Modal Adjectives

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Modal Adjectives

English Deontic and Evaluative Constructions in Synchrony and Diachrony

by

An Van linden

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Abbreviations

2	second person
3	third person
a	ante (preceding a date)
AC	after Christ
AP	adjectival phrase
AVL	An Van linden (in quotes or examples)
BC	before Christ
CB	Cobuild Corpus
CHEL	Cambridge History of the English Language
CEMET	Corpus of Early Modern English texts
CLMETEV	Corpus of Late Modern English texts
c	circa (preceding a date)
CTP	complement-taking predicate
COMP	complementizer
DAT	dative
DEM	demonstrative
EC	extraposition construction
ECM	exceptional case marking
EME	Early Middle English
EModE	Early Modern English
EOE	Early Old English
FEW	Französisches etymologisches Wörterbuch
GEN	genitive
IND	indicative
INF	infinitive
KAK	knowledge or acquisition of knowledge
LME	Late Middle English
LModE	Late Modern English
LOE	Late Old English
ME	Middle English
MED	Middle English Dictionary
NOM	nominative
NP	noun phrase
OE	Old English
OED	Old English Dictionary

OV	object-verb
PDE	Present-day English
POPC	post-predicate construction
PP	prepositional phrase
PPCME	Penn-Helsinki Parsed Corpus of Middle English
PPCEME	Penn-Helsinki Parsed Corpus of Early Modern English
PRON	pronoun
PRS	present tense
PST	past tense
PRT	particle
REL	relative
SG	singular
SBJV	subjunctive
SLC	subjectless construction
SoA	State of Affairs
SOV	subject-object-verb
SVO	subject-verb-object
TAM	tense, aspect, mood
TLF	Trésor de la langue française
TOE	Thesaurus of Old English
VO	verb-object
WB	Wordbanks Online: English
YCOE	York-Toronto-Helsinki Parsed Corpus of Old English Prose

Introduction

This book revisits the notion of deontic modality and related conceptual categories from the perspective of an under-researched category in the modal domain, i.e. that of adjectives. The literature on modality has typically concentrated on the category of modal verbs, in language-specific studies (e.g. Palmer 1979; Heine 1995), as well as cross-linguistic ones (e.g. Palmer 1986, 2001; Bybee, Perkins, and Pagliuca 1994), although there are some recent works that focus on also non-verbal categories, like the papers in Hansen and De Haan (2009). The main aim of this book is to show that the analysis of modal adjectives in English, as in the extraposition constructions in (1) and (2), significantly changes our understanding of modal semantics, specifically with respect to deontic meaning and how it relates to other domains within and beyond modality.

(1) It was **essential**, he said, that money was better distributed, so that it reached the poorest people. Money was power and without it, Professor Desai said, the millions of poor in India would remain without a true say in the running of their country. (CB, bbc)[1]

(2) You can indulge the shortcomings of a friend a certain number of times and then, unwittingly, they go over the limit. … there comes a point when you decide that in total they are unforgivable and can no longer be overlooked. … Sometimes it may be wholly **appropriate** not to forgive or forget. If your partner begs forgiveness and swears he will never do the same again, you may know in your heart of hearts that he's just confessing to get carte blanche to repeat the dirty deed. (CB, ukmags)

Traditionally, deontic modality has been defined in terms of the concepts of obligation and permission: in their deontic meanings, verbs like *must* express an obligation to carry out a certain activity, while verbs like *may* express permission to do it (cf. Lyons 1977: 823–841; Palmer 1979: ch. 4;

1 The Present-day English data are extracted from the COBUILD corpus (marked with CB) and are reproduced with the kind permission of HarperCollins Publishers. I also indicate the subcorpus from which the examples are taken. More generally, all examples in the introduction are extracted from corpora, for which I use the standard abbreviation. More information on the corpora (and subcorpora) can be found in section 3.2.

Van der Auwera and Plungian 1998: 81). The study of adjectival constructions like (1) and (2), however, seriously challenges such traditional accounts since these adjectives cannot encode the supposedly core deontic meanings of obligation or permission. Rather than imposing an obligation or granting permission, the structures in (1) and (2) merely describe the degree of desirability for a State of Affairs (SoA)[2] to take place. Thus, the speaker uttering the expression in (1) does not oblige anyone to distribute money in a better way, but merely states his personal opinion that he regards it as highly desirable. Similarly, the speaker in (2) does not specifically allow anyone not to forgive or forget, but again just uses the construction to report on how desirable he or she thinks this is. In keeping with Nuyts, Byloo, and Diepeveen (2005, 2010), I will argue in this book that deontic modality should be thought of as a qualificational category covering attitudinal assessments like (1) and (2), while obligation and permission are illocutionary notions including directive speech acts.

Another finding that warrants reassessment of traditional modal semantics relates to patterns of polysemy. There is solid evidence that verbs with deontic meanings are often also polysemous with dynamic and epistemic meanings (cf. Coates 1983; Sweetser 1990; Goossens 1999; Traugott and Dasher 2002: ch. 3; Van Ostaeyen and Nuyts 2004). Deontic adjectives are different from deontic verbs in that they are often polysemous not just with dynamic modal meanings, as in (3), but also with meanings beyond the modal domain, as shown in (4).

