Some observations on the meaning of modals

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1 Introduction

This paper offers reflections on aspects of meaning of modals. It lists empirical facts that need to be taken into account when developing a theoretical model for the description of the meaning(s) of modal verbs if the framework is to achieve observational and descriptive adequacy.

There are two main views on modal meaning as expressed by modals: the ‘monosemists’ (cf. e.g. Ehrman (1966), Tregidgo (1982), Haegeman (1983), Klinge (1993), Groefsema (1995), Papafragou (2000)) argue that modals have a core meaning which is present in all their uses and attribute differences in meaning to pragmatic processes. The ‘polysemists’ (cf. e.g. Lyons (1977), Bybee and Fleischman (1995), Palmer (2001), Huddleston and Pullum (2002)) maintain that the different meanings communicated by modals are sufficiently independent to conclude that modals are polysemous. In recent work, Timotejević (2008) has argued that a uniform approach to modals is inappropriate; a differentiated treatment is needed, the line of reasoning being that some modals are more monosemous/polysemous than others.1 Some of the linguists who have contributed a lot to the description of the meaning of modals (Declerck (1991), Palmer (1990), Leech (2004)) do not address the polysemy-monosemy question directly or in much detail; their work is vital to the discussion anyway because they describe meaning distinctions that need to find their place in the framework for modal meaning.

In short, opinions diverge on whether a polysemous rather than a monosemous approach should be taken, but what is more, there is no agreement – especially in the field of non-epistemic meaning – on the number of categories of meaning and the ways in which they fit into a taxonomy. When developing a framework for the description of modal meaning, one is thus faced with a double challenge: (a) that of giving a comprehensive and systematic
description of modal categories (or meaning distinctions) through the application of the same set of defining criteria and (b) that of deciding what the status of the categories of modal meaning is.

2 Taking Stock of Modal Meaning(s)

Let us take the following sets of examples with what are considered to be core modals as a starting point for the discussion:

(1) a. You must come and visit us as soon as you can. (ICE-GB)
   b. I must go back to work now. (ICE-GB)
   c. (mother to child) You must take your swimming costume tomorrow, because you have swimming lessons on Wednesday.
   d. When sons marry fathers must give them a proportion of his herd. (ICE-GB)
   e. You must be ordinarily resident in Great Britain (England, Scotland and Wales) and present there at the date of your claim. (ICE-GB)
   f. You must put on your sneakers.
   g. Must you put on your sneakers?
   h. God, it must’ve been awful in those days. (ICE-GB)
   i. Steven must be older. (ICE-GB)
(2) a. You can have all the chocolate biscuits [if you like].
   b. Already there are sawmills that cannot operate at full ability because of wood shortages. (BNC)
   c. Can you speak any East European languages? (ICE-GB)
   d. You can get coffee from the machine downstairs.
   e. Somewhat less obviously, it has been argued that in certain circumstances States can be treated as parties to the Court's exercise of its advisory jurisdiction. (BNC)
   f. You can leave now. (examiner to student)
   g. Can you leave now? (examiner to student)
   h. You can stay.
   i. Can you stay?
   j. The dose can be doubled to last through the night or for long car journeys.
(3) a. Shall I print it out now? (ICE-GB)
   b. I shall print it out now.
   c. I shall never come home again. (ICE-GB)
   d. Now we’re off to France tomorrow for three weeks, where I shall write to you
again. (ICE-GB)
e. As usual, I shall begin with the economic situation and prospects. (ICE-GB)
f. If, at the end of this period, the professor or reader is unable to resume his duties, his appointment shall continue but he shall not have a right to any remuneration except and in so far as the Governing Body of the Central Activity or School shall otherwise determine. (ICE-GB)

What elements of meaning as revealed by the examples need to find their place in a framework for modal meaning?

