

# Dynamic Modality

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*This paper explores the dynamic senses of CAN and WILL. It is argued that these dynamic senses should not be treated as subtypes of modality. The tendency to analyse these meanings as ‘modal’ is a practice which follows from the fact that they are meanings found in modal verbs. However, instead of analysing them as modal meanings, we should treat them as part of the propositional content of the historical antecedents of CAN and WILL, which have not yet been lost through the processes of semantic change associated with grammaticalization.*

**Keywords:** modality, proposition, semantic change, grammaticalization

## 1. Introduction

Many studies of the English modal verbs MAY, MIGHT, CAN, COULD, SHALL, SHOULD, WILL, WOULD, & MUST assume that there are three kinds of modality expressed by these predicates: dynamic, deontic, and epistemic. Palmer (2001: 7-10) distinguishes between propositional modality and event modality. Propositional modality describes a speaker’s attitude to the status of a proposition and therefore epistemic modality is one kind of propositional modality. Event modality ‘refers to events that are not actualized’ (Palmer 2001: 8) and so both deontic and dynamic modality are kinds of event modality.<sup>1</sup> This paper is about dynamic modality, and its relationship to the other kinds of modality expressed by the English modal verbs. In particular, this paper is interested in the question of whether it is proper to treat dynamic modality as a kind of modality at all. The argument will be that dynamic modality simply reflects the retention of an earlier non-modal meaning through the grammaticalization of a subset of modal verbs.

The three kinds of meaning that modal verbs express are presented in (1) and (2). The examples in (1) show the contrast between epistemic and deontic modality, expressed by MUST and MAY. The examples in (2) show the contrast between deontic and dynamic modality expressed by CAN. The examples are from Huddleston and Pullum (2002: 178; their [8] and [9]). Huddleston and Pullum distinguish between MUST as an example of strong epistemic or deontic modality and MAY which shows weak epistemic or deontic modality. Huddleston and Pullum’s examples showing dynamic MAY have been left out.

- |     |                                       |             |
|-----|---------------------------------------|-------------|
| (1) | a. He <u>must</u> have been delayed.  | [epistemic] |
|     | b. You <u>must</u> pull your socks up | [deontic]   |
|     | c. You <u>must</u> be very tactful.   | [ambiguous] |

The examples in (1a) show epistemic modality; in these examples the speaker hypothesizes that the subject has been delayed. The speaker’s commitment to the notion that the subject has been delayed is strongly articulated in (1a). In (1b), the speaker places an obligation on the hearer or gives the hearer permission. Example (1b) therefore shows deontic modality. (1c) is ambiguous between deontic and epistemic modality: it can be interpreted as either ‘you are obliged to be tactful’ or ‘I conclude that you are tactful’.

As indicated above, the difference between propositional modality and event modality is made clear in these cases: in *He must have been delayed*, the speaker is expressing a

commitment to the proposition that he has been delayed; in *You must pull your socks up* on the other hand, the speaker is placing an obligation on his or her interlocutor to undertake an action (which is a subtype of event).

The examples in (2) show the contrast between dynamic and deontic modality. These are both kinds of event modality.

- |     |  |             |
|-----|--|-------------|
| (2) | a. She <u>can</u> stay as long as she likes.             | [deontic]   |
|     | b. She <u>can</u> easily beat everyone else in the club. | [dynamic]   |
|     | c. She <u>can</u> speak French.                          | [ambiguous] |

Dynamic modality is prototypically associated with CAN, although Palmer (2003: 7) claims that it can also be found with WILL. We shall explore this claim further below. Huddleston and Pullum (2002: 178) define dynamic modality as being ‘concerned with properties and dispositions of persons, etc., referred to in the clause, especially by the subject NP.’ They also assert (2002: 179) that dynamic ability is ‘less central to modality than deontic permission in that it does not involve the speaker’s attitude to the factuality or actualisation of the situation.’ Finally, they state that dynamic modality is most obvious with CAN and that it does not apply as generally to the other modals.

From Huddleston and Pullum’s discussion, we can see that there are three main differences between dynamic modality on the one hand and epistemic and deontic modality on the other, listed here.

- Dynamic modality is part of the propositional content of the clause. Therefore, it is different from deontic and epistemic modality which take the propositional content of the clause within their scope.
- Dynamic modality lacks subjectivity. Both deontic and epistemic modality have subjective senses, so in this way, dynamic modality is different from other kinds of modality.
- Dynamic modality is restricted: CAN is the only modal which clearly retains a dynamic sense, although it is argued by Palmer (2003: 7) that WILL also has a dynamic meaning.

It is particularly important to factor dynamic modality out from deontic modality, because there is a tradition of conflating them. There are two main traditions which class dynamic and deontic modality together. On the one hand, they are both treated as subtypes of ‘root’ modality – for example, in the analysis of Coates (1983), and Sweetser (1990) – and, on the other, they can be treated as subtypes of agent-oriented modality (Bybee 1985; Bybee Pagliuca, Perkins 1994). As Ziegeler (2003: 38) points out, ‘Coates’ root modalities of permission, obligation, necessity and possibility can be included, therefore, in Bybee, Pagliuca and Perkins’ categorisation of agent-oriented modality’. However, as the examples in (2) show, there are clear differences in paraphrase between dynamic modality and deontic modality. This point is made especially clearly by Nuyts (2001: 25). Nuyts et al (2005: 7-8 & 22-27) also very clearly set out differences between dynamic and deontic modality.

In this paper the argument is that dynamic modality is not a modal meaning, but rather is simply the retention of an earlier sense which persists after CAN has joined the modal verb system of English (with similar arguments applying to WILL). The arguments for this position are based on the claim that dynamic modality is distinct from deontic modality, and that it is

inappropriate to subsume it under the category of root modality or to assert that it belongs together with deontic modality as a kind of agent-oriented modality. Ziegeler (2003: 37), citing Denison's (1993: 293) distinction between deontic and dynamic modality, suggests that dynamic modals 'are associated with the ability and volition of the subject and are suggested to be not modal verbs at all, since they were claimed by Palmer to express no indication of speaker subjectivity' as part of a wider discussion about whether dynamic modality and deontic modality should be categorised together. Foolen (1992), Papafragou (1998: 2), and Palmer (1990: 37) have previously made claims to the effect that dynamic meaning is not a modality. Papafragou (2000: 53) argues that the 'ability' meanings of dynamic CAN are not part of the semantic structure of CAN.