(3) This should make you want to go to the toilet frequently. Although it may sting the first few times you go, this usually gets better the more water you pass. It is **essential** to keep emptying the bladder if you are to flush out the germs. (CB, ukephem)

The structure with *essential* in (3) does not express deontic meaning as in (1), but rather indicates a necessity that originates in the physical make-up of the human body. The only way to chase germs out of your bladder is to keep urinating. Unlike in the case of (1), this type of necessity does not involve an 'attitudinal source' (cf. Nuyts 2005), as it does not render a personal opinion, but it is similar to a natural law instead. In this book, this type of circumstantial necessity is viewed as a subcategory of dynamic modality, specifically SoA-internal or 'situational' dynamic necessity (cf.

2 The term 'State of Affairs' is used here to refer to any type of situation, event or state, which can be evaluated in terms of its existence (cf. Dik 1989: 46–47).

Nuyts 2005, 2006) (the example will be used again in section 2.3, example [44] and in 8.3.4, example [74]). The polysemy exemplified by (1) and (3) is well-known from the analysis of modal verbs, but the polysemy of adjectives like *appropriate* is less familiar.

(4) The system offers callers confidentiality and accepts calls day or night and weekends too. … "As an IT consultancy, it's **appropriate** we're taking the initiative and using the latest IT technology," says Gary. The service employs INFOTAP 2000, a Windows-based software which enables audio information stored on a personal computer hard disk to be accessed by phone. (CB, today)

The structure with *appropriate* in (4) clearly does not convey situational necessity, yet its meaning is also quite distinct from that in (2). While in (2), the speaker talks about not forgiving or forgetting as virtual or potential SoAs, the SoA evaluated in (4) has a different factuality status: it is taking place at the moment of speech. The next sentence justifies this assessment. More generally, the SoAs referred to in propositional complements as in (4) are presupposed to be true. This difference in factuality status of the dependent SoAs in (2) and (4) suggests that constructions with adjectives such as *appropriate* are polysemous between deontic meaning, cf. (2), and what will be termed 'non-modal evaluation', cf. (4). This new type of polysemy lends a fresh insight into the semantic structure of the modal-evaluative domain. Comparable contributions to our understanding of modal semantics will come from the study of the semantic development of adjectives like *essential*, the (development of the) patterns of complementation found with the modal-evaluative adjectives, and the semantic refinements that can be made within the categories expressed by the adjectival constructions, as detailed below.

The distinctness of the three conceptual categories introduced above is corroborated by the generality of the adjectives' patterns of polysemy, in terms of two sets. All adjectives that express a strong degree of desirability in the deontic domain, such as *essential* in (1), are also found in situational dynamic expressions (cf. [3]), but they do not occur in non-modal evaluative expressions. By contrast, adjectives that express a weak degree of desirability in the deontic domain, such as *appropriate* in (2), are attested in non-modal evaluative expressions (cf. [4]), but they are not found in situational dynamic expressions. The adjectival constructions therefore suggest that it is useful to distinguish between two semantically coherent lexical classes, namely weak and strong adjectives, as these manifest different patterns of polysemy in the deontic and related domains. The conceptual dis-

tinctions between dynamic, deontic and evaluative meaning on the one hand and the lexico-semantic distinction between weak and strong adjectives on the other will be integrated into what I will term a 'conceptual map', which covers not only adjectives, but also verbs, modal auxiliaries and the imperative mood. This map constitutes the backbone of this study and is represented in rudimentary fashion in Figure 1. The case-studies presented in this book will demonstrate its internal consistency and diachronic and synchronic applicability, which is evident from its defining pathways of change and its accommodating refinements within each category.

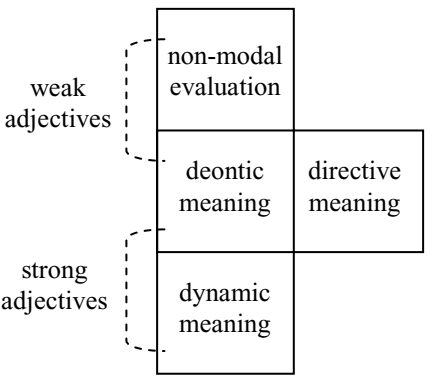

Figure 1. A conceptual map based on the study of English modal adjectives

The validity of the conceptual map for diachronic analysis is indicated by case-studies tracing the semantic development of a set of strong adjectives. Examples (5) and (6) show earlier expressions with the adjectives *essential* and *vital*.

(5) Heate is the **essentiall** propertie of fire (OED 1620 Granger, *Syntagma logicum, or the divine logike* 66)

(6) And as the science of the Anatomie meaneth, the spirite **vital** is sente from the hart to the brayne by Arteirs, and by veynes and nutritional blood, where the vessels pulsatiues be lightly hurt (PPCEME 1548 Vicary, *Anatomy*)

Neither example expresses any of the conceptual categories distinguished above. In (5), *essential* can be paraphrased as 'constituting the true nature of', and the meaning of *vital* in (6) can be described as 'associated with the heart'. (5) and (6) thus testify to premodal stages of *essential* and *vital* respectively. Historical corpus data show that the first modal meaning devel-

oped by the adjectives is that of dynamic modality, which further subjectifies into deontic meaning (cf. Traugott 1989: 35). This dynamic-deontic pathway is very similar to the one proposed for modal auxiliaries such as *can* or *must* (cf. Goossens 1999; Bybee, Perkins, and Pagliuca 1994; Traugott and Dasher 2002: ch. 3). However, the description of the pre-modal stages of the adjectives offers new insights into how the lexical items develop modal meaning in the first place. It will be shown that the development of dynamic meaning crucially depends on the development of two semantic properties, namely relationality and potentiality. The first property allows the adjective to establish a relationship between two concepts, such as *heat* and *fire* in (5), whereas the second property is needed to make sure that the relationship established by the adjective is one of indispensability. Together, these two properties amount to the meaning of situational necessity. They will therefore be thought of as the conditions of entry into the conceptual map of modal-evaluative meaning. The case-studies themselves confirm that the map's two modal categories, dynamic and deontic modality, are diachronically ordered.

