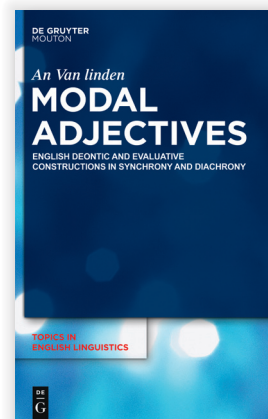*An Van Linden*

MODAL ADJECTIVES

English Deontic and Evaluative Constructions in Diachrony and Synchrony

The book revisits the notion of deontic modality from the perspective of an understudied category in the modal domain, viz. adjectives. On the basis of synchronic and diachronic corpus studies, it analyses the semantics of English adjectives like *essential* and *appropriate*, and uses this to refine traditional definitions of deontic modality, which are mainly based on the study of modal verbs. In a first step, it is shown that the set of meanings expressed by extraposition constructions with deontic adjectives is quite different from the set of meanings identified in the literature on modal verbs. Adjectival complement constructions lack the directive meanings of obligation or permission, which are traditionally regarded as the core deontic categories, and they have semantic extensions towards non-modal meanings in the evaluative domain. In a second step, the analysis of adjectives is used to propose an alternative definition of deontic modality, which covers both the meanings of verbs and adjectives, and which can deal with the different extensions towards modal and non-modal categories. This is integrated into a conceptual map, which works both in diachrony, defining pathways of change from premodal to modal to evaluative meaning, and in synchrony, accommodating refinements within each set of meanings. In the process, this study points to the emergence of partially filled constructions, and it offers additional evidence for well-established changes in the history of English, such as the decline of the subjunctive and the rise of the *to*-infinitive in complement constructions. The book is of particular interest to researchers and graduate students with a focus on mood and modality, and the interface between syntax, semantics and pragmatics, as well as that between synchrony and diachrony.

„[...] this is a valuable addition to the field of historical semantics and to the literature on modality. It is a useful, detailed, clearly written volume. Van linden's approach is solidly empirical, and her data lead to a focused and cohesive conceptual map of adjectival modality and evaluation. This book is highly recommended to researchers with an interest in historical linguistics as well as to those studying adjectival semantics."*James A. Berry in: Linguist List 23.5148*

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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;

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1   The Present-day English data are extracted from the COBUILD corpus (marked with CB) and are reproduced with the kind permission of Harper-Collins 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 construc-
tions like (1) and (2), however, seriously challenges such traditional ac-
counts 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 re-
gards it as highly desirable. Similarly, the speaker in (2) does not specifi-
cally allow anyone not to forgive or forget, but again just uses the construc-
tion 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 cover-
ing 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 seman-
tics 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 in-
volve an 'attitudinal source' (cf. Nuyts 2005), as it does not render a per-
sonal 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 mo-
dality, specifically SoA-internal or 'situational' dynamic necessity (cf.

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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.
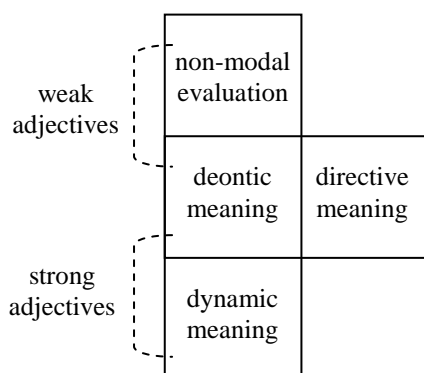

Figure 1. A conceptual map based on the study of English modal adjectives

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 subjecti-fies 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 con-cepts, 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 indis-pensability. Together, these two properties amount to the meaning of situ-ational necessity. They will therefore be thought of as the conditions of en-try into the conceptual map of modal-evaluative meaning. The case-studies themselves confirm that the map's two modal categories, dynamic and de-ontic modality, are diachronically ordered.