The claim of this paper is that we can understand dynamic modality by looking through the lens of grammaticalization, which allows us to see that the modal CAN has retained a certain amount of propositional content, and that what is often analysed as dynamic modality is this propositional content; indeed, I shall argue that CAN is a laggard relative to the other modal verbs of English. It is late in developing epistemic senses, and it retains its propositional dimensions long after the other modal verbs. We can, and should, treat the dynamic senses of CAN (and WILL) as the retention of a sense from an earlier stage in the development of the verb rather than as particular kind of modal meaning. The question of whether dynamic modality is properly treated as a kind of modality subsumes the question of whether it belongs with root modality or agent-oriented modality. It follows from my argument that dynamic modality should not be classed together with root modality or agent-oriented modality.

In the next section, I present the issues that are significant in the analysis of modality; in §3, I discuss dynamic modality and present arguments about why it should not be analysed as a kind of modality; in §4, I present my conclusions that the semantic change of the modal auxiliaries in the context of grammaticalization, and present arguments for why dynamic modality should be treated as the retention of an earlier, pre-modal, sense, as well as some consequences for further study.

The paper generally works with the tools of Huddleston and Pullum (2002). Where it proves necessary, I adopt the theoretical tools of Word Grammar (Hudson 1990, 2007) which is a cognitive theory of language. I also exploit Talmy's (1988) and Sweetser's (1990) force-dynamic analysis of modality.

## **2. The analysis of modality.**

In this section, I look at some issues that are relevant in the analysis of deontic and epistemic modality. We shall see in §3 that the same issues are not relevant in the analysis of dynamic modality.

When we analyse modalized expressions, such as the examples in (3), there is a complex interaction between the proposition or event, the modality itself, the mood of the sentence, and the context. In this section, I am primarily concerned with the relationship between the modality and the context. I shall not discuss interactions of modality and mood. I shall show these interactions by exploring an analysis of modality as expressed by modal verbs; I go on to show that the interaction between modality and context is not limited to subjective expressions, by looking at more objective kinds of modality. The point of this

discussion is that it demonstrates that a relationship between modality and context is inherent in modality, irrespective of whether the modality is subjective or objective.

- (3) a. He left at 3 o'clock; he must be in Manchester (by now).  
b. May I go?

In (3a), the proposition is 'that he is in Manchester'. The modality is epistemic because the sentence expresses the speaker's commitment to the likelihood of the propositional nucleus being true. The sentence is declarative, and contextual information is provided not only by the fact that he left at 3 o'clock, but also by the time of the utterance: if a phrase such as *by now* is not uttered, it is implied. In (3b), the event is 'I go', the modality is deontic, the mood of the sentence is interrogative, and contextual information is provided in the relationship between speaker and hearer, as well as the deictic pronoun *I*.

Some of the connexion with the context is associated with subjectivity, but it is possible to show that the contextual aspects of modality are not purely to do with subjectivity because objective modality also involves context. It is widely understood that the English modals are subjective –that is that they encode a speaker's eye view– and that part of their grammaticalization has involved their becoming increasingly subjective (see Traugott 1989, Sweetser 1990). But for the purposes of the argument being developed here, it is necessary to show that modality involves context, irrespective of whether it involves subjectivity or not. There is some debate about whether objective epistemic modality is possible. Palmer (2001: 33) in his discussion of epistemic modality argues that the reason why the past tense form of modal verbs does not express past time is inherent to the meanings of epistemic modals, because '[i]nferences or conclusions are essentially subjective and performative. They are actually made by the speaker at the time of speaking.' However, as Palmer observes that Lyons (1977: 798) 'offers a theoretically possible example of objective epistemic modality' (although Palmer argues that 'it is contrived and he [Lyons] concedes that the distinction between subject and object epistemic modality "is, to say the least, uncertain"') we shall assume that objective epistemic modality does exist.

Palmer recognises the existence of more objective epistemic modality in his discussion of HAVE TO (2001: 34) so let us assume that objective epistemic modality is possible, and see whether it involves the same set of factors as the kind of subjective modality found with modal verbs. Perkins (1983: 68), following a discussion in Lyons (1977: 805), argues that the underlined part of (4) expresses objective epistemic modality.

- (4) If it is possible that it will rain, you should take your umbrella

The fact that the epistemically modal expression *possible* in (22) can be embedded under IF, in the protasis of a conditional clause, is what makes this an objective epistemic modality for Perkins.<sup>2</sup> Now if we treat the underlined part of (4) separately, we can see that there is a propositional nucleus, 'that it will rain'; that the modality is epistemic; that the mood of the sentence is declarative; and there is a relationship to context. The possibility has to be relative to local, immediate environmental factors. The epistemic modality may be objective in that the degree of likelihood that it will rain might not be an individual's inference, but the context has to provide the likelihood. The possibility is relative to the time the utterance is made and it is relative to what is known about relevant weather conditions.

Therefore, we can conclude that epistemic modality relates a proposition to contextual information.

We shall see that the same applies to objective deontic modality, which also involves a link to context. Palmer (2001: 75) says, ‘deontic modals are often used to indicate permission and obligation emanating from the speaker, but it cannot be claimed that they are always subjective in this sense.’ He argues that the speaker need not be involved in the examples in (5).

- (5) a. You can smoke in here.  
b. You must take your shoes off when you enter the temple.

The reason why the speaker need not be involved is that the authority for the permission or obligation need not emanate from the speaker. Example (5a) can report permission given by law, or a third-party agent; example (5b) reports a cultural convention which has the status of a law. Furthermore, Palmer argues that the example in (6b) is more objective than that in (6a).

- (6) a. You must come and see me tomorrow.  
b. You have to come and see me tomorrow.<sup>3</sup>

The reason is that (6a) is a (weak) invitation whereas (6b) suggests that ‘there is a compelling reason independent of the speaker.’