In addition to the adjectival matrix, the (development of the) complement patterns found with the adjectives offer an interesting perspective on the modal-evaluative domain as well. The literature on complementation is also strongly biased towards the category of verbs, but undeservedly so, as the adjectival constructions offer a diversified picture of semantic and formal types of complements. The semantic types include propositional complements, which are part of non-modal evaluative constructions as in (4), and mandative complements, which occur in deontic expressions such as (1) and (2). In formal terms, the adjectives studied here pattern with *that*- and *to*-clauses. Some further examples are given in (7) and (8).

(7) "Before business you must get well; this is the best wine." She refused it feebly. He poured out a glass. She drank it. As she did so she became self-conscious. However important the business, it was not **proper** of her to have called on him, or to accept his hospitality. (CLMETEV 1905 Forster, *Where angels fear to tread*)

(8) If the bed is to fold neatly back into its box, you must measure accurately and ensure that every component is cut to exactly the right size. Be particularly careful when securing the piano hinges – it's **essential** that they're screwed on straight. (CB, ukmags)

In (7), the speaker expresses his or her disapproval of her (i.e. Miss Abbott's) having called on him (i.e. Gino). The construction thus expresses non-modal evaluative meaning; the propositional content under assessment

is coded by a *to*-infinitive. In (8), screwing the hinges straight onto a partially self-made bed is necessary to be able to fold it back neatly into its box. In this dynamic expression, with the necessity originating in the nature of the bed and box, the complement takes the form of a *that*-clause. Together with (1) to (4), the examples indicate that the formal distinction between *that*- and *to*-clauses does not correspond to the semantic distinction between mandative and propositional complements on a one-to-one basis. More importantly, I will argue that from the perspective of complementation, the non-modal category of evaluation is considerably different from the modal categories of dynamic and deontic meaning, which closely resemble one another. In fact, the complements of dynamic expressions such as (3) and (8) are formally indistinguishable from those of deontic expressions (cf. [1] and [2]), so that in this study mandative complements are taken to include the complements of dynamic constructions as well. This seems to put into perspective the emphatic distinction between dynamic and deontic modality advocated in the literature on modality (e.g. Nuyts 2005, 2006). In any case, the data show that strong adjectives invariably combine with mandative complements, while weak adjectives pattern with both mandative and propositional ones, across the various stages of the English language. This finding clearly supports the diachronic and synchronic applicability of the conceptual map.

Even if all combinations of semantic and formal type of complement are constructionally possible, some of them are more marked than others. In this book, I will propose a functional account of the various combinations, that is, I aim to account for how the formal types are used and what they mean. Moreover, it will be found that this markedness can shift diachronically. For mandative complements, for instance, we can note a change from a predominance of *that*-clauses in Old English to one of *to*-infinitives in Middle English, a development analogous to that of complements of verbs with a volitional element, described by Los (2005). By documenting the origin, development and distribution of *that*- and *to*-clauses with the adjectives studied, this book also helps to fill the gap in the literature on (adjectival) complementation.

In addition, the study of the diachronic development of the complement patterns further substantiates the validity of the conceptual map for diachronic analysis by pointing to a developmental relation between deontic and non-modal evaluative meaning. Specifically, it is shown that deontic complements are diachronically prior to evaluative complements. Like in the case-studies of the adjectival matrices, two pathways can be distinguished. One pathway has a remarkable constructionally mixed pattern as the transitional stage, whereas the other involves bridging contexts (Evans

and Wilkins 2000: 550). Together with the arguments from the semantic development of the adjectives, the complementation data thus show that the vertical axis of the map can be defined as a diachronic pathway of change.

The evidence for the synchronic validity of the conceptual map lies in its potential for semantic refinement. Detailed analysis of Present-day English corpus examples shows that the categories of the map can be further subdivided. Crucially, each category on the vertical axis has a different internal organization, whereas the two adjacent categories on the horizontal axis have a similar one. Consider the deontic expressions in (9) and (10).

