Epistemic and Evidential Sentence Adverbials in Danish and English

A Comparative Study

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1 Introduction

This dissertation is a comparative investigation of the systems of epistemic and evidential sentence adverbials in Danish and English. It is founded on a hypothesis that speakers of Danish as well as English in their respective languages have access to a number of systematically organized adverbials that allow them to specify which degree of force or which type of source supports the utterances they put forward. Sentence adverbials that specify degree of force may be called epistemic, while those that specify source may be called evidential. The two types may be illustrated by means of the following examples:

(1) Svampen er sandsynligvis giftig  epistemic
(2) Svampen er angivelig giftig  evidential
(3) The fungus is probably poisonous  epistemic
(4) The fungus is reportedly poisonous  evidential

Epistemic adverbials are concerned with the notional category of epistemic modality and evidential adverbials with the notional category of evidentiality. Kronning (2004) has aptly summed up the essence of these two notional categories by describing them as *kunskapens styrka*, the force of knowledge, and *kunskapens källa*, the source of knowledge, respectively. The two categories are often more or less conflated in the literature on modality (cf. Palmer 1986:51ff, Chafe 1986:262), yet it is a basic assumption of this dissertation that epistemic modality and evidentiality, although closely related, are in fact distinct notional categories and should be treated as such. The purpose of the dissertation is to investigate and compare how the notional categories of epistemic modality and evidentiality are structured by adverbial systems in Danish and English.

1.1 Research Questions

The research questions that I set out to answer in the dissertation are the following:

*How are the notional categories of epistemic modality and evidentiality structured by adverbial systems in Danish and English?*

And

*What are the differences and similarities between the systems of epistemic and evidential sentence adverbials in Danish and English?*

My primary aim is thus to describe and compare the systems of epistemic and evidential sentence adverbials in Danish and English. Secondarily I shall also be concerned with the questions of how the notions of epistemic modality and evidentiality should be defined and what the relation between them is.
1.2 Motivation & Background

The work presented in this dissertation emerges from a continual interest in linguistics, particularly the study of Danish and English. A number of subjects which have preoccupied me at various periods during the last five years may be said to form the inspirational basis of the current study. They include the study of functional grammar, linguistic polyphony theory, epistemic modality and evidentiality (Mortensen 2006 & 2005, Borch et al. 2003), the linguistic analysis and functional description of fictional texts in Danish and English (Mortensen 2002, Bohn et al. 2002), and finally the relation between Danish and English, especially in translated texts (Baggesen et al. 2001, Christensen et al. 2001).

As indicated by this list, I have been equally engaged in the study of language-as-system and the study of particular texts in the two languages. In this study I focus on Danish and English as systems, or rather, a small corner of the language systems of Danish and English. The dissertation is conceived as a basic contribution to the understanding of the epistemic and evidential sentence adverbials in Danish and English, and the study may thus be described as a piece of basic research (=Danish 'grundforskning'). The study represents an attempt to work out a coherent functional-structural description of a linguistic phenomenon which, as far as I know, has not hitherto been described in the same detailed manner, neither as far as Danish nor English is concerned.

The dissertation is thus clearly situated within the realm of theoretical linguistics, yet I believe the analyses presented here will provide interesting perspectives not only for further studies within theoretical linguistics but also within applied linguistics, for instance translation studies and language teaching. On the theoretical side, I believe the dissertation constitutes a relevant contribution to the understanding of the systems of sentence adverbials in Danish and English. Furthermore, it also adds to the understanding of how the notional categories of epistemic modality and evidentiality are coded in Danish and English.

To some extent, epistemic and evidential sentence adverbials share semantic features with the modal verbs in Danish and English which have arguably constituted the main object of research on modality in both languages (cf. Palmer 1979, 1990; Davidsen-Nielsen 1990; Klinge 1993; Brandt 1999; Boye 2001). A number of modal verbs in Danish as well as English express epistemic modal meaning, e.g. kunne, måtte, and burde in Danish and can/could, may/might and must in English. The category of evidentiality, however, is less relevant to the systems of modal verbs in both languages, although it is common to note that the Danish modal verb skulle in fact has a variant which may be called “quotative” or “evidential” (Palmer 1986:71-72, 2001:40).\(^1\)

\(^1\) An example of this variant of skulle is given on p. 25.
Yet, epistemic modality and evidentiality are not only relevant to the modal verbs in Danish and English but certainly also, as far as evidentiality is concerned even more so, to the group of adverbials often referred to in the literature as ‘modal adverbs’ (e.g. Swan 1980). It is within this broader group that we find the epistemic and evidential sentence adverbials. However, in comparison with the modal verbs, the ‘modal adverbs’ have generally received scant attention in the literature, i.e. in distinction to the modal verbs, the epistemic and evidential adverbials remain fairly unexplored as a grammatical category. In this dissertation I shall argue that it is indeed possible to identify distinct groups of epistemic and evidential sentence adverbials in both Danish and English and that these groups may be said to constitute a grammatical category. Within the systems all members are concerned with distinctions along a limited number of semantic axes, of which force and source are the primary ones. The systems may be illustrated by means of the following examples. Examples (5) and (6) provide a partial illustration of the systems of epistemic and evidential adverbials in Danish while (7) and (8) illustrate the corresponding systems in English.

(5) Svampen er sandsynligvis/muligvis/utvivlsomt spiselig epistemic system
(6) Svampen er angivelig/tilsyneladende/åbenbart spiselig evidential system
(7) The fungus is probably/possibly/undoubtedly edible epistemic system
(8) The fungus is reportedly/apparently/seemingly edible evidential system

The groups of adverbials illustrated in (5)-(8) have been recognized by a number of authors, although the way the groups are defined and the names they are assigned differ considerably from author to author, cf. Jacobson (1964), Greenbaum (1969), Michell (1976), Swan (1980, 1988), Quirk et al. (1985:620ff), Hoye (1997), Andersen (1986) and Hansen & Heltoft (2005). However, earlier studies tend to leave off where the present one begins. The groups of epistemic and evidential adverbials – or groups that resemble these groups – have indeed been noted on a general level by several authors. Yet, the detailed investigation of how the individual adverbials within these groups relate to and differ from each other has not yet been carried out.

1.3 Outline

In Chapter 2, I present the theoretical framework which the dissertation is based upon, viz. Danish Functional Linguistics as well as elements of Scandinavian polyphony theory and contrastive linguistics. Chapter 3 presents the tertium comparationis which forms the basis of the comparison between the adverbial systems in the two languages. The tertium is double, tied to content as well as expression. On the content side it consists of the notional categories of ‘epistemic modality’ and ‘evidentiality’, on the expression side it is delimited
to the grammatical category of ‘sentence adverbials’. The chapter will provide answers to what is understood by these three concepts in the dissertation. In Chapter 4, I account for the method I have employed in the analysis while the analyses themselves are presented in Chapters 5 & 6, which make up the bulk of the dissertation. In these two chapters I answer the first research question outlined above. In Chapter 7 I move on to answering the second research question by comparing and discussing the analyses presented in Chapters 5 & 6. Finally, in Chapter 8 I conclude and present some perspectives for further research.

Throughout the text ‘English’ refers to British English, unless indicated otherwise. Examples, footnotes, figures and tables are numbered successively within each chapter.
2 Theoretical Framework

Danish Functional Linguistics provides the general theoretical framework of this dissertation. To accommodate the investigations particular focus on sentence adverbials and contrastive studies, the basic framework is complemented by elements of Scandinavian polyphony theory as well as theory of contrastive linguistics.

2.1 Danish Functional Linguistics

Danish Functional Linguistics (DFL) is a research community affiliated with the Linguistic Circle of Copenhagen. It gathers a number of Danish linguistics around a theoretical framework, which has recently been outlined in Engberg-Pedersen et al. (2005) and before that in Engberg-Pedersen et al. (1996). The particular brand of functionalism which DFL represents shares some basic views with other functional schools, e.g. Systemic Functional Grammar (cf. Halliday 1994, Halliday & Matthiessen 2004), Dutch Functional Grammar (cf. Dik 1997) and American functionalism (cf. Givón 1995). A common denominator between the different functional schools – and what most effectively sets them apart from formal/generative schools (cf. Chomsky 1965, 1997) – is the perception of language as being essentially functionally motivated: languages look the way they do because they serve a range of functions, most importantly the facilitation of communication and social interaction, while corresponding to the cognitive, physiological and social skills of the human being (Jakobsen 1995:11). As Harder explains:

> Functionalists believe that linguistic elements can only be understood by looking at the jobs they do in communication, because that is what explains why they recur and pattern the way they do (Harder 1996:154).

While it is probably safe to say that this basic view – in some shape or form – is shared amongst all the functional schools mentioned above, it is definitely true to say that they differ on a number of other points. In the following I shall try to explain what distinguishes the specific brand of functionalism that underpins the present work.

2.1.1 Structuralism Goes Functional

Danish Functional Linguistics is in many ways influenced by European structuralism, particularly by the work of Louis Hjelmslev, but obviously also by the fundamental work of Ferdinand de Saussure. Saussure founded European linguistic structuralism by introducing the distinction between la langue, language-as-system, and la parole, language-as-use, and arguing that the synchronic study of la langue was the proper object of linguistics. In structuralist theory la langue is perceived as an abstract (immanent) system of signs in

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1 The attribute Danish is perhaps somewhat misleading, since the school is primarily associated with University of Copenhagen and Roskilde University and less consistently with linguists at the universities of Funen and Jutland.
which every sign acquires its meaning not by reference to objects in the world but by its relation to (and difference from) other signs. These insights are central to the framework of Danish Functional Linguistics, although most of them have undergone extensive revision – or even reanalysis – in light of the functional view of language. One of the most central points where DFL runs counter to traditional structuralism is in relation to the conception of language as having an entirely arbitrary relation to the non-linguistic world. In order to explain what this disagreement consists in, it is necessary first to outline in some detail how the relation between the linguistic sign and the non-linguistic world is perceived by Saussure and Hjelmslev.

**Saussure & Hjelmslev**

Saussure introduces the notion of the binary linguistic sign, i.e. the conception of the linguistic sign as being comprised of a *signifiant* and a *signifié* (an expression and a content side) which stand in arbitrary relation to one another. This may be illustrated like this:

![Figure 1 Saussure's sign concept](image)

In simplified terms, content may be perceived as ‘thought’ and expression as ‘sound’. To Saussure, ‘thought’ and ‘sound’ are “amorphous masses”, substances which are devoid of shape or form until the introduction of linguistic structure:

> We can envisage the linguistic phenomenon [...] – the language, that is – as a series of adjoining subdivisions simultaneously imprinted both on the plane of vague, amorphous thought [...], and on the equally featureless plane of sound [...]. [...] language takes shape with its linguistic units in between those two amorphous masses. [...] The contact between them gives rise to a form, not a substance.

(Saussure 1993 [1916]: 110-111)

Hjelmslev (1966:44ff) refines this view by introducing a tripartite distinction between *form*, *substance* and *purport*, which applies to the content side as well as the expression side of language. *Form* is tied to the linguistic sign and is thus inherent to language while *purport*, this term “being a rather strange translation of the Danish *mening*” (Dahl 1998:41), denotes the non-linguistic world, i.e. that which is not structured by language. *Substance* results from the combination of form and purport (Hjelmslev 1966:46). Substance is thus essentially bound up with language, although not tied to specific linguistic signs (cf. Jakobsen 2005:59).

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2 = p. 155-157 according to the standard page numbers of the *Cours de linguistique générale*, adopted since the 2nd edition from 1922.
Purport does not have independent existence and therefore can only be perceived when formed by language as substance. We may illustrate Hjelmslev’s view like this:

![Figure 2: Hjelmslev’s extended sign concept]

By introducing these distinctions Hjelmslev aims to remedy what he perceives to be an oversimplification on the part of Saussure, namely the claim that substance exists independently of language. In Hjelmslev’s revised version it is clear that substance is entirely dependent on form.

Despite the differences outlined here, the views of Saussure and Hjelmslev converge on one important point: they both perceive language as having a certain primacy over the non-linguistic world: In Saussure’s case language structures amorphous substance, in Hjelmslev’s case language structures amorphous purport (Hjelmslev 1966:69). This, as we shall see below, is a view which is countered by DFL.

**DFL**

Proponents of DFL typically (although Jakobsen 2005 is an exception) merge *purport* and *substance* to one concept, which is then – somewhat confusingly – also called *substance*. Furthermore, *form* is typically renamed as *structure* to avoid confusion with *form* used in the meaning of *expression* which is common in American linguistics (Engberg-Pedersen et al. 1996:xv fn). Henceforth I shall also adopt this terminology.

The distinction between language specific structure and non-language specific substance is crucial to DFL. On the expression plane, the distinction between structure and substance corresponds to the distinction between phonemics, i.e. the study of the phonemes of a particular language, and phonetics, which may be defined as “the study of the nature, production, and perception of sounds of speech, in abstraction from the phonology of any specific language” (Matthews 1997:277). On the content plane, there is no established terminology to distinguish between the two, but the distinction is in principle the same. Thus, within the framework of DFL a theoretical distinction is drawn between universal content substance and the way this substance is structured by particular languages as content structure.
The classic structuralist view that substance is amorphous until the introduction of linguistic structure is rejected by proponents of DFL who hold that even though the non-linguistic world may not be structured by language, it is still structured by its inherent laws, e.g. physical, biological and psychological laws. The colour spectrum is a classic battlefield in this connection (cf. Harder 2005:9ff). The observation that languages differ in the number of colours they distinguish (some as few as two), was taken by the structuralists to mean that no such thing as ‘a colour’ pre-exists language, and this in turn was promoted as evidence for the claim that language held primacy over substance. But this line of argument quite clearly seems erroneous: the labelling of colours, even if it boils down to just two labels, surely presupposes the physical/cognitive ability to distinguish between colours. In fact, by extension, the structuralist view somewhat nonsensically comes to imply that a person – by definition – is colour blind until endowed with language. Moreover, scientific proof has later been presented which shows that the structure of the colour spectrum is in fact determined by the way the human organism is constructed to perceive colours (Harder 2005:9).

This implies that the idea of language as an immanent system cannot be upheld. Language is functionally motivated by the world as it is structured before us by physical, biological and psychological laws and by us by virtue of the apparatus of the human body and our social needs. But it does not mean that substance has primacy over language. The structure of language (content structure) is in a continual process of negotiation with the structure of the pre-linguistic world, and because languages are structured differently, each language produces a unique output on the basis of this process. We may say that different languages ‘cut the pie differently’, i.e. different languages structure the universal substance in different ways (Harder 2005:11). As Harder has pointed out (1998:62), content substance is the tertium comparationis which is presupposed by typological linguistics, and, we may add, also comparative linguistics. Yet, it is not sufficient to say that language ‘codes’ substance, perceived as various pre-linguistic functions; it must be explained how the functions are structured – and to some extent determined – by the particular language they are structured by. Content substance elements become linguistic only when they are associated with expression elements, and vice versa (Harder 1996:200). This is an important maxim of DFL, which helps distinguish the framework from most other functional schools – and at the same time mark out a clear difference to formal theories of language. In Harder’s words:

[...] in postulating elements either on the content or expression side, we always have to demonstrate that the element is associated with something on the other side of the coin. In relation to the generative pattern of description [...], it restrains postulation of invisible underlying formal distinctions. In relation to anti-structural functionalism it restrains the wholesale attribution of functional distinctions to the linguistic code itself. (Harder 1996:200-1)
It is necessary to have hypotheses about the nature of the pre-linguistic substance and how it is structured, but “we cannot assume that conceptual structure will glue to grammatical forms as their content” (Heltoft 2005:85). In other words, the notion of content substance is necessary, and as noted above, especially relevant for comparative linguistics, yet the view of language advanced by DFL implies that each language must be studied on its own terms to determine how it is structured by that particular language.

2.1.2 Instruction and Interaction

Another important aspect of DFL is its perception of meaning as being instructional (Harder 1996:214-215). According to this view, utterances are not perceived as fixed representations of situations, but rather as instructions to the hearer about how to form an interpretation. There is no assumed identity between the speaker’s communicative intention and the hearer’s resultant understanding:

A finished interpretation is an aspect of the addressee’s spatiotemporally concrete situation; linguistic meaning is a potential which is available for use in not yet actualized situations (Harder 1996:215).

The relation between speaker intention and hearer understanding may be considered analogous to that existing between a recipe, a cook and the resultant dish. The analogy has three distinct points (based on Harder 1996:215):

<table>
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<th>Language</th>
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<td>Each step requires the cook to carry out a specific action.</td>
<td>Every content element of an utterance requires the hearer to perform an interpretive action.</td>
</tr>
<tr>
<td>The cook needs to have access to the relevant primary produces and possess the necessary skills to carry out the instructions of the recipe.</td>
<td>The hearer needs to possess the relevant conceptual structure and linguistic skills to process the utterance.</td>
</tr>
<tr>
<td>The nature of the resultant dish is context-dependent.</td>
<td>The hearer’s interpretation of the utterance is context-dependent.</td>
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Table 1: Meaning as instruction

The instructional view of meaning is central to the analyses of the Danish and English sentence adverbials presented in this dissertation. The analyses aim to identify and describe the different instructions carried by the individual adverbials under investigation. In this pursuit, the view of language promoted within the Scandinavian school of polyphony theory, which we shall look at now, is an important source of inspiration.
2.1.3 Polyphony Theory

The linguistic theory of polyphony, henceforth polyphony theory, is based on a perception that language is essentially polyphonic, i.e. all texts – from single utterances to novels – standardly realize several points-of-view (POVs). Though the theory is not formally associated with DFL, the two theories are to some extent based on similar premises and may in my view be used to complement one another. I do not employ the formal descriptive apparatus of polyphony theory in this dissertation, but my description of the adverbials is influenced by insights gained through polyphony theory. In order to clarify this influence, I shall presently give a brief introduction to select areas of the theory.

The project of polyphony theory is to lay bare the linguistic “instructions of polyphony” (either lexical or grammatical), which are present in a given language (cf. Therkelsen 2004:79). The canonical example of polyphony is the following sentence (cf. Nølke 1989a:9-11, Therkelsen 2004, Fløttum 2000):

(1) This wall is not white

The negation, not, carries a specific instruction of polyphony that stages two points-of-view (POVs):

POV 1  This wall is white
POV 2  This wall is not white

The presence of the two POVs can be attested either by looking at two possible continuations of the utterance (1a, 1b) or by comparing two possible answers (1c, 1d) (based on Therkelsen 2004:81):

(1a) and that annoys my neighbour (= that the wall is not-white, POV 2)
(1b) but my neighbour thinks so (= that the wall is white, POV 1)
(1c) that I can agree to (= that the wall is not-white, POV 2)
(1d) I never said that it was (= that the wall is white, POV 1)

According to the polyphony theorists, it can thus be attested that the negation carries a specific polyphonic instruction that stages two different POVs. No matter what the context, two opposing POVs will always be present.4

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3 The concept of ‘polyphony’ originates in the works of the Russian linguist, literary scholar and philosopher Mikhail Bakhtin (e.g. Bakhtin 1984:21). Bakhtin used the concept to designate and analyse the presence of multiple voices within literary works, primarily novels. Later, however, the concept has been adopted and adapted by the French linguist Oswald Ducrot and further developed by Scandinavian linguists (cf. Nølke 1989a, Nølke et al. 2004, Fløttum 2000 and Therkelsen 2004). This has resulted in the emergence of the so-called linguistic theory of polyphony, which in many ways differs from the literary theory of polyphony.

4 Larsen & Ljungberg (2004) have questioned this analysis by claiming that it is in fact not the negation as such that causes polyphony. In their view, any constative speech act, negated or not, is polyphonic. Due to the principle of relevance, a constative speech act always enters into a dialogic relation, implicitly or explicitly, with the opposing view. Thus, the polyphony in (1) is caused by the mere fact that the sentence (in most contexts) will count as a constative speech act. I shall not pursue this discussion any further here.
Polyphony theory is based on a basic distinction between the sentence (la phrase) and the utterance (l'énoncé). The sentence is the linguist’s abstract construct, which is set in neither time nor place. The sentence has a meaning potential, and it carries various grammatical instructions as to how this potential can be realized, but it is basically open-ended in terms of meaning. The utterance, on the other hand, is defined as a string of linguistic items observable in time and place. The utterance is always set in a particular context, and this context takes part in creating the meaning of the utterance in a particular historical situation. Utterances are manifestations of sentences and as such help disambiguate the open-ended meaning potential of abstract sentences (Nølke 1989a:13ff, Therkelsen 2004). Sentences belong to the level of polyphonic structure, whereas utterances belong to the level of polyphonic configuration. These levels can be compared to the distinction between la langue and la parole, and like Saussure, the polyphony theorists are basically interested in the level of la langue, the level of polyphonic structure. The assumption is that the polyphonic structures, the polyphonic blueprints or instructions, as it were, of particular linguistic items and grammatical phenomena can be determined at this level.

In sum, polyphony theory may well be seen as a framework that provides specific tools to describe the instructional potential of linguistic meaning “which is available for use in not yet actualized situations,” to use Harder’s phrase quoted above.

**Polyphonic Adverbials**

Adverbials have been the subject of quite a few studies within polyphony theory, and with good reason: non-propositional adverbials are almost invariably polyphonic. Nølke (1989b) proposes a typical approach to the analysis of non-propositional adverbials, including what he calls illocutionary adverbials and modal sentence adverbials. The two kinds of adverbials are illustrated in (2) and (3) (examples borrowed from Nølke 1989b:54 & 60):

(2) *Franchement*, ce roman est excellent  [Honestly, this novel is excellent]
(3) Pierre est *peut-être* bête, mais il est riche  [Pierre is perhaps stupid, but he is rich]

Nølke argues that the polyphonic structure for both of these adverbials, indeed for all illocutionary and modal adverbials, is basically the same (Nølke 1989b:54, 59), viz.:

\[ M(p) \]

where 'M' represents the adverbial and 'p' represents “what the adverbial is working upon”, i.e. either an illocutionary act as in (2) or a propositional content as in (3). Nølke goes on to give the following, more elaborate, description of the polyphonic structure of modal sentence adverbs. 'Enunciator', e, is synonymous to point-of-view, POV:

A raw utterance of the type \( M(p) \), where M is a modal adverbial, presents two enunciators:

\[ e_p \] asserts p and is not necessarily associated with L [the speaker]
\[ e_m \] comments on the assertion of p and is always associated with L

(Nølke 1989b:60)
This analysis points out that the speaker is not necessarily responsible or, in Nølke’s terms, ‘associated with’ the proposition which is presented under the scope of the adverbial. He is, however, always responsible for the POV ($e_m$) which presents the assessment of the propositional content. This is an important distinction to make in the analysis of the epistemic and evidential adverbials.\footnote{Although the analysis is arguably very useful, it leaves room for improvement. It enables us to isolate the modal component, i.e. the adverbial, and group it along with other adverbials that share the same polyphonic structure, but the analysis does not enable us to distinguish the various modal adverbials from each other. Furthermore, Nølke does not explicate why the polyphonic structure consists of two, and only two, POVs. This is in fact quite typical for polyphonic analyses and points to a general need for clarification of the status of POVs within the theory (cf. Mortensen 2005). It is not necessary to pursue this issue further here.}

The notion of ‘responsibility’ has been developed in later works within the theory and has most recently been discussed in Nølke (2005:151-3). It is especially useful as a means to describe the relations that may exist between the speaker and the POVs for which he is not responsible. The speaker is always responsible for the utterance as such, but he may dissociate himself from some of the POVs generated by his utterance. In this connection, the polyphony theorists assume a basic distinction between responsibility and non-responsibility. Non-responsibility is standardly described as a continuum ranging from agreement to disagreement and can be further graded as neutral, refutation, or pretended acceptance. The basic principle is illustrated in figure 3:

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Non-responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>That the speaker assumes responsibility for a given POV implies that he vouches for the truth-value of the POV.</td>
<td>Agreement</td>
</tr>
<tr>
<td></td>
<td>\begin{align*} \uparrow \end{align*}</td>
</tr>
<tr>
<td></td>
<td>Disagreement</td>
</tr>
</tbody>
</table>

\textbf{Figure 3:} Responsibility vs. non-responsibility

In the case of \textit{not}, to give an example, the speaker is responsible for POV 2, whereas he is non-responsible for POV 1, with the specific value of refutation. The notion of responsibility is especially useful in relation to the analysis of the evidential adverbials, and I shall therefore return to it specifically in sections 5.4.2 and 6.4.

With these presentations of Danish Functional Linguistics and Scandinavian polyphony theory the main theoretical underpinnings of the dissertation have been elucidated, yet the comparative aspect of the dissertation still remains to be discussed.
2.2 Contrastive Linguistics

Contrastive or comparative linguistics is traditionally concerned with the comparison of two languages, or more specifically the comparison of a particular linguistic phenomenon in the two languages. Contrastive analyses thus typically seek to answer questions like: ‘What differences and similarities can be found between language X and language Y in relation to phenomenon Z’. – But what does it mean for two linguistic phenomena to be similar? What is it that is/should be compared in the analysis? And how does one go about setting up a valid method for the comparison? These are all classic questions of contrastive studies, and they will be discussed in some detail in this section.

Contrastive linguistics is not the most fashionable of linguistic disciplines. It has traditionally been closely associated with foreign language teaching, and over the years it has, for various reasons, acquired a somewhat dubious reputation (see Jakobsen 1999 for an overview). Krzeszowski (1990) and Chesterman (1998), however, have both presented convincing arguments in favour of contrastive studies, drawing on generative and functional descriptive frameworks respectively, and the following discussion of contrastive theory and method takes its cue from their works.

2.2.1 Tertium Comparationis

A tertium comparationis is “[t]he factor which links or is the common ground between two elements in comparison” (OED). In the literature on contrastive linguistics it is commonly noted that, irrespective of which tertium is employed, there is a certain problem of circularity inherent to contrastive studies. Krzeszowski outlines the problem in the following way:

We compare in order to see what is similar and what is different in the compared materials; we can only compare items which are in some respect similar, but we cannot use similarity as an independent criterion in deciding how to match items for comparison since similarity (or difference) is to result from the comparison and not to motivate it (Krzeszowski 1990:20).

Krzeszowski’s concern is certainly relevant, yet it appears that it becomes less pertinent if the contrastive analysis is based on a theory that recognizes the difference between content substance and content structure. In the case of this dissertation, the initial assumption about similarity is based on content substance phenomena, specifically epistemic modality and evidentiality. It is assumed that Danish as well as English – to some extent – express these particular content substances. This is the initial assumption about similarity. What is compared, however, is the way these particular content substance phenomena are coded as content structure in the two languages, specifically in adverbial systems. Thus the initial assumption about similarity is formed at a level which is entirely different from the level at which the actual comparison takes place. If we transpose the familiar distinction between
phonemics and phonetics from the expression plane onto the content plane we may say that the etics-dimension is realized by epistemic modality and evidentiality while the emics-dimension is the way these particular content substances are structured by Danish and English as content structure in particular adverbial systems.

2.2.2 Data

Contrastive studies can be carried out at various levels of linguistic description and be performed at various scales. The common denominator between the various types of contrastive studies is that they are essentially concerned with what Krzeszowski calls a 2-text, i.e. “any pair of texts, written or oral, in two languages, which are used as data in contrastive studies” (1990:25). At one extreme, the 2-text may consist of two entire languages; at the other extreme it may consist of just a single text in language Y translated into language X or vice versa. In other words, the comparison may be performed at either the level of la langue or la parole, language system or language use. Krzeszowski refers to the two types as systematic (or projective) vs. text-bound contrastive studies.

Both Chesterman and Krzeszowski tend to favour the text-bound, near-translation type of study, and this approach is admittedly attractive in several respects. It automatically helps delimit the area of study to a manageable size, and thus provides the researcher with a stable frame to work within. In this sense, the text-bound study can be perceived as a demarcated laboratory wherein the linguist can carry out investigations and test hypotheses. Aijmer & Simon-Vanderbergen (2004) presents an interesting approach to the study of pragmatic markers like in fact, actually and really which is based on translation corpora. Similarly, Malmkjær (2005:60ff) includes a minor translation based comparative study of the Danish particle jo. Yet, as a means of generating more general hypotheses about the languages under investigation, the text-bound approach has a fairly limited value, at least relatively speaking. When the investigation is restricted to a limited corpus of translated texts or the like, the applicability of the results is similarly limited.

By contrast, the systematic, langue-based study explicitly aims at formulating cross-linguistic hypotheses that enable the linguist to say something about differences and similarities between the two languages observed in general. However, this approach also has its inherent problems; the task of producing an exhaustive analysis of the grammar of a single language is in itself a Sisyphean endeavour – the task of producing two such analyses and subsequently comparing them is by no means easier.

The analysis in this dissertation leans towards the systematic contrastive study. I am not comparing the use of epistemic and evidential sentence adverbials in particular English-Danish texts-pairs; I am rather describing how epistemic and evidential sentence adverbials may be said to form systems in Danish and English and then subsequently comparing these
systems. Thus, although the study is systematic, it is delimited to a particular aspect of the overall system, namely the epistemic and evidential sentence adverbials. In fact, in order to make the outlined task manageable within the formal limits of a dissertation like this, it is necessary to delimit the scope even further. It is quite simply not possible to include all epistemic and evidential adverbials in the investigation. In Chapter 4 I will explain the principles I have based the selection of adverbials on, and in the beginning of Chapters 5 & 6 I will outline which adverbials are included in the investigation.

2.3 Summing up
In the preceding sections I have outlined the theoretical framework of the dissertation, which is primarily constituted by the particular version of functionalism developed within the framework of Danish Functional Linguistics. DFL may be perceived as a functional reworking of European structuralism. It recognizes the distinction between non-linguistic substance and linguistic structure but stresses that content substance and content structure are functionally related. Content substance is the precondition of contrastive and typological linguistics but all hypotheses about content substance must be reflected in the content structures of particular languages in order to be considered valid. Because of this insistence on treating every language on its own premises while simultaneously relating it to hypotheses about content substance, DFL provides an excellent framework for comparative studies. Finally, with support in DFL and the Scandinavian theory of polyphony I have also argued that language is *instructional* and *polyphonic*. This view is central to the analysis of the adverbials presented in Chapters 5 & 6.

In the following chapter I will look at how we may define epistemic modality and evidentiality as content substance phenomena. Along with the grammatical category of 'sentence adverbial' these notional categories form the tertium comparationis of the present dissertation.
3 Tertium Comparationis

In this chapter I will outline the tertium comparationis of the analysis presented in Chapters 5-7. In fact several types of tertia are invoked, some concerned with content phenomena, others with expression phenomena. Content-wise, the comparison revolves around two notional categories, namely epistemic modality and evidentiality. As stated in the introduction, Hans Kronning has summed up the essence of these concepts quite aptly by describing them as kunskapens styrka and kunskapens källa respectively. Yet, this general characterization is in need of some specification in order to be made operational, and this issue will be addressed in 3.1 and 3.2. The grammatical category of ‘sentence adverbial’, which will be outlined in 3.3, constitutes the expression based tertium.

3.1 Modality

Modality has received and continues to receive considerable attention within linguistics, both as a cross-linguistic category in typological studies and as an object of investigation in the context of particular languages (cf. Klinge & Müller 2005 and Frawley 2006 for recent examples). Modality studies embraces a plethora of diverging research interests, and this has led to a situation where the central term, modality, seems to have lost any core meaning it may once have had (Boye 2005:50ff, Nuyts 2005). It is not the pretension of the present study to attempt to clear up the definitional problems inherent to modality studies, but since the dissertation is concerned with two concepts that are often included in the literature on modality, viz. epistemic modality and evidentiality, in this section I shall try to disentangle the threads which are specifically related to these two concepts. By way of setting the scene, I will start out by outlining the origin of modality studies in modal logic, and introduce some basic concepts and problems of the field.

3.1.1 The Philosophical Legacy

The linguistic study of modality owes much to philosophy and the study of modal logic – for better and for worse. Concepts like possibility vs. necessity, epistemic modality, deontic modality and dynamic modality all stem from philosophy, where modality – in various shapes and forms – has been on the agenda from Aristotle and onwards (cf. e.g. Aristotle 1963:59-65, von Wright 1951). Later, central concepts of modal logic have been adopted by linguists and come to feature prominently in some of the major linguistic works on modality (e.g. Lyons 1977, Perkins 1983, and Palmer 1986). The influence is beyond dispute, but it is important to keep in mind that the two disciplines are in fact different and have different research objects (cf. Hoye 1997:1). Although apparently not always realized by linguists, modal logic per se has little or nothing to do with the study of modality in natural language. Modal logic is concerned with principles of reasoning in abstract modal languages (Kuhn 1998:417-418), irrespective of how or whether these principles and notions are reflected in the structure of
natural languages. Thus, the linguist should not expect to find an exact match between the modality of modal logic and that of natural languages. Borrowing terminology from DFL, we might say that the abstract formulas of modal logic and notions like possibility vs. necessity may serve the linguist well as hypotheses about the nature of modality as content substance, i.e. pre-linguistic semantic material, but the linguist’s object of study proper is modality as it appears as content structure, i.e. as language-specific organisation of the pre-linguistic semantic material (pace Heltoft 2005:85, see also Ch. 2).

The difference between studying modality as content substance and content structure is by no means clear-cut, and some of the major works within modality studies in fact seem to be situated somewhere in-between the two extremes. Lyons, for instance, uses examples from English in his seminal writings on modality (1977:787ff), but is otherwise very close to the philosophical origins. Palmer (1986:10ff) is less philosophically rigid, although he still takes his cue from research in modal logic, in particular from von Wright (1951) and Rescher (1968). In the following, I will look more closely at the way modality has been treated as a category within linguistics.

