan 1990: 37 and Killie 1993: chapter 2).

[86] Platt and Platt (1972: 239-241) use the term "object orientation"; however, they give only one example, which does not, to my mind, represent an example of an object-oriented adverb.

[87] Another case in point here would be so-called "passive-sensitive" adverbs, i.e. adverbs whose orientation is ambiguous in passive sentences. Examples such as those in (v) and (vi) below are well-known in the literature on adverbs. The phenomenon will not, however, be discussed here. Cf. instead Killie (1993: 66-68) and Swan (1988: 18-19) for further information and references.

v   She was reluctantly examined by the doctor.

vi   She was cheerfully seduced by John.

[88] The full reference is: Holt, Hazel (1991). *The Cruellest Month*. London: MacMillan. The novel is not in the corpus of the present study, and it is therefore not included in the list of primary references.

[89] In Killie (forthcoming a) it is demonstrated that with respect to the interpretation of stative adverbs, native-speaker judgements differ enormously.

[90] This kind of reasoning is, of course, what motivates the use of paraphrases with adjectives in adverbial studies.

[91] These readings could be argued to be not semantically but rather pragmatically motivated, since it depends on real-world knowledge. However, to my mind the distinction between semantic and pragmatic meaning is highly artificial, as most semantic knowledge must be said to be pragmatically conditioned.

[92] Heuer (1932) in discussing structures such as *shine bright(e)(ly)*, remarks that "Hier sind syntaktisch die Grenzlinien zwischen Adverb und postattributivem Adjektiv verwischt" (1932: 91).

[93] Western's claim that the sentence *The wood was burning bright* is ungrammatical is contested by several of my English-speaking connections; however, this is an issue which will not be pursued here.

[94] There are, however, several similar uses in the *British National Corpus*, two examples of which are rendered in (vii) and (viii) below.

    vii   On the left a sergeant's mouth was moving *hugely* as he tried to urge men forward to another assault on the German trench that ran down the railway track (FNV 3185)

    viii   Behind Anne I could see another pianist, looming *hugely* over the wall and ceiling, waiting to turn the pages (J17 3094)

[95] Western (1906: 85-86) has a discussion of this issue, where he provides a number of examples involving different types of adverb.

[96] Some parallel examples with other types of adverb are discussed in Western (1906: 84-85) and Killie (1994: 57).

[97] The same claim is expressed in Valera (1998: 271).

[98] The placement of an adverb of course also serves thematic purposes, as the different clause positions serve as focus positions, scene-setters, etc; however, this is an issue which will not be addressed here.

[99] Cf. also Quirk et al. (1985: 573, 578).

[100] This also implies that in many instances the interpretation of a speaker may not correspond to the intentions of the writer; in other words, we may not always understand the utterances of other people as perfectly as we think we do. According to Hopper & Traugott (1993: 64), such discrepancies between intentions and interpretations are probably an important source of linguistic change. To be sure, Hopper & Traugott discuss speaking situations and not written text; however, I see no reason why their hypothesis should not be applicable to written contexts as well.

[101] This is also suggested by Swan (1997: 191).

[102] It has even been maintained that striking uses of *–ly* adverbs may have an "ironisch-humoristiscen Stilwirkung", and therefore "dient... den Zwecken der Stilkomik" (Heuer 1936: 121-122, 129).

[103] The same point is made for Norwegian by Vinje (1970: 158).

[104] I provide no evidence for this claim because, as noted in section 6.1, the indeterminate nature of orientation makes the quantification of this factor impossible.

[105] Wilmet provides no further publication data for this book, and it is therefore not included in the bibliography of the present study.

[106] The term "modifier" is also a possible choice of word, though its traditional, restricted use, viz. to refer to an element which does not have an independent function in the clause, may make it wise not to use this term. The term "qualifier" has not been much used, and is hence much less fraught with other meanings.

[107] In structures such as *even John* and *precisely that book*, the adverbs are not considered to occur in attributive position, i.e. be subordinate to the noun, but to occupy an independent position outside the noun phrase.