In addition to the adjectival matrix, the (development of the) comple-ment 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 for-mal types of complements. The semantic types include propositional com-plements, 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 re-fused 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 hospital-ity. (CLMETEV 1905 Forster, *Where angels fear to tread*)

(8)   If the bed is to fold neatly back into its box, you must measure ac-curately 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 Ab-bott'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, uk-books)

(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 9
Conclusion

In this book, I have revisited the notion of deontic modality and conceptually related categories from the perspective of a formal category that has received little attention in this respect, namely adjectives. In the process, I have explored and mapped some largely uncharted areas in the domains of modal-evaluative meaning and complementation. The starting point was the study of extraposition constructions with deontic adjectives like *essential* and *appropriate*. It was shown that the set of meanings associated with deontic adjectives is quite different from the set of meanings identified in the literature on modal verbs. Adjectives lack the directive meanings of obligation or permission, which are traditionally regarded as the core deontic categories, and they have semantic extensions towards dynamic meanings as well as non-modal meanings in the evaluative domain. Moreover, the distribution of the adjectives across these three types of meaning appeared to be determined by their membership in one of two semantically coherent lexical classes, i.e. weak and strong adjectives. As well, correlations were explored between these weak and strong adjectives and semantic and formal complement types. The relevant lexico-semantic and conceptual distinctions were integrated into a conceptual map, which formed the backbone of this book and is repeated in Figure 27.

The major findings reflected in the conceptual map can be summarized as follows. The two lexico-semantic classes of the adjectives central to this study (in black font in Figure 27) manifest different patterns of polysemy in the modal-evaluative domain. Weak adjectives are found in constructions with deontic or non-modal evaluative meaning, whereas strong adjectives are found in constructions with deontic or dynamic meaning. In other words, constructions with weak adjectives can never be interpreted as dynamic expressions, and constructions with strong adjectives cannot express non-modal evaluative meaning.

These findings confirm a number of hypotheses about the partitioning of the modal-evaluative domain. Firstly, in addition to the generally accepted categories of participant-inherent and participant-imposed meaning, the category of dynamic meaning should be taken to include situational meaning (cf. Nuyts 2005, 2006, see sections 1.1.1 and 2.2.1). Dynamic expressions with strong adjectives indicate the necessity of a particular SoA that
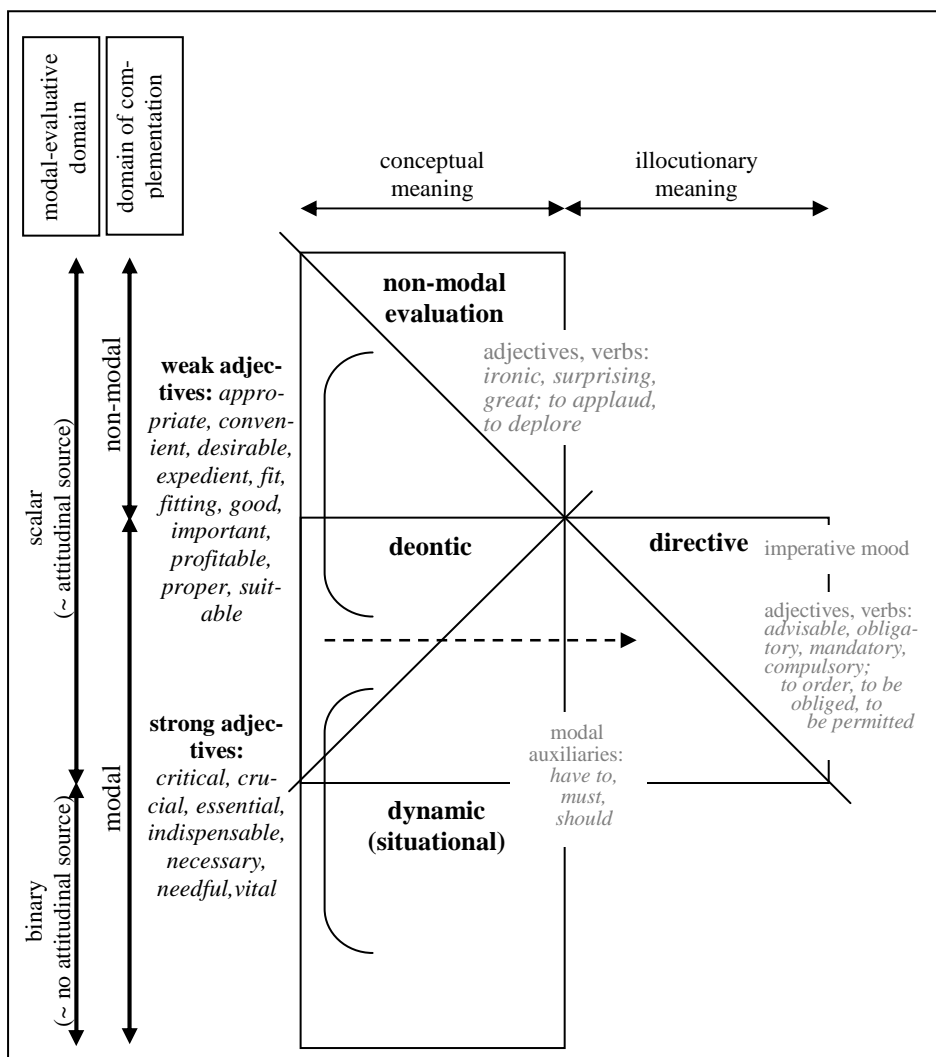
Figure 27. The conceptual map