### 3.1.2 Basic Concepts and Some Problems

One of the most frequently quoted lines in modality studies comes from Lyons’ *Semantics* where modality in one place is described as: “[the speaker’s] opinion or attitude towards the proposition that the sentence expresses or the situation that the proposition describes” (1977: 452). As far as I can see, Lyons does not intend to offer a definition of modality as such by this quote; he is merely describing the function of the English sentence adverbials frankly, fortunately, possibly and wisely. In spite of this, the quote has often been used as a standard point of reference in discussions of modality (e.g. Palmer 1990:2, Siewierska 1991:123), which may serve as an indication of how flimsy the foundation of modality studies actually is. Even though most linguists seem to agree that modality has something to do with the speaker’s opinion or attitude towards the propositional content of his utterance, there are still plenty of unresolved issues left to discuss.

**Grammatical Category vs. Content Substance**

On a very basic note, it is not clear in the literature on modality whether modality is a grammatical category, or whether it designates a certain notional category. Thus, Palmer in an entry on ‘mood and modality’ in the first edition of *The Encyclopaedia of Language and Linguistics* on the one hand maintains that modality is “a cross-linguistic grammatical category”, similar to e.g. tense and aspect, while on the other he explains that “mood is [...] one way in which modality may be expressed; modal verbs is another” (Palmer 1994:2536). In other words, Palmer simultaneously describes modality as a fully-fledged grammatical category (which traditionally includes both content and expression) and as a ‘pure’ content
phenomenon that may be expressed by various grammatical means (mood and modal verbs). This position is problematic since it blurs the distinction between content structure and content substance and paves the way for a peculiar type of circular reasoning which shines through several places in Palmer’s writings, e.g. in the claim that “[t]he meanings expressed by the modal verbs in English represent, to a large degree, those that are to be included in a typological account of modality” (Palmer 1990:2).\footnote{In the first edition of Palmer’s book on the English modals (1979) the wording is less cautious and the circular reasoning and the invalid conclusion correspondingly clearer: “Modality is [...] a semantic term, and I shall use it in this book to refer to the meaning of the modals. It is not necessary to define precisely what kinds of meaning are involved. We take the formal category as our starting point, and it is sufficient for our purpose that the meanings involved are such as to justify characterising them as ‘modality’ (1979:4ff). It should be mentioned that Palmer’s position has undergone quite extensive revision in a later publication (Palmer 2001).} Here, it would seem, Palmer implies that English, in particular the meanings expressed by the English modal verbs, can be used as a yardstick for modality in other languages. It is by no means obvious why this should be the case.

Other scholars within the field distinguish more clearly between modality as content substance and the linguistic means by which it may be expressed. Bybee and Fleischmann (1995:2) describe modality as a “semantic domain” that can be expressed in language in various ways, e.g. through “mood” which is defined as a “formally grammaticalized category of the verb which has a modal function.” The advantage of this position is that it reserves the term modality for the semantic domain. The downside is that no common term is offered for the various ways in which modality may be expressed. To remedy this shortcoming, modal system may be used as a generic term for linguistic systems that have a modal function. Thus, in this dissertation, the term modality will refer to modality as content substance, while the term modal system will be used to refer to the various ways in which particular languages express this semantic category. Finally, the term modal expression will be used to denominate individual linguistic items that have a modal function.

Modality – a unified category?
As mentioned in section 3.1 above, modality seems to have lost any core meaning it may once have had. This means that it is in fact difficult to perceive of modality as a unified semantic category. Under the heading of modality, the literature traditionally includes a wealth of diverse concepts including epistemic modality, deontic/root modality, dynamic modality, possibility and necessity, evidentiality, subjective modality, objective modality, etc. (c.f. Matthews 1997, Kiefer 1994, Palmer 1994). Many of these concepts and the notions they denote are certainly related, yet, the definitional confusion that surrounds them illustrates how difficult it is to make them fit into one overarching framework, namely that of modality: the pieces constantly have to be redefined to make them fit the puzzle, and this process leads to an excess of diverging definitions. In my opinion, which is similar to the
views presented by Nuyts (2005:5) and Boye (2005), descriptions that take their starting point in more specific categories are likely to cause less definitional confusion and at the same time yield more satisfying results. Only if we distinguish acutely, at least as acutely as possible, between various semantic domains, i.e. content substances, will we be able to improve our understanding of how speakers may qualify the propositions they put forward and what it means when they do so.

In the following two sections, I will narrow the scope to epistemic modality and evidentiality with the purpose of distilling operational definitions of these concepts as content substance phenomena.

3.2 Epistemic Modality

Epistemic modality is often defined along lines similar to these, taken from the entry on 'epistemic' in the Concise Oxford Dictionary of Linguistics:

epistemic. Indicating factual necessity, probability, possibility, etc. E.g. the modal must is epistemic or used epistemically, in He must surely be there by now; likewise may in It may have been lost, or might in The train might be late. (Matthews 1997:115-116)\(^2\)

According to this definition, and many other definitions for that matter, the notions of possibility and necessity, borrowed from modal logic, are defining characteristics of epistemic modal meaning. Some have claimed that this influence from modal logic is detrimental for the understanding of epistemic modality in natural language, yet others maintain that the concepts of possibility and necessity may indeed be relevant to the study of modality in natural language (Boye 2005:55). In this dissertation, I work from the assumption that the notions of possibility and necessity are indeed relevant to the study of epistemic adverbials in Danish and English, although not necessarily in the same shape, manner and form as they are employed in modal logic. Furthermore, modal logic is not the only place one can turn to in search for hypotheses about the nature of (epistemic) modality as content substance. One of the most notable theories advanced in this respect is related to the concept of force dynamics.

3.2.1 Force Dynamics

The notion of force dynamics in linguistics originates in the work of Talmy (1988) and has been applied and developed in various ways in relation to modality by others, e.g. Sweetser (1990) and Boye (2001, 2005). Within the framework of force dynamics, the abstract notions

\(^2\) The word ‘epistemic’ originates in the word epistēmē which is Greek for ‘knowledge’. The term epistemic is therefore arguably somewhat of a misnomer since epistemic modality has to do with propositions of which the speaker does not hold exact knowledge. Heltoft (2005) suggests that a more etymologically appropriate term would be doxastic modality (from the Greek doxa = opinion or belief), but this terminology is not introduced in this dissertation for reasons of simplicity.
of possibility and necessity are reinterpreted in terms of forces, i.e. possibility equals a relatively weak force and necessity equals a relatively strong force. The three major types of modality, epistemic, root/deontic and dynamic modality, are likened to rational forces, social forces and physical forces respectively (Boye 2005:58, Talmy 1988:77ff). Although Kronning (2002, 2004) does not seem to draw specifically on the framework of force dynamics, the similarity between his perception of epistemic modality as kunskapens styrka and Talmy’s concept of force dynamics is striking, and in my view the latter may be used as a specification of the former.

Talmy’s force dynamics is a broad concept that essentially concerns content substance phenomena. In order to make the concept more accurate in relation to the description of modality, Boye (2005) has suggested that the concept be combined with the notion of potential which he borrows from Klinge (1993). What distinguishes the force dynamics of modality from other domains of force dynamics, e.g. ‘causative’, and what unifies the various types of modality is that they are all essentially concerned with what may be perceived as an intermediate stage of potential between cause and effect. Thus, using Boye’s terminology, the modal verb must in Bob must be eating can be described as “an epistemic, mental or rational force” that affects a particular ‘agonist’, namely the predicational content3 of Bob be eating, and drives it towards a specific latent ‘goal’, “a particular existential relation” of Bob is eating (Boye 2005:66). On the basis of this understanding, Boye has proposed the following definition of epistemic modal meaning, which underpins the use of the term epistemic modality in the present dissertation:

[...] epistemic modal meaning [...] relates a predicational content to a force-dynamic potential (or a specific force working within this field of potential) the result of which would be (the verification of) the truth of the predicational content. It specifies the strength of the epistemic force-dynamic potential and thus the degree of certainty about the truth of the predicational content. As part of this meaning it implies an epistemic source that serves as evidence for the truth of this content (Boye 2005:72).

Boye’s definition offers a more specific terminology and a more cognitively adequate model of the phenomenon of epistemic modality than the traditional view represented by Matthews. Still, the two definitions are in fact quite compatible. They both allow for the understanding that epistemic modality is concerned with possible worlds (to use a philosophical term) or mental spaces (to use a term from cognitive linguistics) that are different from the actual world (cf. Jensen 2005:16-17).4 When qualifying a proposition by means of an epistemic modal expression the speaker indicates his degree of certainty about the truth of the propositional content by specifying the degree of force that supports his

3 Boye uses the term predicational content, but throughout this study, I will be referring to this ‘residue’ as propositional content.
4 See (Jensen 2005:17) for an explanation of the difference between the concepts of possible worlds borrowed from modal logic and mental spaces, coined by Gilles Fauconnier.
utterance. The explicit specification of force always indicates that the propositional content of the sentence is presented as a possible situation. In other words, the inclusion of an epistemic modal expression will typically change the reality value of a sentence from realis to irrealis.\(^5\)

### 3.2.2 Modal Factor

Boye’s definition of epistemic modal meaning includes the notion of ‘an epistemic source’, which may be related to the notion of modalfaktor, a term coined by Bech in a study of the development of the modal verbs in High German:

Unter dem begriffe modalfaktor wollen wir den faktor verstehen, der den inhalt des modalfeldes\(^6\) notwendig macht oder fordert, bzw. ermöglicht oder erlaubt (Bech 1951:7).

The concept is picked up and further developed by Heltoft & Jakobsen (1996) who distinguish between subjective and objective modal factor depending on whether the modal factor is located exclusively with the speaker or is shared between the speaker and someone else, for instance a narrated person or a narrator, or the speaker and something else, for instance a norm. They show this distinction to be grammaticalized in Danish between the periphrastic passive, which has subjective modal factor, and the morphological s-passive, which has objective modal factor (1996:209). They define the distinction in the following way: “Either the speaker’s consciousness (with the periphrastic passive) is the only relevant point-of-view, or (with the s-passive) another point-of-view is inserted [...]” (Heltoft & Jakobsen 1996:208). We may illustrate the distinction by means of two examples (borrowed from Heltoft 1994:156-157):

(1) Butikstyveri anmeldes
(2) Butikstyveri bliver anmeldt

(1) and (2) are authentic examples of signs posted in Danish shops as warnings against shoplifting; yet, they do not mean the same. The inflectional s-passive in (1) invokes a general rule or norm, whereas the periphrastic blive-passive in (2) describes the action the shopkeeper will take in the event of shoplifting, and possibly has taken in previous cases. In (2) the modal factor is exclusively located with the speaker and may therefore be labelled subjective; in (1) the modal factor is objective because the inflectional passive invokes a general rule or norm.

\(^5\) In Danish grammatical tradition irrealis indicates contrary-to-fact (e.g. gid Svend var her) while non-realis denotes unspecified reality value (e.g. måske er han kommet nu). Yet, in (recent) Anglophone literature (e.g. Givón 1982, Palmer 2001, Tucker 2001) irrealis is used to indicate unspecified reality value. In this dissertation, I follow the Anglophone terminology and use irrealis to indicate unspecified reality value.

\(^6\) The ‘modalfeld’ (Bech 1951:6) is the non-finite nexus which is in the scope of the modal verb, e.g. (Ben leave) in Ben must leave.
In this dissertation, I use the concept of modal factor to denote the locus of the force of a given modal expression. Modal factor is thus the answer to the question where does the force originate? It may for instance originate in the speaker (3), or be constituted by some general norm (4):

(3) I must see you tomorrow! [modal factor = speaker]
(4) Dogs must be kept on a leash in the park [modal factor = norm/rule]

If the force originates exclusively in the speaker (is exclusively located with the speaker, as we may say alternatively), i.e. if the speaker is the only relevant source of the force specified by a particular modal expression in a particular context, I will say the modal factor is subjective. This is the case in (3), at least in the reading where must expresses the speaker’s personal desire. If the force is not located exclusively with the speaker, I shall speak of objective modal factor. This is the case in (4) where the modal factor of must is constituted by a norm or rule.

It is possible to distinguish two types of objective modal factor: one where the modal factor is constituted by a norm and one where it is constituted by the speaker and some other specific agent or agents. The latter type is illustrated by the following example (borrowed from Borch et al. 2003:78) where the force specified by muligvis originates jointly in the speaker and Det Danske Center for Menneskerettigheder:

(5) De århusianske boligforeningers forsøg med spredning af flygtninge/indvandrere er muligvis i strid med FN’s konvention om racediskrimination. Det vurderer i hvert fald Det Danske Center for Menneskerettigheder [...]. (www.korpus2000.dk)

Although we recognize the two types of objective modal factor as different, their function may in principle be said to be identical: norms are norms by virtue of their being observed by a number of people, hence also the first type of objective modal factor may be said to have the function of specifying that the force behind the modal expression originates jointly in the speaker and some other agent(s). For this reason, I shall generally only distinguish between subjective and objective modal factor, still in some cases it is useful to be able to distinguish between the two types of objective modal factor, and I shall do so when relevant in the analysis.

Before we move on to the discussion of evidentiality, a few comments on the notions of ‘subjective’ and ‘objective’ are necessary to delimit my position from other positions in the literature on modality. The notions of ‘subjective’ and ‘objective’ are notoriously difficult to define, not least so in modality studies where they have been used in a number of different ways. Lyons (1977) is usually considered to be the one who introduced the distinction into modality studies (cf. Herslund 2005:39). Lyons uses ‘objective modality’ to denote assessments which are based on firm, verifiable knowledge and ‘subjective modality’ to
denote assessments which are based on mere belief (Lyons 1977:797ff). This use of the terms is clearly different from the one suggested above. Nuyts (2001a, 2001b, 2006:13-15) offers a different view which comes closer to the one advocated in this dissertation. He believes that the distinction should be defined “in terms of who is responsible for the modal evaluation” (2006:14) and he suggests that the distinction between subjective and objective modality be recast as a distinction between ‘subjective’ and ‘intersubjective’ modality, according to the following definition: “an evaluation is subjective if the issuer presents it as being strictly his/her own responsibility; it is intersubjective if (s)he indicates that (s)he shares it with a wider group of people, possibly including the hearer” (2006:14). Nuyts’ notion of intersubjectivity may thus be considered similar to the notion of objective modal factor presented above, apart from the fact that Nuyts’ notion of intersubjectivity does not include norms. A combination of Heltoft & Jakobsen’s notion of objective modal factor and Nuyts’ concept of intersubjectivity could probably be useful, yet for the purposes of this dissertation I have chosen to use the binary distinction between subjective and objective modal factor outlined above.

3.3 Evidentiality

Since the 1980s, linguistic research on evidentiality has been very much in vogue, which is evidenced by numerous anthologies, monographs and journal articles, e.g. Chafe & Nichols (1986), Aikhenvald & Dixon (2003), Aikhenvald (2004) and Kronning (2005). Unfortunately, evidentiality studies suffer from many, if not all or more, of the same problems which have been outlined above in relation to modality studies. Most writers concerned with the subject will probably agree that evidentiality, vaguely put, has to do with the speaker’s linguistic specification of source of information and/or specification of means of obtaining information, but this loose characterization leaves ample room for disagreement and misunderstanding.

First, there is the question of what the semantic category evidentiality (as content substance) includes. On this subject Chafe states (my italics):

I am using the term ‘evidentiality’ in its broadest sense, not restricting it to the expression of ‘evidence’ per se. I will be discussing a range of epistemological considerations that are linguistically coded in spoken and written English. ‘Evidence’, taken literally, is one of these considerations, but not the only one. What gives coherence to the set under discussion is that everything dealt with under this broad interpretation of evidentiality involves attitudes toward knowledge. (Chafe 1986: 262)

It appears from the article that Chafe’s ‘knowledge’ may be considered synonymous to ‘proposition’ or ‘propositional content’.7 Thus, by using the phrase “attitudes towards knowledge” to describe evidentiality, Chafe in fact comes close to Lyons’ popular definition

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7 Regarding the sentence I feel something crawling up my leg Chafe states that “the idea that something is crawling up my leg is what I will call knowledge” (cf. 1986:263).
of modality as “the speaker’s opinion or attitude towards the proposition that the sentence expresses [...]” (cf. 3.1.2). Furthermore, the categories Chafe subsumes under evidentiality are if not identical, then at least very close to categories which are commonly classed as subcategories of epistemic modality, e.g. “degree of reliability”, “belief”, “induction” and “deduction” (Chafe 1986:263ff.). In other words, Chafe’s approach makes it difficult to distinguish evidentiality from epistemic modality.

Aikhenvald (2004) represents a more rigid approach in this respect. She defines evidentiality as “[...] a linguistic category whose primary meaning is source of information,” and although she points out that “evidentials may acquire secondary meanings—of reliability, probability, and possibility (known as epistemic extensions) [...]” she stresses that “evidentiality is a category in its own right, and not a subcategory of any modality [...]” (Aikhenvald 2004:3, 6, 7). This view of evidentiality as a distinct content substance is shared in this dissertation.

Secondly, there is the question of what qualifies as an evidential expression, an ‘evidential’. As specified above, Chafe is concerned with “epistemological considerations that are linguistically coded in [...] English” but his concept of ‘coding’ is apparently quite broad. He believes that English has “a rich repertoire of evidential devices” and explains that “it expresses evidentiality with modal auxiliaries, adverbs, and miscellaneous idiomatic phrases, although not, for example, with a coherent set of verb suffixes like those in some California Indian languages” (Chafe 1986:261). In Chafe’s view, an English expression like *apparently* may be just as evidential as the morphological system of the Tuyuca verb (cf. Barnes 1984). Aikhenvald, on the other hand, states that “linguistic evidentiality is a grammatical system (and often one morphological paradigm)” and she refuses to budge when it comes to the formal criteria of evidentiality: It must be grammatically coded (2004:6ff). This position also leads her to conclude the following, which is in direct opposition to Chafe:

Saying that English parentheticals [e.g. *reportedly* or *apparently*] are ‘evidentials’ is akin to saying that time words like ‘yesterday’ or ‘today’ are tense markers. These expressions are not obligatory and do not constitute a grammatical category [...]. Saying that English has ‘evidentiality’ [...] is misleading: this implies a confusion between what is grammaticalized and what is lexical in language (Aikhenvald 2004:10).

The opposing positions of Chafe and Aikhenvald go to show how difficult it is to pinpoint what evidentiality actually is, both with regard to how it should be defined as content substance and how it should be delimited as a grammatical category.

As mentioned, the definition of evidentiality adopted in this dissertation (cf. 3.3.1 below) is closer to Aikhenvald’s restrictive definition of the notional category of evidentiality than Chafe’s broad definition. However, as far as the status of evidentiality as a grammatical category is concerned, my approach is closer to Chafe’s than to Aikhenvald’s. In my view,
Aikhenvald’s view of “what is grammaticalized” in language is too narrow. Although sentence adverbials like *reportedly* and *apparently* are not as grammaticalized as verbal inflections, they may still be considered to be part of grammatical systems that have evidential meaning as their primary meaning.

### 3.3.1 Source

The understanding of evidentiality which underpins this dissertation is inspired by the way evidential meaning is defined by Boye (2005). In Boye’s framework, evidential meaning is defined thus:

> Evidential meaning relates a predicational content to an epistemic source (i.e. a knowledge source) that serves as evidence for the truth of the content. It specifies which type of epistemic source is at hand [...] (Boye 2005:72).

In contrast to epistemic modal meaning, evidential meaning does not necessarily include the specification of a particular degree of force. This may be illustrated by means of the following example where the modal verb *skal* is used to indicate speaker external source:


This particular variant of *skulle* specifies that the source of knowledge is external to the speaker, yet it does not specify any particular degree of force. Because evidential expressions do not specify a particular degree of force, the introduction of an evidential expression into a sentence does not usually alter the reality value of the sentence from *realis* to *irrealis*. Still, since sources of knowledge may be more or less reliable, evidential expressions may in particular contexts, by implication, be taken to imply weak force and therefore trigger irrealis meanings. I shall refer to this phenomenon as an *epistemic extension* (cf. Aikhenvald’s use of this concept on the previous page). It is important to note, however, that epistemic extensions represent secondary phenomena, which means that the notion of force is tangential to the study of evidential expressions. For this reason, it may also be noted that the notion of modal factor is not relevant in relation to evidential expressions: since they do not code a specific degree of force, it is not relevant to ask where it originates. What is relevant, however, is where the source of knowledge is located, typically if it is located with the speaker or is external to the speaker. Thus, in the analysis of evidential expression the relevant question to ask is not where the force originates but where the source is located. In sections 5.2.2 and 6.2.2 I shall discuss in more detail which types of source are relevant in the analysis of the evidential adverbials in Danish and English.
3.4 Summing up
The notional categories of epistemic modality and evidentiality constitute the content-side of the tertium comparationis of this dissertation. The two categories are difficult to distinguish and often more or less conflated in the literature on modality. Yet, I have argued that epistemic modality and evidentiality should in fact be perceived as two distinct categories. Epistemic modality is essentially concerned with the specification of force and evidentiality is essentially concerned with the specification of source.

In the following section, we shall turn to the discussion of the expression-side of the tertium comparationis of the dissertation, viz. the grammatical category of sentence adverbials.

3.5 Sentence adverbials
Sentence adverbials have perhaps not received quite the same amount of attention as modality. That, however, does not mean that attention has been scant, nor does it mean that the confusion concerning this area is any less than the confusion which we saw to exist in the areas of modality and evidentiality above. In the following I will first make a brief point with regard to the distinction between ‘adverb’ and ‘adverbial’ and briefly discuss the notion of ‘adverb’/‘adverbial’ as a grammatical category (3.5.1). Then I will turn to the discussion of how we may define the concept of ‘sentence adverbial’ (3.5.2).

3.5.1 Adverbial vs. Adverb
A central question to consider in a work concerned with epistemic and evidential adverbials is: what is an adverbial? Even when asking this question, one is confronted with a choice between two terms which are central to the discussion but not always consciously distinguished, namely adverb vs. adverbial. I use the term adverb to designate a particular word class that contrasts with other word classes such as nouns and verbs, and the term adverbial to designate a syntactic unit within the sentence, on a par with other syntactic units such as subject and verbal. Thus, quickly, yesterday, possibly and honestly are adverbs which may function as adverbials as they indeed do in (7)-(10):

(7) John emptied the car quickly
(8) John bought the car yesterday
(9) John probably bought the car
(10) Honestly, John bought the car

These adverbials are all simple, i.e. they consist of just one word, which is in fact an adverb. But adverbials may also be complex and be realized by different material:

(11) John emptied the car in a state of frenzy
(12) John bought the car in L.A.
(13) Much to my surprise John bought the car
(14) John bought the car, in case you haven’t heard
In this dissertation, I am primarily concerned with simple adverbials. As evidenced by examples (7)-(14), the common denominator, be it syntactic or semantic, between the different members of the adverbial category can be hard to spot. This is largely due to the fact that traditionally both adverbs and adverbials have been defined negatively, i.e. not on the basis of what they are but what they are not. Crudely put, everything that does not squarely fit another word class is likely to end up being tagged as an adverb, and every syntactic unit that does not fit the criteria of subject, verbal or complement will standardly be described as an adverbial, of some kind (Auwer 1994). In the following, I shall narrow the scope to the particular type of adverbial under investigation in this work, viz. sentence adverbials.

3.5.2 Adverbial Classification

In this section I will outline what I understand by the concept of ‘sentence adverbial’ and discuss how this particular type of adverbial may be delimited from other types of adverbial. For this purpose, I draw on the adverbial classification of Dik et al. (1990) which is based on the positions adverbials may occupy in the underlying structure of the clause. In order to explain this classification, it is necessary to give a brief outline of the organization of the underlying clause structure as described within Dutch functional grammar (Dik 1997:49ff; cf. Butler 2003:70ff).

The ‘nuclear predication’ forms the basic layer in the abstract model of the underlying clause structure. It consists of a ‘predicate’ and one or more ‘term(s)’, which function as arguments of the predicate, e.g. write is a predicate which may take (John) and (a letter) as its arguments. The nuclear predication thus describes a set of ‘State of Affairs’, an ‘SoA’, e.g. write (John) (a letter), which may be said to occur in some world that may, but need not be, identical to ‘reality’. The nuclear predication forms the basis on which the clause is built by the addition of ‘grammatical operators’ like tense, aspect and mood and ‘lexical satellites’, which is roughly equal to adverbials. The addition of a ‘predicate operator’ to the nuclear predication, for instance the progressive aspect, and an optional predicate satellite like carefully specifies the SoA further and turns it into a ‘core predication’, e.g. John writing a letter carefully. The core predication may then further be located in space and time by means of ‘predication operators’, e.g. verbal present time reference, and possibly by means of a relevant satellite, for instance a place adverbial: John is carefully writing a letter in the library.

This is called the ‘extended predication’ which denotes a located, qualified SoA. The speaker may specify his attitude vis-à-vis the extended predication by means of ‘propositional operators’, e.g. the modal verb may: John may be writing a letter in the library, and/or ‘propositional satellites, e.g. Perhaps John is writing a letter in the library. The final layer of the underlying structure of the clause is realized by the addition of illocutionary force to the
clause which turns the clause into a speech act. Grammatically, this is determined by the choice of sentence type, e.g. interrogative vs. declarative. Lexically, it may be done by means of an ‘illocutionary satellite’ which “in some way modifies or specifies the illocutionary value as a whole,” e.g. *frankly* because it “designates the ‘way of speaking’” (Dik 1997:53).

As indicated by this outline, adverbials may be introduced at each of the four levels as lexical ‘satellites’, and the various adverbials differ in terms scope and function depending on which layer they operate on. This understanding forms the basis of the classification of adverbials presented in Dik *et al.* which may be outlined thus:

<table>
<thead>
<tr>
<th><strong>Adverbial Classes</strong></th>
<th><strong>Examples</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(i) Predicate satellites</strong> capture the lexical means which specify additional properties of the set of SoAs designated by a nuclear predication.</td>
<td>Mary dansede smukt&lt;br&gt; Mary danced beautifully</td>
</tr>
<tr>
<td><strong>(ii) Predication satellites</strong> capture the lexical means which locate the SoAs designated by a predication in a real or imaginary world and thus restrict the set of potential referents of the predication to the external situation(s) the speaker has in mind.</td>
<td>Mary dansede smukt i går&lt;br&gt; Mary danced beautifully yesterday</td>
</tr>
<tr>
<td><strong>(iii) Proposition satellites</strong> capture the lexical means through which the speaker specifies his attitude towards the proposition he puts forward for consideration.</td>
<td>Mary dansede sandsynligvis smukt i går&lt;br&gt; Mary <em>probably</em> danced beautifully yesterday</td>
</tr>
<tr>
<td><strong>(iv) Illocutionary satellites</strong> capture the lexical means through which the speaker modifies the force of the basic illocution of a linguistic expression so as to make it fit his communicative strategy.</td>
<td>Mary dansede ærlig talt smukt i går&lt;br&gt; <em>Frankly</em>, Mary danced beautifully yesterday</td>
</tr>
</tbody>
</table>

The term ‘sentence adverbial’ is typically used to denote both adverbials within satellite group (iii) and (iv) in Dik *et al.*’s classification. Common to adverbials in these groups is that they cannot be focussed and cannot come under the scope of negation. The adverbials I am interested in, however, are exclusively located within satellite group (iii). This is where we find adverbials such as *possibly*, *probably*, *apparently* and *reportedly* as well as *muligvis*, *sandsynligvis*, *åbenbart* and *angivelig*. In other words, the scope of my investigation is limited to adverbials that take the proposition (no more, no less) in their scope and which cannot receive focus or come under the scope of negation. Henceforth, I shall use the term sentence adverbial to refer exclusively to this group.
3.6 Summing up
As argued above, the classification of adverbials presented by Dik et al. (1990) is useful as a means of approaching a definition of which adverbials are relevant for the current investigation, viz. adverbials that take the proposition in their scope, no more and no less, and which furthermore cannot receive focus or come under the scope of negation. This definition is however not sufficient to isolate the relevant adverbials since it also applies to adverbials like fortunately in English and heldigvis in Danish which are neither epistemic nor evidential. Therefore, in order to delimit the groups of adverbials which are relevant to this dissertation, it is necessary to include the content-based tertium outlined in 3.2 and 3.3 (and summed up in 3.4). By combining the expression-based and the content-based tertium, the adverbials under investigation in this dissertation may thus be defined as those located at the intersection between the grammatical category of ‘sentence adverbial’ and the notional categories of ‘epistemic modality’ and ‘evidentiality’.
4 Method

The analyses of the Danish and English adverbials which are presented in Chapters 5 & 6 have been carried out in four steps, which may be briefly described like this:

1) Delimitation of the overall systems of epistemic and evidential adverbials
2) Selection of relevant adverbials for further analysis
3) Detailed analysis of each adverbial
4) Organisation of the adverbials in subsystems

The discreteness indicated by this list of course belies the fact that analyses of the type presented in this dissertation rarely progress in a straight line from A to B, but rather more often tend to consist in moving back and forth in a continual interplay between steps. Eventually, however, one tends to reach the end, which was also the case in this particular process where the completion of steps one through four in relation to both Danish and English opened for the final step, the result of which is presented in Chapter 7:

5) Comparative analysis of the Danish and English systems of epistemic and evidential adverbials

In devising this method of analysis and completing the different steps, I have considered a number of questions pertaining to issues of linguistic method as well as theory. In the following I will discuss these issues in order to account for the method in more detail.

4.1 Introspection vs. Corpus Linguistics

As explained in Chapter 2, Danish Functional Linguistics is in many ways influenced by the legacy of European linguistic structuralism, particularly the work of Hjelmslev. One of the most prominent heirlooms of structuralism is Hjelmslev’s concept of commutation (Hjelmslev 1966:68), which is crucial to the view of language promoted within Danish Functional Linguistics and which underlies the approach to language description within the framework (cf. Harder 1996:200ff., 2005:16, 25; Heltoft 1996:470-71).

The idea of commutation emanates from the basic conception that every linguistic sign consists of an expression plane and a content plane, and that the two sides are functionally related: a change on the expression plane implies a change on the content plane and vice versa. Structural distinctions on either plane can be discovered by means of commutation, which consists in comparing the changes on one plane with the other, i.e. substituting different members of the same paradigm in the same syntagmatic context. Traditionally, commutation tests have been used to clarify distinctions on the expression plane, e.g. in phonology and morphology, but the method in principle applies equally well to content based distinctions (cf. Heltoft 1996). The crucial point to keep in mind is that the existence of specific distinctions – be they in terms of expression or content – can only be justified if they correspond to distinctions on the other plane (cf. Harder quote p. 8).
Commutation tests must be performed within the context of stable syntagmatic frameworks. This means that structuralist analyses are often based on constructed examples. The method may thus be described as primarily introspective: The data for analysis is selected by the researcher on the basis of intuition, and the commutation test is used as a disciplining feature to ensure that the description is anchored in the language system. Another way to put it is to say that commutation is an *experimental*, albeit *intuitive*, method (cf. Harder 2005:25).

Intuition is an indispensable tool in the linguist’s toolbox, yet, it should always be remembered that it is neither infallible nor universal in its range of applications. With the advent of large computerized text corpora and the emerging discipline of corpus linguistics, a new tool that opens for other ways of dealing with data and hypotheses forming has been added to the kit. In terms of method, corpus linguistics differs notably from traditional European structuralism on at least two counts: 1) it is inductive and 2) it is quantitative. In simplified terms, it may be said that while traditional European structuralism aims to produce descriptions of language *structure* (in line with Saussure’s emphasis on *la langue* as the proper object of linguistics) on the basis of introspection and commutation tests, the corpus linguist records the *use* of a particular language, i.e. *parole*, and describes the manifestation of this particular language, rather than the abstract system behind. This presentation is of course somewhat simplified, still I believe it points to important (latent) tendencies in the two approaches.

**4.1.1 An Integrated Approach**

Often, corpus linguistics is seen as a rival to more traditional methods, however, in my opinion a more fruitful – and correct view – would be to perceive of the two methods as complementary. Consequently, in this dissertation the two approaches have to some extent been integrated.

Step one of the analysis, the overall identification of the systems of epistemic and evidential adverbials (in Danish and English) has been based on what may be called traditional grammatical methods, i.e. by consulting reference grammars, by introspection and commutation tests. A description of this kind could not easily have been distilled from the inductive study of a corpus. It would clearly not have been impossible to do so, but it would have been inexpedient.

In step two of the analysis, i.e. the selection of relevant adverbials for further analysis, corpus methodology in the form of word frequency studies became relevant, especially in relation to the English adverbials. The overall group of epistemic and evidential adverbials in English is too comprehensive to be treated in full in a work of this kind, so it was necessary to find a way of selecting which adverbials were the most relevant to include, and the most tangible criterion in this connection was frequency: the most frequent adverbials
were included, the infrequent ones discarded. This should not be taken to mean that *infrequent* is considered equal to *insignificant*. There is no rule saying that infrequent linguistic items are not important members of the language system, quite the contrary: the mere existence of a linguistic item vouches for its importance. Still, seen from a pragmatic point of view I believe it is legitimate to start by treating the most frequent items and leave the more infrequent ones to later. I also used frequency as a criterion in the delimitation of the relevant adverbials in Danish, yet, since the results the frequency investigation yielded in Danish were less clear-cut than in English, it was necessary to include other parameters as well.