What is significant for the purposes of the current discussion is that objective deontic modality also involves context: the obligation applies at a time which is relative to the time of speaking. Indeed, with deontic modals such as CAN, the past tense form does not have past time reference exactly for this reason. This point is shown in the examples in (7), where (7b) is not the past-time denoting equivalent of (7a).

- (7) a. You can go to the party. [intended reading: speaker gives permission]<sup>4</sup>  
b. You could go to party if your aunt weren’t visiting. [speaker signals possibility of permission, but permission can be denied, as it is here in the IF clause]

From this we can see that modality involves context. Furthermore, we can see that modality involves contextual information which goes beyond the question of whether the expression is subjective or not. Context does not only involve linguistic context, as it does in the examples which I have presented here. It also involves other information. The examples in (8) are from Brown (1995).

- (8) a. From all that I can collect from your manner of speaking you must be two of the silliest girls in the country.  
b. [speaker has lost keys] I may have put them down on the table. They’re not in the door.  
c. You can’t come in because I haven’t finished dressing

Brown points out that in these examples, the context provides the ‘warrant’ for the inference expressed in the modalized utterance, which is underlined in the examples.

Following Lyons (1977),<sup>5</sup> Brown uses the modal operators Necessary and Possible in his analysis of both deontic and epistemic modality, and I follow Brown's presentation here.

<b>Context</b>	<b>Modal operator</b>	<b>Proposition/Event</b>
Your manner of talking	Necessary	You are two of the silliest girls
Keys are not in the door	Possible	I put them down on the table
I haven't finished dressing	Not possible	You come in

Table 1 *Brown's account of context and modality.*

What is significant about this analysis is that it shows that modality involves context in two ways: the first is that there is the linguistic context of the utterance – its place, time, speaker, and for some types of modality its hearer; the second is that there is what we might call the situational context – what provides the source of the inference in (8a,b) or the reason for the deontic modality in (8c).

The latter shows, then, that modality not only involves a kind of layering, as Lyons (1977) and Matthews (2003) have both argued, but that it also involves a relationship between the utterance and the context. This can be represented in various ways. For example, in Word Grammar, it is understood that the grammatical analysis is not a representation of abstract words, in an abstract sentence, but that it is an analysis of the words of an utterance. Hudson (1990: 63-66) argues that words are actions, and that they minimally have a time, a place, and a speaker. This analysis makes it very straightforward to analyse deictic expressions like the pronouns I, ME, and YOU as well as adverbs like NOW, and the same analysis can be extended to subjectivity for which reason, I adopt a Word Grammar account of the relationship between utterance-word and context.

This account permits us to establish some similarities between modality and mood. Like modality, mood involves context, and like modality, mood is atemporal. This can be seen in two ways. First, we can look at interrogatives. In the case of an interrogative, the speaker addresses the hearer – the mood of the sentence brings about a specific interaction between speaker and hearer. What is more, the question is at the time of the utterance – it may be about a tensed event or proposition, so the event or proposition may be past, present or future, but the actual time of the question is the time of the utterance. In this respect, questions are like epistemic modality, where as I said before, Palmer (2001: 33) argues that inferences and conclusions are 'essentially subjective and performative'. Questions too are essentially performative.

The analogue to deontic modality in the English mood system is the imperative. Imperatives in English are not tensed, but they are situated relative to the speech event and the speaker: if I say *come in*, I am inviting the hearer to come into my room at the time of speaking. Therefore, both mood and modality involve an interaction with the context. In both cases, this involves reference to the speech event, and in both cases, the speech event is a kind of action. In the case of interrogative mood it is the action of asking a question; in the case of imperative mood it is the action of giving an instruction; in the case of epistemic modality it is the action of drawing an inference; and in the case of deontic modality it is the action of giving, or withholding permission, or placing an obligation.

So far, we have seen some descriptive facts about modality which move beyond the simple description of what modals mean, and which also take us past the notion of subjectivity. I have shown that modality is situated in the speech event, and its context, and

that temporal information does not apply to modality. I have also shown that even in the case of ‘objective’ modality, we need to be able to refer to the context. However, this does not provide us with all of the tools that are pertinent to the analysis of modality. To finish this section, we shall see how the grammar of modality can be analysed in force dynamic terms, in the case of both deontic and epistemic modality.

The analysis assumes a cognitive approach, and the model of modal expressions offered here follows Talmy (1988) and Sweetser (1990). This approach is compatible with studies of the grammaticalization of the English modals, and with the view adopted here about the history of modal senses and polysemy. I shall assume, following Talmy (1988) and Sweetser (1990), that modality involves force-dynamic relations. Talmy (1988) discusses force-dynamics in terms of participants in events: his discussion centres on the notion of the Agonist and the Antagonist. Sweetser (1990: 52) discusses modality in terms of forces, however she generalizes away from aspects of Talmy’s account and presents her account instead in terms of ‘sociophysical concepts of forces and barriers’. Following the usage of Croft (1991), we can use the labels *Initiator* and *Endpoint* for the Antagonist and Agonist respectively.

We can say that both deontic modality and epistemic modality involve force-dynamic relations. In the case of deontic modality, the relations are simple: the speaker is the Initiator (the source of the force) and the hearer is the Endpoint. It is a little more complex in the case of epistemic modality. I shall present an analysis of the salient parts of (8a) and (8c), repeated here as (9).

- (9) a. You must be two of the silliest girls in the country.  
b. You can’t come in.

Sweetser (1990: 62) claims that in both deontic and epistemic modality there is a parallelism, ‘[s]ociophysical forces acting on the subject are taken as analogous to the logical “force” of premises acting on the speaker’s reasoning processes’. In the case of the deontic modality in (9b), the speaker is the Initiator, and the subject the Endpoint. In the case of epistemic modality as expressed in (9a), the proposition is the Initiator (or the reasoning processes leading to the proposition, which the proposition stands for in a metonymic relationship) and the speaker is the Endpoint. Both are subjective, because the speaker is implicated in the semantics of both, but the role of the subject with respect to the force-dynamics is reversed.