is internal to that SoA, which is more rightly labelled as situational necessity than as participant-imposed necessity. Secondly, within the set of constructions that involve assessments based on SoA-external grounds, it is essential to distinguish between deontic expressions, which assess the desirability of potential or virtual SoAs, and non-modal evaluative expressions, which assess the appropriateness of SoAs that are presupposed to be true (cf. McGregor 1997: 221–222, 241–243, see section 2.2.2). While the

previous two hypotheses relate to the vertical axis of the map, the final hypothesis focuses on the horizontal axis. More specifically, it is crucial to distinguish between conceptual deontic meaning, involving attitudinal assessments in terms of desirability, and illocutionary directive meaning, comprising acts of obligation and permission, since these pertain to distinct functions of language, i.e. conceptualization versus interaction (cf. Nuyts, Byloo, and Diepeveen 2005, 2010, see sections 1.1.2 and 2.2.2). Whereas expressions like the modal auxiliaries can be used to convey both types of meaning, it is typical of adjectives that they can express only one type. The adjectives central to this book such as *proper* and *essential* are restricted to qualificational expressions (the left area in the map), whereas adjectives such as *obligatory* (in grey font) can only be used in directive expressions (the right area in the map). More generally, therefore, in this book I have argued for a redefinition of deontic modality which is restricted to attitudinal assessments of potential SoAs, thus excluding directive notions like obligation and permission, as well as attitudinal assessments of presupposed SoAs (e.g. Nuyts, Byloo, and Diepeveen 2005, 2010).

In order to make the relations between the conceptual categories in the map more explicit, I proposed two binary parameters which together divide the conceptual area into three spaces. Assuming a definition of modality in terms of factuality, the first parameter distinguishes between modal and non-modal meaning on the basis of the factuality status of the dependent SoA in the adjectival construction. As mentioned above, dynamic and deontic modal expressions involve potential or virtual SoAs, which are characterized by an undetermined factuality status. Non-modal evaluative expressions, by contrast, involve propositional contents whose SoAs are presented as presupposed true, and hence have a determined factuality status. The second parameter pertains to the presence of an attitudinal source and sets apart the attitudinal categories, i.e. deontic and non-modal evaluative meaning, from the situating category of dynamic meaning. Studies focusing on modal expressions as such (e.g. Nuyts 2005, 2006) advanced the parameter of the attitudinal source as making the most salient distinction within the set of constructions studied here (see sections 1.2.1 and 2.3). Insights from the domain of complementation, however, pointed to some problems with this parameter, and emphasized the importance of the parameter of factuality status. In what follows, I will first recapitulate the diachronic and synchronic evidence proposed in favour of (the partitioning of) the conceptual map, and I will then return to the relative importance of its parameters.