Step three, the detailed study of each selected adverbial, combines traditional methods and corpus inspired methods. The easiest and most reliable way of identifying the defining characteristics of a particular linguistic item is by means of commutation tests. Yet, in the case of epistemic and evidential adverbials it is often very difficult to find contexts where two adverbials can meaningfully be differentiated because the adverbials are often very near synonyms. Furthermore, when relying exclusively on introspection, there is a distinct danger that the resultant description will capture the features of the linguistic item which are most salient to the linguist while neglecting other, less salient, functions. It is difficult to avoid these pitfalls, but I have done a number of things to counter them. In order to avoid analytical narrow-mindedness, I have systematically consulted several dictionaries¹ and (as systematically as possible) referred to other relevant studies. Furthermore, all analyses have been tested against actual examples, which have been drawn from a sample of contextualized examples collected for this project (see next section).

Throughout the analysis, there has been a continuous interplay between step three and step four. Even before step three had been properly commenced, I had formed a hypothesis about the organisation of the adverbials, yet this categorization saw continual revision throughout the process.

### 4.1.2 Reference Sample

In step three of the analysis I compiled an extensive sample of contextualized examples of the adverbials under investigation, with the intention of creating a stable frame of reference that could enhance my perception of the adverbials’ functions beyond mere intuition. The Danish examples were drawn from the online edition of the Danish broadsheet *Politiken*, www.politiken.dk, while the English examples were obtained from *Guardian Unlimited*, the online edition of *The Guardian* available at www.guardian.co.uk. 

¹ For Danish, the online version of *Ordbog over det Danske Sprog* (ODS) at www.ordnet.dk og *Den Danske Ordbog* (DDO) have been consulted; for English I have referred to the online version of the *Oxford English Dictionary* (OED) at www.oed.com and the online version of the 2nd edition of the *Oxford English Dictionary* (www.oxfordreference.com).
extracted ten random examples of each adverbial under investigation and compiled them in a *reference sample*, which is appended to the dissertation on a CD-ROM. The result of this sampling process is really neither fish nor fowl in terms of the discussion of introspection/excerption vs. corpus linguistics. It would be misleading to perceive of it as a mere collection of excerpts but it would also be misleading to call it a corpus. I have not compiled the sample for the purpose of mere excerption, nor have I intended to use it to generate absolute, purely inductive descriptions. The sample has been used as a hypothesis generating medium and a test frame, in a process which is most adequately described as *abduction*, in the sense of Peirce:

Abduction is the process of forming an explanatory hypothesis. It is the only logical operation which introduces any new idea; for induction does nothing but determine a value, and deduction merely evolves the necessary consequences of a pure hypothesis. Induction proves that something must be; Deduction shows that something actually is operative; Abduction merely suggests that something may be (Peirce 1965 [1903]:5.172).

Abduction is often explained as ‘inference to the best explanation’ (Blackburn 1996, Haberland 1996), which in turn may be defined as “[...] choosing the hypothesis or theory that best explains the available data” (Vogel 1998: 766). The method is amplitiative, since the “conclusion one reaches is not a mere summary of the data on hand – one comes to believe something further which explains the data” (Vogel 1998: 767). If the hypothesis derived by the abductive process is to have any validity, it must be testable against other/more data. If this requirement is met, abduction in effect becomes a dialectic method which opens for a continual interplay between data and theory.

By including the data on which I have based my abductions, I intend to provide the necessary ground for intersubjective verification of the analyses presented in Chapters 5 & 6. By making explicit the data on which the hypotheses are based, it should be possible 1) to test my analyses against the data I have used, and/or 2) look for other/more data which may lead to a revision of the hypotheses presented here. It should be stressed that it is not necessary to consult the reference sample to read the dissertation; the sample is merely included as an invitation to anyone who would like to enter into a more profound discussion with the data and the theory presented here.

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2 A few exceptions apply to the randomness of the selection. In cases where the search returned examples of adverbials in translated articles, or in translated segments (quotes etc.), the example was replaced. Similarly, in cases where it was not possible to understand the example without extensive contextual information, the example was also replaced. Finally, a particular adverbial has more uses than the epistemic/evidential sentential one which is the focus of this dissertation, or if the initial search indicated that the sentence adverbial had several distinct uses, relevant examples were selected to represent this diversity.
4.2 Synchronic vs. Diachronic Description

Working with the description of natural language, one is constantly faced with the paradox that language is at one and the same time both fixed and in flux; it is sufficiently stable to be used as a common communicative code for a specific community of speakers, but at the same time constantly, however gradually and imperceptibly, changing. This study is primarily concerned with the synchronic description of the systems of epistemic and evidential adverbials in Danish and English. It attempts to capture the systematic organisation of the adverbials as this structure may be extrapolated from the way Danish and English are used at this particular point in time. However, in relation to modality, a number of recent studies have suggested that the complex semantics of modal expressions like modal verbs (Sweetser 1990:49ff) and sentence adverbials (Swan 1988, Jensen 2000) in fact can be shown to originate in more simplex predecessors, and that the complex synchronic state can be explained by recourse to the diachronic development, which happens according to a certain limited number of metaphoric processes. I am convinced that a diachronic study of the (systems of) epistemic and evidential adverbials in Danish and English would generate interesting insights into the semantics of these adverbials, also in a synchronic perspective. Such a project, however, cannot be undertaken within the framework of this dissertation, but I will, in cases where I find it particularly relevant, include diachronic angles on the analysis of particular adverbials. These points are based on limited studies of historical dictionaries (OED & ODS) and other sources (Swan 1988 & Jensen 2000), and are not intended as in-depth diachronic analyses, but rather as perspectives which could point to further research.

4.3 Instruction vs. Configuration

In the analysis of the adverbials I adopt the distinction between structure and configuration introduced in the section on polyphony theory (2.1.3). The analysis does not aim merely to account for specific configurations of the adverbials under investigation. The purpose is rather to distil the instructional potential of each adverbial at the structural level and show how this particular set-up simultaneously helps constitute and is constituted by the particular system of which it is a member. Two points need to be made in this respect. First, it should be stressed that the notion of instruction is conceived broadly as including both propositional semantics and discourse coherence, to use two concepts used by Givón to explain what grammar codes:

Grammar codes, simultaneously, both propositional semantics and discourse coherence (pragmatics). This is indeed one of the most baffling facts about grammar-as-code: Although it is located wholly in the clause, its functional scope is not primarily about the propositional information couched in the clause in which it resides. Rather, grammar is predominantly about the coherence relations between the propositional (clause) and its wider discourse context. (Givón 2001:13)
It is essential to the understanding of the epistemic and evidential adverbials that their discourse ordering functions are included in the description. How this can be done is outlined in more detail in section 5.2. Secondly, it should be made explicit that the identification of each adverbial’s unique set-up is based on a distinctive feature analysis (inspired by the way this method is used in phonology, cf. Hume & Mielke 2006). In Danish as well as English, I identify a number of distinctive features which I use to describe the systems and define the blueprint of each adverbial.

4.4 Progression

The analyses of the Danish and English adverbials (Chapters 5 & 6) move gradually from an overall perspective towards an analysis of each individual adverbial. First, I investigate whether it is feasible to split the overall category of epistemic and evidential adverbials into smaller categories on the basis of expression features such as morphology, syntax and topology. The aim is to identify expression based systems that may be relevant to consider in the further analysis. Then, I turn to the content side of the coin where I start out by giving a general description of the adverbials’ semantics based on existing literature (Andersen 1986; Greenbaum 1969; Swan 1980, 1988). I show how the existing proposals may be used, and how and why they need to be modified and developed in order to be useful in the attempt to identify and describe systems of epistemic and evidential adverbials in Danish and English. At this point, I also show to what extent the expression distinctions and content distinctions can be said to correlate. The semantic model I propose in relation to the Danish adverbials (5.2) is also employed in the analysis of the English adverbials. I argue for the relevance of the model to the English adverbials in section 6.2, yet, in order to avoid cumbersome reiteration I generally refer to the outline in section 5.2. After this follows the detailed analysis of the adverbials, which is intended to identify how each adverbial differs from the other adverbials while at the same time resembling them enough to be part of the same system. At the end of each chapter, I sum up the analysis and present the system of epistemic and evidential adverbials in conspectus. In Chapter 7, I outline the most salient similarities and differences between the way the epistemic and evidential adverbials are organised in Danish and English with a view to explaining and comparing how the content substances of epistemic modality and evidentiality are structured by the adverbial systems in the two languages.
5 Danish Adverbials

Not surprisingly, no official lists of epistemic or evidential adverbs or any similar categories in Danish exist. However, by consulting relevant dictionaries and cross-checking a number of grammars and articles on relevant topics, e.g. Togeby (2003), Hansen (1967:199ff), Andersen (1986), Strauß (2003), Hansen & Heltoft (2005), it is possible to synthesize a list of what we may consider relevant candidates in the search for epistemic and evidential adverbials in Danish. They are listed in alphabetical order in Table 1. These adverbs/adverbials are often grouped together in the literature, although it differs considerably from account to account how many of the candidates are included and which headings they are sorted under.

<table>
<thead>
<tr>
<th>Danish Adverb</th>
<th>English Adverb</th>
<th>English Adverb</th>
</tr>
</thead>
<tbody>
<tr>
<td>afgjort</td>
<td>måske</td>
<td>utvivlsomt</td>
</tr>
<tr>
<td>angivelig</td>
<td>nok</td>
<td>velsagtens</td>
</tr>
<tr>
<td>antagelig</td>
<td>nødvedigvis</td>
<td>vel</td>
</tr>
<tr>
<td>antageligvis</td>
<td>rimeligvis</td>
<td>velnok</td>
</tr>
<tr>
<td>bestemt</td>
<td>sandelig</td>
<td>vist</td>
</tr>
<tr>
<td>formentlig</td>
<td>sandsynligvis</td>
<td>vistnok</td>
</tr>
<tr>
<td>formodentlig</td>
<td>sikkert</td>
<td>vitterlig</td>
</tr>
<tr>
<td>givetvis</td>
<td>tilsyneladende</td>
<td>øjensynlig</td>
</tr>
<tr>
<td>muligvis</td>
<td>tydeligvis</td>
<td>åbenbart</td>
</tr>
</tbody>
</table>

Table 1: Candidates

The list is not exhaustive, yet I believe it covers the most common epistemic and evidential adverbials in Danish. It is not possible to treat all the relevant candidates in a study of this kind, so I have chosen to disregard a number of the candidates which I for various reasons consider less relevant for the investigation. First, afgjort and bestemt may be disregarded because their primary function is adjectival, and when they do occur as sentence adverbials their meaning is purely emphatic, which is not typical for the other candidates. Sandelig and vitterlig may be excluded on similar grounds as their primary meaning is also emphatic. Secondly, although they should clearly be counted among the epistemic and evidential adverbials in Danish, I have chosen to omit velnok, velsagtens, vistnok and sikkert for practical reasons (cf. comments on pp. 42fn and 49). Finally, some of the adverbials may be excluded on the grounds of frequency. To determine the relative frequency of the adverbials I have looked up the remaining adverbials in Korpus 2000, the largest corpus of written Danish with a total of approximately 28 million words (www.korpus2000.dk). The adverbials are listed according to frequency in table 2, which also – for the sake of reference – lists how many hits the adverbials produce at www.politiken.dk (March 2006).\(^1\) ‘+200’ indicates that the particular form occurs more than 200 times at politiken.dk. The search engine returns a

\(^1\) At politiken.dk the search facility is confined to articles uploaded within the previous three months. This means that the numbers recorded in table 2 will no longer be exactly the same. Still, it appears that the relative frequency of the adverbials stays more or less constant.
maximum of 200 hits, so it is not possible to determine the relative frequency of those forms which occur more than 200 times.

<table>
<thead>
<tr>
<th>Form</th>
<th>Korpus 2000</th>
<th>politiken.dk</th>
</tr>
</thead>
<tbody>
<tr>
<td>nok</td>
<td>22753</td>
<td>200+</td>
</tr>
<tr>
<td>måske</td>
<td>15367</td>
<td>200+</td>
</tr>
<tr>
<td>vist</td>
<td>7381</td>
<td>200+</td>
</tr>
<tr>
<td>vel</td>
<td>6417</td>
<td>200+</td>
</tr>
<tr>
<td>tilsyneladende</td>
<td>3292</td>
<td>200+</td>
</tr>
<tr>
<td>åbenbart</td>
<td>2078</td>
<td>119</td>
</tr>
<tr>
<td>nødvendigvis</td>
<td>1606</td>
<td>106</td>
</tr>
<tr>
<td>sandsynligvis</td>
<td>1358</td>
<td>123</td>
</tr>
<tr>
<td>muligvis</td>
<td>1177</td>
<td>175</td>
</tr>
<tr>
<td>angivelig(t)</td>
<td>811</td>
<td>195</td>
</tr>
<tr>
<td>tydeligvis</td>
<td>584</td>
<td>51</td>
</tr>
<tr>
<td>givetvis</td>
<td>461</td>
<td>30</td>
</tr>
<tr>
<td>utvivlsomt</td>
<td>421</td>
<td>23</td>
</tr>
<tr>
<td>øjensynlig(t)</td>
<td>50</td>
<td>30</td>
</tr>
<tr>
<td>formodentlig(t)</td>
<td>95</td>
<td>28</td>
</tr>
<tr>
<td>antagelig(t)</td>
<td>52</td>
<td>10</td>
</tr>
<tr>
<td>formenti(t)</td>
<td>34</td>
<td>200+</td>
</tr>
<tr>
<td>rimeligvis</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>antageligvis</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 2: Frequency of candidates

The candidates above the dotted line are the ones I shall be concerned with in this dissertation, while rimeligvis and antageligvis will be disregarded due to their infrequency. It is important to note that for the purpose of this dissertation it has not been possible to make a detailed investigation of all occurrences of the adverbials in the text corpora. Table 2 merely registers how many times a particular form occurs in the corpus. This is important to keep in mind since quite a few of the adverbials are in fact highly multi-functional. As an example we may mention nok. The use of this adverbial as a sentence adverbial as in han er nok taget til London is in fact quite rare. It is much more frequent in other functions, of which there are many (see Togeby 1979 for an attempt at a unified account). The frequencies listed in table 2 are not sensitive to this kind of multifunctionality; therefore the numbers should be taken with a grain of salt. However, I do believe the adverbials included above the dotted lines may be considered particularly relevant for the system of evidential and epistemic adverbials in Danish.

In the following section, 5.2, I shall investigate the expression features of these adverbials in more detail, and in 5.3 I shall pay closer attention to their semantic similarities and differences.
5.1 Expression

5.1.1 Morphology

The sentence adverbials investigated in this dissertation are simple adverbials, i.e. they are realized by single adverbs. The Danish adverbs that function as sentence adverbials can be divided into two overall groups on the basis of their morphology: 1) derivational adverbs, e.g. muligvis, formodentlig, åbenbart, and 2) simple adverbs, e.g. nok, måske and vel. Tilsyneladende is unique among the epistemic and evidential adverbials in having participial expression morphology: tilsyne-ladende (Katlev 2000).

The majority of the epistemic and evidential adverbials are derivational. They consist of an adjective stem (e.g. mulig, åbenbar) or a verb stem (e.g. formode, antage) and one of three suffixes: -vis, -lig, or -t. The group can be divided into three sub-groups on the basis of the suffixes:

1. -vis     sandsynligvis, muligvis, nødvendigvis, givetvis, tydeligvis
2. -lig     formodentlig, formentlig, øjensynlig, antagelig, angivelig
3. -t       åbenbart, utvivlsomt

As indicated by the examples here, -vis and -t suffixes tend to combine with adjective stems, whereas -lig typically combines with verb stems, yet, these correlations are not clear-cut since we find exceptions in both cases, viz. givetvis and øjensynlig.

The group of simple adverbs is in fact not that simple. They are alike in the sense that none of them are derivational, but apart from that, morphologically speaking, they have very little in common. Måske is a contraction of the verbs måtte and ske (ODS); vel stems from the Common Germanic wela-; and nok is a development of noch, which itself is derived from the low German particle nôch as a replacement for the Early Middle Danish nōgh, meaning 'sufficient' (Katlev 2000). What enables us to identify the simple adverbs as a group, then, is not so much that they share morphological traits, but rather that they, as will be shown below, to a large extent share syntactical and topological characteristics.

The morphology of the adverbs does not in itself point to homogenous groups of epistemic and evidential adverbials in Danish. Especially the group of derivational adverbs covers a multitude of meanings, and even if we delimit the scope to subgroups defined by a particular suffix, we find that the semantics is diffuse. However, as we shall see below, the morphological characteristics of the adverbs outlined above can to some extent be shown to tally with certain syntactic and especially topological features of various groups of adverbials.

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2 The adverbs kanske og kanhænde have been formed along similar lines, but they are very infrequent in modern Danish, and hence not considered here.

3 This is a reconstructed form.
5.1.2 Syntax

As pointed out by Hansen & Heltoft (2003:9ff), sentence adverbials in Danish are dependent on finite verb phrases in the sense that sentence adverbials presuppose the presence of finite verb phrase. Thus, we cannot employ a sentence adverbial in a non-finite clause like the one given in (2):

(2) At lære fransk på aftenskole (er sjovt)
(2') *At lære fransk muligvis (er sjovt)

Similarly, it is not possible to place adverbials like jo and da (=Danish dialogiske adverbialer) immediately before a non-finite clause:

(3) *jo/d a at lære fransk på aftenskole

However, as far as epistemic adverbials are concerned, this position is not entirely ungrammatical, cf. (4).

(4) muligvis at lære fransk på aftenskole

Yet, when an epistemic sentence adverbial is placed in this position, it typically entails that the sentence is interpreted as an instance of free indirect speech where the sentence adverbial, quite unusually, does not ‘belong to the speaker’, as it were, but is in fact borrowed from someone else, i.e. reported:

(4') Tine har overvejet muligvis at lære fransk på aftenskole

In (4') muligvis expresses Tine’s – not the speaker’s – assessment of the likelihood of her taking evening classes to learn French. Evidential adverbials that attribute the source of the propositional content to a third person, e.g. angivelig, cannot be used in a similar way. That would imply a semantic contradiction. Tine cannot have used angivelig about her own considerations:

(4'') *Tine har overvejet angivelig at lære fransk på aftenskole

Thus, this frame can in some cases be used to test whether a given adverbial is epistemic, as in (4’), or evidential, as in (4’’). It is important to note however, that what is being tested in this frame is not so much the syntactic features of the adverbial under investigation, but rather its semantic-pragmatic potential. Furthermore, the test does not apply to all epistemic adverbials; antagelig and nødvendigvis, for instance, would appear distinctly odd as substitutes for muligvis in (4’). In sum, the test does not bring us very far in subdividing the group of epistemic and evidential adverbials.

The most relevant distinction between the epistemic and evidential adverbials concerns their ability or inability to be used as holophrases, e.g. as answers to bi-polar interrogatives. On this point the adverbials fall into two groups. Derivational adverbs are fine:
5.1.3 Topology

The status of the sentence adverbials as a syntactic category is reflected in their topology, i.e. their distributional properties in declarative sentences. This can be illustrated by means of the ‘sentence frame’ (=Danish sætningsskema, cf. Jensen 2002), which shows that a distinct position, SA, is reserved for sentence adverbials in Danish declarative clauses:

<table>
<thead>
<tr>
<th>F</th>
<th>VF</th>
<th>S</th>
<th>SA</th>
<th>FO</th>
<th>Vi</th>
<th>O</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundament field</td>
<td>Finite verb</td>
<td>Subject</td>
<td>Sentence adverbial</td>
<td>Focus operator</td>
<td>Non-finite verb</td>
<td>Object</td>
<td>Obligatory and free adverbials</td>
</tr>
<tr>
<td>Erik</td>
<td>vil</td>
<td>sandsynligvis</td>
<td>ikke</td>
<td>købe</td>
<td>bogen</td>
<td>i dag</td>
<td></td>
</tr>
<tr>
<td>Han</td>
<td>vil</td>
<td>vist</td>
<td>købe</td>
<td>den</td>
<td>i morgen</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Table 3: Sentence adverbials in the sentence frame*

4 This is a simplified version of the sentence frame. For a more full account see Hansen & Heltoft (2003).
The SA-slot is defined as the position immediately to the left of the place reserved for focus operators, e.g. the negation, *ikke* (*not*) or *kun* (*only*). Apart from occurring in this position, some – but not all – sentence adverbials may also occur in initial position, the ‘Fundament field’ (F), and retain the meaning they have when placed in the SA-position. Other sentence adverbials acquire a different meaning when placed there (cf. Jensen 2000). *Sandsynligvis* and *vist* can be used to illustrate the difference:

(10) Erik vil *sandsynligvis* ikke købe bogen i dag [SA]
(10') *Sandsynligvis* vil Erik ikke købe bogen i dag [F]
(11) Erik vil *vist* ikke købe bogen i dag [SA]
(11') *Vist* vil Erik ikke købe bogen i dag [F]

The meaning of *sandsynligvis* is identical in (10) and (10'). *Vist*, however, goes from indicating uncertainty in (11) to certainty in (11'). This phenomenon – a change of meaning from uncertainty to certainty when moved from SA to F – is common for a number of adverbials, e.g. also *vel* and *nok*. A basic distinction can thus be made between adverbials which may occur in initial position without change of meaning and those that cannot. I shall refer to the first group as [+Fundament] and the latter as [-Fundament].

In fact, this topological feature points to two basic adverbial systems in Danish: System I, which consists of [-Fundament] adverbials, and System II, which is comprised of [+Fundament] adverbials. It is possible to distinguish the two systems on the basis of topological criteria, but the division is in fact supported by morphological and syntactical traits as well. Thus, it is interesting to note that while the [-Fundament] adverbials are realized by non-derivationa l adverbs, particularly *nok*, *vel* and *vist*, the [+Fundament] adverbials are realised by derivational adverbs. It appears that morphologically similar adverbs exhibit similar topological characteristics when they function as sentence adverbials. Moreover, the adverbials that belong to System I are distinguished from members of System II by their inability to function as holophrase answers to yes/no-questions. From a topological point of view, it may seem that this merely reiterates the point made earlier that System I adverbials cannot occur in F-position. Yet, the test also indicates that System I adverbials are strongly tied to their position next to the verbal, and are perhaps best described as *particles* rather than full-fledged adverbials. I shall return to this discussion in Chapter 7.

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*Vist* is in fact derivational, but the semantics of the adjective stem (*vis*) and the adverbial are not congruent, so *vist* may be considered a distinct form.
5.1.4 Summing up

In this section, I have explored the possibilities of splitting the heterogeneous category of sentence adverbials up into smaller and more homogenous groups on the basis of morphological, syntactic and topological criteria. The most tangible division I have proposed concerns the distinction between [+Fundament] adverbials and [-Fundament] adverbials. This topological distinction can be shown to tally with morphological as well as syntactic features of the relevant adverbials:

1. [+Fundament] adverbials are realized by derivational adverbs whereas [-Fundament] adverbials tend to be realized by non-derivational adverbs.
2. [+Fundament] are distinguished from [-Fundament] adverbials by their ability to function as holophrase answers to yes/no-questions.

On the basis of these observations, it is possible to distinguish two systems of sentence adverbials in Danish. In table 4 below, I have set out the prototypical features of adverbials belonging to System I and System II, respectively. It is important to note that the defining criterion is the topological distinction between [+Fundament] and [-Fundament], whereas the other traits are merely prototypical.

<table>
<thead>
<tr>
<th>Topology</th>
<th>System I</th>
<th>System II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syntax</td>
<td>[-holophrase]</td>
<td>[+holophrase]</td>
</tr>
<tr>
<td>Morphology</td>
<td>Non-derivational</td>
<td>Derivational</td>
</tr>
</tbody>
</table>

Table 4: The two adverbial systems in Danish

The central members of System I are nok, vel and vist. These are the members of System I which I shall focus on in the present dissertation. Thus, the bulk of the adverbials selected as relevant candidates for the present investigation belong to System II: muligvis, sandsynligvis, nødvendigvis, utvivlsomt, formentlig, formodentlig, givetvis, antagelig, måske, tydeligvis, tilsyneladende, øjensynlig, åbenbart and åbenbart.⁶

The formal analysis takes us some way in the attempt to identify smaller groups within the larger category of sentence adverbials in Danish, yet the groups we arrive at are still heterogeneous, especially System II. If the categories are to be defined more precisely, it is necessary to include semantic criteria in the setting up of the categories. This we shall turn to in the next section.

⁶ Sikkert also belongs to System II but it has been disregarded in the present investigation because it constitutes a less prototypical member by not conforming to the topological criterion, i.e. its meaning changes between SA and F.
5.2 Content

5.2.1 Semantic parameters

Traditionally, the group of Danish sentence adverbials is subdivided on the basis of semantic/functional criteria. One of the most influential studies in this connection is Andersen (1986). Andersen characterizes sentence adverbials as “reflexive adverbials” to call attention to the fact that they have a particular reflexive metalinguistic function in common in simultaneously pointing to language as a theme and a medium (Andersen 1986:80). He divides the reflexive adverbials into four groups on the basis of pragmatic functions. In English translation these subgroups can be outlined as follows (cf. Andersen 1986:84ff):

1) **Criteria-markers**, e.g. uttvivlsomt, åbenbart, tydeligvis, sandsynligvis, formodentlig, nok …
2) **Evaluation-markers**, e.g. beklageligt, desværre, forbavsende, glædeligt, heldigvis …
3) **Commitment- or dissociation-markers**, e.g. bogstaveligt talt, egentlig, mildt sagt…
4) **Composition-markers**, e.g. alligevel, derefter, med andre ord, desuden …

Adverbials in the first group, the criteria-markers, are concerned with the speaker’s attitude towards his utterance. Adverbials in the second group, the evaluation-markers, specify the speaker’s evaluation of the propositional content. Adverbials in the third group, commitment- or dissociation-markers, are used by speakers to indicate their degree of involvement in the utterance and finally members of the fourth group, the composition-markers, are used to indicate how the speaker’s utterance relates to the surrounding discourse. The epistemic and evidential sentence adverbials belong to the group of criteria markers.

As mentioned, Andersen argues that adverbials which belong to these four groups, despite their differences, have a particular reflexive function in common: on the one hand they point back to the speaker, to his particular knowledge and his general awareness of communicative norms; on the other, they point forward to the ongoing discourse and the speaker’s willingness to accept responsibility for (elements of) this discourse. Andersen illustrates his point by means of a model which is represented here in my translation:

![Diagram](image)

**Figure 1**: Andersen’s model of reflexive adverbials

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7 The analysis presented in this article is used as a blueprint for the presentation of sentence adverbials in e.g. Togeby (2003), Hansen & Heltoft (2005) and Borchmann (2005).

8 Andersen’s term is actually “refleksions-adverbialer”, ‘adverbials of reflection’, (1986:80), but this term is used interchangeably with “reflekive adverbialer”, ‘reflexive adverbials’, (e.g. 1986:83). The latter term is more readily translated into English and is therefore preferred here.
Andersen’s approach offers a comprehensible analytical framework within which much of the apparent adverbial chaos can be explained by recourse to basic pragmatic principles. Yet, in my view, the framework can be developed further. As it stands, Andersen’s analysis does not take us very far in trying to account for the similarities and differences between the members within each of the four groups. In other words, the groups need to be studied in more detail before we can account satisfactorily for their ‘infrastructure’. In order to achieve this goal in relation to the epistemic and evidential sentence adverbials, I have developed Andersen’s model on a number of points.

Andersen’s analysis points to two important relations established by the sentence adverbials: 1) the relation between speaker and background knowledge and 2) the relation between speaker and discourse (which for my purposes may be conceived narrowly as propositional content). Yet, an important additional function of many sentence adverbials is to incorporate the hearer in the discourse by indicating what stance the speaker expects the hearer to adopt, either in relation to the propositional content or the background knowledge. This is perhaps most obvious in the case of dialogic markers like jo and da (cf. Andersen 1982, Therkelsen 2004, Krylova 2005), but it is also relevant in relation to other sentence adverbials, including some of the epistemic and evidential adverbials. So, apart from the relations between speaker and propositional content, the model should include two further relations, viz. 1) the relation between hearer and propositional content and 2) the relation between hearer and background knowledge, which for my purposes can be conceived specifically as the epistemic or evidential basis of the utterance. Thus, I propose that the description of the adverbials take the following four relations into consideration.

![Diagram of four relations between propositional content, speaker, hearer, and basis]

It is important to note that not all relations will be relevant to all adverbials. Relation 1 is relevant to all the epistemic and evidential adverbials, but the remaining three are only

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9 Andersen also refers to background knowledge as “ytringens tilblivelseshistorie”, the history of origin of the utterance, or ‘ytringsgrundlaget’ (1986:83), which seems to correspond with my use.

10 Throughout the dissertation I use ‘speaker’ and ‘hearer’ as abstract terms, i.e. irrespective of whether a given text is comprised of spoken discourse or not, ‘speaker’ always denotes the “I” of the text while ‘hearer’ denotes the “you” which may be implicitly or explicitly present in the text.
relevant to some adverbials. I shall use the model in the analysis of the individual adverbials in sections 5.3 and 5.4 below, and explain it in more detail as we go along.

5.2.2 Force and Source
As mentioned in the introduction, this dissertation is founded on an assumption that epistemic modality and evidentiality are concerned with two primary semantic parameters, namely force and source, and as I shall show in the following analysis, these parameters are indeed relevant to the understanding of the adverbials in Danish. Some adverbials are primarily concerned with the specification of force while others are concerned with the specification of source. The two terms are borrowed from Kronning (2004), but on the basis of my analyses and the discussion of epistemic modality and evidentiality in Chapter 3 I have developed the following particular definitions which are relevant in the description of the adverbials in Danish as well as English:

**Force** is the semantic function of epistemic modality. By employing epistemic expressions speakers may specify the specific degree of force which supports the propositional content of their utterances. Different degrees of force indicate different degrees of certainty concerning the truth-value of the propositional content, ranging from possibility to necessity.

**Source** is the semantic function of evidentiality. By employing evidential expressions speakers may specify what kind of source supports the propositional content of their utterances, and to whom this source is accessible. A basic distinction may be drawn between subjective, intersubjective and objective source. Subjective source denotes the case where the speaker specifies that he is the only relevant person in the communication situation who has access to the source of knowledge which warrants the assessment. **Intersubjective source** denotes the case where the speaker specifies that he assumes the relevant source to be available to both speaker and hearer. Finally, objective source denotes the case where the speaker specifies that the relevant source is someone/something separate from himself and that this source is not accessible to the hearer.

In connection to each of the two primary parameters, two secondary parameters are relevant in the analysis of the epistemic and evidential adverbials. In relation to force, the relevant secondary parameter is modal factor which specifies where the force originates (cf. 3.2.2). In relation to source the relevant additional parameter is responsibility which specifies the relation between the speaker and the propositional content (cf. 2.1.3). In relation to the evidential adverbials I shall also introduce the notion of agreement which concerns the relation between the hearer and the propositional content. However, as I shall argue in due course (conclusively in 5.5 and 6.5), the status of agreement is different from that of force, source, modal factor and responsibility.
5.2.3 Summing up
The epistemic and evidential sentence adverbials are linguistic resources that speakers may employ to negotiate the relations between speaker and hearer, propositional content and background knowledge. The functions performed by the adverbials are manifold, and hence their semantics differ. However, two main semantic functions of the adverbials can be singled out, viz. specification of force and specification of source. In relation to these primary functions two secondary parameters are relevant, viz. modal factor position and responsibility. In the following I will investigate how the features of force, source, modal factor, and responsibility are organized in the two overall systems of adverbials that were defined in section 5.1, i.e. System I and System II.

5.3 System I

5.3.1 nok, vel and vist
The three main members of System I are nok, vel and vist. Over the years, this trinity has been subject to a number of analyses. In the following I shall briefly mention three such studies, viz. Jacobsen (1992), Davidsen-Nielsen (1996) and Krylova (2005), which have provided important input to my analysis of the adverbials.

As far as I am aware, Galberg Jacobsen is the first to explicitly compare nok and vist (Jacobsen 1992). He argues that nok expresses ‘subjective presumption’ (“subjektiv formodning”), i.e. a presumption which belongs solely to the speaker, whereas vist expresses ‘objective presumption’ (“objektiv formodning”), i.e. a presumption that is based on evidence which is external to the speaker, for instance what someone else has said. Jacobsen’s analysis of nok and vist is basically adopted by Davidsen-Nielsen (1996) who classifies the two adverbials as ‘discourse particles’. He also considers vel to be a discourse particle and argues that it is different from nok and vist in that “[...] the hearer [is included] in the assessment of the situation” (1996:286). Davidsen-Nielsen also treats da, dog, jo, nu, sgu, and skam as discourse particles but they are not relevant in relation to the present investigation. Krylova (2005) focuses specifically on nok, vel, and vist which she terms 1., 2. and 3. person particles, while basically agreeing to the analyses presented by Jacobsen and Davidsen-Nielsen. The main points of the three analyses are summarized in table 5.