This claim, that force-dynamic relations can link to contextually present participants in the speech event, is a radical view of argument linking. It is possible to model this in Word Grammar because of the view that words are actions. It is a view that is consistent with Talmy’s and Sweetser’s presentation of force-dynamic relations, and it provides a neat way of viewing subjectivity.<sup>6</sup>

To summarise this section, I have argued that the main elements of modality are these:

- It involves the context.
- The force-dynamic relations Initiator and Endpoint link to elements within the context, such as the speaker, rather than to elements within the sentence.
- It is performative.
- It is temporally located in the speech event.
- (It is prototypically subjective.)

The next section discusses dynamic modality. There are two claims. The first is that in many descriptive ways, dynamic modality is quite different from deontic modality – this argues for treating them as distinct areas of meaning. Having made that claim, I go on to claim that dynamic modality, with respect to contextual involvement and the linking of force-dynamic relations, is quite unlike either deontic or epistemic modality but is, in fact, rather more like the behaviour of the verb TRY. This claim constitutes the main part of the claim that dynamic modality is not, in fact, a modal meaning at all.

### 3. Dynamic modality

A standard definition of dynamic modality from Huddleston and Pullum (2002: 178) was given in the discussion surrounding (2) in §1 above. Huddleston and Pullum diagnosed for dynamic modality by finding ambiguity in CAN. Their example of a clear case of dynamic modality was (2b); (2c) is ambiguous. The examples are repeated here.

- |     |  |             |
|-----|--|-------------|
| (2) | a. She <u>can</u> stay as long as she likes.             | [deontic]   |
|     | b. She <u>can</u> easily beat everyone else in the club. | [dynamic]   |
|     | c. She <u>can</u> speak French.                          | [ambiguous] |

The ambiguity diagnostic does not by itself demonstrate that CAN is an exponent of dynamic meaning. All it does is to demonstrate that CAN is polysemous. Recall Huddleston and Pullum's (2002: 178) definition of dynamic modality. They say that it is about 'properties and dispositions of persons, etc., referred to in the clause, especially by the subject NP.' Huddleston and Pullum's ambiguity diagnostic merely diagnoses for polysemy, not for the modal status of those senses. I think that the definition is key to the issues at hand. What it demonstrates is that Huddleston and Pullum seem to be of the view that dynamic modality is a kind of contribution to the event described in the sentence rather than a modalisation of that event. Other ordinary predicates are also about the properties and dispositions of persons referred to in the clause. For example, *Eleanor has green eyes* describes a property of the subject, referred to by *Eleanor*.

We can elaborate on this view by looking at another definition, this time from Palmer (2003: 7) which gives the examples in (10) as examples of dynamic modality.

- (10) a. They can run very fast.  
 b. I will help you.

Palmer distinguishes between dynamic and deontic modality in terms of the notion of 'control' – that is, who is the controller of the event. In the case of deontic modality, he argues, 'the event is controlled by circumstances external to the subject of the sentence' whereas in the case of dynamic modality, 'the control is internal to the subject'. Talking about deontic CAN versus dynamic CAN, Palmer says 'with Deontic the ability comes from the permission given (externally), with Dynamic the ability comes from the subject's own (internal) ability'. This definition is perfectly consistent with Huddleston and Pullum's given above but more importantly it establishes the notion of control. This is a force-dynamic notion – what is being suggested by Palmer is that the subject is the Initiator of the event.



The question that arises is whether dynamic meaning has any of the properties of modal meaning. Looking at the dynamic examples in (2), we can see that they do not fit the criteria for modality given in §2. Ziegeler (2003) seeks to exclude the dynamic meaning from modality on the grounds that it is not subjective. It is my intention to show that we should exclude dynamic meaning from modality because it fits none of the criteria for modality spelt out in §2. To summarise:

- Dynamic meaning is not contextual.
- In dynamic modality, there is no linking of Initiator or Endpoint to elements in the context.
- Dynamic modality is not performative.
- Dynamic modality is temporally marked, and is not temporally bound to the speech event.
- And, as Ziegeler notes, dynamic modality is not subjective.

Let us take examples (2b) and (10a). Taking the ‘ability’ meaning at hand, neither of these involves the context semantico-pragmatically.<sup>7</sup> There is no sense in which the ‘ability’ meaning of CAN relates to the speaker, or the listener. These examples are not performative: they are both simple declarative utterances; they involve no inferencing, and there is no element of commission or obligation in their meaning. If I commission you to perform an action, perhaps by saying *you may go now*, then I am performing an action. Dynamic modality is not performative in the way deontic modality is.

The facts about time and tense show an important difference between dynamic meanings and deontic modality. The modals COULD, WOULD, and SHOULD, which are the historic past tense forms of CAN, WILL and SHALL respectively, behave like past tense forms with respect to sequence of tense behaviour, but they do not behave like past tense forms in terms of their semantics, when they are epistemic or deontic. This fact, in both cases, is related to the performative nature of the modality. In §2, I presented Palmer’s (2001: 33) claim that epistemic modality is essentially performative because making an inference is performative. Palmer (2001: 76) makes a similar claim for deontic modality when he claims that a speaker cannot place an obligation in the past at the present time. This observation is related to the subjectivity of the modals. Palmer points out that the less subjective (quasi-) modal HAVE TO is available for describing an obligation that applied in the past, as in *he had to go to court*.

The crucial fact is that dynamic CAN is marked for tense: dynamic COULD refers to a past time state of affairs. In example (11), COULD is the dynamic past-time-referring form of CAN.

- (11) a. I can play the piano.  
b. I could play the piano (until I broke my thumb).

Note that without the parentheses, example (11b) is ambiguous between a deontic interpretation and dynamic one. On the deontic reading, it denotes a weak permission (where the deontic reading of (11a) suggests strong permission) but it does not suggest any kind of temporal reading. The temporal interpretation of (11b) is only available on the dynamic reading, which is coerced by the material in parentheses. The observation must be that dynamic CAN behaves very differently from deontic CAN.