In several places, this study produced arguments for the validity of the conceptual map for diachronic analysis. Firstly, a number of case-studies

revealed the diachronic relations between the conceptual categories included in the conceptual map. In chapter 4, studies of the strong adjectives *essential*, *vital*, *crucial* and *critical* indicated that they entered the conceptual map from below: they first developed situational dynamic meaning. In a later stage, they developed deontic meaning through the process of subjectification (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; Traugott and Dasher: ch. 3). However, the description of the premodal stages offered insights into how the lexical items developed modal meaning in the first place. In this respect, we saw that the development of dynamic meaning crucially depends on the development of two semantic properties, relationality and potentiality, which can therefore be regarded as the conditions of entry into the conceptual map. Moreover, the studies also showed that *essential* and *crucial* even developed non-modal evaluative meaning, as they are found with propositional complements in Present-day English (albeit very infrequently). The studies of the strong adjectives thus pointed to the vertical axis in the conceptual map as defining a diachronic pathway.

This finding was confirmed by a case-study of a set of strong and weak adjectives, namely the importance adjectives *essential*, *crucial*, *important*, and the appropriateness adjectives *appropriate*, *fitting* and *proper* in chapter 6. The case-study showed that these adjectives first patterned with a particular semantic complement type – mandative complements, before they could take another semantic type – propositional complements. In addition, the two classes of adjectives appeared to differ in how they developed the propositional pattern. In the case of the importance adjectives, the single proposition pattern could be analysed as a combined mandative-propositional pattern from which the mandative *to*-clause – typically including a cognition verb, such as *note* or *remember* – was dropped but remained in some sense implied (A > A[B] > B+>A). This development proved to account for the specific semantic-pragmatic value of their single proposition pattern: the attitudinal source does not assess the propositional content in the complement as crucial, but rather encourages the hearer to focus mentally on that propositional content. In the case of the appropriateness adjectives, non-modal evaluative constructions with propositional complements developed from deontic expressions with mandative complements via bridging contexts that contextually support both a mandative and propositional reading (A > A/B > B). In the propositional pattern, the attitudinal source evaluates the propositional content as appropriate; construction B thus expresses true non-modal evaluative meaning. In general, the

two pathways sketched above verified that for certain lexical items deontic meaning is diachronically prior to non-modal evaluative meaning.

Generalizing from the diachronic case-studies summarized above, I posited two conceptual hierarchies, for strong and weak adjectives respectively, which apply in both diachrony and synchrony (see section 6.6). Although the case-studies focused on adjectives that came into the English language in the course of or after the Middle English period (i.e. of group C, as defined in section 3.1), the hierarchies are assumed to hold for the whole data set (i.e. also for adjectives of group A and B). They are repeated in (i) and (ii) below.

(i)   The conceptual hierarchy of strong adjectives
        dynamic modality > deontic modality

(ii)   The conceptual hierarchy of weak adjectives
        deontic modality > non-modal evaluation

Secondly, a closer study of the diachrony of the clausal complement patterns also showed that the lexico-semantic and conceptual distinctions in the map apply across time. In chapter 5, it became clear that from Old English onwards, strong adjectives occur with mandative complements only, whereas weak adjectives are found with both mandative and propositional complements. However, it also turned out that these semantic types of complement do not correlate with the formal types of complement (*that*- and *to*-clauses) on a one-to-one basis. Mandative and propositional complements are coded by *that*- and *to*-clauses from the earliest stages onwards. Interestingly, within the mandative type we noted a shift in the distribution of the formal types. The predominance of *that*-clauses in Old English shifted to a predominance of *to*-clauses in the course of the Middle English period, a development parallel to that of complements of verbs with a volitional element described by Los (2005). This distributional change was explained by syntagmatic and paradigmatic analogy (cf. De Smet 2008: 102–127) with the increased frequency of *to*-infinitives with intention and manipulative verbs in Middle English (Los 2005). Unlike in the case of the verbal matrices (cf. Rohdenburg 1995), however, the replacement of *that*-clauses did not run its full course. From the Early Modern English period onwards, the *to*-infinitive stabilized at roughly a 3:1 ratio to the *that*-clause. This renewed type of clausal variation was linked to lexical determination and discourse factors such as information structure. More generally, the data thus indicated that analogy should not be given too much weight in explaining language change, as within the history of a sin-