<table>
<thead>
<tr>
<th></th>
<th>nok</th>
<th>vel</th>
<th>vist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jacobsen</td>
<td>Subjective presumption</td>
<td>-</td>
<td>Objective presumption</td>
</tr>
<tr>
<td>(1992)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Davidsen-Nielsen</td>
<td>“[...] the evaluation of probability is made by [the speaker] alone”</td>
<td>“[...] the hearer [is included] in the assessment of the situation”</td>
<td>“[...] there are others beside [the speaker] who believe the situation [...] to be true”</td>
</tr>
<tr>
<td>(1996:286)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Krylova</td>
<td>1. person particle</td>
<td>2. person particle</td>
<td>3. person particle</td>
</tr>
<tr>
<td>(2005)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5: Three analyses of nok, vel, vist
In my analysis, nok, vel and vist are epistemic-evidential adverbials, i.e. they concomitantly encode force and source. They do not differ notably in terms of the degree of force they specify: They all indicate that the propositional content is considered more likely than not. What distinguishes the three adverbials from one another is the type of source they specify – which is also indicated by the three analyses summarised in table 5. In my terminology, nok codes subjective source, vist codes objective source and vel codes intersubjective source. To illustrate the distinctions, let us look at some examples, starting with nok:

(12) »Som et samvittighedsfuldt menneske har jeg taget ansvaret for bogen, og det er nok det, der er hele fadæsen. Jeg har taget et ansvar, som jeg ikke burde have taget helt alene. Det var rigtig dumt. [...]«. (http://politiken.dk/VisArtikel.sasp?PageID=400679)

In this example, Danish politician Louise Frevert tries to explain why the publication of a book with alleged racist content has caused so much ado in the Danish news. By using nok she indicates that the explanation is her explanation of the situation, founded on her subjective assessment of the case. The relations established by nok may be illustrated thus:

\[ \text{nok} \]

\[ [\text{+F}] \]

\[ P \]

\[ \text{Speaker} \]

\[ \text{Hearer} \]

\[ \text{Subjective source} \]

\([+F]\) indicates medium force, i.e. it specifies that the speaker considers the propositional content of the sentence to be more likely than not. The line between the speaker and the evidential basis, specified as subjective source, indicates that the assessment is based on some unspecified evidence which is available to the speaker.

By using vel, the speaker expresses his assessment of a particular propositional content. He presents the assessment as a tentative conclusion, which the hearer is invited/expected to confirm:

(13) Sprogligt er ’Egoland’ vel næppe nogensinde mindre end forrygende. (http://politiken.dk/VisArtikel.sasp?PageID=401185)

The premise(s) on which the tentative conclusion is based is typically available to both speaker and hearer, i.e. the source is intersubjective. We may illustrate the relations like this:
[+A], for agreement, indicates that the speaker expects the hearer to agree with his assessment. The two lines from speaker and hearer to the evidential basis, specified as intersubjective source, indicate that the evidential basis of the utterance is available to both speaker and hearer.

Finally, vist indicates that the speaker bases his assessment on evidence which is external to him, for instance the observation of another human being’s behaviour:

(14) Men Nørholms musik sagde vist ikke aftenens dirigent, Gerd Albrecht, noget særligt. Hvor Albrecht […] i Bruckners tredje symfoni udfoldede hele sit kropssprog og stedvis direkte lettede fra podiet for at få musikerne med sig, så takterede han sig gennem Nørholm. (Jyllands-Posten 27.01.01, 1. sektion, p. 12)

The kind of evidence that forms the basis for an assessment expressed by vist is highly diverse, and not as such coded in the semantics of the adverbial. The common denominator is that the source is objective.

It is important to note that although the source is objective, the assessment as such still belongs to the speaker.

---

11 This example is not drawn from the reference sample.
Summing up

Nok, vel and vist constitute a multidimensional system. All members integrate the two semantic features of force and source and they may therefore be termed epistemic-evidential adverbials. The three members do not differ in terms of the degree of force they specify, but they differ in terms of source. The relevant distinction between the three adverbials is location of source, not modal factor position.

The traits of the adverbials are set out in table 6 below. A plus sign indicates that the adverbial in question has this particular feature; a minus sign indicates that the adverbial in question does not have the particular feature.

<table>
<thead>
<tr>
<th>FORCE</th>
<th>SOURCE</th>
<th>AGREEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>[+F]</td>
<td>Sub</td>
<td>Inter</td>
</tr>
<tr>
<td>nok</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>vel</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>vist</td>
<td>+</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 6: System I: Epistemic-evidential adverbials

As can be seen from the table, vel stands out in carrying a specific instruction of expected agreement from the hearer concerning the assessment put forward by the speaker. Yet, I believe this instruction can be seen as a derivative function of the intersubjective source, because the expectation of agreement follows automatically from the fact that the adverbial specifies intersubjective source. Finally, it should be noted that responsibility is not a distinctive feature of System I, since all three members, by virtue of their part-epistemic nature, are unspecified in terms of responsibility.

Nok, vel and vist may be perceived as the core members of System I, yet there are a number of additional adverbials which probably belong to the system as well, notably vistnok, velnok and velsagtens, which all fit the expression criteria for members of System I outlined in 5.1.4. Yet, for the purposes of this dissertation, it is not necessary to pursue the analysis of these adverbials further, since the analysis of nok, vel and vist provides ample opportunity for comparison with English.

5.4 System II

In terms of expression features, the members of System II differ considerably from the members of System I. Yet, as I shall show below, the semantic distinctions that applied to members of System I – force and source – in fact recur in System II, albeit in distilled form: the system is divided into epistemic adverbials and evidential adverbials, i.e. the members
of this system do not exhibit the same blending of force and source as the epistemic-evidential adverbials in System 1. I shall start out by looking at the epistemic adverbials.

5.4.1 Epistemic adverbials

Epistemic adverbials allow speakers to assign varying degrees of force to the propositions they put forward. It is common to say that epistemic expressions operate on a scale of probability, ranging from possibility to necessity/certainty; yet, the Danish epistemic adverbials in fact tend to cluster more or less exclusively around the possibility pole. This means that many of the epistemic adverbials often tend to be perceived as more or less synonymous, yet in the following analysis I shall try to point to the differences – however slight they may be – between the adverbials. The analysis specifically aims to determine which degree of force and which modal factor position(s) the individual adverbial specifies as part of its inherent meaning potential, i.e. which instructions it contains regarding these elements. For several of the adverbials it holds that the modal factor position in given configurations may be either subjective or objective depending on the context. The modal factor position of these adverbials is consequently considered to be unspecified at the structural level (cf. the distinction between configuration and structure outlined in 4.3).

muligvis & sandsynligvis

_Muligvis_ expresses minimum force, which may be formally represented as [±F]. By specifying this particular degree of force, _muligvis_ allows the speaker to introduce a proposition without being committed to its truth value:

(15) [På Roskilde Festival 2006] vil man _muligvis_ også kunne finde anmeldernes foretrukne livenavn i fjor, Kashmir [...]

(http://politiken.dk/VisArtikel.sasp?PageID=433164)

By using _muligvis_ the speaker thus indicates that the proposition introduced under its scope may or may not be the case. The modal factor is typically subjective, i.e. located exclusively with the speaker; however, _muligvis_ may also be used in contexts where the modal factor is shared between the speaker and other relevant agents. The following is such an example:

(16) ’Bæsepesten’ er en realistisk bog, der også svarer ærligt på det uundgåelige spørgsmål: »Fik I så stoppet aids?«.

Nej, det gjorde man ikke. Der er stadig omkring 100 bøsser om året, der får konstateret hiv, nogle _muligvis_ smittet for år tilbage. Og tallet er stigende.

(http://politiken.dk/VisArtikel.sasp?PageID=432981)

In this case, the force behind the assessment expressed by _muligvis_ originates jointly in the speaker (the reviewer), and the authors of _Bæsepesten_, i.e. the source is not exclusively located with the speaker. The example could perhaps be perceived as an instance of free indirect speech where the reviewer borrows, as it were, the authors’ _muligvis_; yet, I choose to perceive of the force as originating jointly in the reviewer and the authors.
In sum, we may conclude that *muligvis* codes minimum force, \([±F]\). Its unmarked modal factor position is subjective, yet, in particular contexts it may be objective, shared between the speaker and one or more agents. Therefore, the modal factor may be determined as unspecified at the structural level. We may illustrate the features of *muligvis* like this:

\[\text{muligvis} \quad \begin{array}{c} \text{P} \\ \text{±F} \\ \text{Speaker} \\ \text{Sub MF} \\ \text{Hearer} \\ \text{Obj MF} \\ 3. \text{person} \end{array} \]

The dotted line between subjective and objective modal factor indicates that the modal factor position is unspecified at the structural level. The only invariant relation established by *muligvis* is the force relation between speaker and the propositional content. Thus, it is not coded in the adverbial what type of evidence the speaker may or may have to back his claim or indeed whether he has any evidence at all.

*Sandsynligvis* indicates stronger force than *muligvis*:

(17) Taget på et tysk supermarked er faldet sammen i byen Töging am Inn i Bayern. Det oplyser tysk politi ifølge Reuters. [...] Kollapset skyldes *sandsynligvis* store snemængder, der har samlet sig på bygningens tag.

(http://politiken.dk/VisArtikel.iasp?PageID=437110)

When using *sandsynligvis*, the speaker indicates that he considers the propositional content presented under its scope to be more likely than not. Thus, like *nok*, *vel* and *vist* the adverbial specifies medium force, represented formally as \([+F]\) in the model.

\[\text{sandsynligvis} \quad \begin{array}{c} \text{P} \\ \text{±F} \\ \text{Speaker} \\ \text{Sub MF} \\ \text{Hearer} \\ \text{Obj MF} \\ 3. \text{person} \end{array} \]

As can be seen from the model, *sandsynligvis* indicates a stronger degree of force than *muligvis*, but apart from this difference the relations established by *sandsynligvis* are
basically the same as for muligvis. In terms of modal factor, sandsynligvis also resembles muligvis in that the modal factor position is unspecified at the structural level. In example (17) I consider the modal factor to be objective since the force behind the assessment appears to originate jointly in the speaker and some other unspecified agent(s). Yet, other examples in the reference sample clearly show that sandsynligvis may also be used in cases where the force originates solely in the speaker.

nødvendigvis & ikke nødvendigvis

At a first glance, it would appear that nødvendigvis constitutes a convenient lexicalisation of the category of necessity known from modal logic, yet, upon closer inspection it turns out not to be the case. On the basis of the topological criteria set up for sentence adverbials in Danish (5.1.3), nødvendigvis is actually somewhat problematical since it typically occurs immediately after the negation. A plausible explanation for this observation is to suggest that nødvendigvis in most cases should not be considered an individual lexeme, but should in fact be perceived as part of a syntagm viz. ikke nødvendigvis. Nødvendigvis predominantly occurs as part of this syntagm. Consider the following example taken from an editorial at politiken.dk:

(18) EN VERDEN styret af Frankrig ville ikke nødvendigvis være bedre end en verden styret af USA.

(http://politiken.dk/VisArtikel.sasp?PageID=425369)

In this case, and generally, ikke nødvendigvis implies that p is possibly not the case. What is important to note is the inherent negative polarity of the expression: the speaker does not expect p to be the case, but still leaves the option open.

Often, ikke nødvendigvis is thus used to refute a particular point of view – whether actual or imaginary – that p is in fact the case. Nødvendigvis can in this particular use be seen as a mitigating add-on to the negation. In (18) the editor is up against an apparent common belief that en verden styret af Frankrig ville være bedre end verden styret af USA. Instead of challenging this assumption head on by saying en verden styret af Frankrig ville ikke være bedre... the editor chooses a more tentative and polite solution by adding nødvendigvis.

The force dynamic potential of ikke nødvendigvis is illustrated below where \([±F]_{neg}\) indicates minimum force, negative polarity:

---

12 Nødvendigvis occurs 1606 times at Korpus 2000 and in the majority of these cases (1056/1606) it is immediately preceded by ikke.
There are some examples of the modal factor of *ikke nødvendigvis* in the reference sample. As I shall return to below, this is not surprising.

When *nødvendigvis* does not occur in a syntagmatic relation with *ikke* as described above, it typically collocates with a modal verb, especially the particular variant of the modal verb *måtte* which expresses epistemic necessity:

(19) Med den type velfærdssamfund, vi har i Danmark, må skattetrykket *nødvendigvis* være højt.

(http://politiken.dk/VisArtikel.sasp?PageID=424298)

In many cases it may appear somewhat redundant to include *nødvendigvis*, but it nevertheless has a function in disambiguating the meaning of the modal verb. Take for instance the following example which, depending on context, may indicate either permission or epistemic necessity:

(20) Erik må købe bilen

In order to clarify which meaning is intended, it is necessary to include either *nødvendigvis* (necessity) or *godt/gerne* (permission):

(21) Erik må *nødvendigvis* købe bilen (for at kunne køre i den)
(22) Erik må *godt/gerne* købe bilen (for sin kone)

The epistemic necessity which is expressed when *nødvendigvis* combines with *måtte*, is based on an objective modal factor, typically a logical principle of the type *x* logically entails/presupposes *y*. This is also the case in the rare cases where *nødvendigvis* occurs alone:

(23) På forhånd havde Venstre ellers sat netop 50 borgmesterposter som succeskriterium, hvilket *nødvendigvis* gør valget til en gedigen fiasko for det regeringsledende parti.13 (http://politiken.dk/VisArtikel.sasp?PageID=408464)

As evidenced by the above examples *nødvendigvis* generally expresses maximum force, i.e. a stronger force than *sandsynligvis*. This is indicated by means of [++F] in the model below. The modal factor is invariably objective, and typically constituted by a norm or some logical principle. This also helps explain why the modal factor of *ikke nødvendigvis* is invariably

---

13 Because, at the time the article was written, it was clear that Venstre had not met their own criterion.
subjective. It represents the negation of a norm, and this negation must necessarily come from the speaker alone.

\[
\text{nødvendigvis} \\
\text{P} \\
\text{[++F]} \\
\text{Speaker} \quad \text{Hearer} \\
\text{Obj MF} \\
\text{norm/logical principle}
\]

To sum up, we may say that nødvendigvis rarely occurs as an independent adverbial; its typical occurrence is as part of a syntagm, ikke nødvendigvis; and apart from this construction it primarily occurs in collocations with modal verbs, most notably måtte. On this basis it may be concluded that nødvendigvis, both in terms of syntax and semantics, is much more dependent on other elements of the clause than most of the other epistemic adverbials.

utvivlsomt

Utvivlsomt expresses maximum force. It is used by speakers to emphasize their conviction that \( p \) is the case. Consider the following example where Henrik Elmgreen, organizer of the Danish six-day race, explains why the event, in his opinion, has attracted fewer spectators than expected:

(24) »Når interessen pludselig dalede, hænger det utvivlsomt sammen med Jakob Piils afbud. Det skal nok have kostet os 200.000 kr., at han ikke var i stand til at stille op i par nr. 7 og forsøge at gentage sejren sammen med Jimmi Madsen.«

(http://politiken.dk/VisArtikel.sasp?PageID=437047)

The degree of forced expressed by utvivlsomt is similar to nødvendigvis, however, utvivlsomt is exclusively used with subjective modal factor to introduce the speaker’s personal assessment, and it is thus clearly distinguished from nødvendigvis which takes objective modal factor. This difference may be illustrated by means of a commutation test. Example (25) is taken from an editorial, which argues that the Danish opposition should strive for political diversity rather than political uniformity if they are to win the next election.

(25) Oppositionen vil utvivlsomt opnå den bredeste opbakning ved næste folketingsvalg ved at appellere til så mange vælgergrupper som overhovedet muligt.

(http://politiken.dk/VisArtikel.sasp?PageID=431489)

Here, the editor presents his analysis of the situation, and utvivlsomt helps him underscore the point. In (25’) where nødvendigvis is substituted for utvivlsomt the meaning changes:

(25’) Oppositionen vil nødvendigvis opnå den bredeste opbakning ved næste folketingsvalg ved at appellere til så mange vælgergrupper som overhovedet muligt.
If this was what the editor had written, he would not have expressed a personal opinion but rather put forward a quite tautological statement, based on a general principle saying that ‘oppositionen vil opnå den bredeste opbakning ved at appellere til så mange vælgere som muligt.’

We may conclude that utvivlsomt expresses maximum force, [++F], and is exclusively coded for subjective modal factor:

\[
\text{utvivlsomt} \quad \begin{array}{c}
\text{P} \\
[+F]
\end{array} \\
\begin{array}{c}
\text{Speaker} \\
\text{Sub MF}
\end{array} \quad \begin{array}{c}
\text{Hearer} \\
\text{Basis}
\end{array}
\]

\textit{formentlig} & \textit{formodentlig}

It is difficult to pinpoint the exact difference between \textit{formentlig} and \textit{formodentlig}. They often seem to be used interchangeably, which is also reflected in DDO where they are given identical definitions: "\textit{efter alt at dømme, efter al sandsynlighed}.” From a functional perspective this is obviously not satisfactory; there must be some difference in meaning between the two adverbials – however slight it might be – to motivate their co-existence.

As a perspective on her analysis of nok, \textit{vel} and \textit{vist}, Krylova (2005:86) has tentatively suggested that \textit{formodentlig} expresses what we may call 1. person-oriented epistemic modality, whereas \textit{formentlig} expresses 2. person-oriented epistemic modality. It is difficult to determine how adequate this description is since Krylova does not present a specific analysis to support her assumption. Still, it constitutes an interesting hypothesis that deserves to be tested.

As mentioned, Krylova classifies \textit{formentlig} as a 2. person-oriented adverbial, but I think it is more correctly described as being \textit{non-exclusively} subjective. There is nothing to suggest that it is specifically 2. person-oriented, but it seems quite reasonable to describe it as less subjective than \textit{formodentlig}. At politiken.dk \textit{formodentlig} occurs 28 times whereas \textit{formentlig} occurs more than 200 times. This situation is in stark contrast to the findings in Korpus 2000 where we find 95 tokens of \textit{formodentlig} vs. 34 tokens of \textit{formentlig} (cf. Table 2 p. 37). If we assume that \textit{formodentlig} is more subjective than \textit{formentlig}, the discrepancy between the two corpora could be explained by assuming that journalists in their attempt to adhere to certain norms of “objectivity” feel more comfortable with \textit{formentlig} than the more subjective \textit{formodentlig}. This view seems to be substantiated by the fact that \textit{formodentlig}, when it does occur at politiken.dk, often crops up in quotations:
Still, it appears that *formentlig* and *formodentlig* in many cases are in fact almost completely synonymous. I believe this similarity can be explained by the fact that they are both compatible with subjective modal factor. The difference between them is that *formentlig* has a wider modal factor potential than *formodentlig* as it may also be used with objective modal factor, e.g. in cases where someone has put forward a claim similar to the speaker’s. Consider the following example:

(27) »Tre undersøgelser udført af dyrlæger har de seneste år vist, at gennemsnitligt 5,5 procent af sælungerne aflivet med køller *formentlig* har været ved bevidsthed under afblødning og flåning, mens der kan drages tvivl om, hvorvidt yderligere 16 procent af ungerne har været dybt bevidstløse under afblødningen og flåningen«, siger Ole Münster.

In this example, the speaker, Ole Münster, relays a conclusion which has been put forward by three veterinarians. In this case *formentlig* works very well, whereas *formodentlig* would do less well. The objective modal factor may also be constituted by a general norm, as in the following example where the norm is constituted by a stereotypic view of skilled craftsmen:

(28) Håndværkere er ikke som andre mennesker, og det bør du nok være forberedt på, før du får en af dem til at reparere noget i dit hjem.

Håndværkeren har *formentlig* en helt anden opfattelse af tid og aftaler, end du har. Han ryder ikke op, og han forstår ikke, at det er en god idé at tage håndværkerskoene af, før han træder ind på dit rene gulvtæppe.

I find it reasonable to assume that the difference between the two adverbials is located in their different modal factor potential, and that their ability to be used interchangeably in some contexts is due to the fact that their instructional potential to some extent overlap: *formodentlig* is exclusively coded for subjective modal factor whereas *formentlig* is unspecified between subjective or objective modal factor.
The semantic difference between the two adverbials is very subtle. To most native speakers, the two adverbials are likely to be conceived – and used – as virtually synonymous expressions, and the difference between the two will be perceived as being constituted by tendencies in use rather than clear-cut semantic differences.

givetvis

Historically, givetvis has been used to denote certainty. According to ODS, givetvis derives from the verb give, in the particular sense of something being ‘a given’, i.e. det er givet at x. On this basis, ODS considers the adverbial derivation to be synonymous with the phrase sikkert og vist, yet, there is evidence to suggest that the adverbial has moved away from this concrete meaning of certainty towards a less tangible indication of high probability which is paraphrased as “med stor sandsynlighed” in DDO. We may distinguish the two meanings as givetvis, and givetvis₂. The typical modern usage, givetvis₂, is illustrated by this example:

(29)  Mange danske børnefamilier ønsker sig givetvis brændende en barnepige, der som britiske Nanny McPhee i Emma Thompsons til ukendelighed sminkede skikkelse kan sætte styr på selv de mest uvorne møgumer.

(http://politiken.dk/VisArtikel.sasp?PageID=432886)

In (29), and generally, givetvis, indicates that the speaker considers the propositional content to be more likely than not. The modal factor is invariably subjective.

A remnant of the original certainty meaning of givetvis, givetvis₁, can still be found in certain concessive structures of the type: ‘det er givetvis rigtigt, men…’. Consider the following example:

(30)  Det er givetvis rigtigt, at Mozart var alene om sin genialitet. Ingen samtidige komponistkolleger (det skulle da lige være Haydn) havde de kunstneriske forudsætninger for bare at tale med Mozart om den. Men glansbilledet af Mozart som det evige barn, den altid lyse komponist, der sorgløst nedfældede den ene genistreg efter den anden, mens han lod billardkuglerne rulle, det billede er vi nødt til at revidere.

(http://politiken.dk/VisArtikel.sasp?PageID=431325)

or:

(31)  Anker Jørgensen var givetvis ikke altid den mest overbevisende stærke eller sagligt indsigtsfulde politiske leder i traditionel forstand. [...] Men Anker Jørgensens svagheder var paradoksalt nok samtidig hans største styrke.

(http://politiken.dk/VisArtikel.sasp?PageID=430944)

The data I use in this study do not allow me to make any valid conclusions about the possible diachronic development of givetvis, however, I believe I have enough evidence to suggest as a hypothesis, that givetvis has been, and still is, undergoing a process of semantic change which may be illustrated thus:
This gradual change makes it difficult to make a unified description of the adverbial. In the remaining part of the dissertation I shall primarily be concerned with *givetvis₂* since I consider this variant the most frequent one in present day Danish. We may illustrate the set-up of *givetvis₁* like this:

\[
givetvis₂
\]

\[
\begin{array}{c}
P \neg \mathbf{F} \\
\text{Speaker} \\
\text{Sub MF} \\
\text{Sub MF} \\
\text{Hearer} \\
\text{Basis}
\end{array}
\]

In the force-dynamic set-up of the model it is not possible to distinguish *givetvis₂* from *sandsynligvis*, yet *givetvis* and *sandsynligvis* are quite easily distinguished from one another because of the frozen certainty-meaning of *givetvis₂*, which comes to the fore in concessive structures. Expressed in the force dynamics terms of the model, *givetvis₁* would be identical to *utvivlsomt*; i.e. with [+F] rather than [+F].

**antagelig**

The adjective/adverb *antagelig* is derived from the verb *antage*, which, among other things, can mean either ‘to assume’ (that something is the case) or ‘to accept’ (an offer, an article for publication etc.) (ODS). When *antagelig* is used as an adverbial, its meaning is typically related to the former meaning (ODS, DDO), which is epistemic and hence the meaning I shall be concerned with here.\(^{14}\)

Like *sandsynligvis*, *antagelig* invariably specifies medium force. The modal factor behind the assessment may be located with the speaker, as in example (32) where the speaker is the only relevant agent behind the assessment:

\[^{14}\text{When used as an adjective, however, it means ‘acceptable’. This is also the meaning it has when used in predicative constructions or used to modify adjectives. These uses should not be mistaken for sentence adverbial uses proper. The reference sample contains one such example: “Benedikte Hansen er fremragende som Rita, både den heftige, lidenskabelige kvinde og den vemodigt afklarede, loyalt desillusionerede kvinde. Og Peter Gilsfort er antagelig god som Alfred” (politiken.dk/VisArtikel.sasp?PageID=443100).}\]
Når jeg udfører denne nærmest rituelle handling [at sende et postkort], så glæder jeg – udover modtagerne – postkortfabrikanterne og postvæsnerne i de lande, som gennem mine frimærkekøb antagelig tjener på mit postkortskriveri.

Yet, propositions introduced under the scope of *antagelig* may also be supported by an objective modal factor shared between the speaker and one or more additional agents:

Selv om [...] Osama bin Ladens højre hånd *antageligt* undslap det amerikanske angreb uden skrammer, så menes tre andre ledende al-Qaeda-medlemmer at være blevet dræbt.

In this example, the assessment that *Osama bin Ladens højre hånd undslap...* is shared between the speaker and some other unspecified agent.

We may conclude that *antagelig* does not insist on having a specific type of modal factor; it is unspecified between subjective and objective. The force dynamic set-up of *antagelig* may thus be illustrated like this:

\[
\text{antagelig} \quad \begin{array}{c}
\text{P} \\
\text{[+F]} \\
\text{Presenter} \\
\text{Sub MF} \\
\text{Obj MF} \quad \text{3. person} \\
\text{Hører}
\end{array}
\]

The dotted line between subjective and objective modal factor indicates that the modal factor position is unspecified at the structural level.

*måske*

The adverb *måske* is formed as a compounding of two verbs, i.e. the modal verb *må/maa* and the full verb *ske* (ODS). In other words, its morphological origin is quite distinct from the other epistemic adverbials. To some extent, this difference of expression is reflected in the content of the adverbial.

The force dynamic set-up of *måske* resembles *muligvis*: by using *måske* the speaker indicates minimum force, [±F], i.e. that p may or may not be the case. The following example is a good illustration of how the speaker is free to retract a proposition introduced under the scope of *måske*:

*Det kan måske godt minde analytikerne om den måde, hvorpå Anders Fogh har gjort bevarelser af velfærdsfondet til en mærkesag, [...] Og så alligevel ikke.*
Like *muligvis*, *måske*’s modal factor is not specified at the structural level but determined in the specific context of use. In (34) the modal factor is subjective, whereas in (35) it is objective, shared between the speaker and the team of researchers from Vanderbilt University:

(35) Det bliver *måske* muligt at standse udviklingen af HIV helt i fremtiden. Et amerikansk forskerhold fra Vanderbilt University har gjort et interessant fund.

(http://politiken.dk/VisArtikel.sasp?PageID=437572)

We may represent the force dynamic set-up of *måske* like this:

That *muligvis* and *måske* have identical force dynamic profiles means that they can be used synonymously in contexts that only concern the estimation of probability:

(36) Svend kommer *måske* til mødet i morgen
(36’) Svend kommer *muligvis* til mødet i morgen

But their distribution is different: as pointed out above (5.1.2), *måske* may occur in bipolar interrogatives, although this is generally not possible for epistemic adverbials. When used in this context *måske* indicates ‘tentative suggestion’. As exemplified by the fictitious dialogue in (37) it can be used in a similar way in declarative sentences which function as questions:

(37) A: Jeg kommer ikke i aften  
B: Du er *måske* for træt?

The ability to occur in such contexts is not shared by other epistemic or evidential adverbials:

(37’) A: Jeg kommer ikke i aften  
B: * Du er *muligvis*/sandsynligvis/nævendigvis/utvivlsomt/tydeligvis/åbenbart/tilsyneladende/øjensynlig/angivelig for træt?

Even if the sentence *måske* occurs in does not have the illocutionary force of a question, *måske* may still have the function of indicating ‘tentative suggestion’. Consider the following example from Nimb (2004:98):
Nimb suggests that the måske in this example, although it is placed in the main clause, logically belongs to the sub-clause, and hence may be considered identical to (39'):

(38') Jeg føler at han måske er lidt for gammel

Yet, in my view, the two constructions are clearly different, both in terms of form and meaning. In the former construction, the adverbial has scope over the entire sentence, ((måske) jeg føler at han er lidt for gammel)), and indicates a polite ‘tentative suggestion’; in the latter the adverbial has a more narrow scope, ((måske) han er lidt for gammel)), and indicates a simple assessment of probability. That the two meanings differ can be illustrated by means of a commutation test where we insert muligvis in the same context:

(39) Jeg føler at han muligvis er lidt for gammel
(39') ? Jeg føler muligvis at han er lidt for gammel

Muligvis in (39') is not idiomatic, exactly because it lacks the meaning of ‘tentative suggestion’ which måske has. Similarly, in the following example måske cannot be replaced by muligvis without the sentence becoming distinctly odd:

(40) Måske er det bedste, man som forældre og bedsteforældre kan give sin lille øjesten med på vejen netop overbevisningen om at have været elsket og at være 'god nok' i al fremtid.

(http://politiken.dk/VisArtikel.sasp?PageID=431652)

On this basis, I think it is reasonable to suggest that måske as ‘tentative suggestion’ should be considered a distinct pragmatic function of the adverbial, although it is clear that the force dynamic structure behind it is similar to that of the basic epistemic function.

**Summing up**

The epistemic adverbials are all essentially concerned with the specification of force and secondarily where the force originates. The analyses of the epistemic adverbials are summed up in a table 7 where the force dynamic set-up of each adverbial is recorded, including modal factor position. A plus sign indicates that the adverbial in question has this particular feature; a minus sign indicates that the adverbial in question does not have the particular feature. In the modal factor column, two plusses indicate unspecified modal factor between subjective and objective.
On the basis of the overview, a number of observations may be made regarding the way epistemic modality is structured by the Danish sentence adverbials.

In terms of force, the five adverbials at the top define an epistemic scale ranging from \([-F\]_{neg} to \[+F\]], i.e. from negated possibility to necessity. Utvivlsomt and nødvendigvis make up the necessity extreme of the scale. They both specify maximum force, yet, they differ in terms of modal factor. Nødvendigvis operates on an objective modal factor which is constituted by a norm or a logical principle, utvivlsomt draws its force exclusively from the speaker. The same is the case for ikke nødvendigvis at the other end of the scale which constitutes the speaker’s (polite) negation of a norm or a common view. In between these two extremes we have muligvis and sandsynligvis which specify minimum and medium force respectively. Common to both these adverbials is that the modal factor position is unspecified at the structural level.

It should be noted that the objective modal factor of nødvendigvis is different from the modal factors of the adverbials which may, but need not, be based on an objective modal factor. The modal factor of nødvendigvis is constituted by a norm or a logical principle; for all other adverbials, the objective modal factor is realized by the speaker’s assessment being shared by one or more additional agents.

Like sandsynligvis, the adverbials formentlig, formodentlig, givetvis, and antagelig all specify medium force, [+F]. Thus, in many cases these adverbials may be used more or less

<table>
<thead>
<tr>
<th></th>
<th>([±F]_{neg}</th>
<th>([±F]</th>
<th>([+F]</th>
<th>[+F]</th>
<th>Sub</th>
<th>Obj</th>
</tr>
</thead>
<tbody>
<tr>
<td>muligvis</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>sandsynligvis</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>nødvendigvis</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>ikke nødvendigvis</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>utvivlsomt</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>formentlig</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>formodentlig</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>givetvis₂</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>antagelig</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>måske</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

Table 7: The epistemic adverbials
synonymously, and it may be difficult to distinguish them from one another. Still, it is possible to identify some relevant differences between them, although not all of these differences are structural. First, I have pointed out that *givetvis* has a specific variant, *givetvis*, which occurs in certain concessive structures. This particular function sets *givetvis* apart from the other [+F] adverbials. Secondly, *formodentlig* stands out because its modal factor is invariably subjective. The modal factor position of the remaining adverbials is essentially unspecified between subjective and objective. However, it may be noted that *formodentlig* typically, albeit not invariably, operates on an objective modal factor whereas *sandsynligvis* and *antagelig* tend to take subjective modal factors. This, however, is not a structural difference. Furthermore, my analysis has not identified any differences, structural or otherwise, between *antagelig* and *sandsynligvis*. I assume that they constitute lexical variants which belong to different registers.

Finally, *måske* has been set apart from the other adverbials by means of a dotted line. This indicates that *måske* differs considerably from the other epistemic adverbials by its ability to indicate ‘tentative suggestion’. I consider this ability to be a specific pragmatic function of *måske* which allows it to be used as a politeness marker. In this particular function, *måske* may be said to modify the *speech act* rather than the propositional content of the utterance, i.e. *måske* in fact spans the categories of propositional satellites and illocutionary satellites (cf. Dik et al.’s (1990) classification of adverbials outlined in 3.5.2).

### 5.4.2 Evidential adverbials

The evidential adverbials are essentially concerned with the expression of various types of source. Three types of source are relevant to the description of the Danish adverbials: subjective, intersubjective and objective source (cf. 5.2.2). As I shall demonstrate below, none of the evidential adverbials code a particular degree of force as part of their invariant meaning. The absence of a particular coded force value is in fact what distinguishes the evidential adverbials from the epistemic ones. Yet, some of the evidential adverbials may, by implication, in certain contexts be taken to indicate a certain degree of force and hence produce *irrealis* meanings. This phenomenon I shall refer to as ‘epistemic extension’.

In the following, I shall analyse the adverbials one by one, starting with the ones that specify subjective source and then move on to those that specify intersubjective and objective source. I will determine the source potential of each adverbial, outline what relations it establishes in terms of responsibility and agreement and, when relevant, illustrate its ability to acquire epistemic extensions.
Tydeligvis

Tydeligvis specifies subjective source, i.e. it points to the speaker as the relevant sentient agent who has access to the source that warrants the proposition. This is illustrated in the following example:

(41) Krause, en energifylt grående herre, der *tydeligvis* elsker at tale med sine kunder, klarer sig upåklageligt, fordi han modtager mange af de kunder, der ikke længere har en lokal biks.

(http://politiken.dk/VisArtikel.sasp?PageID=428852)

In this case, the assessment that *Krause elsker at tale med sine kunder* is made by the speaker on the basis of his personal observations of Krause in his shop. This source is available to the speaker, but not necessarily to anyone else in the communication situation. In (41), the evidence is most likely visual, but *tydeligvis* does not necessarily code which channel the evidence is obtained through; this is contextually defined.

In certain contexts other sentient agents apart from the speaker may have access to the source that warrants the assessment presented by the speaker under the scope of *tydeligvis*. This is the case in many of the reference examples, e.g.:

(42) Som datter af den tidligere verdensmester Lene Køppen har hun *tydeligvis* ikke talentet fra fremmede [...].