(9) Your concern seems to spring from an insecurity about him and his relationship with you, and perhaps it's just as **important** to resolve that insecurity as your present anxiety about AIDS. It can poison your relationship with him if you feel you can't trust him. (CB, ukbooks)

(10) A large number of people who have AIDS are homosexual men. But it's **important** to remember that AIDS can affect other people too. Any incurable disease is frightening, especially when it is infectious and when so much about the disease is still unknown. (CB, ukephem)

In these examples, the deontic meaning seems to function at two different levels. In (9), the speaker says it is important that the hearer should resolve his or her present insecurity and anxiety about AIDS. The SoA that is assessed as important clearly relates to the outside world: the hearer has to talk with his or her partner and needs to see a doctor. In (10), by contrast, the SoA that is assessed as important relates to the speaker's argumentative purposes. The speaker uses this expression to encourage the hearer to focus mentally on the propositional content 'AIDS can affect other people too'. I will term examples such as (9) 'SoA-related' uses, and those such as (10) 'speaker-related' uses (cf. Verstraete 2007: ch. 9). Interestingly, these two levels have also been observed for other linguistic phenomena which (may) have a modal flavour, such as interclausal relations (e.g., Davies 1979: 146–176; Sweetser 1990: 76–112; Verstraete 2007: ch. 9). With regard to example (10), it can further be noted that its specific meaning correlates with a particular constructional make-up: the present indicative matrix verb is complemented by an extraposed *to*-clause containing a cognition verb, which is in turn complemented by a secondary *that*-clause. As this pairing of meaning and form is recurrent in the Present-day English data, I will argue that it constitutes a partially filled construction in the sense of Goldberg (1995). Significantly, the same distinction between SoA-related and

speaker-related uses can be found in the directive domain, whereas the categories of non-modal evaluation and dynamic modality feature quite different sets of subtypes. These differences in internal organization of the categories on the vertical axis of the map confirm their distinct conceptual make-up (and hence, the need to distinguish between them), whereas the similarity of the categories adjacent on the horizontal axis may explain why these have typically been conflated in the literature (e.g. Nuyts, Byloo, and Diepeveen 2010).

The discussions in the following chapters are based on qualitative and quantitative analyses of diachronic and synchronic corpus data. This empirical usage-based approach is couched in a theoretical framework that can broadly be called 'cognitive-functional' in that it builds on insights developed in functional theories (e.g., Functional Grammar [Dik 1989, 1997ab; Halliday 1994]) and cognitive theories (e.g., Cognitive Grammar [Langacker 1987, 1991]), including constructionist approaches (e.g. Goldberg 1995). These frameworks typically focus on the lexicon-syntax interface and assume a symbolic relation between form and function of linguistic units. In some places, I will also refer to more specific claims proposed by these frameworks, such as, for example, the functional analysis of the clause (see chapter 6).

This book is organized as follows. The first two chapters concentrate on the structure of the modal-evaluative domain and on the category of adjectives. Chapter 1 presents the literature on modality and associated categories. It discusses the basic categories that are traditionally assumed to make up the modal domain – dynamic, deontic and epistemic modality – and various types of relations between them. In addition, it homes in on some categories 'at the modal edge' that are relevant to this study, such as evaluation.

Chapter 2 focuses on the set of adjectives studied, and relates insights from the modal-evaluative domain to the adjectival constructions. Importantly, it proposes a redefinition of the category of deontic modality that covers adjectives as wel as modal auxiliaries, and it incorporates the lexico-semantic and conceptual distinctions introduced above into a conceptual map (cf. Figure 1), which forms the main thesis of this book.

The next four chapters (3–6) present the diachronic analysis of the complex adjectival constructions into an adjective-focused part, a complement-focused part, and a construction-focused part. Chapter 3 first discusses the data and methods used in this diachronic analysis: it details how the various adjectives were selected and in which corpora they were searched for.

Chapter 4 details the diachronic development of a set of strong adjectives towards (parts of) complement-taking matrices. The adjectives studied

are the Latin or Romance loans *essential*, *vital*, *crucial* and *critical*. The case-studies show that they all start off with a descriptive, non-modal meaning in English, and that the first type of modal meaning they develop is invariably situational dynamic meaning, with deontic meaning developing out of this dynamic meaning through subjectification (Traugott 1989). Thus, this chapter offers arguments for the diachronic applicability of the conceptual map: the synchronic patterns of polysemy of the strong adjectives have developed from a situation in which the lexical items could express only one type of modal meaning (i.e. dynamic modality) in addition to their original non-modal meanings.

Chapter 5 presents the second part of the diachronic analysis, concentrating on the clausal complement patterns of the adjectival constructions. It examines the origin and development of the two most frequent formal types of clausal complement, i.e. *that*- and *to*-clauses, that are used to code mandative as well as propositional complements as of Old English. The diachronic data confirm that the conceptual map applies across time in that strong adjectives are found with mandative complements only, whereas weak adjectives combine with both mandative and propositional ones throughout the various historical periods. The data of the *that*-clauses also bear out the decrease of subjunctive forms, a development which has been well described in the literature. In addition, the data of the diachronic distribution of *that*- and *to*-clauses indicate that the *to*-infinitive rises in frequency at the expense of the *that*-clause in Middle English, as has been observed with verbal complement constructions by Los (1999, 2005). I will argue that this replacement can be explained by analogy between the adjectival and verbal complementation system. From the Early Modern English period onwards, the *to*-infinitive stabilizes at a 3:1 ratio to the *that*-clause. For this type of clausal variation, an explanation will be proposed in terms of lexical determination and discourse factors, such as information structure.

Chapter 6 concludes the diachronic analysis by examining the constructional wholes of adjectival matrix and clausal complement. It elaborates on the distinction between mandative and propositional complements from the perspective of complementation studies and presents new insights into the development of propositional complements. A case-study of weak adjectives shows that these first occur in deontic expressions with mandative complements before they are attested in non-modal evaluative expressions with propositional complements. Moreover, some strong adjectives are marginally adopted in the propositional pattern in Present-day English, and are used in non-modal evaluative expressions as well. To explain this infrequent (apparent) crossing of a lexical boundary in the conceptual map, I

will propose two pathways of development for the propositional complements. In any case, these two pathways further substantiate the validity of the map for diachronic analysis, since its vertical axis is shown to accommodate pathways of change.