gle construction type it may be blocked by other factors, such as lexical determination and discourse factors.

In addition to diachronic evidence, this study also adduced synchronic evidence for the conceptual map. The in-depth investigation of Present-day English constructions, reported on in chapter 8, proved its synchronic validity by indicating its applicability and internal consistency. It proposed refinements of the conceptual and illocutionary categories in the conceptual map, which are in keeping with its general conceptual and lexico-semantic distinctions discussed above. Essentially, it showed that the categories on the vertical axis of the map have a different internal organization, reflecting their different conceptual make-up, whereas the categories that are adjacent on the horizontal axis feature the same internal structure – to a certain extent, which may explain why they have typically been conflated in the literature (cf. section 1.1.2). In particular, it became clear that the distinction between SoA-related and speaker-related uses, which has been observed for the domain of interclausal relations as well (cf. Davies 1979: 146–176; Sweetser 1990: 76–112; Verstraete 2007: ch. 9), is relevant to the deontic and directive domain, but not to the dynamic and non-modal evaluative domains. With respect to deontic and directive expressions, SoA-related uses refer to actions in the outside world (e.g., *it was appropriate to prescribe tranquillisers freely* [CB, ukmags]), whereas speaker-related uses refer to the speaker's argumentative goals (e.g., *it would be appropriate to conclude this section ...* [CB, ukbooks]). One speaker-related subtype was analysed as a partially filled constructions in the sense of Goldberg (1995), namely the mental focus construction. The same analysis was assigned to the non-modal evaluative locative and knowledge/acquisition of knowledge (KAK) constructions. However, not all subtypes in the proposed typology correlated with clear constructional patterns that are (getting) entrenched in Present-day English (cf. Hopper's [1987, 1998] Emergent Grammar). On the basis of the detailed study, it was possible to locate each of the adjectives studied within the finer subcategories of the conceptual map (section 8.5, Figure 26). The result generally verified the conceptual hierarchies for the two lexico-semantic classes of adjectives.

At the same time, the study of the synchronic validity of the conceptual map also substantiated and synthesized the findings on the relative importance of the two parameters in the conceptual map. When equating the matrices of dynamic, deontic and non-modal evaluative constructions with Noonan's modal, modal/desiderative and commentative complement-taking predicates respectively (cf. Noonan 2007: 127–139), insights from the typological literature on complementation indicated that in terms of types of complement relation, the parameter of factuality status or the distinction

between modal and non-modal categories is much more salient than the parameter of the presence of an attitudinal source (see section 6.2.1). This finding was supported by the problems encountered in trying to categorize Present-day English examples of SoA-related constructions with strong adjectives. Whereas the diachronically oriented chapters 5 and 6 did not treat dynamic and deontic expressions as separate categories, as it is not possible to formally distinguish between them, the synchronic study in chapter 8 found that some examples can in principle be assigned to either dynamic or deontic modality. This problem of delineation was explained in terms of the process of subjectification that links them diachronically: the development of deontic meaning is a purely semantic change, which does not correlate with a clear difference in the formal properties of the complement (see chapter 4). It was shown that it is the impossibility of demonstrating the absence of an attitudinal source in the constructions with strong adjectives that makes it difficult to analyse them as either dynamic or deontic. The development of the semantic property of relationality (see chapter 4) made it clear that the delineation problem appears with condition-goal structures especially. However, I also maintained that, in spite of the problem of delineation, dynamic and deontic modality remain valid categories. Since these two categories essentially differ from one another in having a binary versus scalar conceptual make-up, I proposed to link the parameter of the presence of an attitudinal source to a parameter that separates binary from scalar categories (cf. Figure 27), which is conceptually less problematic. To decide whether a certain expression belongs to a binary or scalar category, it proved useful to consider a number of pragmatic elements, such as context, world knowledge and communicative purposes of the speaker.