(http://politiken.dk/VisArtikel.sasp?PageID=436521)

In this context, the speaker might expect the source behind his assessment to be shared by other relevant agents, e.g. the hearer. This is however not a prerequisite for *tydeligvis* to be used, and I will maintain that the characteristic trait of *tydeligvis* is that it points to the speaker as the relevant sentient agent.

If we compare *tydeligvis* to *nok*, it is clear that the relations established by the two adverbials are in many ways quite similar; yet, there is an essential difference in terms of realis/irrealis: *Nok* always causes an *irrealis* reading, whereas *tydeligvis* always realizes a *realis* reading, cf.

(43) John er *nok* skyldig > irrealis
(44) John er *tydeligvis* skyldig > realis

This is due to the fact that *tydeligvis* only has a source component; not a source and a force component like *nok* and the other adverbials belonging to System I.

Graphically, we can display the semantics of *tydeligvis* in the following way:
[+R] indicates that the speaker always accepts responsibility for the truth-value of the propositional content which is presented under the scope of *tydeligvis*.

**tilsyneladende**

*Tilsyneladende* introduces the speaker's assessment of what he believes to be the case based on induction from observable facts:

(45) Snevejret gik først og fremmest ud over morgenbilisternes rejsetid. [...] Over hele landet havde mange brugt lang tid på at komme på arbejde, men *tilsyneladende* kørte folk forsigtigt, da der blev meldt om relativt få uheld.

(http://politiken.dk/VisArtikel.sasp/PageID=436939)

In this case, the observation that few car accidents had been reported leads the speaker to make the assessment that people drove carefully.

Etymologically, *tilsyneladende* is formed as a past participle of “lade (sig) til syn” (ODS). Visual perception may thus be taken as a prototypical feature of the adverbial although its modern meaning is more abstract. In modern usage, it functions to introduce a tentative conclusion on the basis of what the speaker has seen or otherwise observed.

Like *tydeligvis*, *tilsyneladende* is used in cases where the source is subjective. Yet, compared to *tydeligvis* the speaker with *tilsyneladende* takes a step back from p, as it were, and does not necessarily accept responsibility for its truth-value. This means that the adverbial in many contexts may acquire an epistemic extension. This is evidenced by the following example, where the speaker presents his tentative interpretation of certain protesters’ intentions:

(46) Omkring 300 militante muslimer har i morges stormet den danske ambassadebygning i Indonesiens hovedstad, Jakarta.

Hensigten var *tilsyneladende* at få den danske ambassadør til at undskyde Jyllands-Postens tegninger af profeten Muhammed.

(http://politiken.dk/VisArtikel.sasp/PageID=436416)

This meaning of *tilsyneladende* is particularly obvious when it used non-sententially (i.e. not as a sentence adverbial) to modify adjectives, as in this example where it modifies *uanselige*:

(47) [Øst-asiaternes forfædre] er således blevet reddet fra kuldedøden af det gen, der gav dem tørt ørevoks. Hvilket man nok bør have i tankerne, næste gang man hører nogen tale nedsettende om denne *tilsyneladende* uanselige gullige substans.

(http://politiken.dk/VisArtikel.sasp/PageID=436802)
It seems that this ‘one-step-back’ meaning is inherent to *tilsyneladende* as such, also when it is used as a sentence adverbial proper, although it may be less clear in some cases. Yet, it is, in fact, the trait which sets it apart from *tydeligvis*. Compare these two examples:

(48) Hensigten var *tilsyneladende* at få den danske ambassadør til at undskyldte
(48’) Hensigten var *tydeligvis* at få den danske ambassadør til at undskyldte

The speaker in (48) will be able to retract the assessment without problems, whereas this will be quite difficult for the speaker in (48’). We may conclude that *tilsyneladende* establishes the same relations as *tydeligvis*, but in distinction to the speaker who employs *tydeligvis*, the speaker who employs *tilsyneladende* does not necessarily accept responsibility for the truth-value of p. This is illustrated by means of [+R] in the model:

![Model diagram](image)

*øjensynlig*

In early usage, *øjensynlig* quite literally referred to what could be visually perceived. This meaning is evidenced by several examples in ODS, e.g.:

(49) hand (er) saa *øjensynlig* . . overbeviist

When used as an adjective, the concrete meaning of what is ‘visible to the eye’ is still the only meaning *øjensynlig* can have. However, as an adverbial, *øjensynlig* has undergone a semantic development which means it has come to express a more tentative assessment based on the available evidence; evidence which may or may not be visual. (This semantic development in some respects resembles that of *åbenbart*, cf. below p. 69ff). *Ojensynlig* thus indicates that the speaker bases his assessment on some external evidence, but it will in some cases indicate some degree of reservation on behalf of the speaker *vis-à-vis* the propositional content. This means that the adverbial in some cases acquires an epistemic extension. The extent to which the speaker dissociates himself from the propositional content is however not coded as such in the adverbial; it appears to be working on a cline. In the following example, the use of *øjensynlig* seems to be quite close to the pure evidential reading – *from what can be seen/perceived we may conclude*. In this case, the speaker accepts responsibility for the propositional content:
(50) Frankrig indførte tirsdag nødretslove og flere byer udstedte udgangsforbud for unge under 16 år, og det har øjensynligt været med til at dæmpe uroligheder.
(http://politiken.dk/VisArtikel.sasp?PageID=407532)

In other contexts, however, øjensynlig may be used to indicate uncertainty, in which case the speaker does not accept responsibility for p:

(51) Den brasilianske øverstkommanderende for FN’s mission i Haiti er fundet død efter skud gennem hovedet. Han skød øjensynligt sig selv.
(http://politiken.dk/VisArtikel.sasp?PageID=428907)

In such contexts the adverbial acquires an epistemic extension and implies that the value of the proposition is irrealis.

Irrespective of whether the speaker accepts responsibility for p or not, øjensynlig always implies that the assessment is based on evidence which is available to the speaker. We may sum up its features like this:

\[
\text{øjensynlig} \\
\quad \text{[±R]} \\
\quad \text{P} \\
\quad \text{Speaker} \\
\quad \text{Hearer} \\
\quad \text{Subjective source}
\]

It is difficult to see how øjensynlig differs from tilsyneladende. In most situations the two sentence adverbials can be used interchangeably:

(52) Hensigten var tilsyneladende at få den danske ambassadør til at undskyde
(52') Hensigten var øjensynlig at få den danske ambassadør til at undskyde
(53) det har øjensynligt været med til at dæmpe uroligheder.
(53') det har tilsyneladende været med til at dæmpe uroligheder.
(54) Han skød øjensynligt sig selv.
(54') Han skød tilsyneladende sig selv.

Yet, when they occur non-sententially (i.e. not as sentence adverbials), as in the following two examples where they modify uanselige and velargumenterende respectively, they in fact differ substantially in meaning

(55) denne tilsyneladende uanselige gullige substans.

In such cases tilsyneladende has a negative polarity while øjensynlig has a positive one: tilsyneladende could be paraphrased by ‘It appears that x, but it is not necessarily so’ while øjensynlig says ‘It appears that x, and I believe it is so.’ On the basis of the analysis presented
here, it is not possible to verify whether or not this difference is in fact coded. Neither is it possible to determine with certainty whether the distinction also applies when the adverbials are used as sentence adverbials. Yet, the examples in the reference sample seem to support a hypothesis saying that 

*tilsyneladende* is generally more prone to trigger irrealis meanings than *øjensynlig*. When using *øjensynlig*, the speaker typically vouches for the truth-value of p, while when using *tilsyneladende* he often does not. This means that *øjensynlig* less frequently than *tilsyneladende* acquires an epistemic extension.

**åbenbart**

What characterizes *åbenbart* is that it implies that the source which warrants the speaker’s assessment is shared between the speaker and the hearer. The source may be deictic or textual, i.e. either present in the non-linguistic context or in the preceding or ensuing discourse. Often, it is the speaker who introduces the source into the discourse by means of a separate proposition, in the following example the sub-clause *for nu får de deres vilje*:

(57) De var eddikesure og protesterede. Og det kan *åbenbart* betale sig, *for nu får de deres vilje.*

(http://politiken.dk/visArtikel.iasp?PageID=429213)

In this example, the speaker presents the evidence behind the proposition to the speaker; thus making the source intersubjective. He also assumes responsibility for the truth-value of p, *det kan betale sig*, and expects that the speaker agrees with this assessment. These last two features are however not part of the invariant meaning of *åbenbart*. The speaker does not invariably need to accept responsibility for the truth-value of propositions expressed under the scope of *åbenbart*, neither is the hearer invariably expected to agree to the proposition. What *åbenbart* invariably implies is merely that the speaker and hearer have access to the source – the premise behind the conclusion – so to speak. The fact that the speaker does not necessarily accept responsibility for a proposition introduced under the scope of *åbenbart* means that it can be used sarcastically to introduce propositions which the speaker disagrees with. This function may be illustrated by means of the following example:

(58) Holger Danskes korpus er *åbenbart* ikke det eneste, der sådan kan komme til ‘live’ på Kronborg. Ifølge de ansatte spøger det i udpræget grad på Kronværket Café og Restaurant på Kronborg Slot, skriver Frederiksborg Amts Avis.

(http://politiken.dk/visArtikel.iasp?PageID=425983)

The two uses of *åbenbart* exemplified in (57) and (58) may appear to be quite different, but in fact they merely represent two different contexts for the same function. Irrespective of context, *åbenbart* always contains the following instruction:

- The source that allows the speaker to put forward p is known to both speaker and hearer.
At the same time the adverbial allows for the following variation:

- The source may be provided by the speaker (cf. 57), in which case the speaker accepts responsibility for the truth-value of p.

Or

- The source may originate in a third person (cf. 58), in which case, the speaker may distance himself from p and thus achieve a certain sarcastic or mocking effect.

We may illustrate the semantic set-up in the following manner, where \([±R]\) indicates the option the speaker has in accepting or declining responsibility for the truth-value of p, and where \([±A]\) indicates the expected relation between hearer and p in terms of agreement. The values of \([R]\) and \([A]\) are symmetrical, i.e. \([+R] = [+A]\) and \([-R] = [-A]\).

The potential of the adverbial will always be disambiguated in the context of use, i.e. it will be revealed what relation the speaker takes up in relation to p, and the expected relation between hearer and p will follow suit accordingly.

The relations established by åbenbart in some respects resemble those established by vel, particularly in the sense that both adverbials define a particular position the hearer is expected to adopt when the adverbial is used, but in the case of åbenbart it is merely the evidence which the hearer is expected to acknowledge.

Before we move on, an excursus on the diachronic development of åbenbart is needed to complete the picture. The meaning of åbenbart described above may be perceived as a semantic derivation of earlier meanings which to some extent still linger in today’s language. ODS records two adverbial senses of åbenbart, aabenbar 5.1 and 5.2, which are here reproduced in edited form as 1) and 2):

1) “(nu l. br.) paa en tydelig maade, paa en saadan maade, at enhver kan vide ell. forstaa det.”
   a. de Jøder, som aabenbar bekiende den Jødiske Religion.
   b. (man) vidste, hvilken af (pigerne) der var hemmelig eller aabenbart gode Venner med en Mads.
2) “(alm. i talespr., dog næppe dial.) om en formodning, som den talende betegner som sikker, d. s. s. utvivlsomt; stærkere udtryk end: vistnok. (opr. forkortet for: det er (mig) aabenbart [...]”

a. Mennesket . . kan aabenbar ogsaa gøre sig selv Uret.

b. Det (dvs.: et manuskript) var aabenbar Vers.

In 1a. and 1b. åbenbart is used as a manner adverbial, whereas in 2a. and 2b. it is used as a sentence adverbial proper. Neither of these meanings, however, are described in DDO, which considers åbenbart synonymous to tilsyneladende and/or øjensynlig (i.e. not at all similar to utvivlsomt like ODS suggests), and only includes examples of åbenbart as a sentence adverbial. We may hypothesize that åbenbart has undergone a development from a concrete meaning vested in a manner adverbial to a sentence adverbial with an exceedingly more abstract meaning which can be paraphrased by ‘it appears that...’. We may illustrate the development like this:

<table>
<thead>
<tr>
<th>Expression:</th>
<th>åbenbart&lt;sub&gt;1&lt;/sub&gt;</th>
<th>åbenbart&lt;sub&gt;2&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content:</td>
<td>manner adv &gt;</td>
<td>sentence adv</td>
</tr>
<tr>
<td></td>
<td>concrete</td>
<td>abstract</td>
</tr>
</tbody>
</table>

In modern language, the second meaning, which is the one I have presented an analysis of in the above, is by far the most common. It is still possible to find examples of åbenbart in the more concrete meaning, but when used in this sense, it is typically used in predicative constructions and modified by helt (e.g. 59 below) or så in order to distinguish this meaning from the unmarked meaning:

(59) »Der er helt åbenbart behov for langt klarere retningslinjer fra Miljøstyrelsen til kommunerne«, siger miljøordfører Pernille Blach Hansen (S).

(http://politiken.dk/VisArtikel.sasp?PageID=410405)

If Blach Hansen had not premodified åbenbart in this case, it is quite likely that she would have been misunderstood because people would have thought she was using the adverbial in its unmarked sense, i.e. instead of conveying the message ‘it is beyond doubt that p’ she would probably have been understood to mean ‘it appears that p.’

There is evidence to suggest that the meaning of åbenbart has developed even further. In those cases where it appears from the context that the speaker does not accept responsibility for the truth-value of the proposition, it is very natural that the proposition may be conceived as an irrealis, opening for what we may call an *epistemic extension* of the evidential meaning. This may be seen as a further abstraction of the meaning of åbenbart:

<table>
<thead>
<tr>
<th>Expression:</th>
<th>åbenbart&lt;sub&gt;1&lt;/sub&gt;</th>
<th>åbenbart&lt;sub&gt;2&lt;/sub&gt;</th>
<th>åbenbart&lt;sub&gt;3&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content:</td>
<td>manner adv &gt;</td>
<td>sentence adv &gt;</td>
<td>sentence adv</td>
</tr>
<tr>
<td></td>
<td>concrete</td>
<td>abstract</td>
<td>epistemic</td>
</tr>
<tr>
<td></td>
<td>evidential</td>
<td>evidential</td>
<td>extension</td>
</tr>
<tr>
<td>Value of p:</td>
<td>realis</td>
<td>realis</td>
<td>irrealis</td>
</tr>
</tbody>
</table>
This movement towards an epistemic extension in fact appears to be a general feature of those evidential adverbials which do not invariably imply that the speaker assumes responsibility for p, i.e. tilsyneladende, øjensynlig, åbenbart and angivelig, the final evidential adverbial which we shall turn to now.

**angivelig**

*Angivelig* specifies that the source which supports the propositional content is located outside the speaker and not accessible to the hearer, i.e. it points to the presence of an objective source. Prototypically, the adverbial is used to relay what someone else has said or claimed, as in this example:

(60) **angiveligt er delfinerne blevet skyllet til havs, da orkanen Katrina ødelagde flere akvarier og svømmebassiner på en flådebase.**

(http://politiken.dk/visArtikel.iasp?PageID=399665)

Here, *angiveligt* indicates that someone has claimed or hypothesized that the dolphins were washed into the sea when hurricane Katrina wrecked aquariums and basins at an American naval base, and that this someone is not the speaker.

It is essential to note that the speaker does not accept responsibility for the relayed information. This feature is clearly exploited in the following example:

(61) »Desuden er det meget stærkt kritisabelt, at Egypten *angiveligt* har været med til at slippe sagen løs og blandt andet rundsende tegninger, som ikke var bragt i Jyllands-Posten«, siger Villy Søvndal til Ritzau.

(http://politiken.dk/VisArtikel.sasp?PageID=439200)

In this case Villy Søvndal uses *angiveligt* to relay the claim that *Egypten har været med til at slippe sagen løs* [...] without accepting responsibility for the proposition.

Finally, it should be noted that the speaker may in fact quite explicitly doubt the truth value of a proposition that is introduced under the scope of *angivelig*, cf. the following example where the speaker doubts whether certain houses are actually in need of frequent restoration:

(62) **Stilladsreklamer mener jeg nu, er et endnu større problem, men ingen indstillede dem [til konkurrencen om Danmarks største makværk], så den irritation lever jeg måske alene med. Men det er altså bemærkelsesværdigt så ofte de samme huse bliver pakket ind i stilladser og *angiveligt* restaureret.**

(http://politiken.dk/VisArtikel.sasp?PageID=431921)

The fact that the speaker does not necessarily accept responsibility for a proposition introduced under the scope of *angivelig* – and may indeed explicitly doubt its truth value – entails that it may in certain contexts acquire an epistemic extension, in which case the propositional content is considered *irrealis*. 
The semantic set-up of *angivelig* is illustrated below. [-R] indicates that the speaker does not accept responsibility for the proposition presented under the scope of *angivelig* – he is free to either agree or disagree with the opinion he quotes – or doubt or trust the truth value of the information he reports. The figure also specifies that *angivelig* carries an instruction of third person source.

![Diagram of *angivelig*](image)

**Summing up**
The evidential adverbials are all essentially concerned with the specification of source and secondarily with the responsibility relation between speaker and propositional content. The analyses I have presented of the evidential adverbials is summed up in table 8.

<table>
<thead>
<tr>
<th>AGREEMENT</th>
<th>SOURCE</th>
<th>RESPONSIBILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>[+A]</td>
<td>[-A]</td>
<td>[+R] [-R]</td>
</tr>
<tr>
<td><strong>tydeligvis</strong></td>
<td>- -</td>
<td>+ - - -</td>
</tr>
<tr>
<td><strong>tilsyneladende</strong></td>
<td>- -</td>
<td>+ - - -</td>
</tr>
<tr>
<td><strong>øjensynlig</strong></td>
<td>- -</td>
<td>+ - - -</td>
</tr>
<tr>
<td><strong>åbenbart</strong></td>
<td>+ +</td>
<td>- + - -</td>
</tr>
<tr>
<td><strong>angivelig</strong></td>
<td>- -</td>
<td>- - + +</td>
</tr>
</tbody>
</table>

Table 8: The evidential adverbials

We note that the Danish system makes clear distinctions between subjective, intersubjective and objective source. *Tydeligvis, tilsyneladende* and *øjensynlig* all specify subjective source. *Tydeligvis* moreover invariably specifies that the speaker vouches for the truth-value of *p*, while this is not specifically coded for *tilsyneladende* or *øjensynlig*. *Åbenbart* is special in insisting that the source which warrants the speaker’s proposition is available to speaker as well as hearer. The use of *åbenbart* does not necessarily imply that the speaker accepts responsibility for *p*. Yet, if he does, it follows that the hearer is expected to agree, i.e. the values of [R] and [A] are symmetrical, i.e. [-R] = [-A] and [+R] = [+A]. This means that agreement can be seen as a derivative function. Like we saw it was the case in relation to *vel* in System I (p. 49) agreement is dependent on other features.
Angivelig is special in specifying objective source. It is used by speakers to specify that they are relaying information from a third party and that they do not necessarily vouch for its truth-value.

Finally, the analysis has shown that adverbials which do not invariably specify that the speaker accepts responsibility for the truth-value of the propositional content (i.e. all except tydeligvis) may in certain contexts acquire epistemic extensions and be taken to indicate irrealis meanings.

5.5 Summing up
In this chapter I have shown that epistemic and evidential adverbials in Danish may be divided into two groups on the basis of topological, syntactic and morphological criteria (cf. 5.1.4). I have referred to the two groups as System I and System II. System I adverbials are characterized by concomitantly encoding force and source and may on this basis be described as epistemic-evidential adverbials. In System II, none of the adverbials exhibit this concomitant encoding of force and source. The semantic parameters of force and source are relevant to the group, only they are found in distilled form, in what I have called epistemic and evidential adverbials, respectively. These basic elements of the analysis may be represented graphically as in figure 2.

![Figure 2: The Danish Systems](image-url)
I have shown that it is generally possible to distinguish between the adverbials by recourse to a limited number of distinctive features, viz. source, force, modal factor position and responsibility. Force and source are the two primary distinctive features. Epistemic adverbials are essentially concerned with specification of force while evidential adverbials are essentially concerned with the specification of source. Modal factor position is a secondary feature of the epistemic adverbials while responsibility is a secondary feature of the evidential adverbials. The specification of expected agreement on the part of the hearer is a characteristic function of some of the adverbials (vel and åbenbart), yet, I have argued that in both cases agreement can be seen as a derivative function of the intersubjective source specified by the adverbials. For this reason, agreement can be disregared as a distinctive feature of the system. In the table on the following page, the set-up of each of adverbial is recorded. The chart represents the instructional potential of each adverbial. For most of the adverbials it holds that this potential is relatively wide, although it is typically narrowed down in the specific context of use. Not all of the adverbials have unique set-ups. This reflects that fact that some of them are very near synonyms, although it is generally possible to point to specific contexts or particular uses where they differ from each other.
### Table 9: Overview of the epistemic and evidential adverbials in Danish.

<table>
<thead>
<tr>
<th>Epistemic-adverbials</th>
<th>FORCE</th>
<th>MODAL FACTOR</th>
<th>SOURCE</th>
<th>RESPONSIBILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[+F]</td>
<td>[+F]</td>
<td>Sub</td>
<td>- [R]</td>
</tr>
<tr>
<td>Epistemic-adverbials</td>
<td></td>
<td>[+F]</td>
<td>Obj</td>
<td></td>
</tr>
<tr>
<td>nok</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>vel</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>vist</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Epistemic-adverbials</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>muligvis</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>sandsynligvis</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>nødvendigvis</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>ikke nødvendigvis</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>utvikkomt</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>formentlig</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
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<td>formodentlig</td>
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<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>givetvis₂</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>antagelig</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>måske</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Evidential-adverbials</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>tildeligvis</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>tilsyneladende</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>øjensynlig</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>åbenbart</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>angivelig</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Epistemic-adverbials</th>
<th>FORCE</th>
<th>MODAL FACTOR</th>
<th>SOURCE</th>
<th>RESPONSIBILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>[+F]</td>
<td>Sub</td>
<td>- [R]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[+F]</td>
<td>Obj</td>
<td></td>
</tr>
<tr>
<td>tydeligvis</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>tilsyneladende</td>
<td>-</td>
<td>-</td>
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<td></td>
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<tr>
<td>øjensynlig</td>
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<tr>
<td>åbenbart</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>angivelig</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
</tbody>
</table>
6 English Adverbials

Not surprisingly, no official lists of epistemic or evidential adverbs or any similar categories in English exist. However, by consulting literature on subjects like ‘modal adverbs’, ‘sentence adverbials’, ‘modal particles’, ‘stance adverbials’ etc., e.g. Greenbaum (1969), Swan (1980 & 1988), Biber & Finegan (1988), Quirk et al. (1985), Hoye (1997), and Huddleston (2003), it is possible to synthesize a list of what we may consider relevant candidates in the search for epistemic and evidential adverbs/adverbials in English. They are listed in alphabetical order in Table 1. These adverbs/adverbials are often grouped together in the literature, although it differs considerably from account to account how many of the candidates are included and which headings they are sorted under.

<table>
<thead>
<tr>
<th>admittedly</th>
<th>doubtless</th>
<th>necessarily</th>
<th>recognizably</th>
</tr>
</thead>
<tbody>
<tr>
<td>allegedly</td>
<td>evidently</td>
<td>obviously</td>
<td>reported</td>
</tr>
<tr>
<td>apparently</td>
<td>incontestably</td>
<td>ostensibly</td>
<td>reputedly</td>
</tr>
<tr>
<td>arguably</td>
<td>incontrovertibly</td>
<td>patently</td>
<td>seemingly</td>
</tr>
<tr>
<td>assuredly</td>
<td>indeed</td>
<td>perhaps</td>
<td>supposedly</td>
</tr>
<tr>
<td>avowedly</td>
<td>indisputably</td>
<td>plainly</td>
<td>surely</td>
</tr>
<tr>
<td>certainly</td>
<td>indubitably</td>
<td>possibly</td>
<td>unarguably</td>
</tr>
<tr>
<td>clearly</td>
<td>inevitably</td>
<td>presumably</td>
<td>undeniable</td>
</tr>
<tr>
<td>conceivably</td>
<td>likely</td>
<td>probably</td>
<td>undoubtedly</td>
</tr>
<tr>
<td>decidedly</td>
<td>manifestly</td>
<td>professedly</td>
<td>unquestionably</td>
</tr>
<tr>
<td>definitely</td>
<td>maybe</td>
<td>purportedly</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Candidates

The list is of course not authoritative, but I believe it is fairly exhaustive. In a study like this, it is not possible to treat all the listed adverbs, and so the question of which candidates to include and which to exclude – and particularly why – arises. This is a difficult question to answer, and undoubtedly one that may be answered in more than one way. In relation to the English adverbials, I have chosen to answer it by comparing the relative frequency of the adverbials and basing the selection on the simple principle that the more frequent an adverbial is, the more relevant it is to include. This may seem simplistic, yet from a pragmatic perspective, it seems reasonable to leave the less frequent adverbials for a later study. To determine the relative frequency of the adverbials I have consulted Leech et al. (2001), which contains comprehensive information on word frequencies in written and spoken English, based on the British National Corpus, BNC. The BNC is “a finite, balanced, sampled corpus” which is designed to be representative of British English: “It is possible to extrapolate from corpus frequencies to inferences about the language as a whole, because the compilers have taken pains to sample different kinds of speech and writing (e.g. conversation, novels, news reporting) broadly in accordance with their representation in everyday language use” (Leech et al. 2001:1).

Table 2 on the following page reports the information which may be extracted from Leech et al. in relation to the candidates in table 1.
Table 2: Frequency, range and dispersion in BNC, based on Leech et al (2001).²

<table>
<thead>
<tr>
<th>Form</th>
<th>Tokens/million words</th>
<th>Range</th>
<th>Dispersion</th>
</tr>
</thead>
<tbody>
<tr>
<td>perhaps</td>
<td>350</td>
<td>100</td>
<td>96</td>
</tr>
<tr>
<td>probably</td>
<td>273</td>
<td>100</td>
<td>95</td>
</tr>
<tr>
<td>certainly</td>
<td>186</td>
<td>100</td>
<td>95</td>
</tr>
<tr>
<td>clearly</td>
<td>153</td>
<td>100</td>
<td>95</td>
</tr>
<tr>
<td>obviously</td>
<td>110</td>
<td>99</td>
<td>93</td>
</tr>
<tr>
<td>maybe</td>
<td>105</td>
<td>99</td>
<td>90</td>
</tr>
<tr>
<td>apparently</td>
<td>78</td>
<td>100</td>
<td>96</td>
</tr>
<tr>
<td>possibly</td>
<td>73</td>
<td>100</td>
<td>97</td>
</tr>
<tr>
<td>surely</td>
<td>63</td>
<td>99</td>
<td>93</td>
</tr>
<tr>
<td>necessarily</td>
<td>57</td>
<td>100</td>
<td>93</td>
</tr>
<tr>
<td>presumably</td>
<td>33</td>
<td>100</td>
<td>95</td>
</tr>
<tr>
<td>definitely</td>
<td>32</td>
<td>100</td>
<td>91</td>
</tr>
<tr>
<td>inevitably</td>
<td>31</td>
<td>97</td>
<td>93</td>
</tr>
<tr>
<td>undoubtedly</td>
<td>24</td>
<td>98</td>
<td>94</td>
</tr>
<tr>
<td>reportedly</td>
<td>15</td>
<td>67</td>
<td>63</td>
</tr>
<tr>
<td>evidently</td>
<td>15</td>
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<tr>
<td>seemingly</td>
<td>12</td>
<td>97</td>
<td>95</td>
</tr>
<tr>
<td>allegedly</td>
<td>10</td>
<td>85</td>
<td>86</td>
</tr>
</tbody>
</table>

- admittedly
- arguably
- assuredly
- avowedly
- conceivably
- decide                       
- doubtless
- incontestably
- incontrovertibly
- indisputably
- indubitably
- manifestly
- ostensibly
- patently
- plainly
- professedly
- purportedly
- recognizably
- reputedly
- supposedly
- unarguably
- undeniably
- unquestionably

² Likely is excluded from the list because it is only counted as an adjective in Leech et al. (2001). Furthermore, likely is rare in modern British English as a simple adverbial. When used epistemically it must be premodified by most or very. For these reasons it is not treated further in this study. Similarly indeed is disregarded because I assume that the frequency reported in Leech et al. reflects its function either as a conjunct or an intensifier (cf. Hoye 1997:162) and not as a sentence adverbial.

Frequency gives the number of tokens pr. million words in the BNC, with a lower threshold of 10; range indicates how many sectors (out of a total number of 100 equalized sectors in
the corpus) include the adverb in question, and finally dispersion is a statistical coefficient that shows how evenly distributed a word is across successive million word sectors of the corpus (Leech et al. 2001:18ff). As can be seen, the table only contains information about frequency, range and dispersion for the 18 most frequent candidates. The remaining 23 are not treated specifically in Leech et al. (2001) because the study only includes forms with more than 10 tokens pr. million words. In the present study, I choose to do the same.

It is important to note that for the purpose of this dissertation it has not been possible to make a detailed investigation of all occurrences of the adverbials in the BNC. The table merely registers how many times a particular form occurs in the corpus. This is important to keep in mind since quite a few of the forms are in fact multi-functional, e.g. clearly which may be used both as a sentence adverbial, He had clearly been irresponsible, and a manner adverbial, I could see her clearly. The frequencies in Leech et al. are not sensitive to this multi-functionality; for clearly there is only one common adv-entry. Therefore, not all 153 tokens of clearly are likely to represent clearly used as a sentence adverbial. Still, I do believe that table 2 gives a fair indication of which members could be considered most frequent in the system of evidential and epistemic adverbials in English and therefore serves well as a point for a discussion of how the system may be organised.

Disregarding the candidates which occur less than 10 times pr. million words narrows the scope to 18, and these particular 18 adverbials will form the basis of the investigation in this dissertation. Except for reportedly and allegedly, it appears that they are quite common across the corpus. Their range is between 97-100 sectors (out of a total of one hundred) and their dispersion value ranges from 91-97, which shows that they are quite evenly distributed across the corpus sectors. Reportedly and allegedly are the odd ones out in this respect, being clearly less evenly distributed. This indicates that they tend to cluster in certain text types, presumably journalistic genres.

In the following section, 6.2, I shall investigate the expression features of the adverbials selected for analysis in more detail, and in 6.3 I shall pay closer attention to their semantic similarities and differences.

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3 Yet, on the book’s companion website it is possible to look up the raw numbers of forms with less than 10 tokens/million words. On the basis of these numbers, the relative frequency of the remaining adverbs is reported in appendix 1.

4 In fact, the results gained from the frequency investigation correspond quite well with the presumptions I had beforehand, i.e. my intuition about the system has been corroborated by the statistics.
6.1 Expression

6.1.1 Morphology

English adverbs can be divided into three groups on the basis of morphological traits (Quirk et al. 1985:438):

1. Simple adverbs, e.g. just, only, well
2. Compound adverbs, e.g. somehow, somewhere, therefore
3. Derivational adverbs, e.g. oddly, interestingly

The majority of English adverbs which are capable of functioning as sentence adverbials are derivational, i.e. they are derived from adjectives (e.g. clear) or participial adjectives (e.g. alleged) by the addition of an -ly suffix. Except two, all adverbs investigated in this dissertation are derivational, formed through -ly suffixation. The odd ones out are perhaps and maybe, which, if anything, seem to belong to the group of compound adverbs. Perhaps is formed through the compounding of per and hap – a preposition and a noun meaning chance or accident. Maybe is a contraction of an entire phrase, it may be, i.e. a compounding of a pronoun, a modal verb and a verb (OED).

Since almost all English epistemic and evidential adverbs share the -ly suffix, it is difficult to sub-divide the adverbs on the basis of morphological traits. Still, some important observations concerning the stems of the adverbials may be made. A portion of the adverbs are based on participial adjectives, i.e. allegedly, reportedly, supposedly and seemingly, and their meanings seem to be closely tied to the meanings of their respective verb stems. Another group is based on ‘pure’ adjective stems, i.e. apparently, clearly, obviously, evidently, and here the relations of meaning between stem and adverb seem to be more abstract. It may also be noted that almost all adverbs which operate on an intensity scale concerned with the notions of possibility and necessity, i.e. possibly, probably, inevitably, necessarily, presumably, surely, certainly, definitely, undoubtedly are formed by the addition of -ly to an adjectival stem (OED).

Seen in isolation, these observations are quite tentative. It is not possible to establish a 1:1 relationship between morphological features and semantic profile since for every morphological feature there are multiple semantic functions. Still, the morphological features add pieces to the puzzle. As I shall show below (6.1.2 and 6.3 & 6.4 passim) most of the differences in morphology tend to go hand in hand with syntactic and semantic features of the adverbs when they function as adverbials.

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5 -ly is by far the most common suffix in the formation of adverbs. Other suffixes like -wise (moneywise) and -ways (sideways) are not relevant in relation to epistemic and evidential adverbials and will not be treated here.

6 Presumably is somewhat awkward in this respect, since its corresponding adjective, presumable, is very rare (only 4 unique occurrences at guardian.co.uk, 29.11.2005) of which two are clearly misspellings of presumably).
6.1.2 Syntax

Sentence adverbials in English typically take finite clauses (bold face) in their scope (adapted examples from Preisler 1997:27):

(1) I obviously want the patient to be x-rayed immediately
    You definitely should have seen him kissing Aunt Mary
    He is probably having the house painted

Yet, they may also combine with non-finite clauses realized by to-infinitives as well as past and present participle forms as attested by the following authentic examples from Tucker (2001: 190, 206):

(2) had 6in cut out of the chassis at the front – possibly to make it more suitable for hillclimbs.
(3) help identify Iraqis possibly involved in war crimes, dispose of captured
(4) accused Iraq of slipping military transports, possibly carrying SCUD missiles, into the convoys

Many of the adverbs that realize epistemic and evidential sentence adverbials may furthermore be used to modify elements at lower levels than the clause, for instance adjectives, yet these uses will not be considered in this dissertation.