Observation 1. The examples with must contain sentences that communicate epistemic meaning ((1h) and (1i)) and sentences that communicate root meaning. No such distinction exists with shall and it is a matter of debate whether can can communicate epistemic meaning (cf. infra). Is the distinction between root and epistemic semantic in nature or is it pragmatic? 
Observation 2. While some examples with root can seem to be communicating possibility meaning only (cf. (2d)), the possibility meaning seems less obviously present in examples that are commonly referred to as communicating permission (as in (2a)) or ability (as in (2c)). Is ‘possibility’ the semantic core of all uses of can?
Observation 3. Do ability, permission and what some linguists (e.g. Coates (1983), Leech (2004)) have called ‘theoretical possibility’ together make up the class of root possibility meanings? How many subclasses of root possibility meaning need to be distinguished? Is a similar subdivision possible or necessary for root necessity?
Observation 4. The meaning of some sentences can be adequately captured by more than one ‘modal meaning’: for instance, in (2j), the sentence might be said to express ‘theoretical possibility’ but it might also express permission. Do modal meanings overlap? If so, is this fact compatible with a monosemous and a polysemous approach to meaning?
Observation 5. The strength of the (root) necessity is not the same: while (1c) is understood as a strong order, (1a) is more like a piece of advice or an offer. What is the status or role of ‘modal strength’ in the description of modal meaning? Is this a parameter that is useful both on the necessity and the possibility side of modal meaning?
Observation 6. The illocutionary force of the utterance impacts on the meaning of the modal. For instance, (1g) is understood as a reproach and the meaning of root necessity is bleached, as it were. What is the status of the impact of illocutionary force on modal meaning? The sentence in (2f) is understood as an order even though the modal as such communicates permission meaning.³ Can obligation be said to be part and parcel of the semantics of can? The interrogative counterpart of (2f), the example in (2g), inquires into the addressee’s willingness to leave, and is a polite request to leave. Again, we are moving away from the
core possibility meaning of can.

Observation 7. There is a similar discursive effect in both the declarative sentence (2f) and in the (directive interpretation of the) interrogative sentence (2g). This is not the case in the next set of examples ((2h) and (2i)): the unmarked interpretation of can in the declarative sentence in (2h) is at least in part permission, while the interrogative sentence in (2i) is most readily interpreted as a request. In (2i), can no longer communicates possibility in a straightforward way. Observations 6 and 7 show that sentence type impacts on modal meaning in what appear at first sight rather inconsistent ways, with interrogatives having or lacking the same discursive effects as their declarative counterparts, and there being a greater or lesser degree of bleaching of the core meaning of the modal in question.

Observation 8. It is not possible to describe the meanings of shall in terms of possibility or necessity in a straightforward way. Even though shall is considered to belong to the category of core modals, its meaning seems to be widely determined by its linguistic context, i.e. the sentence type, the lexical items with which it is combined, and the syntactic features of the constituents of the sentence in which it is used. Is it still possible to suggest a label that captures the common denominator of modal meaning of shall in all the examples in (3)?

Observation 9. The examples also bring up the question of whether a uniform approach to the description of modal auxiliaries is possible or necessary.

3. Contextually Determined Meaning: Pragmatics or Semantics?

The list of observations is not exhaustive, but it highlights a number of key issues that need to be addressed. All of the meaning distinctions, the central elements of meaning as well as the more delicate shades of meaning referred to, need to find their place in a framework of modal meaning if it is to be descriptively adequate. In what follows, we will attempt to pave the way for an approach on the right track. It will be clear though that it is not possible, within the confines of this paper, to propose a full-fledged theory of modal meaning.

While few people would deny that the meaning distinctions just described are real, the question that matters is to what extent they can be said to constitute or contribute to invariant semantic meaning and to what extent they are pragmatic variants. How can we decide, for instance, whether ability, permission and ‘mere/pure/theoretical’ root possibility constitute separate semantic categories in their own right or whether they are pragmatic variants of the archetype ‘root possibility’? Answering this question implies deciding on a general approach to meaning. Do we accept that part of the semantics can be determined by the context and in this way acknowledge the existence of pragmatically determined semantics? Or do we draw a clear distinction between, on the one hand, lexical semantics independent of context, and on
the other hand, any aspect of meaning determined by the linguistic and non-linguistic context? In Depraetere and Reed (2007), we wrote:

‘If one argues for a unitary treatment of meaning [of modals], the unitary meaning will provide the relatively small base which needs to be considerably enriched so as to find ways of explaining how the multiple interpretations are pragmatically derived. While the polysemy/monosemy question is obviously important, in the end, one is basically pursuing the same aim: that of setting up a taxonomy in which all the meanings find their place, the difference being that the semantics/pragmatics division line is drawn at different points.’ (2007: 284)