Huddleston and Pullum (2002: 196-7) discuss past time meaning and state that the majority of examples involve dynamic modality ‘the kind [of modality] that is least different from the type of meaning expressed by lexical verbs’. They give one example of past time deontic COULD: [*i*]n those days we could borrow as many books as we wished. However, this is not a prototypical example of deontic meaning: the source of the permission is not given, it is not performative, and so the meaning can be paraphrased by BE ABLE: *in those days we were able to borrow as many books as we wished*. Here, I think, we have a case where permission and ability overlap. Note that it is not possible for COULD to have past time reference in a situation where the source of the modality is identified, and which is performative. When a parent says to a child *you could go to the party*, on the reading where what is at issue is the parent’s permission, they are indicating that permission is a remote likelihood. They are clearly not saying that there was past-time permission (which either still obtains or which has been cancelled).

Returning to the force-dynamics of modality, we have seen that subjectivity is related to the argument linking patterns of the force-dynamic relations Initiator and Endpoint. In both deontic and epistemic modality, one of these force dynamic relations is linked to at least one participant in the speech event – the speaker in the case of epistemic modality, or the speaker and the hearer in the case of deontic modality. We can think a little further about the linking of force-dynamic relations. In an example like (2b) or (10a), the subject of the verb is the Initiator. The force-dynamic chain begins with the subject. Where the Initiator is linked to the subject, we have a prototypical case of agentivity, and so we can say that dynamic CAN is an agentive verb. In this respect, CAN is like TRY, which Jackendoff (1990) analyses as a verb with only one force-dynamic participant. Dynamic CAN is therefore unlike deontic and epistemic modals in that it has only one force-dynamic participant, and that force-dynamic participant is linked solely within the clause, like any ordinary causative or otherwise agentive verb.

In fact, in what sense is dynamic CAN different from TRY? It does not appear to be very different at all. The primary difference seems to be that in the dynamic interpretation of *he can drive* it is entailed that he is able to drive, whereas in *he tried to drive*, there is no entailment with respect to the success of the outcome. *He tried to drive* refers to a single event; *he can drive* refers to a property that holds of him indefinitely. Dynamic CAN is simply a verb which means ‘to be able’ much as TRY means ‘to attempt’. Note too that dynamic CAN does not only refer to properties. Nor is it always an Individual-level predicate. The examples in (12) show cases where dynamic CAN refers to an event which is co-temporal with the utterance. In these cases, CAN does not refer to a permanent property of the subject. To put this another way, the meaning of CAN is part of the event.

- (12) a. Their enemy can see the troops.  
 b. Their enemy could see the troops.  
 c. Jane can hear the Arsenal crowd roaring.  
 d. Jane could hear the Arsenal crowd roaring.

In (12a), the ability of the enemy to see those troops is a contingent property of the enemy. It applies at the time of the utterance, but only because the verb *can* is present tense (and shows tense marking when it is dynamic). In the examples with *could*, the ability to see or hear is clearly past. Indeed, dynamic COULD is not only past denoting, it is also perfective, just like other simple past tenses in English.

These examples are significant, because the use of dynamic CAN helps the speaker to avoid a problem often found with verbs of perception and sensation. As Huddleston and Pullum (2002: 169) point out, perception verbs are ‘at the boundary between stative and progressive’. I think that this means that (at least in the present tense) perception verbs sit uncomfortably in both the simple present and the present progressive. As Huddleston and Pullum point out, a simple present perception verb seems to have a special interpretation. The examples in (13) are from Huddleston and Pullum (2002: 169).

- (13) a. Yes I see it now.  
b. I smell something burning.

As they say, the simple form ‘tends to sound somewhat more dramatic’ than examples using dynamic CAN. On the other hand, the progressive seems to be used with perception verbs when the focus is on the ‘quality of the sense organs’, as in (14a) below, or when ‘the sensation is understood to be hallucinatory’, as in (14b). The observations and examples are from Huddleston and Pullum (2002: 170).

- (14) a. I’m hearing you loud and clear.<sup>8</sup>  
b. She’s seeing little pink men from Mars.

These facts about perception verbs mean that the use of dynamic CAN gets around the odd interpretations that the simple present and simple past tend to force: CAN simply provides its ordinary stative meaning. However, this fact shows that dynamic meaning, at least when CAN occurs with a perception verb, is quite unlike deontic or epistemic modality.

The reason is that if *I could see you* is true at a given past point in time, then *I saw you* is true at that same time. This entailment does not follow with other verbs. If *I could play the piano* is true at a given point in the past, it does not follow that I was actually playing at that point in the past. This has consequences for dynamic modality – in the case of CAN with perception verbs, the meaning of CAN is an inherent part of the event denoted by the perception verb complement of CAN. This means that there can be no element of modality to the meaning of dynamic CAN when it occurs with perception verbs.

An important element of modality –irrespective of the other criteria given above– is that a modal predicate should denote a state of affairs which takes another state of affairs or a proposition as its argument. This is, of course, a necessary, but not sufficient criterion of modality, because several other non-modal predicates behave in similar ways. But where dynamic CAN occurs with a perception verb it does not meet this criterion.

I have not yet discussed dynamic WILL which Palmer (2003: 7) includes as a dynamic modal. Where WILL has a dynamic meaning, it is with the sense ‘intend’. So for example *I will help you*, according to Palmer, means ‘I intend to help you’. WILL is not as good a candidate for a dynamic modal as CAN in that it is harder to find the past/present contrast with WOULD that CAN shows with COULD. The examples in (15) show that WOULD, which historically was the past form of WILL, does not have straightforward past time reference with the ‘intend’ sense, although (12b & d) above show that COULD does behave in that way. Example (15c) is from Huddleston and Pullum (2002: 197).

- (15) a. \*I would help you yesterday.  
b. I would eat more chocolates (*cf.* I will eat more chocolates).

c. I had no money on me but he wouldn't lend me any.

In (15a), *yesterday* coerces a temporal interpretation of WOULD and so the sentence is ungrammatical. The example in (15b) shows that, as with other modals, WOULD indicates a more remote possibility as in *I would help you move tomorrow, but I have to go to the dentist*. From this, we can see that while WILL retains a dynamic meaning, it does not extend to the past/present distinction in a simple way; for example, note that Kipling's title *The man who would be king*, where *would* has both past time reference and the sense 'intend', seems archaic. Huddleston and Pullum claim that the example in (15c) shows that WOULD can have past-time meaning with the (dynamic) sense 'intend' when it is appropriately contextualized. This position is disputable, however. The English modals follow the normal English rules for sequence of tense, which apply to the morphosyntax, and not to the sense. Example (15c) is an apparent past-tense of WOULD merely because it is obliged to be formally past tense when it is in a clause with *had*.