The discussion of the relative salience of the parameters on the vertical axis in the conceptual map shows conflicting views between the two domains covered in this book, i.e. the modal-evaluative domain and the domain of complementation. Insights from the domain of complementation identified the distinction between modal and non-modal categories as the most salient one. Insights developed in the domain of modal-evaluative meaning (e.g. Nuyts 2005, 2006), by contrast, regard the distinction between attitudinal and situating categories (or non-modal evaluative and deontic meaning as opposed to dynamic meaning) as the only relevant distinction in the map. In Figure 27, the two domains have been added right above the parameter which they highlight as most salient. Interestingly, in their conflict these two domains actually support the three-way contrast among the conceptual categories on the vertical axis of the map, not as a pair of isomorphic three-way distinctions, but as a pair of cross-cutting binary ones. More generally, this category mismatch suggests that the two do-

mains covered in this book are of a different nature, and provide non-complementary perspectives on the same phenomenon. In any case, the major findings of this study summarized above show that they clearly cross-fertilize one another.

The fact that the conceptual map covers two domains of a different nature implies that it opens up two avenues for further reflection. With regard to the modal-evaluative domain, for instance, it can be questioned to what extent the conceptual map proposed here can be considered a semantic map, "a geometric representation of meanings or, if one likes, uses, and of the relations between them" (Van der Auwera and Plungian 1998: 86). Semantic maps, like the map of modality proposed by Van der Auwera and Plungian (1998), are often used in typology: they depict and constrain how genetically and areally diverse languages split up a particular semantic/conceptual space among their lexical and/or grammatical items, both with respect to diachrony and synchrony (Van der Auwera and Plungian 1998: 86; Haspelmath 2003). The discussions above suggest that the conceptual map shows some but not all characteristics of a semantic map. Like a semantic map, it is valid for diachronic analysis in that it accommodates pathways of change for specific lexical items and constructions. In addition, it also holds synchronically in that the component elements meet the adjacency requirement: in the map, the distinct meanings or uses of the adjectives (and modal auxiliaries) are adjacent (cf. Van der Auwera and Plungian 1998: 112). However, the conceptual map is not a genuine semantic map in that it is not assumed to have universal relevance. It has been designed on the basis of English data, and evidence has been adduced for its language-specific validity, but it has not been examined cross-linguistically. In this sense, the organization of the map suggests questions for further research: it may be interesting to take the conceptual map into typology and investigate whether it also applies across languages. In this perspective, the semantic properties of relationality and potentiality proposed in chapter 4 seem promising. They may be helpful in tracing items across languages that qualify for a typological study of the conceptual map, especially items like adjectives or nouns. However, it might also be revealing to study the premodal stages of modal auxiliaries in more detail, and see whether the two semantic properties apply to the verbal category as well. In addition, the features can be used to distinguish various stages in the semantic development from premodal to modal. Thus, together with the semantic descriptions of the different categories in the conceptual map, the properties of relationality and potentiality may form a starting point for the typological research that is needed to turn the conceptual map into a genuine semantic map in the traditional sense.