While Grice (1975) already admits of a certain degree of pragmatically determined semantics (reference assignment and disambiguation), in Relevance theory (cf. Sperber and Wilson (1995)), for instance, the proportion of contextually determined semantic meaning is a lot more considerable. Applied to the description of modal meaning, we may well arrive at a consensus on what constitute aspects of meaning determined by the context and on what aspects of meaning are inherent in the lexical items. Opinions differ, however, on whether or not the contextually derived aspects of meaning can be said to contribute to the semantic (invariant) core of the modal at all and, if they can be said to contribute to it, to what extent they do so. Applied to possibility meaning in English, these observations imply that we need to decide on the status of epistemic possibility and root possibility and we need to decide on the status of possible subclasses of root meaning. A further question is whether it is possible to generalize across modals, i.e. is the way in which the meaning is structured and composed the same for all auxiliaries that communicate, for instance, modal possibility meaning? Or should we, rather, put forward a model with potential layers of meaning, which are not necessarily realized by or relevant to every individual modal?

4. Towards a Framework of Modal Meaning

4.1. Epistemic Possibility vs. Root Possibility

Let us take the example of possibility as a starting-point for the discussion. Possibility is mainly associated with the modal auxiliaries can and may. It is generally accepted that may can communicate root meaning and epistemic meaning, but there is no agreement on whether can has the same meaning potential. While, for example, Coates (1995) and Collins (2007) argue that epistemic can exists or that can is in any case developing epistemic meaning,
Papafragou (2002) and Timotejevič (2008) maintain that can cannot communicate epistemic meaning.

Root and epistemic meanings are generally believed to be semantically distinct, evidence being (a) the existence of ambiguous examples, and (b) the difference in syntactic environment between a modal expressing root meaning and a modal expressing epistemic meaning (cf. e.g. Tsangalidis (2004), Wärnsby (2004), for evidence to this effect and for critical observations on the claims made by e.g. Coates (1983) and Heine (1995) about the typical syntactic environments in which root meaning and epistemic meaning come about). Identity of sense under anaphora is one of the tests used to identify semantically different meanings (cf. e.g. Zwicky and Sadock (1975)). While (4b) does not include an anaphor, but is rather a case of ellipsis, the effect seems similar to the identity of sense under anaphora test in that the meaning selected in the first clause is necessarily the same in the second clause:

(4) a. John may leave.
   b. John may leave and Mary may too.

The sentence in (4a) is ambiguous between an epistemic and a root interpretation. The sentence remains two-way ambiguous in the same way in (4b): it either means that both John and Mary have permission to leave or that both John and Mary are likely to leave. Just as Zwicky and Sadock take constancy of meaning under anaphora as evidence for a semantic distinction, I take constancy of meaning under ellipsis as evidence for the fact that the epistemic-root distinction is a semantic distinction.

In order for the utterance in (5a) to be interpretable, a reading (the epistemic one or the root one) has to be selected.

(5) a. He may leave.
   b. He may leave if he wants to.
   c. He may leave if you challenge him.

The sentence in (5a) cannot be interpreted out of context: the meaning of may in this utterance will be determined by the extra-linguistic context (situation of speaking). If it is an answer to ‘John is getting hot under the collar’, it will be understood as expressing epistemic possibility; if it is a reply to ‘Does John have to stay on any longer?’, it will be understood as expressing permission. Alternatively, in (5b) and in (5c), it is the linguistic context that singles out a specific interpretation (permission in (5a) and epistemic possibility in (5b)). The examples in (5) show that the extra-linguistic or the linguistic context disambiguates the meaning. In
other words, the semantics are contextually-determined: the epistemic-root distinction results from processes which Recanati (2004: 21) has called ‘primary pragmatic processes’, i.e. processes which are required in order for the sentence to have full propositional meaning. They are needed in order to assign reference, for instance. In the case of (5a), the context is needed in a similar way in order to arrive at a fully propositional utterance, one with a root reading or one with an epistemic reading.

The standard test to distinguish between ambiguity and vagueness shows that the epistemic-root distinction is semantic in nature. The strategy used to disambiguate meaning leads to the conclusion that epistemic meaning, or root meaning for that matter, constitutes an instance of contextually determined semantic meaning.

### 4.2. Subclasses of Root Possibility

What about the number of subclasses of root possibility meaning? In Reed and Depraetere (ms), we argue that three criteria are needed to define five classes of meaning that together make up root possibility.