The following two chapters (7–8) take a synchronic perspective. Chapter 7 concentrates on the data and methods used in the detailed study of the Present-day English constructions, presented in chapter 8. The latter chapter offers a synchronic synthesis of the concepts discussed in the diachronic chapters. On the basis of this synthesis, it proposes a number of refinements of the categories in the conceptual map, which are similar in the cases of the two categories adjacent on the horizontal axis of map (deontic and directive meaning), but very different on the vertical axis (dynamic, deontic, non-modal evaluative meaning), cf. Figure 1. As argued above, these internal organizations of the categories of the map lend support to its internal consistency and synchronic validity. In construing this typology of extraposition constructions with modal-evaluative and directive adjectives, I also take account of the distribution of the individual adjectives across the various subtypes, which makes it possible to indicate how they split up the conceptual map among each other.

The final chapter, chapter 9, presents the overall conclusion of this book. It recapitulates the findings and hypotheses of this study that led to the conceptual map, and summarizes the evidence showing that it works both in diachrony and synchrony. In addition, it also reflects on the relative salience of the conceptual distinctions in the map. It finds that the two domains covered in this book, that of modal-evaluative meaning and that of complementation, highlight a different boundary on the vertical axis as more important. At the same time, the two domains also suggest two avenues for further research.

Chapter 1
The notion of modality

This chapter discusses the wide-ranging literature on modality, and distills the notions and categories that are useful to the present study of adjectival constructions. The literature on modality has typically focused on the category of modal verbs, with the Germanic modal auxiliaries as the prototypical cases. This bias is found both in language-specific accounts (e.g. Palmer 1979; Coates 1983; Goossens 1985; Heine 1995; Hansen 1998, 2004; Salkie, Busuttil, and Van der Auwera 2009), and in cross-linguistic studies (e.g. Palmer 1986, 2001; Bybee, Perkins, and Pagliuca 1994; Van der Auwera and Plungian 1998), although recently some scholars have taken a broader perspective, like Nuyts (2001) and Simon-Vandenbergen and Aijmer (2007) on epistemic modality, and the papers in Hansen and De Haan (2009). This chapter incorporates insights into modal meanings as they emerge from the study of modal auxiliaries, but it will also apply these to constructions with open-class lexical items, especially adjectives. The assumption here is that there is a semantics of modality that is unaffected by word class.

In the literature, the term 'modality' has been used both in a broad and a narrow sense. In its broad sense, it refers to the whole range of tense-aspect-modality (TAM) categories (cf. Givón 1984: 269–318), or, in semantic terms, to "qualifications of states of affairs" (Nuyts 2001, 2005). This broad sense is found most often in philosophical writings (as discussed, for instance, in Perkins 1983: 6–12; Palmer 1986: 9–14), but it is also used in some linguistic accounts (e.g., Fillmore 1968; Ransom 1977, 1986; Dietrich 1992). In its narrow sense, modality refers to a specific subtype of qualificational meaning, which is complementary to the tense and aspect categories (Nuyts 2006: 1). However, according to Nuyts (2005, 2006), modality cannot simply be put on a par with the categories of tense and aspect, as it is only the latter that can be defined in coherent terms (see, e.g., Comrie 1985 and 1976 respectively). The modal categories, by contrast, have been the subject of many linguistic discussions.

This chapter will only be concerned with the category of modality in its narrow sense. I will focus on the basic categories that are typically regarded as constituting the modal domain: dynamic, deontic and epistemic meaning. Although these are the categories *traditionally* used to carve up the modal domain, their particular interpretation here, which is indebted to Nuyts's

insights, will not be entirely traditional. As this tripartite division is not the only view on modality proposed in the literature, I will also present the most important alternative organizations of the modal domain. In addition, I will elaborate on the relations between these basic categories. The discussion of relations of a conceptual nature will refine the definitions of the three categories. The treatment of relations of a formal, diachronic and ontogenetic type will center about the modal auxiliaries, which are reputed to establish a formal tie between the three categories. It will thus become possible – in further chapters – to see to what extent their patterns of polysemy and diachronic development can be extrapolated to the adjectival constructions studied here. Apart from the basic modal categories, I will also discuss some categories that are not systematically included in the modal domain. Among these categories 'at the modal edge', volition and evaluation stand out as important notions here.

1.1. Dynamic – deontic – epistemic modality: The basic categories

The definition of modality crucially depends on the question which semantic categories are taken to belong to the modal domain, and how these ought to be defined. In this section, I will examine the categories commonly considered to make up the core of modal meaning, that is dynamic, deontic and epistemic (with or without evidential) meaning. I will also look at alternative ways of carving up the (core) modal domain.