[108] Cf. Western (1921: 111-112), Vinje (1970: 107-111), Lie (1984: 84), and Swan (1990: 47). Poutsma (1928: 344) refers to elements in this function as "predicative adnominal adjuncts", while Helbig & Buscha (1986: 339) use the term "prädikatives Attribut".

[109] Cf. Lass (1980: 120-122), Gumperz (1982: introduction), Nerlich (1990), Milroy (1992: sections 2.0 and 2.1), and Keller (1994: chapter 3).

[110] There has, however, been an upsurge of interest in these ideas in recent years, however (cf. for example Waldron 1985, Lass 1990, Deacon c1997, and Ogura & Wang 1998 and the references therein).

[111] Keller's "invisible hand" approach (1985, 1990, 1994) represents a compromise between the two positions just outlined. In Keller's view, language and linguistic change are partly speaker-based and partly autonomous. Specifically, the linguistic actions that lie at the base of linguistic change are under the control of each language user. By contrast, the linguistic "macro-effects" (i.e. the changed structure which results from the individual linguistic actions) are brought about by causal mechanisms, and are hence beyond the control of the individual.

[112] Of course, in a sense all causes are mental(ist), though of course they derive from conditions outside ourselves. Reading historical accounts, one is often left with the impression that the causes of linguistic change are conceived of as phenomena with an existence of their own; however, for example social phenomena have no objective existence. They are not directly available to us, but exist in the mind of each human as the result of his or her interpretation of some aspect of the outside world. In other words, social "facts" are individual-psychological internalizations of some external condition. Thus, causes are only ultimately social, linguistic or historical; our contact with these norms is through our internalization, or interpretation, of them. This is probably what Keller means when he claims that "[t]here is nothing, neither a structural attribute, nor a power or 'force', which has any *direct* effect on language. Every linguistic process has to go through the individual and must be explained on this basis" (Keller 1994: 93, emphasis added).

[113] This aspect of Sapir's drift is discussed and problematized in Lass (1987).

[114] Thus, Itkonen refers to a faculty which is termed "unconscious rationality" (1982: 144, 146).

[115] A similar view is held by Joseph (1992: 133), who claims that "one has to reckon with speakers who, unintentionally of course, might analyze an element of their language in such a way that it differs from its historically justified analysis, even when the historically "correct" analysis is reasonably well justified synchronically as well.

[116] In the same vein, Stein (1990: 333) speaks of "variants of economy on different levels". Bourcier (1981: 14) maintains that there is an "inherent sluggishness not only of

the vocal organs but also of human nature in general, both of which favour economy of effort".

[117] In the same vein, Sapir refers to "our unconscious desire for form symmetry" (1921: 159). Cf. also Andersen (1990: 17, 18).

[118] The terms transparent/transparency and opaque/opacity are used here in an "everyday", i.e. non-generative sense (i.e. meaning something like 'easy to interpret on the basis of the "one form-one function principle"').

[119] Another of Lass's objections is that we cannot prove in how many percent of the potential cases linguistic changes go in this particular direction, viz. in the direction of greater simplicity and transparency. This is of course true, but if we are to require this kind of evidence for our claims, we would hardly be able to make any claims at all. After all, the data that we have at our disposal constitute only a small fragment of the history of languages, and hardly a "representative selection". For a criticism of Lass's views, see Samuels (1987).

[120] The problem is pointed out also by Crowley (1987: 243).

[121] Cf. also Lass (1980: 83), Harris (1982: 6, 14), Traugott (1982: 466), Faarlund (1990: 34-37), and Heine (1994: 255). Keller (1994) and Vennemann (1993) take this principle to the extreme in trying to explain all language use (and indeed all human behaviour) in terms of one single non-linguistic principle, i.e. to "be socially successful" in the case of Keller (1994: 86, 88), and to "improve their condition" in the case of Vennemann (1993: 321).