With regard to the domain of complementation, the very use of the term 'complementation' for the constructions included in the conceptual map warrants further reflection as well. It may be questioned what type of elements are linked in the constructions and what type of syntagmatic relation holds between them. Traditionally, in the extraposition constructions (ECs) *that-* and *to*-clauses are viewed as extraposed arguments of the matrix predicate, i.e. as subjects in the case of copular or passive transitive ECs, or objects in the case of active transitive ECs (cf. Quirk et al. 1985: 1224–1225, 1230, 1391–1393; Biber, Johansson, and Leech 1999: 155, 672–674, 720–722, Huddleston and Pullum 2002: 1252–1254) (see section 5.1). Likewise, the constructions also fall under the rubric of 'complementation' in the typological account proposed by Noonan (2007), which is defined as "the syntactic situation that arises when a notional sentence or predication is an argument of a predicate" (2007: 52). Cristofaro (2003: 95–98) goes against this traditional constituency analysis, arguing that it is untenable in a cross-linguistic perspective: not all languages express complement relations by means of embedded clauses which function as a nominal constituent of the main clause. Instead, she proposes what she calls a 'functional' definition: "complement relations link two SoAs such that one of them (the main one) entails that another one (the dependent one) is referred to" (2003: 95). Even if her definition is cross-linguistically adequate, it remains imprecise in both semantic and syntagmatic terms.

An alternative proposal that aims to be more generally applicable and offers a more detailed description has been formulated in Semiotic Grammar (McGregor 1997). McGregor (1997: 210, 242 [6-50]) argues that in expressions such as *it was good that you came* (i.e. a non-modal evaluative construction in my analysis), the clause *it was good* encompasses and "shapes" the clause *that you came* in that it attitudinally modifies the content of that clause. He identifies the syntagmatic relation between these two units as a whole-whole relationship (or 'conjugational' relationship in his own terms), rather than a traditional part-whole or constituency relationship, in which one clause is analysed as a part or a constituent of another clause (McGregor 1997: ch. 6).[94] The more specific type of conjugational relationship involved here is one of scoping: the scoping clause (*it was*

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94 This whole-whole relation thus links two clauses, rather than a clause and a predicate. In fact, conjugational relationships obtain between the "enclosed unit" and the unit consisting of that enclosed unit together with "what encloses it" (McGregor 1997: 210). For the sake of convenience, the two units are referred to as the enclosed and enclosing unit (or more specifically, as the "scoped" and "scoping" unit [McGregor 1997: 240]).

good) modifies the scoped clause (*that you came*), "leaving its mark on the entirety of this domain" (McGregor 1997: 210), in this case indicating the speaker's attitude towards it. The two types of attitudinal modification proposed in McGregor (1997: 221–222, 241–243) also correspond nicely to the two types of attitudinal meaning proposed in this book: McGregor's evaluative modification captures what is expressed by non-modal evaluative constructions, such as *it was good that you came*, whereas his desiderative modification corresponds to the meaning of deontic constructions, such as *it would be desirable for you to stop swearing in front of the children* (McGregor 1997: 242 [6-56]). It is less clear, however, how the dynamic constructions studied here should be treated in terms of this analysis. I presume that they involve a conjugational relationship of scoping between two clauses as well, though the type of modification is not attitudinal but rhetorical ("indicating how the unit fits into the framework of knowledge and expectations relevant to the interaction") (McGregor 1997: 210), more precisely status modification, indicating the speaker's evaluation of the status of a clause in terms of polarity, modality and/or mood (1997: 224–232).

In addition to its intrinsic interest for the complex constructions studied here, the analysis of scoping may also be more useful than the traditional constituency analysis in other respects, for instance in accounting for the speaker-related text-building use. Below, I repeat example (52) from section 8.3.2. In this example the deontic construction is used to express the speaker's general idea that if we want to appreciate the nature and extent of Davies's alleged criminal coup discussed in the previous discourse, we have to understand Japan's position in the coin world.