1.1.1. Dynamic modality

Dynamic modality (from Greek δύναμις: 'power', 'strength') traditionally involves ascribing an ability or capacity to the subject participant of a clause. In his seminal *Essay in Modal Logic*, von Wright (1951b: 28) briefly deals with this type of modality, which he takes to refer to abilities and dispositions, as in *Jones can speak German* (note the modal auxiliary *can*).[3] The term has found general acceptance and is used in, amongst others, Palmer (1979, 1983, 1986), Perkins (1983), Plank (1984), and Nuyts (2005, 2006) (see Depraetere and Reed [2006: 281–282] for a short overview of how dynamic modality is treated in the literature). Other terms for this type

3 Von Wright acknowledges his colleague philosopher G. T. Geach for the term 'dynamic modality' (1951b: 28).

of modal meaning are 'facultative modality' (De Schutter 1983: 285; Goossens 1985: 204), and 'inherent modality' (Hengeveld 1988: 233–234).

However, the traditional definition of dynamic modality has been felt to be too narrow. Rather, the term should apply to all indications of abilities/possibilities, or needs/necessities inherent in agents or, more generally, participants of actions (which are not necessarily syntactic subjects) or in situations (Palmer 1979: 3–4, ch. 5–6, 1990: ch. 5–6; Perkins 1983: 11–12; Nuyts 2005, 2006). The property of being inherent in a situation or in a participant is what motivates the internal consistency of the dynamic category. Consider the following example.

(1) Some athletes are **able** to run many miles at a time but to lesser mortals a maximum of three to four miles is ideal. (CB, ukbooks)

In (1), some athletes are said to be able to run many miles at a time. As this ability is inherent in the participants (because of their physical condition), the speaker indicates the ability on the basis of grounds that are internal to (the participants in) the situation or State of Affairs (SoA). Thus, the example does not express the speaker's attitude or personal commitment to the SoA. The same goes for example (2).

(2) Fund-raising is vital to the continuation of Redwings and requires a great deal of effort and good-will on the part of both staff and supporters. We know of several smaller sanctuaries which **have had to** close down because of financial difficulties. (CB, ukephem)

In (2), the circumstance of financial difficulties made it necessary for the participants (i.e. some smaller sanctuaries) to close down. Here, it is the need of the participants to close down (imposed by the situation) that is indicated, again on SoA-internal grounds.

(3) It is **possible** to crop cauliflowers over a number of months, by growing them under polythene or cloches using the varieties already mentioned. (CB, ukmags, Amateur Gardening, 17/07/1993)

In (3), the possibility of cropping cauliflowers within a few months (after July) is presented as contingent upon the use of polythene or cloches and the choice of the variety. Or, to put it differently, to reach the goal of successful early cropping, the gardener needs to make sure that the conditions of a favourable location (under polythene or cloches) and the right variety of crop are fulfilled. This paraphrase shows that the possibility of early

cropping is inherent in the SoA. Once more, therefore, the example does not involve any expression of the speaker's attitude. Rather, the possibility is indicated on SoA-internal grounds. As will be discussed in section 1.2.1, this is why Nuyts (2005) argues that dynamic modality rates as a situating category in the qualificational domain.

It should also be noted that dynamic modality is a binary category (Nuyts 2005: 16; 2006: 16). It contains only the two values of possibility and necessity, and does not involve a scale of meanings intermediate between these two values, as is the case for deontic and epistemic modality (see sections 1.1.2 and 1.1.3; see also Nuyts [2005: 33–34, note 33] on the problems of regarding dynamic modality as a scalar rather than binary category). Arguably, this binary nature is connected with the inherent character of the abilities/possibilities or needs/necessities. I will return to the two values of dynamic modality in section 1.2.1, in which this category will be contrasted with scalar categories such as deontic modality discussed below.

The three examples given above each illustrate a specific subtype of dynamic meaning as proposed in Nuyts (2005, 2006). In this study, I will adopt his subclassification of dynamic modality, which arguably goes back to his diachronic analysis of the Dutch modal *kunnen* ('can') in Van Ostaeyen and Nuyts (2004).

First, participant-inherent dynamic modality involves the ascription of abilities/capacities or needs/necessities to the first-argument participant, which is usually the agent (Nuyts 2006: 3). An example of participant-inherent ability has been given in (1) above. Example (4) illustrates a participant-inherent need.

(4) [T]he dog began to yowl because he **had to** go pee badly and I noticed that I had missed my usual mealtime. (CB, ukbooks)

Second, participant-imposed dynamic modality indicates the abilities/capacities or needs/necessities of a participant which are "determined by the local circumstances (and which may thus be partly beyond the power and control) of that participant" (Nuyts 2006: 3). An example of participant-imposed necessity has been given in (2) above. Example (5) below involves participant-imposed inability. In (5), Scout leaders will be unable to find the young boys' equipment if these have dropped it away from the tents, because boys typically do not remember where they leave their equipment. Such negligence of the boys often escapes the control of the leaders.

(5) The only way equipment can be left at the camp as if a boy has dropped it away from the tents, perhaps in the woodland nearby. Obviously if this does happen we will not be **able** to find it while we are at the camp, since boys don't remember where they leave equipment. (CB, ukephem)

Third, situational dynamic modality involves the indication of "a potential or a necessity/inevitability inherent in the situation described in the clause as a whole" (Nuyts 2006: 4). Such expressions thus go beyond the (first-argument) participant, and may not involve any participant at all, as in example (6). In example (3) above and (7) below, the first-argument participant is left implicit due to the syntactic construction used, i.e. the extraposition construction.