[122] This is by no means an automatic process; ongoing changes may stagnate or even reverse themselves (Bauer 1994: 21, 25, Smith 1996: 142-150, Lass 1997: 140).

[123] The phenomenon is not unknown in science. Watson (1980: 173-174), for example, reports an incidence from biology, or specifically, from the world of the Japanese monkey *Macaca fuscata*, which has been studied intensely for several decades. The species lives in a number of wild colonies. In the colony which lives on the island of Koshima, scientists made provision stations containing dirty potatoes. The monkeys did not know what to do with the dirty potatoes, until one of the them – Imo - discovered that one could wash them in a stream nearby. Imo taught the trick to her mother and playmates, who in turn spread the news to their mothers. Gradually, the whole colony learned to wash dirty food before eating it. This is perhaps only what was to be expected. The funny thing, however, is that "the habit seems to have jumped natural barriers and to have appeared spontaneously... in colonies on other islands and on the mainland in a troop at Takasakiyama" (Watson 1980: 174).

[124] This fact is noted by Milroy (1992: 5, 165).

[125] The claim is partly contradicted by Opdahl's (1991) results, which show that at least with regard to written English, zero forms are in fact more frequent in British than in American English (1991: 24).

[126] Cf. Heuer (1932: Kapitel II), Swan (1984, 1990, 1996, 1998), Killie (1993), and Swan & Breivik (1997).

[127] Swan (1997: 180, 181) considers this function to be secondary.

[128] Cf. also expression such as "quasi-predicative" (Jespersen 1949: 358) and "quasi-adverb(ial)s" (Nevalainen 1997: 154, 180, and repeatedly in the *Oxford English Dictionary*).

[129] It is not unlikely that similar processes may have caused the –ly suffix to spread to other kinds of linguistic items as well, such as mental mode and mental state adverbs. This issue will not be discussed in any more detail here, however.

[130] In this respect we may note that many of the adverbs in (11) to (15), which were said

to possibly represent associative patterns for the development of stative adverbs, are indeed the result of adverbialization.

[131] For a comprehensive account of drift within various frameworks of modern linguistics, see Vennemann (1975).

[132] He elsewhere uses the terms "conspiracy" (1974a, 1974b and 1980: chapter 3) and "center of gravity" (1977).

[133] A related idea is the suggestion of de Saussure (1911) and Bloomfield (1933) that regular patterns which occur with many forms are more likely to influence other forms by analogy (cf. Moder 1992: 180).

[134] There is some empirical evidence that seems to support this claim. With respect to disjuncts, Ramat & Ricca (1998: 218) show that of 40 European languages, English is the language which has lexicalized the highest number of adverbial concepts. This is also support in favour of Swan's claim that some languages are more adverbial than others, and that English is more adverbial than most (1997: 186-187, 1998: 451).

[135] This is strongly suggested by the correspondence I have had with those 20th-century writers who use stative adverbs most, cf. section 8.3.4 below.

[136] All of Western's examples are from sources which are not included in the corpus of the present study, which would seem to indicate that the corpus texts are by no means untypical in that they use stative adverbs.

[137] This assumptions is based on "uniformitarianism", which assumes that "the principles governing the world (...) were the same in the past as they are now" (Lass 1997: 25, cf. also Christy 1983). We should have in mind, however, that alongside such universal principles there will also be language-specific, i.e. cultural, factors which may blur common lines of development.

[138] Similarly, Burrows (1992: 191) claims that from around 1800 the "language of English fiction (like the English language generally?) continued its passage towards modern vernacularity".

[139] A similar tendency is noted by Burrows (1992: 191), who interprets this as "evidence of a change from a more complex to a less highly wrought syntax".

[140] The suffix can, of course, be added to other types of element as well, cf. derivations such as *matter-of-factly*, *out-of-breathly*, etc. (Baayen & Renouf 1996: 83).