<table>
<thead>
<tr>
<th>Ability</th>
<th>Opportunity</th>
<th>Permission</th>
<th>General situation possibility (GSP)</th>
<th>Situation permissibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope</td>
<td>narrow</td>
<td>narrow</td>
<td>narrow</td>
<td>wide</td>
</tr>
<tr>
<td>Source</td>
<td>internal</td>
<td>external</td>
<td>external</td>
<td>external</td>
</tr>
<tr>
<td>Potential barrier</td>
<td>–</td>
<td>–</td>
<td>+</td>
<td>–</td>
</tr>
</tbody>
</table>

Table 1: Taxonomy of Root Possibility in Reed and Depraetere (ms)

While it is not possible, in the confines of this article, to outline in detail the rationale behind the meaning distinctions made, table 1 shows what we mean when we argue that the definition of modal meanings should be based on the systematic application of clear set of criteria. Some of the examples listed in (2) (repeated in (6)) illustrate the different categories distinguished, i.e. permission (6a), opportunity (6b), ability (6c), general situation possibility (6d), situation permissibility (6e).

The criterion of scope of the modality is meant to capture ‘what it is that is possible’: put informally, there is narrow scope if we are concerned with whether something is possible for the subject referent to do. There is wide scope if we are concerned with the possibility (or
conceivability) of an entire situation. The paraphrases below bring out scope differences quite clearly:

(6) a. You can have all the chocolate biscuits [if you like]. {To have all the chocolate biscuits} is something that is possible {for you} to do.

b. Already there are sawmills that cannot operate at full ability because of wood shortages. (BNC) {To operate at full ability} is impossible {for some sawmills} (to do).

c. Can you speak any East European languages? (ICE-GB) Is {to speak East European languages} something that is possible {for you} to do?

d. You can get coffee from the machine downstairs. {For you to get coffee from the machine downstairs} is possible.

e. Somewhat less obviously, it has been argued that in certain circumstances States can be treated as parties to the Court’s exercise of its advisory jurisdiction. (BNC) {To treat States as parties to the Court’s exercise of its advisory jurisdiction} is possible.

The source of the modality may be internal or external to the subject. This makes for the distinction between, on the one hand, (narrow scope) ability and, on the other, all other types of narrow scope possibility meanings and wide scope possibility meanings. The external source of the possibility (or absence of possibility) is the speaker in (6a), wood shortages in (6b), the faculty infrastructure in (6d) and legislation in (6e).

The decisive criterion for permission meaning (the definitions of which are very often circular in previous descriptions) and permissibility is as follows: what signals out permission meaning is that the source owes source status to its potential to impose a barrier to actualization. In (6a), for instance, the speaker is presented as being in a position to block the taking of liberties ([+ potential barrier]) but not imposing that barrier, so the interpretation is ‘permission’.

Note that the speaker is seen as the source of the possibility purely by virtue of the fact that the speaker has this potential to impose a barrier to actualization. In (6e), an example of (wide scope) situation permissibility, the source (legislation) is also seen as capable of imposing a barrier to the actualization of the situation, and it is only for that reason that it is considered to be the source of the possibility.

As pointed out in the introduction, while one may agree (or not) that it is necessary to distinguish between five subclasses of root possibility meaning (challenge (a) referred to on page 1), whatever the number of classes decided on, this does not as such tell us something about the status of the subclasses (challenge (b) referred to on page 1). It is also necessary to
make explicit one’s view on the semantics/pragmatics interface and the role (not) played by the context in determining semantic and/or pragmatic meaning. A corollary of the more general theoretical stance chosen is that the subclasses will be considered as (contextually determined) classes of meaning in their own right, or as pragmatic variants of root possibility meaning.

Ambiguous root possibility examples exist (cf. identity of sense under anaphora test) and they are contextually disambiguated in the same way as those that are ambiguous between a root and an epistemic reading (cf. examples in (5)):

(7) Mary can swim. And so can Jennifer. (permission or ability)

It will be clear that the criteria used to establish the different classes of root possibility crucially depend on the interpretation in context: it is only one of the paraphrases of scope (narrow or wide) that is compatible with the meaning communicated by the utterance; source can be identified in the linguistic or extra-linguistic context; the status of source being determined by its potential to impose a barrier is also a criterion that is verified in context. In other words, the five root possibility classes are pragmatically determined. The observations made in this section lead us to argue that the five classes or root possibility are also distinct, pragmatically determined semantic categories.5

4.3. Modal Meaning Grids

It is possible to distil, from the preceding discussion, the central building blocks of a framework for the description of modal meaning. Three potential layers of meaning can be identified:
1. Semantic core, lexically encoded meaning
2. Contextually determined semantics
   (a) epistemic versus root
   (b) subclasses of epistemic meaning and subclasses of root meaning
3. Contextual effects (pragmatics)
   (a) of sentence type
   (b) of strength
   (c) etc.