Another feature of sentence adverbials is that, generally speaking, they do not occur in interrogatives or imperatives:

(5) * John, possibly/apparently get the ice-cream!
(6) * Does John possibly/apparently like ice-cream?
(7) * How is probably/possibly the ice-cream?

Yet, perhaps and maybe are somewhat more flexible in this respect since they may both combine with yes/no-questions. Let us start by looking at perhaps:

(8) Does John perhaps like ice-cream?
(9) Perhaps John likes ice-cream?

These examples illustrate that perhaps is entirely compatible with bipolar interrogatives, yet, as Nuyts and others have pointed out: when used in interrogatives perhaps in fact does not indicate a degree of likelihood concerning the propositional content; it rather “modifies the ‘tendency’ of the speech act: it turns a neutral question into a tendentious one” (Nuyts 2001b:58, cf. also Hoye 1997:196). Thus, this use of perhaps is probably best seen as a pragmatic extension of its core epistemic meaning. This observation is similar to the one made in relation to måske in Chapter 5, and I shall therefore employ the same term, i.e. ‘tentative suggestion’, to describe the phenomenon.

Similar to perhaps, maybe may also occur in interrogatives where it exhibits a similar pragmatic function indicating tentative suggestion. This may be illustrated by means of the following authentic example from Jacobson (1964:293):  

---

7 This example is American English.
Are you maybe feeling a little nervous, laddie?

We may conclude that the distinction between derivational and the non-derivational adverbs in English corresponds to a syntactic difference in terms of compatibility with interrogatives.

6.1.3 Topology

Although the names assigned to the positions vary, English grammars (e.g. Quirk et al. 1985, Bache & Davidsen-Nielsen 1997 and Huddleston et al. 2003) commonly present a tripartite description of the main adverbial positions in declarative sentences. The terminology in (11) is adopted from Quirk et al.:

(11) Obviously, John had won the race
   John had obviously won the race
   John had won the race, obviously

Initial position is defined as the position which precedes the subject, medial position is located after the subject and the operator while preceding the head of the verb phrase, and end-position is located after the verb phrase. This basic division may be further subdivided; especially medial position presents a number of variations as a consequence of the complex English verb phrase. To accommodate for variation, the three main positions are therefore usually expounded, typically along the lines of the matrix presented here (adapted from Quirk et al. 1985:490):*

| By then the book must have been placed on the shelf | [I] (initial position) |
| The book by then must have been placed on the shelf | [IM] (initial-medial position) |
| The book must by then have been placed on the shelf | [M] (medial position) |
| The book must have always been placed on the shelf | [mM] (medial-medial position) |
| The book must have been carefully placed on the shelf | [eM] (end-medial position) |
| The book must have been placed carefully on the shelf | [iE] (initial-end position) |
| The book must have been placed on the shelf by then | [E] (end position) |

This overview is useful as a nomenclature, but it is of limited use in an attempt to subcategorize the adverbial category. It may be noted that medial-medial, end-medial and initial-end positions are not compatible with epistemic and evidential sentence adverbials, but then again: medial-medial is altogether very rare and end-medial and initial-end are almost exclusively associated with degree and manner adverbials. In other words, it is not only sentence adverbials that shun these positions.

Some analysts (e.g. Buysschaert 1982:104-7, Quirk et al. 1985:493-4) have suggested that whereas sentence adverbials may occur optionally at either medial or initial-medial position in positive sentences, cf. (12) and (12'), they must be placed in initial-medial

* Quirk et al. use by then throughout the matrix; however, I have substituted other adverbials in a few cases where this makes the example appear more idiomatic.
position, i.e. between the subject and the operator, if the predication is negated, cf. (13) and (13'):

(12) He has probably ignored my request  [M]
(12') He probably has ignored my request  [iM]

(13) * He hasn’t probably ignored my request  [M]
(13') He probably hasn’t ignored my request  [iM]

What is really at stake here is the position of the negation vis-à-vis the position of the sentence adverbial. If the negation is realized as an independent unit, rather than as part of a contraction as in (13) it is in fact quite possible for a sentence adverbial to occur at [M] in a negated context:

(14) He has probably not ignored my request

This ties in with the general observation (cf. 3.5.2) that sentence adverbials generally cannot come under the scope of negation. Adverbials placed at lower levels in the underlying structure of the clause, for instance manner adverbials, behave in the opposite way:

(15) He hasn’t completely ignored my request  [M]
(15') * He completely hasn’t ignored my request  [iM]

The examples represented in (13/15) and (13'/15') may thus be employed as a test-frame by which it is generally possible to distinguish sentence adverbials from other types of adverbial. Sentence adverbials cannot maintain their function as sentence adverbials when placed in the frame of the first sentence whereas other types of adverbials only work in the first sentence. With a sentence adverbial in medial position the sentence must either be considered ungrammatical or interpreted as free indirect speech. In the latter case, it is quite possible for the speaker to disagree with the evaluation expressed by the adverbial since it formally belongs to someone else:

(16) He hasn’t probably ignored my request; I know it for a fact (that he has)

Furthermore, the matrix may be used to lure out the meanings of polysemous adverbials. Clearly is a case in point:

(17) He clearly hasn’t ignored my request  [sentence adv]
He hasn’t clearly ignored my request  [manner adv]

Clearly works fine in both positions, yet, it is only in initial-medial position it is used as a sentence adverbial; placed in medial position it is automatically turned into a manner adverbial.

It is clear that this topological test is useful as a tool to delimit the group of sentence adverbials in English, yet it does not help to discriminate sub-groups within the overall
group. Thus, we may conclude that the topology of English sentence adverbials, in contrast to the topology of their Danish counterparts, cannot be used as a clear-cut criterion by means of which the overall group of sentence adverbials can be subdivided.

6.1.4 Summing up
We may end this section by concluding that it is not possible to make any consistent classification of the English adverbials purely on the basis of expression features. The subgroups that may be defined on the basis of morphological, syntactic and topological criteria are highly heterogeneous. In order to arrive at more homogenous groups, the description must also include semantic criteria, which is what we shall turn to in the following section.

6.2 Content

6.2.1 Semantic parameters
There are numerous examples of semantic classifications of the English sentence adverbials. The most frequently quoted work on adverbials in English is probably Greenbaum’s (1969) study of English adverbial usage, and its various reincarnations and developments in grammars co-authored by Greenbaum (e.g. Quirk et al. 1972, 1985). The thrust of Greenbaum’s approach is arguably the grammatical analysis, i.e. the distinctions between adjuncts, subjuncts, disjuncts and conjuncts, which is fully developed in the 1985 version. But his 1969-analysis also includes a semantic sub-classification of the attitudinal disjuncts (1969:202ff), which deserves mentioning here.

Greenbaum distinguishes two overall groups of attitudinal disjuncts: “Semantic set [1]”, which include adverbials that are used by the speaker to “express an opinion on the truth-value of what is being said”, e.g. possibly, apparently, admittedly, and “Semantic set [2]”, which includes adverbials that are used to “convey a judgement about what is being said”, e.g. sadly, annoyingly, amazingly (1969:202ff). The two sets are further divided into a number of sub-sets, of which an overview is given in Appendix 2. For the present investigation focus can be narrowed down to “Sub-set [1a]” which contains adverbials that “express shades of doubt or certainty about what is being said” (1969:202). As can be seen from this definition, Greenbaum’s main semantic parameter in relation to this group is degree of certainty – ranging from shade of doubt to certainty; yet he recognizes that a certain sub-group, “sub-set [1a(ii)]”, in addition to doubt vs. conviction also refers “to the observation or perception of a state of affairs” (1969:202, my emphasis). Although it is not entirely clearly stated, it seems

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9 Adjuncts may be compared to group (i) and (ii) in Dik et al.’s typology while the disjunct category roughly covers group (iii) and (iv). Of the four adverbial groups suggested by Quirk et al. (1985), it is thus the group of disjuncts which is the most relevant one to my investigation.
fair to say that Greenbaum here in fact points to two distinct types of adverbial that correspond to what in this dissertation are called epistemic and evidential adverbials.

These distinctions in the adverbial category have been outlined in more detail by other scholars, typically under the heading of “modal adverbs.” Swan (1980, 1988), building on the work of Michell (1976), sorts the modal adverbs (MAs) into logical, evidential, distancing and performative adverbs. Table 3 offers an overview of how Swan defines the four sub-classes. The definitions are quoted from Swan (1980), but they are almost identical with the ones offered in Swan (1988).

<table>
<thead>
<tr>
<th>Type of MA</th>
<th>Definition</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logical</td>
<td>“These are the adverbs which express the speaker’s evaluation of the logical possibility of the truth of the adjoined sentence” (p. 427).</td>
<td>necessarily, certainly, unquestionably, indubitably, undoubtedly, definitely, decidedly, indisputably, presumably, doubtless, probably, conceivably, possibly, surely</td>
</tr>
<tr>
<td>Evidential</td>
<td>“These adverbs [...] are used by a speaker to convey that he/she has some evidence (often perceptual), or draw conclusions from evidence available to both hearer and speaker” (p. 430).</td>
<td>clearly, obviously, manifestly, plainly, patently, evidently, apparently, seemingly, ostensibly,</td>
</tr>
<tr>
<td>Distancing</td>
<td>“The common characteristics of this group of adverbs is that they signal the speaker’s non-acceptance of the responsibility for what he/she is saying; the speaker emphasizes the fact that someone else believes in the truth of (p) [...]” (p. 432).</td>
<td>allegedly, reputedly, purportedly, reportedly, supposedly, professedly,</td>
</tr>
<tr>
<td>Performative</td>
<td>“[...] the speaker asserts (strongly) the truth of the adjoined sentence” (p. 435).</td>
<td>admittedly, assuredly, assertably, concededly, confessedly</td>
</tr>
</tbody>
</table>

Table 3: Swan’s (1980) MA classes

Swan’s ‘performative adverbs’ fall outside the scope of this study. The remaining three groups will be discussed in the following section.

6.2.2 Force and Source

Swan’s semantic classification is more lucid than Greenbaum’s intricate system of sub-sets, yet it also presents a number of problems which need to be addressed.

First, Swan’s definition of the class of logical adverbs is clearly influenced by the philosophical legacy of modality studies and this is problematical since, as argued earlier, cf. 3.1, modal logic concepts like logical possibility and truth cannot easily be transferred to the study of natural languages. This case is no exception. The adverbs Swan include in the class of logical MAs are in fact used by speakers as adverbials to indicate an assessment of the likelihood of the propositional content they put forward, but there is no logical calculus behind the evaluation. They are epistemic adverbials that express which degree of force the speaker puts behind the propositional content of his utterance.
Secondly, Swan’s *evidential* and *distancing* adverbials share a central semantic/functional feature which in my opinion warrants a merger of the two classes: they all point to the fact that the evidence that supports the propositional content comes from something/someone external to the speaker. In other words, both classes are essentially concerned with the semantic parameter of *source* and should be grouped together according to this feature as *evidential adverbials*. True, the adverbials differ in the *type* of source they specify and hence the degree or type of association between speaker and propositional content, but these are distinctions which may be used in the further analysis of the system of evidential adverbials.

Finally, it should be noted that on the basis of the arguments and reservations presented in this section, it does not seem reasonable to maintain “modal” as a cover term for the two groups of adverbials since only the first group is inherently modal. Rather, each group should be seen as constituting a system in its own right: one concerned with epistemic modality, the other with evidentiality.

We may conclude that the primary semantic parameters that were involved in the analysis of the Danish adverbials, i.e. force and source, are also relevant in the analysis of the English adverbials.

### 6.2.3 Summing up

In this section I have shown that the semantic parameters that were involved in the analysis of the Danish adverbials, i.e. force and source, are also relevant in the analysis of the English adverbials. Although a consistent classification along these two parameters (into epistemic adverbials and evidential adverbials) has not previously been suggested, several analysts (Greenbaum 1969, Michell 1976, Swan 1980, 1988) have in fact noted that particular groups of English adverbials are concerned with these particular semantic features.

In the following analysis the English adverbials selected for analysis are divided into two overall groups on the basis their primary semantic function, i.e. specification of force or source, but the analysis will not be centred solely on the features of force and source. In order to explain the differences between the various members of each group it is necessary to resort to other features, including the notions of modal factor, responsibility and agreement. I shall employ these notions in the same sense as outlined in relation to the Danish adverbials (cf. 5.2.2) and also employ the same analytical model as the one developed in relation to the Danish adverbials (cf. 5.2.1).
6.3 Epistemic adverbials

The group of epistemic adverbials in English can be divided into two groups on the basis of function. The first group consists of adverbials that negotiate the semantic continuum between possibility and necessity. This group is treated in section 6.3.1. The second group, which I treat in section 6.3.2, contains adverbials that constitute variations on a theme that may be called ‘claim to certainty’.

In the analysis of the epistemic adverbials I shall determine which degree of force and which modal factor position(s) each adverbial specifies as part of its inherent meaning potential, i.e. which instructions it contains regarding force and modal factor position. For several of the adverbials it holds that the modal factor position may be either subjective or objective, depending on context. The modal factor position of these adverbials is consequently considered to be unspecified at the structural level (cf. the distinction between configuration and structure outlined in 4.3).

6.3.1 Group 1: Possibility vs. Necessity

The adverbials of Group 1 can be divided into two subgroups on the basis of their morphologic and syntactic traits. One group consists of adverbials that are realized by derivational adverbs and incapable of occurring in interrogatives: possibly, probably, inevitably, necessarily, presumably. The other group consists of maybe and perhaps, which are non-derivational and more syntactically versatile than the other adverbials as they may occur in yes/no-questions (cf. 6.1.2). We will start out by looking at the former group and proceed from possibility towards necessity.

possibly & probably

Possibly is used to introduce propositions that, according to the speaker, may or may not be the case, i.e. it specifies minimum force. Consider the following example:

(18) Many people I know who have had children later in life face a real struggle when they go back to the office. I’ve been lucky, possibly because I haven’t asked for too much and my flexi-working requests have never been a problem.
(http://money.guardian.co.uk/workweekly/story/0,,1577152,00.html)

The modal factor of possibly is prototypically subjective, i.e. the force originates exclusively in the speaker. This is the case in (18). Yet, possibly may also be used in contexts where the modal factor is objective, shared between the speaker and one or more additional agent(s) or some speaker-external state of affairs.¹⁰ Consider the following example:

(19) Opinion polls show that large numbers of Likud voters will follow Mr Sharon, possibly making his new party the largest in parliament after the next election but without an outright majority.
(http://guardian.co.uk/guardianweekly/story/0,,1649033,00.html)

¹⁰ Note that I use ‘state of affairs’ in a non-technical sense here.
In this particular example, the force behind the speaker’s assessment is supported by the opinion polls. The speaker is responsible for the assessment as such but the force behind the assessment can be ascribed jointly to the speaker and the particular state of affairs represented by the opinion polls. In this case we may say possibly has objective modal factor.

In sum, the unmarked modal factor position of muligvis is subjective, yet, in particular contexts it may be objective. Therefore, we may conclude that the modal factor is unspecified at the structural level. Irrespective of modal factor position, possibly invariably specifies minimum force, [±F]. We may illustrate the set-up like this:

\[
\text{possibly} \quad [±F] \\
\text{P} \\
\text{Speaker} \quad \text{Sub MF} \\
\text{Hearer} \\
\text{Obj MF} \quad \text{3. person/state of affairs}
\]

The dotted line between subjective and objective modal factor indicates that the modal factor position is unspecified at the structural level.

Tucker (2001) has shown that, depending on the lexicogrammatical context, possibly may have a wider range of functions than indicated by the analysis presented above. The most notable of these particular contexts is when it co-occurs with the modal verb can/could. In such contexts, possibly may in fact occur in questions, e.g. how can you possibly eat ice cream?, despite the fact that it is generally disallowed in interrogatives. Furthermore, when in combination with could it may also occur in negated contexts, e.g. couldn’t possibly, despite the fact that this is generally not possible for sentence adverbials. This is evidenced by the following example:

(20) Each week we subject drama’s great personalities to psychoanalysis. Today Pip from Great Expectations is played by Samuel Roukin. […]  
[Analyst:] Could you and Estella not be happy together living a more simple life?  
[Pip:] (Offended) That’s a ridiculous thought. I became a gentleman to improve myself. It would be like going backwards, and I couldn’t possibly put Estella in such a position. (http://arts.guardian.co.uk/character/story/0,,1653954,00.html)

The meaning of possibly in such contexts cannot be satisfactorily explained without taking the entire collocation into consideration. The detailed investigation of these collocations falls outside the scope of the present dissertation.

Probably differs from possibly by specifying medium force. Consider the following example:
“It ['an ancient Carron Capri range cooker'] has all the features I like (eye-level grill, two ovens, four rings, and a hotplate), but when it was moved during a kitchen refit, parts ceased to work, probably because the wiring is so old.”

(http://guardian.co.uk/consumer/story/0,,1648701,00.html)

By using probably the speaker indicates that the stove’s malfunction is more likely than not due to old wiring. Had the speaker used possibly instead the proposed explanation would not carry any specific weight over other possible explanations. The stronger force specified by probably may be formally represented as [+F]. Finally, probably’s modal factor potential is similar to that of possibly, i.e. unspecified between subjective and objective, yet prototypically subjective. The set-up can be illustrated like this:

```
probably

[+F]

Speaker
Sub MF

Hearer

Obj MF
3. person/state
of affairs
```

necessarily & not necessarily

On the basis of the criteria set up for sentence adverbials in English, necessarily is actually quite problematic since it typically occurs immediately after a negation:

(22) While liposuction may make people look leaner, a recent study indicates it won’t necessarily improve health issues related to obesity.

(http://www.guardian.co.uk/weekend/story/0,,1645708,00.html)

As it was pointed out above in 6.1.3, this particular position is generally disallowed for sentence adverbials as they cannot come under the scope of negation. However, we notice that necessarily in (22) does not acquire the specific contrastive meaning we saw probably acquire in this position, caused by it being seen as an instance of free indirect speech (cf. example 16). A plausible explanation for this observation is to suggest that necessarily in most cases should not be considered an individual lexeme, but should rather be perceived as one part of a syntagm or very strong collocation, viz. not necessarily. Necessarily thus presents a good example of the discrepancy between natural language and modal logic – completely parallel to the Danish nødvendigvis (cf. p. 52). At a first glance, necessarily might seem to provide a neat lexicalisation of the category of necessity known from modal logic. Yet, when looking at actual data it turns out that necessarily in fact rarely occurs in contexts that express epistemic necessity since the typical collocation with not, i.e. not necessarily,
specifies minimum force. Like the Danish ikke nødvendigvis, not necessarily has an inherent negative polarity: when using not necessarily the speaker does not expect p to be the case, although he leaves the option open:

(23) “I’m very shy and that’s not necessarily a great thing to be in advertising,”
    (http://business.guardian.co.uk/story/0,,1653677,00.html)

In this case, the speaker clearly intends to say that it is not ‘a great thing to be shy in advertising’, however, he still – compared to the non-modified version of the same sentence – leaves the option open that it could be.

Often, not necessarily is used to refute a particular point of view – whether actual or imaginary – that p is in fact the case. Consider the following example:

(24) “Fundamentalism doesn’t necessarily derive from sacred texts. It’s where a belief trumps a fact and refuses to confront the facts.”
    (http://education.guardian.co.uk/higher/news/story/0,,1653749,00.html)

Here, the speaker opposes the view that ‘fundamentalism derives from sacred texts’; he does not categorically deny that this may be the case, he merely points out that it is a more general phenomenon than that. Necessarily can in this particular use be seen as a mitigating add-on to the negation, parallel to the situation in Danish with ikke nødvendigvis (cf. Ch. 5).

The meaning of not necessarily is summed up in the model below. [±F] indicates minimum force and the added ‘neg’ specifies the speaker’s negative expectation vis-à-vis p:

\[
\text{not necessarily} \quad [\pm F]_{\text{neg}}^P
\]

```
Speaker
Sub MF
```

```
Hearer
```

Basis

The modal factor of not necessarily is invariably subjective.

When necessarily does not occur in a syntagmatic relation with not as described above, it is typically used in predicative constructions like the following:

---

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American populist new-media extremist that I am, I believe that the tools that enable free speech are necessarily good.

(\url{http://media.guardian.co.uk/mediaguardian/story/0,,1641722,00.html})

Necessarily specifies Maximum force, \([+F]\), i.e. a force that is stronger than that specified by probably. The modal factor is always objective, typically constituted by a norm or some particular logic, which the speaker believes to apply in a specific context. This is clearly illustrated by the following example:

Everyone is aware that rapid liberalisation is harmful to fragile economies. However, the measures taken to deal with this are necessarily complex because the issues they relate to are complicated.

(\url{http://business.guardian.co.uk/story/0,,1670632,00.html})

The norm/logical principle which constitutes the modal factor of necessarily in this statement goes something like 'measures taken to deal with complicated issues must be complex'. We may illustrate the set-up of necessarily like this:

\[
\begin{align*}
\text{necessarily} & \quad \text{[+F]} \\
\text{P} & \\
\text{Speaker} & \quad \text{Hearer} \\
\text{Objective MF} & \quad \text{Norm/logical principle}
\end{align*}
\]

Note that the line between the speaker and the objective modal factor is not dotted in this case since the objective modal factor is obligatory.

inevitably

Inevitably is rarely considered central to the system of epistemic modal adverbials in English, yet having discarded necessarily as a clear-cut candidate for the necessity-pole of the epistemic scale because it primarily occurs in collocations with not, inevitably seems the most obvious contender for the necessity extreme. Like necessarily, inevitably specifies maximum force:

Parents inevitably fret when a child starts at a new school.

(\url{http://observer.guardian.co.uk/magazine/story/0,,1644895,00.html})

What we see in this example is typical: a proposition presented under the scope of inevitably is supported by a force comparable to a law of nature. The speaker uses the adverbial to assert the truth-value of the proposition, and the necessity which supports the assertion stems from an objective modal factor – a norm which the speaker claims to exist and
expects that the hearer will recognize. Sentences in which inevitably occurs thus often take on an almost axiomatic character:

(28) There is a widespread, popular myth that unless faith is restricted to the private sphere, it will inevitably lead to intolerance and extremism.
(http://politics.guardian.co.uk/comment/story/0,,1647481,00.html)

*Inevitably* acquires these absolutist meanings because the force it specifies always originates in an objective modal factor, e.g. a norm, a natural law or a common belief. Whether or not the norm or common belief that the speaker invokes in fact exists may be doubted by others, but the speaker claims it does.

\[
\text{inevitably} \quad \begin{array}{c} 
\text{P} \\
[+F] \\
\text{Speaker} \\
\text{Hearer} \\
\text{Objective MF} \\
\text{norm/law/} \\
\text{common belief}
\end{array}
\]

*presumably*

*Presumably* generally resembles *probably*:

(29) The movie is dedicated to ‘Karel’, who is *presumably* Stephen Frears’s mentor, Karel Reisz. I somehow doubt that he would have liked it.
(http://observer.guardian.co.uk/review/story/0,,1651397,00.html)

That ‘Karel’ is Stephen Frears’s mentor is in this case presented as more likely than not – just as it would have been if *probably* had been used, i.e. *presumably* specifies medium force. It is difficult to identify the difference between *presumably* and *probably*, but generally speaking it seems that *presumably* has a strong tendency to point to the speaker as the relevant agent behind the assessment whereas *probably* is generally more compatible with objective modal factor readings. It should be stressed, however, that these are tendencies, not structural differences. In fact, both adverbials may take either subjective or objective modal factors depending on context, i.e. for both adverbials it holds that the modal factor position is unspecified at the structural level. In (29) above, the modal factor of *presumably* is clearly subjective since the speaker is the only relevant agent behind the assessment. This example represents the typical use of *presumably*. In the following example, however, the modal factor may be said to be objective since the relevant agents behind the assessment seem to include the speaker as well as someone else, for instance the prosecution, or something else, e.g. some particular piece of evidence:
The original judge ruled that between 1994 and 1998, Juve\(^{12}\) fuelled their title spree with ‘enough drugs to maintain a medium sized hospital’. So far, only the team doctor’s been done for it, having presumably sneaked the EPO and other drugs he systematically doped players with into the ground in trucks every night, under cover of darkness to avoid the directors finding out.

(http://football.guardian.co.uk/continentalfootball/story/0,,1653465,00.html)

It is difficult to determine whether this reading in fact hinges on presumably being part of an instance of indirect speech. But under all circumstances it is quite clear that the modal factor position is not subjective. On this basis, the modal factor position of presumably must be determined as unspecified at the structural level.

We may sum up the analysis of presumably like this:

\[
\text{presumably} \quad \text{[+F]} \quad \text{P} \\
\text{Speaker} \quad \text{Sub MF} \quad \text{Hearer} \\
\text{Obj MF} \quad 3. \text{person/ situation}
\]

The figure illustrates that the modal factor is typically located with the speaker, although it may in certain contexts be shared between the speaker and other agents (hence the dotted line).

\textit{perhaps} & \textit{maybe}

\textit{Perhaps} and \textit{maybe} are included in Group 1 because their basic epistemic meanings resemble those of the other members of the system. But in many ways the two adverbials differ significantly from the other members – both in terms of expression and content, so there is actually reason to suggest that the two adverbials could be seen as constituting a separate subsystem. The reasons are the following:

Firstly, as pointed out in 6.1.1 and 6.1.2, the two adverbials are unique amongst the epistemic adverbials in terms of morphology (non -\textit{ly}) and syntactic versatility (ability to occur in bipolar interrogatives). Secondly, their topological preferences stand out, as they, according to Jacobson (1964), tend to favour initial position over medial (or some variant thereof), which otherwise is the preferred choice for Group 1 adverbials. Thirdly, the semantic-pragmatic potential of the two adverbials seems to be different from that of the other members. These observations are to some extent versions of the same story –

\(^{12}\) The Italian football club \textit{Juventus FC}. 

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expression and content go hand in hand – but in the following, starting with *maybe*, I shall tell the story from the content perspective.

By employing *maybe* the speaker indicates that the proposition he puts forward may or may not be the case. The degree of force it specifies is thus similar to that specified by *possibly*, i.e. minimum force, as illustrated by this example from an article about how to solve crosswords:

(31) Today we look at clues that use a double definition. [...] Often such clues will be short; *maybe* two words only.

(http://www.guardian.co.uk/crossword/howto/story/0,,1606301,00.html)

In this particular example, *possibly* could be substituted for *maybe*, yet, in most cases the two can in fact not substitute for each other, despite their similarity in terms of force. When *maybe* is used to introduce a ‘tentative suggestion’ (cf. 6.1.2) or a question it cannot be substituted by *possibly*, and when *possibly*, on the other hand, participates in one of its fixed collocations it cannot be substituted by *maybe*. The point is neatly illustrated in example (20) above where Pip from Great Expectations is subjected to psychoanalysis, which is repeated here in abbreviated form:

(32) [Analyst:] Could you and Estella not be happy together living a more simple life?  
[Pip:] (Offended) That’s a ridiculous thought. I became a gentleman to improve myself. It would be like going backwards, and I *couldn’t* *possibly* put Estella in such a position. *Maybe* I should go and see her now? What do you think?

In this case, it would clearly not do to interchange the adverbials.

While it is clear that *maybe* and *possibly* have different uses although their force dynamic potential is identical, it is difficult to distinguish *maybe* and *perhaps* from one another. The force dynamic potential of *perhaps* is similar to *possibly* and *maybe*, i.e. it specifies minimum force:

(33) As the 21st century unfolds, the south London borough of Sutton provides prime examples of the way that libraries could and, *perhaps*, should evolve.

(http://society.guardian.co.uk/publicservicesawards/story/0,,1653410,00.html)

The difference between *maybe* and *perhaps* is very difficult to spot. In many cases the two are used completely synonymously. The OCD stipulates that *perhaps* can be used to make a polite request or suggestion while this function is not mentioned in relation to *maybe*. This may be seen as an indication that *perhaps* is perhaps more polite than *maybe*. Yet, often speakers seem to employ the two adverbials without any specific difference in meaning intended – the two adverbials seem to be employed as stylistic alternations. This is evidenced by the following example where *maybe* and *perhaps* could be interchanged without problems. Stephen Woolley, director of the film ‘Stoned’ explains:
Like any director making his debut, I’m elated by the good reviews and perturbed by the bad. Chris Tookey called Stoned “smutty”; on the other hand, it was film of the week in the “sophisticated” Nuts. I don’t know if I should self-flagellate or toss myself off (maybe that’s the same thing?). Perhaps I’ll just remain calm, and see what audiences think. (http://film.guardian.co.uk/features/featurepages/0,,1653951,00.html)

The fictitious Pip from example (20) and (32) also seems to use the two interchangeably:

(35) [Pip:] Maybe I should go and see her now? What do you think?
[Analyst:] What do you think?
[Pip:] Perhaps I need to tell her how I feel. I just hope she’ll reciprocate. [...]

We may conclude that maybe and perhaps are very near synonyms, and may be considered stylistic variants.

In terms of modal factor, the examples in the reference sample indicate that subjective modal factor is the unmarked type for both adverbials, yet it is reasonable to assume that the modal factor may also be objective in cases where the adverbials can be interchanged with possibly.

```
\begin{align*}
\text{maybe} & \quad \begin{array}{c}
\text{P} \\
[\pm F] \\
\text{Speaker} \\
\text{Sub MF} \\
\text{Hearer} \\
\text{Obj MF} \\
3. \text{person}
\end{array} \\
\text{perhaps} & \quad \begin{array}{c}
\text{P} \\
[\pm F] \\
\text{Speaker} \\
\text{Sub MF} \\
\text{Hearer} \\
\text{Obj MF} \\
3. \text{person}
\end{array}
\end{align*}
```

**Summing up**

The members of Group 1 are all essentially concerned with the specification of force and secondarily where this force originates. The analyses of the epistemic adverbials in Group 1 are summed up in table 4 where the force dynamic set-up of each adverbial is recorded, including modal factor position. A plus sign indicates that the adverbial in question has this particular feature; a minus sign indicates that the adverbial in question does not have the particular feature. In the modal factor column, two plusses indicate unspecified modal factor between subjective and objective.
On the basis of this overview, a number of observations may be made regarding the way epistemic modality is structured by this particular group of English sentence adverbials.

In terms of force, the five adverbials at the top define an epistemic scale ranging from \([\pm F]_{\text{neg}}\) to \([++F]\), i.e. from negated possibility to necessity. *Inevitably* and *necessarily* make up the necessity extreme of the scale. They both specify maximum force and operate on an objective modal factor which is constituted by a norm or a logical principle. However, *necessarily* is fairly rare as an individual lexeme. Its most frequent use is as part of the syntagm, *not necessarily*, which occupies the other extreme of the scale. *Not necessarily* constitutes the speaker’s (polite) negation of a norm or a common view. In between these two extremes we have *possibly* and *probably* which specify minimum and medium force respectively. Common to them both is that their modal factor position is unspecified at the structural level, yet the unmarked position is subjective.

Like *probably*, *presumably* specifies medium force and is unspecified in terms of modal factor position. Thus, in many cases the two adverbials may be used more or less synonymously, yet, I have suggested that the difference between the two seems to be that *presumably* tends to point specifically to the speaker as the relevant agent behind the assessment whereas *probably* is generally more compatible with objective modal factor readings.

It should be noted that the type of objective modal factor specified by *necessarily* and *inevitably* is different from the modal factors of the adverbials which may, but need not, be based on an objective modal factor. The modal factor of the former two is constituted by a norm, a logical principle or a commonly held view; for the latter group, the objective modal factor is realized by the speaker’s assessment being shared by one or more additional agents.
Finally, *maybe* and *perhaps* have been set apart from the other adverbials by means of a dotted line. This indicates that they differ from the other epistemic adverbials by their ability to indicate ‘tentative suggestion’, which I consider to be a specific pragmatic function of these two adverbials (a politeness marker). In this particular function, they may be said to modify the *speech act* rather than the propositional content of the utterance, i.e. both of them may in fact be said to span the categories of propositional satellites and illocutionary satellites (cf. Dik et al.’s (1990) classification of adverbials outlined in 3.5.2).

### 6.3.2 Group 2: Claim to Certainty

Members of Group 2 are all concerned with variations on a theme we may call ‘claim to certainty’. It is a quite common view that in English (as well as many other languages) the strongest epistemic assessment is realized by a simple declarative sentence. Pragmatically speaking, modal expressions that indicate necessity or certainty tend to devaluate the assessment rather than enforce it. The point has been made by Lyons:

> Although it might appear that a statement is strengthened by putting the proposition that it expresses within the scope of the operator of epistemic necessity, this is not so, as far as the everyday use of language is concerned (Lyons 1977:808).

And also by Halliday: “[…] we only say we are certain when we are not” (1994:362). Others, however, have taken issue with this view by claiming that some epistemic modal expressions may in fact be used as veritable means of emphasis (Hoye 1997:61, Aijmer 2002:98). In the following, I will investigate how the various ways of emphasizing a proposition by means of epistemic adverbials differ from one another, and in doing so try to give my contribution to the discussion outlined here.

*surely*

*Surely* specifies maximum force, [+F]. It functions to assert the speaker’s proposition and invite the hearer to agree with the speaker’s assessment:

(36) It could be argued that the only thing in nature that ought to be allowed to get away with being orange is an orange. And, OK, one or two flowers, And maybe the occasional parrot-part, if we must. But no cars, *surely*. Unless you want to appear to be driving around in a huge metal fruit.