Appendix 1: Abbreviated titles

Alcott BM	Alcott, Louisa May: *Behind a mask: or, A woman's power*
Alcott LW	Alcott, Louisa May: *Little women.*
Allingham FJ	Allingham, Margery: *Flowers for the judge.*
Amis DB	Amis, Martin: *Dead babies.*
Amis OPMS	Amis, Martin: *Other people: A mystery story.*
Bennett GBH	Bennett, Arnold: *The Great Babylon Hotel.*
Bierce CSTB	Bierce, Ambrose: *Can such things be?*
Brontë WH	Brontë, Emily: *Wuthering heights.*
Brooks LC	Brooks, Maggie: *Loose connections.*
Cabell CH	Cabell, James Branch: *The certain hour.*
Chettle KHD	Chettle, Henrie: *Kind-Harts dreame.*
Cleland FH	Cleland, John: *Fanny Hill: memoirs of a woman of pleasure.*
Collins WW	Collins, Wilkie: *The woman in white.*
Crane RBC	Crane, Stephen: *The red badge of courage.*
Davis PA	Davis, Richard Harding: *The princess Aline.*
Dexter SWNQ	Dexter, Colin: *The silent world of Nicholas Quinn.*
Dexter WW	Dexter, Colin: *The way through the woods.*
Dickens CC	Dickens, Charles: *A Christmas carol.*
Dickens GE	Dickens, Charles: *Great expectations.*
Eliot SM	Eliot, George: *Silas Marner: The weaver of Raveloe.*
Ferber BSD	Ferber, Edna: *Buttered side down.*
Forrest DTP	Forrest, Norman: *Death took a publisher.*
George FSE	George, Elizabeth: *For the sake of Elena.*
George GD	George, Elizabeth: *A great deliverance.*
Gunn SD	Gunn, Neil M.: *The silver darlings.*
Hardy JO	Hardy, Thomas: *Jude the obscure.*
Hariot BTR	Hariot, Thomas: *A briefe and true report of the new found land of Virginia.*
Hawthorne SL	Hawthorne, Nathaniel: *The scarlet letter.*
James TD	James, P.D.: *A taste for death.*
Joyce PAYM	Joyce, James: *A portrait of the artist as a young man.*
Lawrence LCL	Lawrence, D. H.: *Lady Chatterley's lover.*
Lawrence SL	Lawrence, D.H.: *Sons and lovers.*

Lewis OMR	Lewis, Sinclair: *Our Mr. Wrenn: The romantic adventures of a gentle man.*
MacLaverty SOS	MacLaverty, Bernhard: *Secrets and other stories.*
MacLaverty TD	MacLaverty, Bernhard: *A time to dance.*
Melville BS	Melville, Herman: *Bartleby the scrivener.*
Milton PL	Milton, John: *Paradise lost.*
Murdoch SH	Murdoch, Iris: *A severed head.*
Ouida DFOS	Ouida (Louisa de la Ramé): *A dog of Flanders and other stories.*
Rendell PC	Rendell, Ruth: *Put on by cunning.*
Roberts FF	Roberts, Charles G. D.: *The forge in the forest.*
Rogers SF	Rogers, E. Mandevill: *Steadfast falters.*
Sharpe PB	Sharpe, Tom: *Porterhouse blue.*
Stevenson DJMH	Stevenson, Robert Louis: *The strange case of Dr. Jekyll and Mr. Hyde.*
Twain ATS	Twain, Mark: *The adventures of Tom Sawyer.*
Wells TM	Wells, H. G.: *The time machine.*
Wilde PDG	Wilde, Oscar: *The picture of Dorian Gray.*
Woolf VO	Woolf, Virginia: *The voyage out.*