(6) The alternative is the verdant, Atlantic-facing north, where it **can** rain although it does so pretty warmly. (CB, times)

(7) There had followed a nightmare procession along the sewer for what felt like and doubtless was several miles. For the first part of their journey it was **necessary** to move doubled up, in a position of almost unbearable discomfort. After what seemed at least an hour but was probably ten minutes they reached mercifully, a larger, higher sewer tunnel and could move upright. (CB, ukbooks)

In (6), the potentiality of rain is inherent in the meteorological properties of Spain's northern coast, the region discussed in this excerpt.[4] Another example of situational possibility (with an implicit participant, however) has been given in (3) above. In (7), the circumstances inherent in the situation (i.e., the small and low tunnel) make it necessary for the (implicit) participants to move doubled-up. As in the case of (3), the example can be paraphrased in terms of condition and goal: advancing in the first part of the trip is conditional upon moving doubled-up. It can be concluded that the possi-

4 The analysis of (6) as a dynamic expression is not uncontroversial. According to Palmer (1979: 152–155), this example expresses existential modality, with *can* having the meaning of 'sometimes', yielding 'It sometimes rains at the northern coast of Spain' (cf. *Lions can be dangerous*: 'lions are sometimes dangerous' [1979: 152–153]). Following von Wright (1951b: 1–2), however, Palmer acknowledges "a close parallelism between the existential mode involving 'some' and 'all', and the dynamic mode involving 'possible' and 'necessary'" (1979: 152) (see also Plank 1984: 342).

bilities/necessities illustrated in the examples above are all based on grounds that are inherent in or internal to the SoA in question.

The three different types of dynamic modality all involve a binary distinction between abilities/possibilities and needs/necessities, but the distinction between the participant-inherent and participant-imposed subtype on the one hand, and participant-imposed and situational meaning on the other may not always be as clear-cut. Arguably, both participant-imposed and situational necessity are included in the terms 'external necessity' (Quirk et al. 1985: 226; Palmer 1990: 114–116), 'circumstantial necessity' (Declerck 1991a: 383; Huddleston and Pullum 2002: 185), 'objective necessity' (Coates 1983: 36), and 'general objective necessity' (Goossens 2000: 161) (cf. Depraetere and Verhulst 2008: 8). Nuyts acknowledges possible ambiguity within the dynamic domain (Nuyts pc). Consider the example given in (8).

(8) We must persuade our mps to support the Bill – it's a Private Member's Bill, and so it is **essential** that at least 100 MPs support it, or it will get thrown out without a second reading. (CB, ukephem)

In (8), the speaker describes the need to get the support of 100 MPs in order to give the Wild Mammals (Protection) Bill a second reading. The expression clearly involves participants: at least 100 MPs. This number of supporters is needed because it is a Private Member's Bill. Therefore, it can be argued that this number of MPs have to support the bill because of the regulations imposed by the British parliamentary system. In this sense, (8) expresses participant-imposed dynamic meaning. However, (8) can also be interpreted as a situational dynamic expression. The necessity of the 100 MP support is inherent in or imposed by the British political system, or, more generally, it is an SoA-internal necessity. In this book, dynamic meaning expressed by complement constructions with adjectival matrices is taken to be of the situational subtype, as will be explained in section 2.2.1.

1.1.2. Deontic modality

Deontic modality (from Greek τὸ δέον (sg), τὰ δέοντα (pl): 'what is (sg)/the things that are (pl) fitting, proper, needful') has traditionally been associated with the notions of permission and obligation. This definition goes back to the tradition of modal logic, in which obligation is characterized as "deontic necessity", and permission as "deontic possibility" (von

Wright 1951a,[5] 1951b: 36, 1971; Lyons 1977: 823–841; Kratzer 1978: 111; Van der Auwera and Plungian 1998: 81). Such accounts often feature examples such as (9) and (10) with the modal auxiliaries *must* and *may*.

(9) You **must** open the door (Lyons 1977: 832 [3])
(10) You **may** open the door (Lyons 1977: 832 [5])

In (9), the speaker imposes the obligation to open the door on the hearer by using *must*, or at least, he or she states that the hearer is "obliged (by some unspecified authority)" to do so (Lyons 1977: 832). In (10), the speaker confers permission to the hearer to open the door by using *may*, or again, he or she states that the hearer is allowed (by some unspecified authority) to do so (Van linden and Verstraete 2011: 151–152). A broader definition is found in Verstraete (2005), who takes deontic modality to express the degree of desirability of a certain SoA. In deontic utterances a modal source, typically the speaker, assesses the desirability for an agent to carry out a certain action (Verstraete 2005: 1405–1406). The term 'agent' here refers to "the person who is given permission or is under the obligation to do something" (2005: 1402). This definition still includes expressions in which permission is (reported to be) granted, or obligation is (reported to be) imposed.

More recent accounts of modal auxiliaries, however, have proposed a distinction between obligation and permission on the one hand, and desirability on the other hand – an idea already embryonic in Kiefer (1997).[6] Starting from their analysis of the Dutch modals *mogen* 'may' and *moeten* 'must', for instance, Nuyts, Byloo, and Diepeveen (2005, 2010) have argued that the meaning of examples like (11) to (14) below is very different from the traditional notions of obligation and permission (see also Nuyts 2005).

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5 Von Wright acknowledges his colleague philosopher C. D. Broad for the term 'deontic modality' (1951a: 1).