(http://www.guardian.co.uk/g2/story/0,,1648521,00.html)

In this case, the speaker advocates the proposition that ‘cars are not allowed to be orange’ and by using *surely* he indicates that he expects the hearer to second this view. Although the speaker who employs *surely* expects the hearer to agree with his assessment, the modal factor is always subjective since the force originates solely in the speaker.

The fact that *surely* indicates that the hearer is expected to agree with the speaker’s assessment means that *surely* may also be used in questions, for instance in (37) where a declarative sentence functions as question:
Shakespeare's love life may have had its ups and downs, but surely he wasn't quite as much of a cold fish as BBC4 made out? 
(http://www.guardian.co.uk/tv_and_radio/story/0,,1648527,00.html)

Similarly, surely may also be used as a tag in tag questions, e.g. He's wrong, surely?

Hoye (1997:191) has noted that surely is typically used in anticipation of some opposition. This is the case in (36) where the speaker may be said to refute the POV that ‘cars are allowed to be orange’. This POV is present in the discourse situation although it is not ascribed to any particular agent. The same applies in (37) where the speaker counters the view allegedly presented by BBC that Shakespeare was a cold fish. In some cases, however, it is difficult to see that the speaker’s proposition is in opposition to another POV, whether explicitly or implicitly:

(38) After extensive research, Dr Ap Dijksterhuis of Amsterdam University has discovered that “thinking too hard about a problem leads to poor choices”. Surely this will ring a bell for many a punter. We’ve all been there. After hours of study, you’ve had a proper stake on a longshot, which is then pipped in a photo by the odds-on favourite. 
(http://sport.guardian.co.uk/horseracing/story/0,,1721093,00.html)

There is no reason to suggest that the speaker in this case by means of employing surely intends to counter an implicit POV that ‘this will not ring a bell for many a punter’. It may be claimed that any constative speech act always implicitly or explicitly enters into a dialogic relation with the opposite view (cf. fn 4, p. 10), and this of course also applies to the current example. Yet, there is no indication that surely plays a specific role in this respect in (38).

In sum, we may say that surely is used by speakers to assert the propositions they put forward while also indicating that they assume the hearer will agree with the assessment. This latter feature is marked by [+A] in the model.

\[
\text{surely} \\
\text{[++F]} \\
\text{[+A]} \\
\text{P} \\
\text{Speaker} \\
\text{Sub MF} \\
\text{Hearer} \\
\text{Basis}
\]

\[
\text{definitely}
\]

Like surely, definitely specifies maximum force, [++F], yet, it does not have the inherent dialogic nature of surely. Consider the following example:
One of the joys of my youth was Shipham’s crab paste, which I ate directly from the jar without the benefit of toast. Shipham’s ham spread, on the other hand, definitely needed toast.

If surely was substituted for definitely in (39) it would indicate an appeal to the hearer to agree that the ham spread needed toast. This is not the case as it stands, where definitely is simply used for emphasis. Thus, in itself definitely does not encode an expected hearer position. However, it may combine with other polyphonic elements and hence participate in a dialogic sequence:

“I definitely don’t think that money can buy you love,” he [George Best] said. “It can buy you affection but certainly not love. Love is about mutual respect, apart from attraction. I don’t even think you have to have the same interests. It is definitely something chemical.”

In this example, it might seem like definitely in the first sentence is used to refute the POV that money can buy you love but in fact this refutation is coded in the negation. Definitely merely emphasizes it. The second use of definitely is less ambiguously emphatic.

Concerning the relation between surely and definitely, Bolinger (1989:130) has noted that: “Definitely is literally no more ‘certain’ than surely, but surely makes a good question marker, definitely does not” (quoted in Aijmer 2002:98). I would venture to say that difference is due to the fact that surely possesses a dialogic potential which is not present in definitely. Definitely is more simply used to assert the speaker’s proposition. Like surely, the modal factor is invariably subjective.

definitely

[+F]

P

Speaker

Sub MF

Hearer

Basis

certainly

Certainly also specifies maximum force [+F], and like definitely it may be used to assert the speaker’s proposition. Typically it places the speaker’s proposition in implicit or explicit opposition to another POV, which may – but need not – be associated with the hearer. Consider the following example, where Michelle Pauli, a journalist, relates her experience of using ‘Waterstone’s personal book-shopper service’. The gift finder is Cathy Waterhouse:
Despite Waterhouse urging me to seriously consider [the illustrated Da Vinci Code], I pooh-poohed the idea and rejected it flat in favour of Stefan Fatsis’s Word Freak, an investigation into the bizzare world of competitive Scrabble. Which is well-received [by the person receiving the gift]... until I mention what I’d turned down. “But I’d have loved The Illustrated Da Vinci Code!” was the crestfallen reaction. Word Freak remains unread. OK, I admit defeat. The Waterstone’s gift finder certainly knows her stuff and, it appears, knows my loved ones better than I do.

In this case, Pauli uses certainly to refute a POV she herself has put forward earlier – ‘I started out as a sceptic’. In other cases, the opposing view may not have been explicitly stated by anyone, but it is nevertheless instantiated by the use of certainly:

One night in St Barth certainly wasn’t enough time to see the island exhaustively, but the other islands on our itinerary seemed more interesting and less unreasonably expensive.

In this case, the speaker anticipates a possible objection the reader might have to the story, but which has in fact not been voiced by anyone, that one night couldn’t have been enough to see the entire island.

In many cases, certainly may thus be used simply for emphasis, yet it also has a specific use which may tentatively be labelled ‘concessive’. In this particular use it may be paraphrased ‘I’ll grant x, (but y)’. This particular use is illustrated by this example:

The next morning, I set out to purge the excesses of the night before with a dip in the warm volcanic mud of Hoyoland. My skin certainly felt smoother, but I had not reckoned on the sticking power of the silky grey gloop.

In this example certainly realizes a concessive structure which could be paraphrased as ‘my skin felt smoother, I’ll grant that, but it was also very sticky’.

In sum we, may represent the force-dynamic set-up of certainly like this:

```
certainly

[++F]

P

Speaker
Sub MF

Hearer

Basis
```

The specific concessive use essentially works on the same potential and does therefore not appear separately from the model.
Undoubtedly resembles definitely and certainly, i.e. it specifies maximum force and does not necessarily assume agreement from the hearer vis-à-vis p. However, in contrast to all members of Group 2, the examples in the reference sample suggest that undoubtedly may in certain contexts operate on the basis of an objective modal factor. That is, in some cases it appears from the context that there are other agents besides the speaker who vouch for the proposition presented under the scope of undoubtedly. Consider the following example:

(44) On the plus side, modern coal-fired power stations, which act as oversized kettles to boil water to drive steam turbines, are undoubtedly much cleaner [than previous coal-fired power stations].

(http://society.guardian.co.uk/societyguardian/story/0,,1653343,00.html)

The proposition that ‘modern coal-fired power stations are much cleaner than previous coal-fired power stations’ is here presented as a commonly held view which the speaker subscribes to. The force behind the proposition is thus jointly located with the speaker and some unspecified external agent(s), say the scientific community. The same thing is evidenced by the following example:

(45) The university situation is undoubtedly compounded by relatively poor salaries in comparison with some other professions into which graduates with good analytical and problem-solving skills can move, and insecure career prospects

(http://education.guardian.co.uk/higher/comment/story/0,,1643790,00.html)

If certainly had been used instead of undoubtedly in the above two examples, the sentences would have been concessive, i.e. the speaker would only reluctantly have accepted the POVs. If surely had been used it would have implied expected agreement from the hearer, and finally, if definitely had been used it would have suggested simple emphasis.

We may sum up the force dynamic potential of undoubtedly like this.

\[
\text{undoubtedly} \quad \begin{array}{c} \text{P} \\ [+F] \end{array} \\
\text{Speaker} \quad \text{Sub MF} \\
\text{Hearer} \\
\text{Obj MF} \\
3. \text{person}
\]

In this presentation of undoubtedly I have focussed on examples where undoubtedly operates on an objective modal factor, yet, as indicated by the model, it may also operate on a subjective modal factor.
**Summing up**

The members of Group 2 all specify maximum force. In my opinion, they all essentially function to underscore the speaker’s point of view. By explicitly emphasizing certainty the speaker may also by implication draw attention to the fact that \( p \) may not be the case. Yet, in my view, this is generally not what speakers intend to do when they use these particular four epistemic adverbials. The analysis of the four members of Group 2 is summed up in table 5.

<table>
<thead>
<tr>
<th>FORCE</th>
<th>MODAL FACTOR</th>
<th>AGREEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>([\pm F])</td>
<td>([\pm F])</td>
<td>([\pm F])</td>
</tr>
<tr>
<td>surely</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>definitely</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>certainly</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>undoubtedly</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Table 5: Epistemic adverbials, Group 2**

As can be seen from the table, all members of the group share the feature of maximum force, \([++F]\). Yet, the force specified by these adverbials does not stem from a norm or a particular logical principle like I have shown it to be the case for necessarily and inevitably (6.3.1). As far as the three first adverbials are concerned the force originates solely in the speaker. The force behind undoubtedly may either stem from the speaker or originate jointly in the speaker and one or more additional agents. Although the four adverbials are identical in terms of force they may be distinguished on the basis of their special uses: surely is dialogic, definitely is emphatic, certainly is concessive and undoubtedly is objective. As far as the latter three are concerned these are not coded instructions, yet they are still characteristic traits which enable us to identify their unique functions. Surely represents a particularly interesting case because it appears that this particular adverbial, as the only member of the overall group of epistemic adverbials in English, is concerned with the notion of agreement. This could indicate that the function of surely spans more than one content substance category. It is not only epistemic but also dialogic. Since surely is the only epistemic adverbial which appears to be concerned with agreement I consider it likely that this feature of surely is related to its dialogic potential rather than its epistemic potential. For this reason, I do not consider agreement to be a distinctive feature of the system of epistemic adverbials in English.

Surely, certainly, definitely and undoubtedly are perhaps the most multifunctional of the English epistemic adverbials treated in this dissertation and it is difficult to do justice to this multifunctionality in a study like this which focuses on the more general perspectives.
in relation to the overall system. However, I believe that the analysis presented here forms a good basis for further, more detailed studies of the individual adverbials.

6.4 Evidential Adverbials

The evidential adverbials can be divided into two groups on the basis of the type of source they are concerned with. One group includes adverbials which are concerned with various types of perception while another is concerned with various types of report. In the following I start out by treating those that are concerned with perception.

6.4.1 Group 1: Perception

The adverbials in Group 1, viz. apparently, clearly, evidently, obviously and seemingly, are used by speakers to delicately negotiate the relations between context, speaker and hearer. To some extent they are all concerned with perception, although often in a quite abstract sense. Generally speaking, the perception adverbials tend to realize realis meanings, yet for some of them it is the case that, given the right context, they may acquire epistemic extensions and be taken to imply irrealis meanings. This function, however, is not coded but depends on context. In the following I will determine the source potential of each adverbial, outline what relations it establishes in terms of responsibility and agreement and, when relevant, illustrate its ability to acquire epistemic extensions.

**clearly**

Clearly has a range of functions, some of which are on the borderline between evidential functions and what may tentatively be called ‘dialogue coordinating’ functions. Depending on context, it indicates either subjective or intersubjective source, i.e. at the structural level, the source is unspecified between these two options. Consider the following example taken from an album-review:

(46) [The tune] Space Rider’s easy-fit funk was clearly influenced by Jamiroquai

(http://guardian.co.uk/arts/fridayreview/story/0,,862965,00.html)

In this case, the reviewer is the only relevant sentient agent who has access to the source, i.e. the album and the tune Space Rider, which warrants the proposition that Space Rider...was influenced by Jamiroquai. The source may therefore in this case be described as subjective. Yet, it is in fact rather unusual for clearly to be used in contexts where the source is subjective; in most cases it is used to indicate that the speaker's assessment is based on intersubjective evidence, and by implication that the speaker expects the hearer to agree with his assessment:

(47) “It is difficult to try and anticipate what children might or might not do with a product and it is clearly impossible to ban everything that might be dangerous. We need a commonsense approach to toy safety.”

(http://ga-uk.org/db_newsletter/may_6.pdf)
Here the speaker uses *clearly* to introduce the observation that *it is impossible to ban everything that might be dangerous* as a generally accepted truth – a ‘fact’ that the hearer is expected to acknowledge. The source that backs this claim may be characterized as ‘common knowledge’. Yet, in other cases the source is more explicit, as for instance as in this review of the video game *Grand Theft Auto*, GTA:

(48) Pastimes here include carjacking, whacking innocent civilians with baseball bats, street racing, stunt competitions. Bored with that? Then you could grab some guns, go on a rampage and mow down civilians and the police. Phew. GTA clearly exists in a moral vacuum.

(http://shopping.guardian.co.uk/games/story/0,,1643820,00.html)

The conclusion that “GTA exists in a moral vacuum” belongs to the speaker, yet by using *clearly* he indicates that the description of the game in the preceding discourse is to be taken as sufficient evidence for this conclusion, and that he consequently expects the hearer to agree with him. The claim is justified by the intersubjective source. Thus, *clearly* may in many instances be paraphrased by “as I’m sure you/we all agree on the basis of the available evidence.”

We may sum up the analysis like this:

![Diagram](image)

[*+R*] indicates that the speaker, irrespective of whether the source is subjective or intersubjective, always accepts responsibility for the truth-value of *p*. The dotted lines on the right indicate that these relations are only realized in cases of intersubjective source. They are therefore not formally coded, yet, I consider them to be prototypical for *clearly*.

The source may be constituted by information presented in the text (textual), by information present in the communication situation (deictic/contextual) or be actualized by implicit or explicit reference to common knowledge or a norm.

*obviously*

The meaning of *obviously* appears to be quite close to the meaning of the corresponding adjective *obvious*, i.e. “easily perceived or understood; clear” (OCD). The use of *obviously* implies that there is some source which warrants the claim that *p* is obvious. It is however not specified *a priori* by the adverbial which sentient agents this source must be accessible
to. In some cases, the speaker may be the only relevant sentient agent, as in this example where the relevant sentient agent is Richard Curson:

\[(49)\] Richard Curson, the complainant, has told Ofcom\(^{13}\) that the DJ called him in what seemed to be an emotional state. “He confessed he was bisexual and said he was in love with me and had had these feelings for years. He was crying and **obviously** upset. [...]”

(http://www.guardian.co.uk/diary/story/0,,1658896,00.html)

In other cases, the range of relevant sentient agents may include other persons, e.g. the hearer as well:

\[(50)\] The ice cream, too, can **obviously** be made in advance and kept in the freezer, but don’t hold on to it for more than 48 hours, otherwise it will lose much of its flavour. Serves eight.

(http://www.guardian.co.uk/weekend/story/0,,1655007,00.html)

In sum, we can say that **obviously** is not coded for a particular type of source; like **clearly** it covers the range from subjective to intersubjective. At the same time, the speaker will always accept responsibility for \(p\) and present it as *reals*. The dotted lines indicate that the hearer need not necessarily be included as a relevant sentient agent; if this is the case, however, the hearer will be expected to agree with the assessment expressed by the speaker, [+\(A\)].

It is not possible to distinguish **clearly** and **obviously** by their structural potential. This indicates that as sentence adverbials they are in fact quite synonymous. Generally speaking, **obviously** tends to be used more in cases of subjective source while **clearly** tends to be used more in cases where the source is intersubjective. However, these are not structural differences but tendencies in use.

**seemingly**

Browsing through the hits at Guardian Unlimited it is striking to note how frequently **seemingly** is in fact used to modify adjectives, and hence not as a sentence adverbial. This is evidenced by the following example where it modifies *inexorable*:

---

\(^{13}\) “**Ofcom** is the regulator for the UK communications industries, with responsibilities across television, radio, telecommunications and wireless communications services” (www.ofcom.org.uk).
The New Puritans might be a trend, but it’s still a small one, swimming against a seemingly inexorable consumerist river. 
(http://lifeandhealth.guardian.co.uk/ethicalliving/story/0,,1661467,00.html)

This indicates that the frequency of seemingly recorded in Leech et al. (2001) should probably not be taken as a very accurate indication of how frequently seemingly occurs as a sentence adverbial. However, there is no doubt that seemingly has a distinct sentence adverbial use. Here is a typical example:

(52) Araki seemingly photographs as he blinks: indiscriminately.  
(http://arts.guardian.co.uk/reviews/observer/story/0,,1587980,00.html)

As indicated by this example, seemingly is typically used in cases where something appears to be the case or is perceived to be the case, but unlike obviously and clearly, seemingly invariably points to the speaker as the relevant sentient agent. That is, in terms of source it is clearly marked for subjective. Seemingly also differs from clearly and obviously in terms responsibility. Whereas obviously and clearly entail a [+R]-relation between speaker and p, seemingly is unspecified in this respect. Prototypically, it instantiates a neutral relation which may be paraphrased ‘it appears that way to me, but I cannot be sure’, yet it may also be used in cases where the context clearly shows that the speaker cannot believe p and uses seemingly as a contrast to actually:

(53) Along the seafront, an artist by the name of Bill Dan was plying his trade. Bill balances rocks, one on top of the other seemingly in defiance of gravity, creating mesmerisingly beautiful, albeit temporary, abstract sculptures  
(http://travel.guardian.co.uk/davegorman/story/0,,1592376,00.html)

We may illustrate the set-up of seemingly like this:

\[
\text{seemingly} \quad \begin{array}{c}
\text{P} \\
\pmR \\
\text{Speaker} \\
\text{Hearer} \\
\text{Subjective source}
\end{array}
\]

evidently

To some extent, evidently resembles clearly and obviously, but there are also a number of important differences. In some contexts, evidently, clearly and obviously may be interchanged without noticeable difference in meaning. In the following example, an interview with actor Val Kilmer, there would seem to be no significant change had evidently been replaced by clearly or obviously:
“[...] I love that Bob Dylan asked me to be in the first movie he wrote.” Kilmer is evidently very excited about Dylan. “I’ve known him for over 10 years, and I don’t get nervous round that many people but he’s someone I’m real concerned about. [...]”

On the other hand, there are also contexts where the interchangeability is limited. This is in part due to the fact that, unlike the other two adverbials, evidently may be used to introduce a preliminary or hesitant conclusion which the speaker does not necessarily accept full responsibility for. Historically evidently has been used to indicate certainty by simply implying “that the fact predicated is evident” (OED), yet in its modern usage it has developed an ‘uncertainty meaning’ which may be paraphrased by “it appears that x, but I am not sure”. This meaning is not mentioned by the OED but it appears from more recent dictionaries. When used in this meaning, evidently cannot be substituted by obviously or clearly which both retain their certainty meaning.

The interchangeability is also limited by the fact the source potential of evidently differs from that of clearly and obviously. While clearly and obviously cover the range from subjective to intersubjective source, evidently covers the range from intersubjective to objective source. In contexts where it has intersubjective source, which is the most common, the speaker vouches for the truth-value of p and at the same time the adverbial stipulates an expectation that the hearer agrees with the assessment. The source may be deictic or textual, i.e. either present in the non-linguistic context or presented in the preceding or ensuing discourse. The following example illustrates evidently used with intersubjective source:

A few months ago a glossy British magazine, Restaurant, conducted a poll among mainly British gastronomic judges which concluded that 14 of the best restaurants in the world – the whole world, nothing less – are in Britain, and only a measly 10 are in France. That is evidently absurd.

In cases where the source is intersubjective, evidently may typically be substituted by clearly and obviously without problems. This is the case in (55), but also (54) above. However, in cases where the source is objective this is not possible. This is evidenced by example (56), which stems from an article that presents some of the major findings of a report published by The Council for Industry and Higher Education (CIHE) on the increasing difficulties UK universities experience in receiving funding from businesses:

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14 The development of evidently appears to be parallel to that of åbenbart in Danish (cf. p. 69ff).
15 E.g. in Collins Cobuild (1987) where the first of the senses listed for evidently says that it is used “to indicate that you think something is true but that you are not sure, because you do not have enough information or proof.”
Businesses are evidently nervous about the move by universities to apply full economic costing, and the CIHE intends to investigate whether this will lead to a shift of research overseas in search of cheaper prices. The quality of research and facilities are said by some firms to be as good in China and India as in the UK.

(http://business.guardian.co.uk/story/0,,1667274,00.html)

In this case, the speaker uses evidently to specify that the information he presents is relayed from the report; information which the hearer does not have access to. When used in contexts of objective source evidently takes on a hearsay meaning, and the speaker does not necessarily vouch for the truth-value of p. In cases where the source is objective and the speaker consequently does not accept responsibility for p, evidently may acquire an epistemic extension and be taken to imply irrealis.

We may illustrate the potential of evidently like this:

\[
\begin{array}{c}
\text{evidently} \\
\begin{array}{c}
\text{[+R]} \\
\text{Speaker}
\end{array} \quad \begin{array}{c}
\text{[+A]} \\
\text{Hearer}
\end{array}
\end{array}
\]

The values of [R] and [A] are symmetrical, i.e. in cases where evidently is used with intersubjective source the speaker vouches for p, [+R], and the speaker is expected to agree, [+A]. In cases of objective source, the speaker does not necessarily vouch for p, and no hearer position is stipulated by the adverbial (hence the dotted lines), nor is there an expectation that the hearer will agree.

**apparently**

Apparently covers the range from intersubjective to objective source. In some cases, it can in fact be difficult to tell which of the two is intended by the speaker. This ambiguity is illustrated in (57):

(57) Apparently, this train is no longer terminating at Barking, but is in fact, terminating here. I’m sorry about this but I too was under the impression that this train was going to Barking, but ‘they’ have other ideas. I mean, why tell me – I’m merely the driver...

(http://www.geofftech.co.uk/tube/overheard.htm)

In this case, the driver may be referring to the situation of being stuck ‘here’, which would be a shared experience between driver and passengers, i.e. intersubjective source.

---

\(^{16}\) This example is not drawn from the reference sample.
Alternatively, the driver may be relaying information he has received over the radio, i.e. objective source. In other cases, however, the source is indicated less ambiguously.

Example (58) below is an example of intersubjective source. It is taken from an article about a new Pac-Man video game. The reader is told that Pac-Man in this game is going to speak for the first time, and then we get a comment from Martin T. Sherman, who has been chosen to do the job of giving voice to Pac-Man:

(58) “I’ve been the voice of many different characters but Pac-Man is without doubt the most fun and the most difficult [-] I mean, what is a yellow, ghost-eating circle supposed to sound like? Me, apparently! [...]”
(http://blogs.guardian.co.uk/games/archives/2005/10/27/pacman_finds_his_voice.html)

Sherman clearly expects the hearer to have access to the same source as he has, i.e. the same background information. In (59) the speaker does not expect the source to be accessible to the hearer:

(59) Dolphins have been trained in attack-and-kill missions since the Cold War. The US Atlantic bottlenose dolphins have apparently been taught to shoot terrorists attacking military vessels.
(http://observer.guardian.co.uk/international/story/0,6903,1577753,00.html)

In this case the speaker uses apparently to signal that the information is relayed.

The two different meanings of apparently illustrated above may be referred to as deictic/textual and hearsay respectively. Deictic/textual apparently points to some element of shared knowledge between speaker and hearer, either located in the spatio-temporal context or in the textual context which is then presented as the evidence supporting the propositional content. When the source is intersubjective, the speaker will typically expect the hearer to agree with the propositional content he puts forward. Hearsay-apparently on the other hand signals that the speaker relays information from a third party. The source of knowledge is not accessible to the hearer, and consequently there is no implied expectation that the speaker will agree with the propositional content put forward by the speaker. In the case of hearsay-apparently it is also possible for the speaker to deny – or in various other ways qualify – the information that is introduced under the scope of apparently. Thus, in the case of objective source the speaker may take up a sceptical attitude towards the truth-value of the propositional content.

(60) [Puglia] is where [the Italians] take their holidays, apparently. I couldn’t vouch for that, since it’s hard to tell a holidaying Italian from one at work, what with all their scheduled napping.
(http://www.guardian.co.uk/italy/story/0,,1722789,00.html)

The reference sample does not contain many examples of this variant of apparently, which may be ascribed to the medium from which the examples have been drawn – it is quite obvious that the hearsay-variant of apparently should be the most frequent in newspapers.
In such cases apparently may acquire an epistemic extension and be taken to imply irrealis. We may sum up the analysis like this:

```
apparently
[±R]      [±A]
P
Speaker         Hearer

Inter/Obj Source
Textual-deictic/
third party
```

Like for evidently, the responsibility and agreement values specified by apparently are symmetrical. The model of apparently is similar to that of evidently above (p. 107). This indicates that my analysis has not pointed to any differences between apparently and evidently as far as their structural potential is concerned. Yet, generally speaking, apparently tends to be used more with objective source to relay information than evidently does. In fact, as far as evidently is concerned cases of objective source appear to be very rare.

Summing up
The analysis of the evidential perception adverbials in English is summed up in table 6. We note that the system does not generally make clear distinctions between subjective, intersubjective and objective source. Clearly and obviously are unspecified between subjective and intersubjective while evidently and apparently are unspecified between intersubjective and objective source. Furthermore, clearly and obviously always imply that the speaker accepts responsibility for the propositional content of the utterance while this is not the case for evidently and apparently in cases where the source is objective. For all four adverbials it holds that if the source is intersubjective and the speaker accepts responsibility for p, it follows that the hearer is expected to agree with or accept the propositional content presented by the speaker. This means that agreement can be perceived as a derivative feature which in itself is not distinctive.

Seemingly is the only of the English evidential adverbials treated in this dissertation which invariably implies subjective source. It does not, however, specify whether or not the speaker accepts responsibility for the truth-value of p. This is only determined in the particular context of use.

Finally, the analysis has shown that adverbials which do not invariably specify that the speaker accepts responsibility for the truth-value of the propositional content (i.e. seemingly, evidently, apparently) may in certain contexts acquire epistemic extensions and be taken to indicate irrealis meanings.
Table 6: Evidential adverbials, Group 1. (+) = if intersubjective source and [+R] then +, otherwise –.

In cases where evidently and apparently operate on an objective source they may in fact be considered quite similar to the adverbials in the following group, the evidential adverbials concerned with various types of report.

6.4.2 Group 2: Report

Group 2 is constituted by reportedly and allegedly which both invariably specify objective source. Their function is to specify that the propositional content presented by the speaker is relayed information, i.e. information which stems from another human agent. Moreover, the two adverbials specify what relation exists between this agent and the relayed information: is it something the source has reported or alleged? Neither of the adverbials instantiate irrealis meanings per se, but they do effectively insert a filter between the speaker and the propositional content which indicates that the speaker does not necessarily accept responsibility for p. Hence, they may in certain contexts acquire epistemic extensions and be taken to imply irrealis.

reportedly

Reportedly is transparent in the sense that it basically has the meaning of its verb root, report:

report • v.
1 give a spoken or written account of something. ➔ convey information about an event or situation (OCD).

The meaning of the adverbial may be paraphrased as ‘somebody reports X’. The agent behind the original report is always different from the speaker, and prototypically this agent is not identifiable from the context:

(61) Producer Simon Franks, whom you won’t have heard of, has gotten into a brawl with George Clooney, whom you most probably will. It reportedly took 10 men to tear them apart.

(http://film.guardian.co.uk/news/story/0,,1635803,00.html)
In this case, which is entirely typical, it is not possible to identify the source behind the original report, i.e. the agent who has reported that ‘it took 10 men to tear Clooney and Franks apart’. The fact that the source typically remains incognito often makes it difficult to verify if the information introduced under the scope of reportedly is correct or not.

The instructional potential of reportedly may be summed up like this:

\[
\text{reportedly} \quad [-R] \quad \text{P} \quad \text{Speaker} \quad \text{Hearer} \quad \text{Obj. Source} \quad \text{report}
\]

[-R] indicates that the speaker does not necessarily accept responsibility for the proposition presented under the scope of reportedly. The responsibility is relegated to the implicit or elect agent who constitutes the source.

**allegedly**

Allegedly is tailored to the same pattern as reportedly, except for the fact that the semantics of its verbal source, allege, replaces the semantics of report, i.e. the paraphrase is turned into ‘somebody alleges/claims x’. Rather than relaying a report, the speaker who uses allegedly is thus relaying an allegation or a claim. The speaker does not assume responsibility for this allegation or claim since it is subscribed to a third party, which may or may not be identifiable in the context. In the following example we may, on the basis of contextual information, hypothesize that it is the police who have claimed that the tractor driver swerved, but we cannot be entirely sure.

(62) During the 50-minute chase, the drunken [tractor] driver allegedly swerved to prevent police cars overtaking him and tried to back into a patrol car, and was thwarted only when the trailer he was towing jack-knifed.

(http://guardian.co.uk/crime/article/0,,1653125,00.html)

That the speaker does not accept responsibility for the truth-value of p also means that allegedly can be used in contexts where the speaker clearly finds the allegation to be false, which may be paraphrased: “Somebody alleges x, but I doubt it is true”. This is the intended meaning in (63), which is the lead from an article entitled Below the Belt:


(http://guardian.co.uk/international/story/0,,1278022,00.html)
In such cases allegedly clearly comes to imply that the status of the propositional content is to be perceived as irrealis.

The instructional potential of allegedly may be depicted like this:

\[
\text{allegedly} \quad P
\]

\[\text{[-R]}\]

\begin{tabular}{c|c|c|c|c|c|c|c}
 & \text{AGREEMENT} & \multicolumn{3}{c|}{\text{SOURCE}} & \text{RESPONSIBILITY} \\
\hline
reportedly & - & - & - & - & + & - & + \\
allegedly & - & - & - & - & + & - & + \\
\end{tabular}

Table 7: Evidential adverbials, Group 2

6.5 Summing up

In English the epistemic and evidential sentence adverbials may be perceived as parallel sub-systems within the overall system of sentence adverbials. The two groups are identifiable primarily on the basis of semantic criteria. The epistemic adverbials are essentially concerned with the semantic parameter of force, the evidential with the semantic parameter of source. It is a characteristic feature of the English system that none of the adverbials concomitantly code force and source.

The epistemic adverbials may be divided into two groups on the basis of semantic criteria: Group 1 concerns the possibility-necessity continuum, while Group 2 contains adverbials that constitute variations on a theme that I have called ‘claim to certainty’. Group 1 may be further sub-divided into two groups on the basis of expression criteria, specifically morphology: derivational -ly adverbials vs. the composite perhaps and maybe. These distinctions correspond to functional differences since maybe and perhaps have specific pragmatic functions which the other epistemic adverbials do not share. Group 2 of the
epistemic adverbials is constituted by adverbials that all specify a maximum degree force which stems from the speaker, i.e. subjective modal factor. Although they are all multifunctional, I have argued that their main function, the one they have in common, is to underscore the speaker's point of view.

Like the epistemic adverbials, the evidential adverbials may be divided into two groups, on the basis of functional criteria. Group 1 contains members which are based on perception (often in an abstract sense); Group 2 contains adverbials that are used to relay information obtained from an objective source. Members of Group 1 are typically unspecified between two types of source, either subjective/intersubjective or intersubjective/objective, while members of Group 2 invariably specify objective source.

The basic elements of the analysis may be represented graphically as in figure 1.

Figure 1: The English System

I have shown that it is generally possible to distinguish between the adverbials by recourse to a limited number of distinctive features, viz. source, force, modal factor position, and responsibility. Force and source are the two primary distinctive features. Modal factor position is a secondary parameter of force, and responsibility is a secondary parameter of source. In the table on the following page, the set-up of each of adverbial is recorded. The chart represents the instructional potential of each adverbial. For most of the adverbials it holds that this potential is relatively wide, although it is typically narrowed down in the specific context of use. Not all of the adverbials have unique set-ups. This represents the fact that some of them are very near synonyms, although it is generally possible to point to specific contexts or particular uses where the adverbials differ.

It should be observed that the chart does not include the notion of agreement. This is due to the fact that agreement, although it plays an important role for many of the adverbials, is not in itself a distinctive feature of the system. On the contrary, the analyses of the evidential adverbials have clearly shown agreement to be a derivative function: agreement follows automatically if the adverbial specifies intersubjective source and [+R]. Thus, with reference to Ockham’s razor we may disregard agreement in the overall system.
<table>
<thead>
<tr>
<th>Epistemic adverbials</th>
<th>FORCE</th>
<th>MODAL FACTOR</th>
<th>SOURCE</th>
<th>RESPONSIBILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[±F]</td>
<td>[±F]</td>
<td>[+F]</td>
<td>[++F]</td>
</tr>
<tr>
<td>possibly</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>probably</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>necessarily</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>not necessarily</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>inevitably</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>presumably</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>maybe</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>perhaps</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>surely</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>definitely</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>certainly</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>undoubtedly</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>clearly</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>obviously</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>seemingly</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>evidently</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>apparently</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>reportedly</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>allegedly</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Table 8: Overview of the epistemic and evidential adverbials in English.
7 Comparison

In the two preceding chapters, I have investigated how the content substances of epistemic modality and evidentiality are structured by adverbial systems in Danish and English. In this chapter, I will outline the most salient similarities and differences between the way the systems are organised in Danish and English.

7.1 Overview

The most significant overall difference my investigation has revealed is that Danish has two distinct adverbial systems that code epistemic modality and evidentiality, System I and System II, while English, generally speaking, only has one. The Danish System I clearly stands out, both in terms of expression and content, while the Danish System II generally resembles the English system. In the latter two systems we find a clear semantically motivated distinction between epistemic and evidential adverbials. These systems, however, are organised somewhat differently in the two languages: in English, it is possible to identify distinct subgroups within the group of epistemic as well as the group of evidential adverbials; in Danish this is less clear. Figure 1 gives a general overview of the systems.