Appendix 2: Size of the corpus texts

Middle English (1100-1500)	no. of words
Anon, Alphabet of tales	179400
Anon, The alliterative morte Artur	42900
Anon, Blanchardyn and Eglantine	77300
Anon, Book of the knight of La Tour-Landry	81300
Anon, Everyman	7400
Anon, The owl and the nightingale	4000
Anon, Pearl	8500
Anon, Pierce the ploughmans crede	9700
Anon, Prose life of Alexander	47700
Anon, Sawles warde	4900
Anon, The siege of Jerusalem	6700
Anon, Sir Gawain and the green knight	21300
Anon, The three kings' sons	108400
Dunbar, The tretis of the twa..	6000
Gower, Confessio amantis	245000
Helsinki Corpus, ME section	608600
Julian of Norwich, A Revelation of love	55100
Langland, The vision of Piers Plowman	80100
Layamon, Layamon's brut	166600
Paston family, Paston letters..	253600
Rotelande, The lyfe of Ipomydon	18000
total	2032500

Early Modern English (1500-1700)	no. of words
Anon, The King and Queenes entertainment..	4650
Ascham, The scholemaster	23750
Bacon, The new Atlantis	15400
Behn, Oroonoko	29200
Behn, The unfortunate happy lady..	10500
Browne, Letter to a friend	7150
Cavendish, George, The life and death..	72150
Cavendish, Margaret, A true relation..	9000
Chettle, Kind-Harts dreame	14000
Elyot, The boke named the Governour	40150
Fox, George Fox. An autobiography.	128200
Green, Groton in the witchcraft times	8250
Hall, Characters of virtues and vices	16800
Hariot, A briefe and true report..	13200
Helsinki Corpus, EModE section	551000
Jonson, Volpone	28100
Jonson, The alchemist	32000
Marlowe, The jew of Malta	20440
Marlowe, The massacre at Paris	11400
Middleton, Christopher, The famous historie..	25000
Middleton, Thomas, The phoenix	27600
Middleton, Thomas, The revenger's tragedy	33500
Milton, Aeropagitica	18000
More, The history of King Richard the Third	30850
More, Utopia	42600
Naunton, Fragmentalia regalia..	20000
Ro:Ba, The life of Syr Thomas More..	60000
total	1292890

18th century:	no. of words
Brooke, The history of Julia Mandeville	63400
Burney, Dr. Johnson and Fanny Burney	57200
Cleland, Fanny Hill..	85600
Cowley, The runaway, a comedy	4100
Defoe, Robinsoe Crusoe	121500
Fielding, The history of Tom Jones, a foundling	346300
Franklin, The autobiography of Benjamin Franklin	66300
Gay, The beggar's opera	22400
Goldsmith, The vicar of Wakefield	63800
Gronniosaw, A narrative of the most remarkable..	14200
Hodgson, The boats of the "Glen Carrig"	67300
Johnson, The history of Rasselas, Prince of Abissina	37000
Johnson, The life of Savage	32400
Montagu, The prose and poetry of Lady Mary..	6600
Rowson, Charlotte Temple	37000
Schaw, Journal of a Lady of Quality	32850
Sheridan, Memoirs of Miss Sidney Bidulph	200000
Sterne, A sentimental journey through France..	40700
Swift, Gulliver's travels	103700
Wollstonecraft, Maria, or the wrongs of woman	46700
Woolman, The journal of John Woolman	60000
total	1509050

19th century:	no. of words
Alcott, Little women	186200
Alcott, Behind a mask: or, A woman's power	41000
Alger, A fancy of hers	30500
Austen, Sense and sensibility	119400
Bierce, Can such things be?	62000
Brontë, Wuthering heights	116800
Collins, The woman in white	110000
Cooper, The last of the Mohicans	150000
Crane, The red badge of courage	46600
Davis, The princess Aline	26200
Dickens, A christmas carol	29100
Dickens, Great Expectations	187800
Eliot, Middlemarch	380000
Eliot, Silas Marner	72500
Hardy, Jude the obscure	145600
Hawthorne, The scarlet letter	86000
Melville, Bartleby the scrivener	14500
Morris, News from nowhere, or, an epoch of rest	78400
Ouida, A dog of Flanders and other stories	66500
Poe, The murders in the Rue Morgue	14100
Roberts, The forge in the forest	50700
Scott, Ivanhoe. A romance	197000
Shelley, Frankenstein	78600
Stevenson, The strange case of Dr. Jekyll and Mr. Hyde	26000
Stoker, Dracula	161000
Trollope, Ayala's angel	198900
Twain, The adventures of Tom Sawyer	72200
Wells, The time machine	32500
Wilde, The picture of Dorian Gray	80200
total	2860300