In their account of dynamic WILL, Huddleston and Pullum (2002: 192-4) give over the majority of their discussion to the volitional meaning, which they admit is not very modal: 'the modal meaning is not sharply separable from the non-modal component'. A second interpretation they identify is 'propensity' – that is, the meaning found in examples like *oil will float on water*. This kind of generic use has been identified by Ziegeler (2003) as a source for the development of modals. It is a kind of dynamic meaning, but its dynamic nature is attenuated by virtue of the generic interpretation. We can see this as a semantic shift in the meaning of WILL, that is as a sense which is intermediate between the dynamic and modal senses.

In summary, we can see that clear cases of dynamic meaning are quite distinct from what we would normally expect to be a modal meaning. Huddleston and Pullum (2002) provide a number of more ambiguous cases, but it seems reasonable to assume that these are the product of a process of grammaticalization, and that they are a consequence of ambiguity, polysemy, or lexicalized pragmatic inferences. These ambiguities are to be expected in grammaticalization; they are in part the kind of semantic context that drives syntactic change.

### 3.1 Huddleston and Pullum on dynamic possibility and necessity

Huddleston and Pullum (2002: 184-5) discuss dynamic possibility and necessity with respect to CAN and MUST. This is the part of their discussion that relates dynamic modality to the modal operators Necessary and Possible. If Huddleston and Pullum are correct that dynamic modality can be analysed in terms of these modal operators, they present a difficulty for the argument advanced here that dynamic meaning is not properly treated as a modality.

However, it is possible to argue that 'necessity' does not apply in the analysis of dynamic meaning, and that 'possibility' is an inference, rather than being the central element of the dynamic sense. Indeed, we can see the 'possibility' element in the examples offered by Huddleston and Pullum as a conventionalized inference of the kind that Traugott (1989) discusses, in which case Huddleston and Pullum's discussion of dynamic possibility and necessity is actually an account of how the semantic development of the modals is reflected in aspects of their current meanings. The inference from the 'ability' meaning of CAN to its 'possible' meaning is straightforward, and the notion of dynamic possibility introduced by Huddleston and Pullum is just what follows from the usual processes of inferencing. Dynamic necessity expressed by MUST is a little more complicated. As Huddleston and

Pullum point out, the category of dynamic necessity is hard to pin down. It should be noted that Huddleston and Pullum adduce somewhat “dirty” data in their discussion. I discuss CAN first, and then MUST.

Huddleston and Pullum’s category of dynamic possibility is simple an interpretation of the dynamic meaning of CAN. Dynamic CAN has the meaning ‘able’ or ‘to have the ability’, and “possibility” is structured into that meaning. If I can drive, then it is possible that I will drive. In fact, this inference becomes clearer if CAN is negated: if I cannot drive, then it is not possible that I will drive.

In addition to straightforward ability, Huddleston and Pullum offer three particular uses: (a) what is reasonable or acceptable; (b) what is circumstantially possible; (c) what is sometimes the case. These are exemplified in (16a-c) respectively; the examples are Huddleston and Pullum’s.

- (16) a. The most we can expect is a slight cut in the sales tax.  
b. Water can still get in.  
c. He can be very tactless.

As Huddleston and Pullum note, (16a) is not a straightforward example of dynamic modality and they classify it as dynamic because they cannot identify a deontic source. The problem is that expecting is a mental activity: anyone can have expectations; the issue is what licences those expectations and where do they come from? However, objective deontic modality does not require an explicit contextual source, and it is possible to construe this as an example of objective deontic modality. The example can be glossed as *it is reasonable to expect...* where an evaluation of what is reasonable could be construed as a sub-type of deontic modality. What is reasonable is arguably what the context permits. On this construal, the example is performative, COULD would simply be more remote and not temporally marked, and for all that the initiator is not identified, it is recognised to be linked to some offstage actor in the discourse: the example is more like objective deontic modality than any other class.

The example in (16b) is simply an extension of the ‘ability’ meaning. The example can be paraphrased as *water is still able to get in* which sets up the inference in the alternative paraphrase *it is possible for water to get in*. So this simply goes well with what we already know about dynamic CAN. However, examples like this also set up the implicature that the speaker is making an inference, which means that they are ambiguous with epistemic interpretations. In part the ambiguities follow from the fact that examples like this tend to occur in generic examples which, as we have seen, Ziegeler suggests is a source for modality. Huddleston and Pullum note that this is not a good example of dynamic modality.

The third example is a kind of potential ability, best paraphrased by *he has the capability of being tactless*. It does not mean that he will be tactless, and it shows the kind of sense extension which is common in grammaticalization – here ability shades into potential ability; it is however clearly dynamic because *he could be tactless* can be used with past time reference. In all of these cases, therefore, dynamic possibility is simply a predictable extension of the ‘ability’ sense of CAN.

Huddleston and Pullum’s category of dynamic necessity relates to MUST in examples such as (17).

- (17) Ed’s a guy who must always be poking his nose into other people’s business.

They claim that the example ‘represents prototypical dynamic modality in that it is a matter of someone’s properties/disposition’. One way of thinking about this would be to treat it as a deontic modal, but where (uniquely) the deontic source was identical with the Endpoint. This would be a way of representing someone who was driven to certain kinds of behaviours from aspects of their personality that they were not fully in control of. That is to say, we can analyse this example as a kind of objective deontic modality, where the modal source was an inherent property of Ed’s. If we follow this reasoning, (17) is not an example of dynamic modality at all. This kind of approach is consistent with Verstraete’s (2001: 1520) reasoning which permits objective modality to be non-performative in this way: this would be the kind of deontic modality which ‘merely predicates the existence of some kind of necessity without actually committing the speaker to it’.

Note that the examples in (18) are better than the example in (17).