6 In his comment on Bybee, Perkins and Pagliuca's (1994) categories of agent-oriented versus speaker-oriented modality, Kiefer (1997: 247–248) notes that speech acts such as granting a permission and imposing an obligation do not belong to the modal domain, but rather to the pragmatic domain. The notions of deontic necessity and deontic possibility, by contrast, are semantic notions. However, his treatment of the distinction between semantics and pragmatics is fairly limited. A more – independently – developed discussion in found in Nuyts, Byloo, and Diepeveen (2005, 2010).

(11) A: And you are going to bring your poems or what?
B: Yes, because I have such a hard time deciding what I am going to take. I have to pick out three, and they **should** relate to each other to some extent, in my opinion, and it can't be too sinister I think. (cited in Nuyts, Byloo, and Diepeveen 2005: 29 [24])[7]

(12) Sir, It was poignant and entirely **fitting** that the nation should fall silent for one minute on Sunday to demonstrate its sympathy for Dunblane's awful loss; and how striking it was that supermarkets, stations and sports stadiums suspended their business at the time. (report 18/03/1996; 13/03/1996 a massacre took place in Dunblane, Scotland) (CB, times)

(13) Taking such an approach was entirely necessary because of the growing extent of the problem. … It was also **important** to raise the public awareness of the claims situation. Remember at the end of the day it is the taxpayer who foots the bill. (CB, sunnow)

(14) There is no pre-contract available in Scotland. I have written to both the SFA and the Scottish League pointing this out. … We also **deplore** that a person not involved in the affairs of this club gave advice to the player [i.e. Morton, AVL]. (CB, sunnow)

According to Nuyts, Byloo, and Diepeveen (2005, 2010), in these examples the (reported) speakers indicate the degree of moral desirability of particular SoAs, but they do not grant permission nor impose an obligation. The 'assessors' or modal sources commit themselves to the SoAs on the basis of moral principles. Crucially, those principles are external to the SoA under assessment. Therefore, Nuyts, Byloo, and Diepeveen (2005, 2010) classify deontic modality as an attitudinal category in the qualificational domain, as distinct from the notions of obligation and permission. They adopt a broad definition of morality, as "it need not involve societal principles, however, it can also concern strictly personal norms of the assessor" Nuyts, Byloo, and Diepeveen (2005: 8, 28, note 3).

If utterances expressing permission or obligation are excluded from the category of deontic modality, which type of meaning do they express?

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7 This example is their translation of the Dutch original in (i) below, taken from the Corpus Gesproken Nederlands ('Corpus of Spoken Dutch').

(i) A: en gij gaat dan uw gedichten meebrengen of wat?
B: ja want ik kan zo moeilijk beslissen wat dat 'k ga nemen. ik moet er drie uitnemen en ze **moeten** een beetje verband hebben met elkaar vind ik en 't mag niet te zwartgallig zijn vind ik. (42 – fv700058)

Nuyts, Byloo, and Diepeveen (2005: 9) propose the term 'directive' meaning, which is an illocutionary type of meaning. In their view, the notions of permission and obligation involve "an 'action' plan (stimulating or [not] hindering somebody to do something)," and as such they are speech act notions (Nuyts, Byloo, and Diepeveen 2010: 18). On the relation between a directive utterance and deontic meaning, they refer to Searle's (1969, 1976) notion of a sincerity condition of a speech act: "a deontic assessment may serve as the 'sincerity condition' of a directive, i.e. as the 'mental state' underlying the obligation or permission" (Nuyts, Byloo, and Diepeveen 2010: 18). In that case, the directive is said to be 'inspired' or 'informed' by a deontic judgement (Nuyts, Byloo, and Diepeveen 2010: 18, 24).[8]

From a cognitive perspective, there is a fundamental difference between the dimension of directivity and that of deontic meaning (Nuyts, Byloo, and Diepeveen 2010). As an attitudinal category, deontic modality belongs to the domain of qualifications of SoAs. This domain is basic to human conceptualization: qualificational categories are "central dimensions of our cognitive system for storing and handling world knowledge" (Nuyts, Byloo, and Diepeveen 2010: 32). Directivity, by contrast, is not a qualificational category, but an illocutionary notion, with a primary function in the interactional system of language. More precisely:

> [I]llocutionary notions are not conceptual (in that sense) at all, they are not elements of how we know and think about the world. Rather, they are central elements of communicative behavior, i.e. of how we interact with other 'minds'. More specifically, they encode (types of) communicative goals which speakers may pursue by means of language (and for which language offers specific means to signal them). As such, they belong in a different cognitive system, i.e. the system for planning communicative behavior. (Nuyts, Byloo, and Diepeveen 2010: 32)

Nuyts, Byloo, and Diepeveen (2005, 2010: 32) thus locate deontic modality and directivity in different 'components' of the processing systems: the conceptual versus illocutionary component. While this distinction may at first sight seem more relevant to philosophical debates rather than linguistic

8 Directives are not necessarily inspired by deontic assessments. As Nuyts, Byloo, and Diepeveen (2010: 24–27) convincingly show, they can also be based on "practicalities (potentials or necessities) ensuing from situations or individuals in those situations" (dynamic meanings), or on boulomaic assessments (on the notion of boulomaic modality, see sections 1.3.2 and 1.3.4). In their study, most directive expressions were indeterminate as to their type of sincerity condition.