20th century:	no. of words
Allingham, Flowers for the judge	84000
Amis, Dead babies	75000
Amis, Other people: a mystery story	70000
Barnes, The porcupine	40700
Bennett, The Grand Babylon Hotel	68400
Brooks, Loose connections	50800
Buchan, The thirty-nine steps	40900
Burroughs, The beasts of Tarzan	63600
Cabell, The certain hour	57100
Christie, Five little pigs	66600
Daviess, The elected mother	4500
Dexter, The silent world of Nicholas Quinn	75500
Dexter, Through the woods	70000
Ferber, Buttered side down	46200
Forrest, Death took a publisher	63500
Forster, Howard's end	112000
George, A great deliverance	104500
George, For the sake of Elena	156500
Gunn, The silver darlings	134400
James, A taste for death	149000
Joyce, A portrait of the artist as a young man	86000
Joyce, Ulysses	304900
Lawrence, Lady Chatterley's lover	117200
Lawrence, Sons and lovers	163300
Lewis, Our Mr. Wrenn	77300
MacLaverty, A time to dance	50000
MacLaverty, Secrets and other stories	45000
Murdoch, A severed head	70000
Rendell, Put on by cunning	70000
Rogers, Steadfast falters	41300
Sharpe, Porterhouse Blue	78800
Sharpe, Wilt	80900
Woolf, The voyage out	137200
total	2855100

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Anon.
    1993   *The alliterative morte Arthure.*
Anon.
    1997   *Blanchardyn and Eglantine.*
Anon.
    1997   *Book of the knight of La Tour-Landry.*
Anon.
    1993   *Everyman.*
Anon.
    1993   *The owl and the nightingale.*
Anon.
    1993   *Pearl.*
Anon.
    1996   *Pierce the ploughmans crede.*
Anon.
    1997   *Prose life of Alexander.*
Anon.
    1993   *Sawles warde.*
Anon.
    1993   *The siege of Jerusalem.*
Anon.
    1993   *Sir Gawain and the green knight.*
Anon.
    1997   *The three kings' sons.* Part I.
Dunbar, William
    1993   *The tretis of the twa mariit women and the wedo.*
Gower, John
    1993   *Confessio amantis.*
Henryson, Robert
    1993   *Orpheus and Eurydice.*
Henryson, Robert
    1993   *The testament of Cresseid.*
Julian of Norwich.
    1996   *A revelation of love.*

Langland, William
    1993   *The vision of Piers Plowman.*
Layamon
    1993   *Layamon's brut.*
Paston family
    1993   *Paston letters and papers of the fifteenth century. Part I.*
Rotelande, Hue De
    1996   *The lyfe of Ipomydon.*

Early Modern English corpus:

Helsinki Corpus
    1991   *The Helsinki corpus of English texts: diachronic part.* Early
                   Modern English section, in: ICAME. Bergen: Norwegian
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Anon
    1998   *The King and Queenes entertainment at Richmond.*
                   http://darkwing.uoregon.edu/~rbear/ent.htm:
                   Renascence Editions/Richard Bear.
Ascham, Roger
    1998   *The scholemaster.* Collocation of 1st and 2nd.
                   http://darkwing.uoregon.edu/~rbear/ascham1.htm: Judy Boss.
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Cavendish, George.
    1997   *The life and death of Cardinal Wolsey.* http://library.utoronto.ca/
                   www/utel/ret/ret.html: Web Development Group (University of
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    no date   *A true relation of my birth, breeding, and life.* http://www.acs.
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Chettle, Henrie
    1998   *Kind-Harts dreame.* http://darkwing.uoregon.edu/~rbear/kind.
                   html: Richard Bear.

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                Nebraska.

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