(1)   And throughout the coin world, the jovial Paul Davies has proved a man of his word, respected on the coin circuits of Europe, America and Japan. Yet Davies' sterling reputation has been repeatedly called into question during his attempts to recover 1,000 Showa gold coins he supplied to the Nihonbashi branch of Fuji Bank, as well as more than 3,000 others which were subsequently seized, and his friendly disposition has been sorely tested as he has tried to reclaim what he regards as rightfully his. It is, in many ways, a very Japanese affair. It involves fear of losing face, bureaucratic bungling and a distrust of foreigners. It involves the Japanese Ministry of Finance, the Tokyo Metropolitan Police and, most extraordinarily, the possibility that, like some latterday Goldfinger, Davies found the capital and clandestine resources to counterfeit no fewer than 107,000 twenty-ounce gold coins. It has cost Japan over £ 1.6 billion in lost coin sales and refunds to collectors. But,

> three years after the scandal first broke, no crime has been established and no charges have been brought. To appreciate the nature and extent of Davies' alleged criminal coup, it is **necessary** to understand Japan's position in the coin world. By the mid-Eighties the Japanese had established their ability to earn money, yet they remained relative novices in the making of artful currency. Of course, the Japanese Mint Bureau's main Osaka Mint, along with its branches in Tokyo and Hiroshima, produced quality everyday legal tender, but the minting of gold coins had not been attempted in the country since 1927. (CB, ukbooks)

Importantly, the deontic expression does not merely justify the immediately following clause, but also the subsequent ones – in fact, the remainder of the paragraph focuses on the history of Japanese coins. In other words, the discourse following the *to*-clause associated with the deontic expression elaborates on the contents of this *to*-clause. This type of discursive situation can be captured more easily in a scoping analysis than in a traditional constituency analysis. In the constituency analysis, the *to*-clause functions locally as an argument of the matrix predicate, in a part-whole relation, and there is nothing in the syntactic analysis to suggest that it could take up wider discourse functions. In the scoping analysis, by contrast, the *to*-clause is analysed as a whole that is modified by another whole, which explains more easily why it can take up both more local functions, as in its standard uses, and more global ones, as in the text-building functions where the *to*-clause projects the rest of the paragraph.

   More generally, the scoping analysis also deserves further attention because it offers a unified syntagmatic account of various formal types of expressions that convey similar meanings. Previous studies, for example, have shown that the scoping analysis also holds for the English modal auxiliaries (Verstraete 2007: ch. 3). McGregor (1997: ch. 6) himself uses expressions of various parts of speech in his scoping examples, such as adverbs (*fortunately*), adjectives (*good*, *desirable*), and verbs (*wish*, *want*). Interestingly, he also assigns a scoping analysis to clauses associated with nouns (1997: 250–251), which show a formal distinction between *that*-clauses and *to*-clauses as well (cf. [2]–[3] versus [4]).

(2)   I foresaw the **possibility** <u>that they would follow his dripping blood until nightfall</u>. (McGregor 1997: 250 [6-75])

(3)   The **fact** <u>that you have been there</u> does not impress me in the slightest. (McGregor 1997: 250 [6-76])

(4)   Most women don't feel the **need** <u>to become a mother</u> until something goes wrong in their career or life – and then having a baby is the way out. (CB, today)

In the literature, there is disagreement on how to analyse the *that-* and *to-*clauses underlined in the examples above, for example as (noun) complement clauses or as appositional clauses (cf. Schmid 2000: ch. 1). An analysis in terms of constituency, for instance, assumes a parallel between these noun constructions and complex constructions with verbal or adjectival matrices. However, nouns that do not have a verbal or adjectival counterpart, like *fact* in (3), pose serious problems to such a constituency analysis, because they cannot be related to any element that has valency. A scoping analysis, by contrast, can easily generalize across such cases, because it does not assume constituency relations to be the basis of these constructions. It is one of the merits of the scoping analysis that it captures the formal and semantic parallels between complex constructions involving nouns on the one hand and verbs or adjectives on the other in terms of one and the same syntagmatic relation. In this perspective, the scoping analysis suggests one further way to expand the analysis proposed in this book. The formal and semantic parameters distinguished in the study of adjectives could also be used as a framework to study comparable constructions with nouns, regardless of whether they have adjectival counterparts or not.

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