![Figure 1: Overview of the Danish and English systems](image)

In the following sections I will examine the similarities and differences between the systems in more detail. I shall start out by comparing System II in Danish to the English system (the epistemic systems in 7.2 and the evidential systems in 7.3) and return to the discussion of System I in Danish later (7.4).
7.2 The Epistemic Systems

The epistemic adverbials in both languages are all essentially concerned with the specification of force and secondarily with the origin of the force, i.e. modal factor position. There are many similarities between the systems of epistemic adverbials in Danish and English, yet the analysis has also pointed to a number of important differences.

If we start by comparing Group 1 in English with the Danish epistemic system, we find that the two systems are in fact quite similar. Both systems work on a scale of probability ranging from possibility to necessity, in force notation: \([\pm F]_{\text{neg}}\) to \([+F]\) (cf. p. 62 and 95).

In both languages, adverbials that specify minimum and medium force, \([\pm F]\) and \([+F]\), typically operate on subjective modal factors, yet the majority of them may in particular contexts, i.e. when the force behind the adverbial originates jointly in the speaker and one or more additional agents, be said to operate on an objective modal factor. This means that the modal factor of these adverbials is unspecified at the structural level. In Danish two adverbials, *formodentlig* and *givetvis*, stand out from this general description as they invariably specify that the modal factor is subjective.

Furthermore, in both languages maximum force, \([++F]\), may be expressed by means of adverbials that operate on an objective modal factor constituted by a norm or a logical principle. In Danish this is the case with *nødvendigvis*, in English it goes for *inevitably* and *necessarily*. However, it is a common phenomenon in both languages that the adverbial which might appear to be a convenient lexicalisation of the modal logic category of epistemic necessity, viz. *nødvendigvis/necessarily*, in fact most frequently occurs as part of a syntagm, *ikke nødvendigvis/not necessarily*, that does not express epistemic necessity but rather constitutes the speaker’s negation of a norm or a commonly held view. The force potential of these syntagms I have characterised as \([\pm F]_{\text{neg}}\).

Group 2 in English is constituted by four adverbials that all specify maximum force and essentially function to underscore the speaker’s point of view: *surely*, *definitely*, *certainly* and *undoubtedly*. Except for *undoubtedly* these adverbials invariably point to the speaker as the modal factor. There is no obvious equivalent group in Danish; *utvivlsomt* has a similar function, yet it is the only contender.

*Surely*, *certainly*, *definitely* and *undoubtedly* are perhaps the most multifunctional of the English epistemic adverbials treated in this study, and it has only been possible to account partially for this multifunctionality within the framework of this dissertation. However, I find it plausible to suggest that Group 2 in English apart from the field of epistemic modality in fact also spans another content substance field which is concerned with what may be described as ‘dialogue organization’, i.e. the dialogic relation between speaker and hearer. This is particularly obvious in the case of *surely*. In Danish this dialogic function is
primarily covered by particles like *jo* and *da*, which have no obvious equivalents in English. This could explain why it appears there is no equivalent in Danish to Group 2 in English: while Danish makes a clear distinction between dialogic adverbials on the one hand and epistemic and evidential adverbials on the other hand, English appears, at least to some extent, to have adverbials that integrate the two.

The final point which should be made in relation to the epistemic systems concerns *måske* and *maybe/perhaps*. It is a striking similarity between the two languages that while the adverbs that function as epistemic adverbials are generally derivational, there is a small group of adverbs – in Danish it has only one member, in English two – that are non-derivational and have a different syntactic potential than the other epistemic adverbials. These special expression features are mirrored in the particular ability of these three adverbials to indicate ‘tentative suggestion’, a special pragmatic function. In this particular function, the three adverbials may be said to modify the *speech act* rather than the propositional content of the utterance, i.e. they may in fact be said to span the categories of propositional satellites and illocutionary satellites (cf. Dik *et al.*’s (1990) classification of adverbials outlined in 3.5.2).

The main similarities and differences between the epistemic systems in Danish and English discussed above are summed up in table 1. This table gives a comparative overview of the systems of epistemic adverbials in Danish and English.

<table>
<thead>
<tr>
<th>Force</th>
<th>Modal factor</th>
<th>Danish</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>[++F]</td>
<td>Objective</td>
<td>nødvendigvis</td>
<td>necessarily, inevitably</td>
</tr>
<tr>
<td></td>
<td>Subjective</td>
<td>utvivlsomt</td>
<td>surely, definitely, certainly</td>
</tr>
<tr>
<td></td>
<td>Unspecified</td>
<td>-</td>
<td>undoubtedly</td>
</tr>
<tr>
<td>[+F]</td>
<td>Subjective</td>
<td>formodentlig, givetvis</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Unspecified</td>
<td>sandsynligvis, formentlig, antagelig</td>
<td>probably, presumably</td>
</tr>
<tr>
<td>[+F]</td>
<td>Unspecified</td>
<td>målqvist</td>
<td>possibly</td>
</tr>
<tr>
<td>[+F]_{neg}</td>
<td>Subjective</td>
<td>ikke nødvendigvis</td>
<td>not necessarily</td>
</tr>
<tr>
<td>[+F]_{illocutionary}</td>
<td>Unspecified</td>
<td>måske</td>
<td>maybe, perhaps</td>
</tr>
</tbody>
</table>

Table 1: Comparative overview of the epistemic systems in Danish and English
7.3 The Evidential Systems

In both languages the evidential adverbials are essentially concerned with the specification of source and secondarily with the specification of responsibility. However, the ways in which these features are structured by the adverbial systems in the two languages differ substantially. The Danish evidential adverbials are what we may call mono-source adverbials, i.e. the source of a given adverbial is always invariably specified as either subjective, intersubjective or objective.

<table>
<thead>
<tr>
<th>Source</th>
<th>Adverbials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjective:</td>
<td>tydeligvis, tilsyneladende, æjensynlig</td>
</tr>
<tr>
<td>Intersubjective:</td>
<td>åbenbart</td>
</tr>
<tr>
<td>Objective:</td>
<td>angivelig</td>
</tr>
</tbody>
</table>

In English, on the other hand, the picture is more blurred. Some adverbials are unspecified between two different source types, i.e. subjective/intersubjective or intersubjective/objective, while others invariably specify subjective or objective source:

<table>
<thead>
<tr>
<th>Source</th>
<th>Adverbials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjective:</td>
<td>seemingly</td>
</tr>
<tr>
<td>Subjective/intersubjective:</td>
<td>clearly, obviously</td>
</tr>
<tr>
<td>Intersubjective/objective:</td>
<td>evidently, apparently</td>
</tr>
<tr>
<td>Objective:</td>
<td>reportedly, allegedly</td>
</tr>
</tbody>
</table>

Clearly, obviously, evidently and apparently are typically disambiguated when used in specific contexts, and some of them have clear preferences for a specific type of source, yet, at the structural level they must be characterised as unspecified.

As mentioned, I have shown that specification of source is the primary function of the evidential adverbials in both languages. Furthermore, I have argued that responsibility is relevant as secondary distinctive feature in the analysis of the evidential adverbials in both languages. It is a characteristic trait of many of the evidential adverbials that they may function as filters, so to speak, between the speaker and the propositional content in cases where the speaker does not accept responsibility for p. Similarly, a particular function of a number of the adverbials is to specify an expected relation between the hearer and p in terms of agreement. However, I have argued that agreement can be seen as a derivative function since it in all cases can be shown to be dependent on other features. Thus, although it plays an important role for many of the adverbials, agreement is not in itself a distinctive feature of the evidential systems.

Finally, an important similarity between the majority of the evidential adverbials in both languages is that they may in certain contexts acquire epistemic extensions and come to imply irrealis meanings. In this respect the feature of responsibility plays an important role: adverbials that invariably specify that the speaker accepts responsibility for p cannot
produce irrealis meanings. On the other hand, adverbials which do not invariably specify that the speaker accepts responsibility for the truth-value of the propositional content may in certain contexts acquire epistemic extensions and be taken to indicate irrealis meanings. Thus, a general principle which may be proposed on the basis of the analysis of the evidential systems in both languages is that evidential expressions which are unspecified in terms of responsibility, [+R], or which specify non-responsibility, [-R], are capable of acquiring epistemic extensions.

7.4 The Epistemic-Evidential System

As pointed out in the introduction to this chapter, the Danish System I, which consists of epistemic-evidential adverbials constitutes a special system, both in terms of expression and content features. On the expression side, the members of the system, nok, vel and vist, differ significantly from the members of the Danish System II, especially in terms of topology. Furthermore, in terms of content features, the members of the system stand out by concomitantly coding epistemic modality and evidentiality. Because nok, vel, vist combine the two specific functions of force and source they may be described as portmanteau forms. The three members do not differ in terms of the degree of force they specify, but they differ in terms of source. In this respect they exhibit the same clear distinction between subjective, intersubjective and objective source as the evidential adverbials of System II.

Several authors have suggested that a number of Danish sentence adverbials, including nok, vel and vist, should in fact be perceived as particles (cf. Davidsen-Nielsen 1996, Krylova 2005, 2006). This has to do with the fact that these adverbials may be characterized as more grammaticalized than other sentence adverbials. In a synchronic perspective the concept of grammaticalization can be used to refer to the relative degree of grammaticalization a particular linguistic unit exhibits on a “continuum between relatively unconstrained lexical and more constrained grammatical structure” (Wischer 2006:133). As mentioned in 5.1.3 the members of System I are strongly tied to their position next to the verbal. On this basis, it may be argued that the members of System I are more grammaticalized than the other adverbials treated in this dissertation because they are very restricted in terms of their syntactic variability. The table below gives a simplified illustration of how various types of adverbials in Danish can be ordered on a scale of increasing grammaticality according to their topological properties:
On this basis it may be argued that the members of the Danish System I are more grammaticalized than members of the Danish System II, and also the epistemic and evidential adverbials in English for that matter. This does however not mean that the Danish System II and the English systems should be perceived as entirely ‘ungrammatical’ (in distinction to what is claimed by Aikhenvald, cf. section 3.3). Compared to inflections or modal verbs, these systems are clearly less grammatical. But to write them off as mere ‘lexis’ is a simplification which overlooks the fact that the adverbials are in fact organised in a number of distinct systems, and each choice within these systems constitutes a choice between complex units. In the epistemic systems the choice concerns degree of force as well as modal factor potential. In the evidential system it concerns type of source as well as relation between speaker and propositional content, i.e. responsibility.

7.5 The Relation between Epistemic Modality and Evidentiality

Throughout the dissertation, I have maintained that epistemic modality and evidentiality are distinct content substance phenomena. However, I have also pointed out that although epistemic modality and evidentiality are distinct content substances, they are indeed very closely related. To account for the intricate relationship between the two categories, Boye has proposed the existence of a superordinate category of epistemicity, ordered as an epistemic scale, which he defines as “a continuum consisting of meanings which specify the degree of certainty about the truth (or falsity) of a predicational content” (Boye 2005:73). Epistemic meaning inherently belongs to the scale whereas evidentiality only occurs on the scale due to the indirect degrees of certainty which may be related to different types of sources of knowledge (Boye 2005:73). Figure 2 is a slightly modified version of Boye’s model which shows the entire system (including how deontic and dynamic modality fall outside the scale).

---

1 This reading is only possible if muligvis occurs in 'extra position', i.e. not at A.
As can be seen from the model Boye assumes that evidential meaning always expresses a greater degree of certainty than epistemic meanings. However, Boye stresses that weak evidential meaning may come close to strong epistemic meaning and vice versa in terms of certainty (Boye 2005:75).

Boye’s notion of an epistemic scale represents a theory about the nature of epistemic modality and evidentiality as content substance phenomena and the relation between them. The analysis of the epistemic and evidential sentence adverbials in Danish and English presented in this dissertation leads to a similar conclusion about the relation between epistemic modality and evidentiality. My analysis of the epistemic and evidential adverbials in both languages substantiates the claim that epistemic modality and evidentiality are different content substance phenomena: there is a clear observable difference between those adverbials whose primary function is to specify force and those whose primary function is to specify source. Yet, the analysis also shows that in several cases, there are clear similarities between the systems. Most prominent in this respect, as explained in the preceding section, is System I in Danish which in fact spans the two categories of epistemic modality and evidentiality. However, an additional point can be made in this connection with respect to the evidential adverbials. I have suggested that many of the evidential adverbials in both languages have undergone a semantic change from a relatively concrete meaning to relatively more abstract meaning. In their earlier uses the adverbials tend to imply realis meanings, yet in their modern uses the adverbials may, in cases where the speaker does not accept responsibility for p, acquire epistemic extensions and come to imply irrealis. As I have stated, it is not possible within the confines of this dissertation to pursue a full analysis of this diachronic development, yet the analysis has certainly pointed to a general movement within the system of evidential adverbials towards less certainty. That is, in both languages we observe a movement within systems of evidential adverbials from right to left on the epistemic scale above.

2 Realis and irrealis are my terms. Boye uses “factive meaning” and “non-factive, hypothetical meaning”.
8 Concluding Remarks

In this dissertation I have investigated and compared the ways in which the notional categories of epistemic modality and evidentiality are structured by adverbial systems in Danish and English. I have argued that although closely related, epistemic modality and evidentiality are in fact two distinct content substances which should be treated as such. I have shown that in Danish as well as English both content substances are coded by particular adverbial systems. These systems represent a limited number of options, which speakers may choose between if they wish to specify the degree of force or type of source that supports the propositional content they put forward.

I have argued that the differences and similarities between the individual members of the epistemic and evidential systems in both languages may generally be explained by recourse to a limited number of distinctive features, of which force and source are the primary ones.

Epistemic adverbials are essentially concerned with the specification of force, and secondarily with modal factor position, i.e. the specification of where the force originates. I have shown that in both languages the epistemic adverbials cover four distinct degrees of force, viz.

\[
\begin{align*}
[+F]_{\text{neg}} &: \text{minimum degree of force, negative polarity} \\
[+F] &: \text{minimum degree of force} \\
[+F] &: \text{medium degree of force} \\
[++F] &: \text{maximum degree of force}
\end{align*}
\]

Furthermore, I have shown that in both languages the epistemic adverbials are concerned with a distinction between subjective and objective modal factor, although many of them are unspecified between the two at the structural level.

Evidential adverbials, on the other hand, are essentially concerned with the specification of source and secondarily with responsibility, which concerns the relation between the speaker and the propositional content of the utterance. I have shown that in both languages the evidential adverbials cover three distinct types of source, viz.

- Subjective source
- Intersubjective source
- Objective source

Furthermore, I have shown responsibility to be relevant to all evidential adverbials in both languages. Some adverbials invariably specify a responsibility relation between the speaker and the propositional content, others are unspecified and finally some invariably specify a relation of non-responsibility.
By employing these distinctive features in the analysis of the epistemic and evidential adverbials in Danish and English, I have generally been able to explain how the different epistemic and evidential adverbials in Danish and English differ from each other and how the systems they are organized in differ from language to language. In other words, I have shown how the systems of epistemic and evidential sentence adverbials in the two languages carve out the content substances of epistemic modality and evidentiality in different ways to produce different language specific content structures. The tables on p. 75 and 114 are formal representations of these structures. The distinctive feature analysis is not capable of explaining all differences between the adverbials, but in essence, the dissertation presents a coherent functional-structural description of the systems of epistemic and evidential adverbials in Danish and English.

8.1 Perspectives
The analysis of the epistemic and evidential adverbials in Danish and English presented in this dissertation opens for a number of further perspectives. By way of ending this dissertation I should like to point to three areas which in my opinion constitute particularly interesting perspectives for further research.

The relation of the systems of epistemic and evidential adverbials to other modal systems
The first perspective follows in immediate continuation of the analysis presented in the dissertation. In the dissertation I have shown how the systems of epistemic and evidential adverbials are organised in Danish and English, but it still remains to be explored to what extent and how these systems interact with other modal systems, e.g. the modal verbs. This line of research has to some extent been pursued by Hoye (1997) in relation to English, but it has not yet been done in relation to Danish.

Typological validity
The second interesting question the dissertation raises concerns the analytical categories I have developed in order to describe the epistemic and evidential adverbials. To what extent are the distinctive features I have employed in the analysis relevant to similar (epistemic and evidential) systems in other languages?

From langue to parole
Finally, an interesting next step could be to move from the description of the adverbials in a langue perspective to a parole perspective. A number of questions arise in this respect, e.g. to what extent are adverbials in Danish and English with similar semantic profiles translation equivalents? I assume that many of them will be, but certainly also that there will be some that are not. To resolve these issues, a further investigation of the pragmatic functions of the adverbials, which have not been in the focus of this dissertation, is called for.
English Summary

In this dissertation I investigate and compare how the notional categories of epistemic modality and evidentiality are structured by adverbial systems in Danish and English. The dissertation is founded on a hypothesis that speakers of Danish as well as English in their respective languages have access to a number of systematically organized sentence adverbials that allow them to specify which degree of force or which type of source supports the utterances they put forward. Sentence adverbials that specify degree of force may be called epistemic, while those that specify source may be called evidential.

In Chapter 1, I present the two research questions the dissertation sets out to answer, viz. how are the notional categories of epistemic modality and evidentiality structured by adverbial systems in Danish and English? And: what are the differences and similarities between the systems of epistemic and evidential sentence adverbials in Danish and English? I argue that in comparison to the modal verbs in Danish and English, the group of epistemic and evidential adverbials has so far remained fairly unexplored as a grammatical category.

In chapter 2, I present the theoretical framework of the dissertation, which is primarily constituted by Danish Functional Linguistics. To accommodate the dissertation’s particular focus on sentence adverbials and the comparative aspect of the study, this framework is complemented by elements of Scandinavian polyphony theory as well as theory of contrastive linguistics.

In chapter 3, I outline the tertium comparationis of the analysis. Content-wise, the comparison revolves around the two notional categories of ‘epistemic modality’ and ‘evidentiality’ while the grammatical category of ‘sentence adverbial’ constitutes the expression based tertium. With inspiration in Kronning’s (2004) characterization of epistemic modality and evidentiality as kunskapens styrka and kunskapens källa I argue that specification of ‘force’ and specification of ‘source’ can be seen as the primary functions of epistemic modality and evidentiality. In order to make these notions operational I draw on the definitions of epistemic and evidential meaning presented in Boye (2005).

In Chapter 4, I present the method I have employed in the analysis of the epistemic and evidential adverbials. The method may be characterised as an integration of traditional methods of structural linguistics with methods inspired by corpus linguistics. For the purpose of the dissertation I have compiled a reference sample which consists of ten randomly selected contextualized examples of the adverbials under investigation drawn from www.politiken.dk and www.guardian.co.uk. The reference sample has been used as a hypothesis generating medium and a test frame, in a process which is most adequately described as abduction, in the sense of Peirce (1965 [1903]).

Chapters 5 and 6 make up the bulk of the report. In these two chapters I investigate how the notional categories of epistemic modality and evidentiality are structured by adverbial systems in Danish and English. I show that the differences and similarities between the
individual members of the epistemic and evidential systems in both languages can generally be explained by recourse to a limited number of distinctive features, of which force and source are the primary ones, while ‘modal factor’ and ‘responsibility’ are secondary ones. Epistemic adverbials are essentially concerned with the specification of force and secondarily with modal factor position, i.e. the specification of the origin of the source. Evidential adverbials are essentially concerned with the specification of source, and secondarily with the specification of responsibility, which concerns the relation between the speaker and the propositional content of the utterance.

The investigation of the Danish adverbials (Chapter 5) includes the following adverbials (in alphabetical order): angivelig, antagelig, formentlig, formodentlig, givetvis, ikke nødvendigvis, muligvis, måske, nok, nødvendigvis, sandsynligvis, tilsyneladende, tydeligvis, utvivlsomt, vel, vist, øjensynlig and åbenbart. I show that it is possible to split this group into two distinct systems, System I and System II, on the basis of morphologic, syntactic and, especially, topological criteria. System I consists of nok, vel and vist, while the remaining adverbials belong to System II. I determine the members of System I to be epistemic-evidential adverbials because they concomitantly code force and source. The members of System II, on the other hand, are clearly divided into epistemic and evidential adverbials. The epistemic ones are: antagelig, formentlig, formodentlig, givetvis, ikke nødvendigvis, muligvis, måske, nødvendigvis, sandsynligvis and utvivlsomt, while the group of evidential adverbials consists of: angivelig, tilsyneladende, tydeligvis, øjensynlig and åbenbart. In the analysis I show that the difference between the adverbials can generally be explained by recourse to the mentioned four distinctive features.

The investigation of the English adverbials (Chapter 6) includes the following adverbials (in alphabetical order): allegedly, apparently, certainly, clearly, definitely, evidently, inevitably, maybe, necessarily, not necessarily, obviously, perhaps, possibly, presumably, probably, reportedly, seemingly, surely and undoubtedly. On the basis of semantic criteria I divide these adverbials into two overall groups of epistemic and evidential adverbials. The epistemic adverbials are further divided into two subgroups: Group 1, which consists of adverbials that are concerned with the continuum ranging from possibility to necessity, viz. inevitably, maybe, necessarily, not necessarily, perhaps, possibly, presumably, probably, and Group 2, which consists of adverbials that constitute claims to certainty, viz. certainly, definitely, surely and undoubtedly. Similarly, the evidential adverbials are divided into two groups: Group 1, which consists of members that are concerned with perception (often in an abstract sense), viz. apparently, clearly, evidently, obviously and seemingly, and Group 2, which consists of adverbials that are concerned with report, viz. reportedly and allegedly. In the analysis I show that the difference between the members can generally be explained by recourse to the mentioned four distinctive features.
In chapter 7, I compare the way the Danish and English systems are organized. The most significant overall difference I point out is that while Danish has two distinct adverbial systems that code epistemic modality and evidentiality, English, generally speaking, has only one. The Danish System I clearly stands out, both in terms of expression and content, and I argue that it is more grammaticalized than the other systems. The Danish System II, on the other hand generally resembles the English system. In both cases there is a clear semantically motivated difference between epistemic and evidential adverbials. As far as the epistemic systems are concerned I show that they are in fact organised quite similarly in the two languages, although Group 2 of the English adverbials stands out. As far as the evidential adverbials are concerned I show that they are organized quite differently in the two languages. The Danish evidential adverbials are mono-source adverbials, i.e. they invariably specify one type of source, subjective, intersubjective or objective, while the English adverbials are typically unspecified between two source types at the structural level.

Finally, in chapter 8, I end the dissertation by concluding that the presented analysis provides a coherent functional-structural description of the systems of epistemic and evidential adverbials in Danish and English and present some perspectives for further research.

**Danish Summary**

I dette speciale undersøger og sammenligner jeg hvordan de to substanskategorier epistemisk modalitet og evidentialitet er kodet i adverbialsystemer i dansk og engelsk. Specialet bygger på en antagelse om at sprogbrugere på både dansk og engelsk har adgang til en række systematisk ordnede sætningsadverbialer som kan bruges til at eksplicitere hvilken styrke eller hvilken kilde der ligger bag de udsagn de fremsætter. De sætningsadverbialer som angiver styrke, kaldes i specialet epistemiske, mens de som angiver kilde, kaldes evidentielle.

I kapitel 1 præsenterer jeg de to spørgsmål som specialet har til hensigt at besvare: Hvordan er epistemisk modalitet og evidentialitet kodet i adverbialsystemer på dansk og engelsk? Og: Hvilke forskelle og ligheder er der mellem den måde de epistemiske og evidentielle adverbialsystemer er organiseret på i henholdsvis dansk og engelsk? Jeg påpeger at de epistemiske og evidentielle adverbialer, til forskel fra de danske og engelske modalverber, stadig er relativt uudforskede som grammatisk kategori.

I kapitel 2 præsenterer jeg afhandlingens teoretiske fundament, der primært udgøres af den funktionelle videreførsel af klassisk europæisk strukturalisme som er udviklet inden for rammerne af Dansk Funktionel Lingvistik. For at imødekomme specialets fokus på sætningsadverbialer og komparativ lingvistik inddrages endvidere elementer af den skandinaviske polyfoniteori og teori om komparativ lingvistik.

I kapitel 4 redegør jeg for den metode jeg har anvendt i analysen af de epistemiske og evidentielle adverbialer. Metoden kan betegnes som en kombination af klassisk strukturalistisk metode og elementer af nyere korpusinspirerede metoder. For hvert adverbial jeg undersøger i specialen, har jeg indsamlet 10 kontekstualiserede eksempler fra henholdsvis www.politiken.dk og www.guardian.co.uk. Denne eksempelsamling har jeg anvendt som en hypotesegenererende ramme i samspil med kommmutationsprøver i en proces som bedst kan beskrives som abduktion i Peirces forstand (Peirce 1965 [1903]).

Kapitel 5 og 6 udgør specialets hoveddel. I disse to kapitler undersøger jeg hvordan epistemisk modalitet og evidentialitet er kodet i adverbialsystemer i henholdsvis dansk og engelsk. Jeg viser at forskellene og lighederne mellem de individuelle medlemmer af de epistemiske og evidentielle sætningsadverbialsystemer i begge sprog påvirkede af forskellige og lighederne mellem de to sprogs systemer kan forklares med henvisning til et begrænset antal (semantiske) distinktive træk. Af disse er kilde og styrke de to primære træk, mens modalfaktor og ansvar udgør to sekundære træk. De epistemiske adverbialers primære funktion, på begge sprog, er at angive hvilken grad af styrke der sættes bag det propositionelle indhold. Sekundært angiver de hvor denne styrke eller kraft har sin oprindelse (modalfaktorposition). Den primære funktion af de evidentielle adverbialer, på begge sprog, er at angive hvilken kilde der ligger bag det propositionelle indhold. Sekundært angiver de hvilken ansvarsrelation der eksisterer mellem afsender og det propositionelle indhold.

Undersøgelsen af de danske adverbialer (Kapitel 5) omfatter følgende adverbialer (ordnet i alfabetisk rækkefølge): angivelig, antagelig, formentlig, formodentlig, givetvis, ikke nødvendigvis, muligvis, måske, nok, nødvendigvis, sandsynligvis, tilsyneladende, tydeligvis, utvivlsomt, vel, vist, øjensynlig og åbenbart. Jeg viser at det på baggrund af en række udtrykskriterier er muligt at opdele denne overordnede gruppe i to distinkte systemer, System I og System II. Nok, vel og vist udgør System I, mens de andre adverbialer tilhører System II. Jeg definerer de tre medlemmer af System I som epistemisk-evidentielle adverbialer idet de alle koder både styrke og kilde. Adverbialerne i System II kan derimod klart opdeles i henholdsvis epistemiske og evidentielle adverbialer. Gruppen af epistemiske adverbialer udgøres af antagelig, formentlig, formodentlig, givetvis, ikke nødvendigvis, muligvis, måske, nødvendigvis, sandsynligvis og
utvivlsomt, mens gruppen af evidentielle adverbialer omfatter angivelig, tilsyneladende, tydeligvis, øjensynlig og åbenbart. I analysen viser jeg at forskellene mellem de danske adverbialer i hovedtræk kan forklares med henvisning til de fire distinktive træk nævnt ovenfor.

Undersøgelsen af de engelske adverbialer (Kapitel 6) omfatter de følgende adverbialer (ordnet i alfabetisk rækkefølge): allegedly, apparently, certainly, clearly, definitely, evidently, inevitably, maybe, necessarily, not necessarily, obviously, perhaps, possibly, presumably, probably, reportedly, seemingly, surely og undoubtedly. På baggrund af semantiske kriterier opdeler jeg disse adverbialer i to overordnede grupper af epistemiske og evidentielle adverbialer. De epistemiske adverbialer opdeles yderligere i to undergrupper, Gruppe 1 og Gruppe 2. Gruppe 1 indeholder adverbialer der angiver forskellige punkter på det semantiske kontinuum fra mulighed til nødvendighed. Denne gruppe består af inevitably, maybe, necessarily, not necessarily, perhaps, possibly, presumably og probably. Gruppe 2 indeholder adverbialer der har at gøre med angivelse af sikkerhed, nemlig certainly, definitely, surely og undoubtedly. På samme vis opdeler jeg de evidentielle adverbialer i to grupper. Gruppe 1 består af adverbialer der har at gøre med perception/sansning (ofte i en abstrakt forstand): apparently, clearly, evidently, obviously og seemingly. Gruppe 2 består af adverbialer som har rapporterende funktion: reportedly og allegedly. I analysen viser jeg at forskellene mellem de engelske adverbialer i hovedtræk kan forklares med henvisning til de fire distinktive træk nævnt ovenfor.

I Kapitel 7 sammenligner jeg måden hvor på de danske og engelske systemer er organiseret. Den tydeligste forskel som mine analyser viser, er adverbialerne i dansk fordeler sig på to systemer hvorimod Engelsk, overordnet set, kun har et system. Det danske System I skiller sig klart ud, både på udtrykssiden og indholdssiden, og jeg argumenterer for at det kan betragtes som mere grammatikaliseret end de andre systemer. Det danske System II ligner til gengæld det engelske system i sin opbygning. I begge tilfælde er der en klar, semantisk motiveret opdeling i epistemiske og evidentielle adverbialer. For de epistemiske adverbialers vedkommende viser jeg at systemerne på dansk og engelsk i høj grad ligner hinanden, om end Gruppe 2 i engelsk skiller sig ud. Hvad angår de evidentielle adverbialer, viser jeg at mens de danske adverbialer entydigt koder en specifik kildetype, enten subjektiv, intersubjektiv eller objektiv, er de engelske evidentielle adverbialer typisk uspecificerede mellem to kildetyper på det strukturelle niveau.

I Kapitel 8 afslutter jeg specialet med at konkludere at den analyse jeg har præsenteret, repræsenterer en kohærent funktionel-strukturel forståelse af de epistemiske og evidentielle adverbialer i dansk og engelsk.
List of Abbreviations

Analytical notation

[**F] : Maximum degree of force
[*F] : Medium degree of force
[±F] : Minimum degree of force
[±F]neg : Minimum degree of force, negative polarity
[A] : Agreement
[R] : Responsibility
H : Hearer
Inter : Intersubjective
MF : Modal Factor
Obj : Objective
P : Propositional content
POV : Point-of-view
S : Speaker
Sub : Subjective

Dictionaries

OCD : Oxford Concise English Dictionary
OED : Oxford English Dictionary
ODS : Ordbog over det Danske Sprog
DDO : Den Danske Ordbog

Other

DFL : Danish Functional Linguistics
GDS : Grammatik over det Danske Sprog
Appendices

Appendix 1: Infrequent adverbs in BNC
Appendix 2: Greenbaum’s Semantic Classes
Appendix 3: necessarily collocates
Appendix 1: Infrequent adverbs in BNC

Frequency of adverb form in the British National Corpus.

Based on the Companion Website for *Word Frequencies in Written and Spoken English* available at: [http://www.comp.lancs.ac.uk/ucrel/bncfreq/](http://www.comp.lancs.ac.uk/ucrel/bncfreq/)

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Appendix 2: Greenbaum’s Semantic Classes

**Semantic set [1]**
These attitudinal disjuncts express an opinion on the truth-value of what is being said.

**Sub-set [1a]**
Those that express shades of doubt or certainty about what is being said. Sub-set [1a] can be further subdivided into two sub-sets.

**Sub-set [1a(i)]**
Those that merely express shades of doubt or certainty about what is being said.

**Conviction**
definitely, incontestably, indisputably, indubitably, unarguably, unquestionably, certainly, assuredly, undoubtedly, indeed

**Doubt**
arguably, conceivably, possibly, presumably, probably, allegedly, reportedly, reputedly, supposedly, doubtless, quite (etc.) likely, maybe, perhaps.

**Sub-set [1a(ii)]**
Those that in addition to 1a(i) refer to the observation or perception of a state of affairs.

**Conviction**
assuredly, decidedly, indeed

**Doubt**
apparently, seemingly

**Sub-set [1b]**
Those that state in what sense the speaker judges it to be true or false (only) apparently, formally, nominally, officially, ostensibly, outwardly, superficially, technically, theoretically.

**Conviction**
clearly, evidently, manifestly, obviously, patently, plainly

**Doubt**
apparently, seemingly

**Semantic set [2]**
Most of the attitudinal disjuncts that have not been included in set [1] convey a judgement about what is being said.

**Sub-set [2a]**
Express the judgement that what is being said is fortunate or unfortunate tragically, sadly, happily, unhappily, (un)fortunately, (un)luckily, blessedly

**Sub-set [2b]**
State that the content of the communication causes satisfaction or the reverse comfortingly, gratifyingly, refreshingly, annoyingly, disappointing, disturbingly, embitteringly, shamingly, delightfully, regretfully

**Sub-set [2c]**
Convey the attitude that the content of the communication is in some measure strange or unexpected amazingly, astonishingly, bizarrely, curiously, eerily, absurdly, preposterously, unexpectedly

**Sub-set [2d]**
Convey that what is being said is in some measure expected or appropriate unsurprisingly, appropriately, aptly, characteristically, naturally, predictably

**Sub-set [2e]**
Pass judgement on the rightness of the action described correctly, incorrectly, rightly, unjustly, wrongly, justly

**Sub-set [2f]**
Pass a judgement on the wisdom of the action described or the skill with which it has been performed amusingly, interestingly, conveniently, crucially, mercifully, relevantly, significantly, topically, thankfully, splendidly

Source: Greenbaum (1969).
Appendix 3: necessarily collocates
Source: www.webcorp.org.uk

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Search info
WebCorp output for search term “necessarily”
Domain: “guardian.co.uk”
Using the Google search engine WebCorp accessed 200 web pages, 0 of which returned errors.
430 concordances were generated.
Date of search: 21.03.06
Literature


Dictionaries


*Ordborg over det Danske Sprog.* Online version available at www.ordnet.dk.