- (18) a. Ed’s a guy who has to be always poking his nose into other people’s business  
b. Ed’s a guy who’s got to be always poking his nose into other people’s business

These are both reasonable paraphrases of (17); both of these paraphrases describe obligation. It seems to me that (17) is arguably contrived. Note too that in footnote 54 Huddleston and Pullum (2002: 185) discuss the idiom *must needs* as an example of dynamic modality. Traugott (1989: 42) gives an example of *must needs* which is epistemic, because in Middle English NEDES is a strongly epistemic adverb. Huddleston and Pullum’s example of *must needs* could therefore have an epistemic interpretation.

If (17) is a plausible example, I think that we might see it as a case of a counter-example to Traugott’s (1989) subjectification, where MUST has been re-interpreted as having the same kind of sense as HAVE TO or HAVE GOT TO. Krug (2000: 77-79) shows HAVE TO (and to a lesser extent HAVE GOT TO) increasing in frequency since the middle of the 17<sup>th</sup> Century, and it is arguable that the meaning of MUST has to some extent been affected. In this case, it is a kind of non-subjective deontic modality rather than a kind of dynamic modality. It is hard to see how it fits with a notion of dynamic modality which includes examples like *I can see you*.

On the basis of this discussion, we can be confident that dynamic meaning does not reduce to the Possible or Necessary operators, and that it is possible to maintain the argument that dynamic meaning is not really a sub-variety of modality. However, we can also see that there are complex interactions with pragmatics, and there are conventionalized inferences that set up the possibility of modal interpretations, which are related to the historical development of the modals. The position about dynamic Possibility and Necessity advanced in this section is consistent with Salkie’s observation (nd: 3) that Possibility and Necessity can only be understood relative to a possible worlds analysis which ‘excludes from the core the category of dynamic modality’.

#### 4. Conclusions

In the previous section, I presented an argument that clear-cut cases of dynamic meaning do not look like modality at all. In this section, I present evidence that the dynamic meanings of

modal verbs can simply be treated as retentions of earlier senses which pre-dated the emergence of the modal senses.

In order to do this, we need to look at the development of modal meanings through the lens of grammaticalization. Plank (1984), Traugott (1989), and Warner (1993) have all presented accounts where it is shown that the emergence of the class of modals happened over several hundred years, and that they were established from the class of Old English preterite-present verbs. The two modals that have dynamic meanings are CAN-COULD and WILL (and arguably WOULD). The dynamic sense of WILL is clearly simply a retention of the sense of its etymon. Old English WILLAN meant 'intend'. In the case of CAN, it is harder to establish that the 'ability' meaning is directly related to the etymon, because the primary sense of CUNNAN was 'know'. However, there is a semantic path which is associated with CAN – 'to have knowledge of'. In the OED, the 3<sup>rd</sup> sense, 'to know how (*to do* anything) is described as passing imperceptibly into the present sense, 'to be able'.

There are various accounts of the semantic development of modal verbs. Sweetser (1990) argues that there is a metaphorical mapping from one semantic domain to another; in her cognitive view of language, Traugott (1989), while accepting the importance of metaphor argues that the semantic changes found in the modals rely on the 'conventionalizing of conversational implicatures'. Traugott argues that this conventionalization is a form of pragmatic strengthening.

We can see that the development of the senses of CAN involves exactly such a conspiracy of metaphorical mappings reinforced by conversational implicature and pragmatic strengthening from the basic meaning 'know' to the modern sense 'be able'. The same implicatures, although not necessary conventionalized, apply to the verb KNOW today. If *I know French* is true, so is *I know how to read French*. Furthermore, *I know French* brings with it the implicature that I can communicate in French: *i.e.* that I have abilities in French. Traugott and Dasher (2002) argue for a similar point, when they suggest (following Bybee, Perkins and Pagliuca 1994) that verbs of knowing are a common cross-linguistic source for modals, along with verbs of having physical ability.

Traugott's account is useful in another way: it permits us to see how we can accommodate the slightly 'dirty' data that Huddleston and Pullum include under the rubric of dynamic modality. These data involve a number of conventionalized implicatures which, are not only inherent to the meaning of the dynamic modal, but which are also there because of the nature of the context. For example, a quantified subject NP brings its own implicatures, which can drive a more modal interpretation. As we saw in the previous section, Huddleston and Pullum have problems with several of their examples of dynamic modality, especially concerning WILL and MUST.

What this means for CAN is that it acquires the form associated with a modal verb: it is always finite and it is a prototypical auxiliary with respect to negation and question formation, but that until it acquires its deontic sense (OED gives an example from Tennyson in 1979 as the first example of deontic CAN) it does not have what we might think of as prototypical modal sense.

This last point raises an important point about the nature and processes of grammaticalization. It is commonly thought that grammaticalization is led by semantics. In this, I am in agreement with Warner (1993: 196) who writes that for the English modals 'grammaticalization is not here led by semantics' and, 'while semantic developments are clearly crucial, they do not have the clear-cut independence and priority apparently envisaged by Brinton'.<sup>9</sup>

I conclude, then, that dynamic meaning is not a variety of modality and that it is wrongly labelled as such because it is regularly associated with WILL and CAN. The picture that emerges is more interesting: modal verbs can have straightforwardly non-modal meanings, and grammaticalization must involve categorial analogy, as well as being driven by certain semantic-pragmatic developments.

#### Notes:

<sup>1</sup> A fourth kind of modality, evidentiality, is expressed in English, but this domain of meaning is not primarily expressed by English modal verbs. Instead, it can be found in the evidential verbs of appearance, and in certain uses of perception verbs (Sweetser, 1990). Traugott (1989: 47) suggests that certain uses of must may be evidential.

<sup>2</sup> Verstraete (2001: 1519-20), following Palmer (1990: 179-182), explores the behaviour of modals in the protasis of conditional clauses. Verstraete claims that dynamic modals can occur unproblematically in this position; however, he also claims that epistemic meanings require a special quotative interpretation, as do the majority of deontic modals. Verstraete's paper is an argument in favour of a split between 'the performative, speaker-related functions of modal auxiliaries, and their non-performative, content-related functions.' That is a distinction relevant to this paper; however, Verstraete would presumably be obliged to argue that (4) does not exemplify epistemic modality.