A modal meaning grid can be developed on the basis of this structure:
The semantic core of *can* is possibility. Depending on whether or not one accepts that sentences like that in (8) express epistemic meaning, a first semantic distinction emerges (or does not emerge), that between root possibility and epistemic possibility.

(8) You *can* be maybe next Australia next South Africa. (ICE-AUS) (Collins 2007: 5)

On the root side, five subclasses of contextually determined meaning can be identified (cf. examples in (6)). No further semantic subclasses of epistemic meaning can be identified. In other words, while the framework provides slots for potential meaning distinctions, it does not presuppose that a certain level of meaning has to be ‘validated’ in order for the meaning distinctions at the next level to arise. This observation is particularly relevant for the description of the meaning(s) of a modal like *shall*.

The examples in (1f) and (1g), (2h) and (2i) and (3a) and (3b) show that the communicative effects of modals in declaratives are not always the same as those in interrogatives. Illocutionary force impacts on modal meaning; accordingly, sentence type and the linguistic context are factors that also need to be taken into account when describing meaning. For instance, while *You can stay* may communicate the literal meaning of permission, the interrogative *Can you stay?* is more likely to be understood as inquiring into willingness and/or constraints on general possibility (‘Is your staying possible?’). In a similar way *Must you put on your sneakers?* is understood as a reprimand (i.e. Stop behaving so foolishly!) rather than as a question inquiring into circumstantial necessity (i.e. Do you feel compelled to behave like that?). In this case, the semantic core of the modal is considerably bleached. No such
bleaching arises in the declarative *You must put on your sneakers*. We would like to argue that the effect of illocutionary force is a pragmatic aspect of meaning, in the sense that, even though the unmarked interpretation of the interrogative sentence with *must* is that of a reprimand, this meaning is context-dependent and can (be it in rather marked circumstances) be cancelled. The following attested example is a case in point:

(9) “*Must* you talk like that?” Kevin said in an annoyed tone. A.J. knew what buttons to push to get Kevin mad and he was pushing them at that very moment. “Yes I *must!*” A.J. said, walking out the door. (Cobuild)

The effect of illocutionary force on the meaning of modals has been referred to by e.g. Collins (2007), who uses the term ‘dynamic implication’ (Palmer (1990: 86)) to refer to utterances whose “literal semantic interpretation is dynamic, but the relevant interpretation is dependent upon the illocutionary force” (2007: 9). He gives the following examples:

(10) a. Perhaps we *can* talk about that on another occasion. (ICE-GB) (suggestion)
    b. I *can* make one of those up for you to show you how to put that together. (ICE-GB) (offer)
    c. Mum *can* you please send over copies of all my bank and credit statements. (ICE-GB) (request)
    d. You *can* bloody well keep your hands off. (ICE-GB) (command)

We must again stress that the observations made are meant to highlight meaning distinctions that need to be addressed in a framework for modal meaning. It is not possible, for reasons of space, to apply the proposal to a wider set of examples in the context of this article.

The approach to meaning just outlined can also be used to describe the meaning of *may:*
As in the case of *can*, a first (contextually determined) semantic distinction is between root meaning and epistemic meaning (11a). *May* can communicate three root modal meanings: that of permission (11b), general situation possibility (11c) and permissibility (11d):

(11) a. You *may* be left out of it because you are a freelancer.  (ICE-GB)  
    b. Let me develop the point if I *may* Jonathan.  (ICE-GB)  
    c. For instance, a chemical *may* be screened against enzymes implicated in disease.  (ICE-GB)  
    d. A person under the age of eighteen years *may* not be admitted without the Director’s special admission.  (ICE-GB)  

There is pragmatic strengthening in an epistemic example like (12), which is a suggestion, and does not merely express ‘neutral possibility’:

(12) Thinking of moving your table out to your main room.
    You *may* want to do that.
    Right that’s cleared up.
    Quickly cleared off.  (ICE-GB)

The effect of illocutionary force is clear from (13), in which the speaker is not asking for permission but is rather giving an order, and in this way *may* is strengthened:

(13) *May* I have the lights please?  (ICE-GB)
The list of factors resulting in contextually determined pragmatic aspects of meaning in table 2 and table 3 is not exhaustive. It is inherent in their nature that they do not always have an impact on the meaning communicated whenever the modal in question is used. Future descriptive research (building on descriptions like, for instance, those in Coates (1983)) will need to specify what elements in the context trigger the meaning distinctions. In order to generate accurate descriptions of modal meaning, meaning grids of the kind outlined in table 2 and table 3 need to be developed for individual utterances so that all the relevant factors and meaning distinctions that can be communicated by one modal can be identified.