<sup>3</sup> In a fascinating study of contemporary developments in modal meanings, Krug (2000: 60) observes that have to has also undergone subjectification (Traugott 1989). Palmer's distinctions could, therefore, be thought of as a little crude. However, the point of the argument in this section of the current paper is to show that modality as a semantic domain per se involves relationship to the utterance context. Therefore, I wish to show that to the extent modal expressions may be claimed to be objective, they are still expressions where context is invoked.

<sup>4</sup> I am specifically interested in the temporally contextualized nature of the deontic reading in this example.

<sup>5</sup> Lyons (1977) works with a logic-based semantic tradition which translates modal expressions into the modal operators 'Necessary (that)' and 'Possible (that)'.

<sup>6</sup> Verstraete (2001) discusses subjective and objective modality in terms of performativity. In Verstraete's analysis, performativity is anchored to subjectivity, so that only subjective modalities are performative: as Verstraete's system admits objective deontic modality, it also admits non-performative deontic modalities.

<sup>7</sup> Of course tense relates an utterance to the context, and both of these examples behave as though they were instances of a normal present tense. This fact makes them just like any other tensed verb, and it is a point to which I return below.

<sup>8</sup> Of course, as an anonymous referee observes, although Huddleston and Pullum do not note this, example (14a) can also mean 'I understand what you are saying'.

<sup>9</sup> Warner is discussing Brinton 1988, which is a study of the grammaticalization of English aspectualizers.



## References:

- BROWN, Keith. 1995. Modality. Unpublished lecture notes, Research Centre for English and Applied Linguistics, University of Cambridge.
- BRINTON, Laurel J. 1988. *The development of English aspectual systems*. Cambridge: Cambridge University Press.
- BYBEE, Joan L. 1985. *Morphology: a study of the relationship between meaning and form*. Amsterdam: Benjamins.
- BYBEE, Joan L., PERKINS, Revere D., PAGLIUCA, William. 1994. *The evolution of grammar*. Chicago: Chicago University Press.
- COATES, Jennifer. 1983. *The semantics of modal auxiliaries*. London: Croom Helm.
- CROFT, William. 1991. *Syntactic categories and grammatical relations*. Chicago: University of Chicago Press.
- DENISON, David. 1993. *English historical syntax*. London: Longman.
- FACCHINETTI Roberta, KRUG, Manfred and PALMER, Frank (eds.). 2003. *Modality in contemporary English*. Berlin: Mouton.
- FOOLEN, Ad. 1992. Review of SWEETSER (1990). *Lingua*, September 1992, vol. 88, no. 1, pp. 76-86.
- HART, David K. (ed.). 2003. *English modality in context*. Bern: Peter Lang.
- HUDDLESTON, Rodney and PULLUM, Geoffrey. 2002. *The Cambridge Grammar of English*. Cambridge: Cambridge University Press.
- HUDSON, Richard. 1990. *English word grammar*. Oxford: Blackwell.
- JACKENDOFF, Ray. 1990. *Semantic structures*. Cambridge, MA: MIT Press.
- KRUG, Manfred. 2000. *Emerging English modals*. Berlin: Mouton.
- LYONS, John. 1977. *Semantics*. Cambridge: Cambridge University Press.
- MATTHEWS, Richard. 2003. Modal auxiliary constructions, TAM, and interrogatives. In FACCHINETTI R., KRUG, M. and PALMER, F., eds., *Modality in contemporary English*. Berlin: Mouton, 2003, pp. 47-70.
- NUYTS, Jan. 2001 *Epistemic modality, language and conceptualization*. Amsterdam: Benjamins.
- NUYTS, Jan, BYLOO, Pieter. and DIEPEVEEN, Janneke. 2005. On deontic modality, directivity, and mood. A case study of Dutch *mogen* and *moeten*. *Antwerp Papers in Linguistics*, 2005, vol. 110. pp. 1-56.
- PLANK, Frans. 1984. The modals story retold. *Studies in Language*, September 1984, vol. 8, no. 3, pp. 305-366.
- PALMER, Frank R. 1990 *Modality and the English modals*. 2<sup>nd</sup> edition. London: Longman.
- PALMER, Frank R. 2001. *Mood and modality*. Cambridge: Cambridge University Press.
- PALMER, Frank R. 2003. Modality in English. In FACCHINETTI R., KRUG, M. and PALMER, F., *Modality in contemporary English*. Berlin: Mouton, 2003, pp. 1-17.

- PAPAFRAGOU, Anna. 1998 Inference and word meaning: the case of modal auxiliaries. *Lingua*, June 1998, vol. 105, no. 1, 1-47.
- PAPAFRAGOU, Anna. 2000 *Modality: issues in the semantics-pragmatics interface*. Oxford: Elsevier.
- PERKINS, Michael R. 1983. *Modal expressions in English*. London: Pinter.
- SALKIE, Raphael. nd. Degrees of modality. University of Brighton ms. [cit. 2007-04-10] Available at: [http://www.brighton.ac.uk/languages/research/Salkie\\_Degrees\\_of\\_modality.pdf](http://www.brighton.ac.uk/languages/research/Salkie_Degrees_of_modality.pdf).
- SWEETSER, Eve. 1990. *From etymology to pragmatics*. Cambridge: Cambridge University Press.
- TALMY, Leonard. 1988. Force dynamics in language and cognition. *Cognitive Science*, 1988, vol. 12, no. 1, 49-100.
- TRAUGOTT, Elizabeth C. 1989. On the rise of epistemic meanings in English: a case study in the regularity of semantic change. *Language*, March 1989, vol. 65, no. 1, 31-55.
- TRAUGOTT, Elizabeth C. and Dasher, Richard B. 2002. *Regularity in semantic change*. Cambridge: Cambridge University Press.
- VERSTRAETE, Jean-Christophe. 2001. Subjective and objective modality: interpersonal and ideational functions in the English modal auxiliary system. *Journal of Pragmatics*, October 2001, vol. 33, no. 10, 1505-1528.
- WARNER, Anthony. 1993. *English auxiliaries: structure and history*. Cambridge: Cambridge University Press.
- ZIEGELER, Debra. 2003. On the generic origins of modality in English. In HART, D.K., *English modality in context*. Bern: Peter Lang, 2003, pp. 33-69.

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