The meanings communicated by the different modals are moulded differently and accordingly, we are in agreement with, for example, Timotejevič (2008) when she argues that a differentiated approach is called for. A framework for modal meaning has to be flexible and the meaning layers distinguished are not necessarily realized (to the same extent or in the same way) by any modal in any utterance. This observation seems a mild understatement when shall is drawn into the discussion: while few would question the status of shall as a modal, it is very difficult to pin down its semantic core in terms of possibility or necessity. Far more than in the case of modals like can and must, the meanings of shall are determined by the construction in which it is used: for instance, a question in which shall is followed by a first person subject (as in (3a)) is likely to be interpreted as an offer of service or as a suggestion, a first person in an affirmative sentence (as in (3d)) tends to communicate intention or volition, a third person in a negative sentence (as in (3f)) communicates a prohibition. In other words, the description of shall appears to be impossible without reference to the concrete linguistic structures in which it is used and to illocutionary force. It is not possible to pursue this issue in more detail in this article, but the inclusion of shall shows that a great challenge stands ahead if one is to arrive at a model that can achieve descriptive adequacy.

5. Conclusion

It was our aim to show that a very considerable number of factors influence the meaning(s) communicated by modals and that the relative weight of the factors is different depending on the modal. Further detailed descriptions are required to survey all the aspects of meaning. Once this has been done, it will be possible to construct a full-fledged framework of modal meaning that is, on the one hand, sufficiently broad in scope for all features to be encompassed and, on the other, sufficiently flexible so that the potential layers of meaning
can be activated to a greater or a lesser degree. The approach outlined in this article is a modest attempt to pave the way for a modal model on the right track.

6. Epilogue

I wrote my PhD dissertation under Renaat Declerck’s supervision. In the preface to my book (1996), which is based on my PhD (1993), I thanked my supervisor for setting “standards of professional excellence that will provide a continuous challenge to my own work”. Fifteen years later, I can only confirm that this is still the case, and predict with confidence that it will remain the case. I am grateful to my mentor for having enhanced my awareness of delicate meaning distinctions, both through his publications and through the discussions we had during the years we collaborated. There is no doubt that the ways in which Renaat Declerck has unravelled meaning distinctions will continue to inspire future generations of linguists.

References


Reed, Susan and Ilse Depraetere (ms) “Towards a more explicit taxonomy of root possibility.”


Endnotes

* I have benefited a lot from discussions about modal meaning(s) with Bert Cappelle and Susan Reed. I am very grateful to Susan Reed for her detailed comments on a draft of my paper. I would also like to thank the editors for their feedback on the manuscript. It goes without saying that any inaccuracies in this paper are the author’s.

1 This approach is also inherent in Leech and Coates (1979).

2 The examples are from the British English component of the International Corpus of English (ICE-GB) and the British National Corpus (BNC). Note that disfluencies and anacolutha in the corpus examples have been removed to facilitate reading.

3 He and Tsoneva (1998: 633) also discuss examples with can that communicate a requirement rather than a possibility.

4 Although this definition of permission clearly has resonances associated with Talmy’s (1988) force dynamics, it is not meant to invoke the paradigms within which he formulates his ideas.

5 It will be clear that it is not possible, within the context of this article, to develop in detail the argumentation for each of the different subclasses.

6 Cf. e.g. Keck and Biber (2004), who distinguish between the ‘meaning of modals’ and the ‘communicative functions of modals’. One of the conclusions of their investigation is that “general semantic classes such as possibility and necessity do not always capture the full range of meanings that particular modals convey” (2004: 24).

7 I am grateful to Bert Cappelle for drawing my attention to this example.

8 If we were to apply the same approach to could and might, it would become clear that the past morpheme gives rise to shades of pragmatic meaning that are not communicated by its present tense counterparts.