CHAPTER IV

MODALITY AND MODALS IN ENGLISH

1. Modal Auxiliaries

Although some grammarians do not distinguish mood in English, they may perhaps acknowledge the existence of modal auxiliaries. Whether there is a specific, well-defined, set of these auxiliaries, whether they constitute a distinct grammatical system, whether they can be further subclassified, whether they behave like full verbs, are some of the issues that we shall raise now. We shall show the reaction of some prominent grammarians of English to these issues just to show that they are also of a controversial nature.

Going back to Henry Sweet again, we find that nowhere in A New English Grammar (1955) he recognizes a system of modal auxiliaries. In the chapters on verbs and verbals he discusses mood at length, but not modal auxiliaries. He treats verbs like 'can', 'may', 'will', 'shall', 'need', 'dare', 'ought' etc. along with 'be' and 'have' as anomalous verbs in a section on 'accidence'. That too is a historical, not a descriptive, account.

Jespersen too does not recognize a system of modal auxiliaries. Both in A Modern English Grammar on Historical Principles (1958, part IV) and Essentials of English Grammar (1969) he discusses the uses of 'will', 'shall', 'would' and 'should' individually in different chapters. Other modal
auxiliaries like 'could' and 'might' are discussed as cases of the Preterite of Imagination. (1969:254-58) The rest of the modals like 'can', 'may', 'must', 'ought', 'need', 'dare' etc., are discussed here and there, but all these modal verbs are not treated parts of the same system.

Kruisinga and Erades (1960) do not recognize a distinct system of modal auxiliaries as such. They treat 'can', 'may', 'must', 'shall' and 'will' together with 'do' as finite verbs that occur with the plain stem. The plain stem is defined as a stem without 'to' in its non-finite function. It is only 'do' that occurs in non-finite functions. 'could', 'might', 'should' and 'would' are referred to as the preterites of 'can', 'may', 'shall' and 'will'. It has been admitted that the preterites of other verbs can also be used modally, but it is pointed out that the above modal preterites differ from other preterites in that they are used in the function of an irrealis in simple sentences, and in the main clauses of compound sentences, whereas the preterites of the other verbs are used in sub-clauses only (1960:595-96). Kruisinga and Erades discuss the various characteristics of both the present and preterite forms of 'can', 'may', 'must', 'shall' and 'will' separately (1960:ch.XIX) and add the uses of 'dare' and 'need' just because these two verbs are used as invariable finite verbs in groups with a plain stem (in sentences with a negative meaning). The leading verbs in
these groups are said to have the function of a neutral present, or of an irrealis. But again we do not find modal auxiliaries being treated as a distinct system here.

Poutsma (1926) distinguishes auxiliaries of mood along with those of tense, voice and aspect. He defines auxiliaries as verbs which are used as substitutes for the inflections of tense, mood, voice and aspect. About modal auxiliaries he says that in English "auxiliaries of mood take the place of modal inflections actually existing in the language, assist in expressing notions which are not adequately denoted by the latter". (1926:15) He thinks that the auxiliaries of the subjunctive mood can be distinguished from other auxiliaries in that while "the latter are merely matter-of-fact words, the auxiliaries of the subjunctive mood are distinctly emotional, i.e., they express not only that by taking account of certain circumstances the speaker has come to a conclusion as to the possible fulfilment of an action or state, but also how he is disposed towards it". (1926:15-16)

The above view is close to Sweet's. Both Sweet/Poutsma recognize periphrastic as opposed to inflectional moods. Modal auxiliaries, being substitutes for modal inflections, are said to be markers of these periphrastic moods. Nevertheless, Poutsma admits that modal verbs do not fully correspond to modal inflections, but serve the purpose of denoting the speaker's attitude as to the fulfilment of a prospective action or state. (1926:17)
Poutsma is able to find some grammatical features by which modal auxiliaries can be distinguished. He distinguishes a set of them having 'may', 'can', 'will', 'shall', 'must', 'should', 'ought to', 'have to', 'am to', 'dare' and 'need'. But he does not seem to be happy about the status of all of them as modal auxiliaries. He doubts if 'dare' and 'need' could be regarded as auxiliaries at all. Similarly, he does not think that 'can', and 'will', in the sense of ability and willingness respectively, express the speaker's attitude of uncertainty towards the fulfilment of the predication, and are thus modals in the true sense of the word. So, in his view the case of 'dare' and 'need' is weak on the syntactic ground and that of 'will' and 'can' is weak on the semantic ground (pp. 16-17). The net result is that Poutsma remains uncertain whether all the so-called modal auxiliaries can be fitted suitably into one grammatical system.

Curme (1935) also seems to think that modal auxiliaries are markers of periphrastic moods. This is evident from the way he distinguishes two kinds of subjunctive form - the old subjunctive form and the newer form, consisting of a modal auxiliary and a dependent infinitive of the verb to be used. The present subjunctive is said to be associated with the idea of hopefulness/likelihood, while the past and the past perfect subjunctive are said to indicate doubt, unlikelihood, unreality, modesty, politeness etc. In both modal auxiliaries are used
for example, 'May he return soon!', 'O that he were alone, and could see the fruits of his labour!' etc. Similarly, modal auxiliaries are freely used for wishes, moral constraint, permission etc. But here also they are mostly treated as substitutes for pure moods. We do not find a clear recognition of a grammatical system of modal auxiliaries that may include even items like 'need' and 'dare'.

Zandvoort (1962) quotes from OED which recognizes 'may', 'should' and 'could' etc. as auxiliaries of mood. 'Can', 'must', 'ought', 'need', 'dare', 'shall', 'will' and 'may', when not auxiliaries of tense or mood, are regarded as auxiliaries of incomplete predication which require a verbal complement. About 'dare' and 'need' Zandvoort says that there are certain characteristics that enable them to be grouped with 'can', 'may' etc., as auxiliaries of predication. Their third person singular present tense as a rule takes no 's' when it is followed by a complementary infinitive. The following infinitive usually does not take 'to'. They do not also require 'do' in interrogative and negative sentences with 'not'. Now there is surely some attempt to treat all the so-called modal auxiliaries as members of the same grammatical system, although some of them are still called auxiliaries of predication, as opposed to auxiliaries of mood.

Scheurweghs (1959) does not distinguish a separate system of modal auxiliaries. Instead, he treats 'can', 'could', 'may',
'might', 'ought', 'must', 'used', 'shall', 'should', 'will',
'would', 'dare', 'need', the finite forms of 'to be', and
sometimes of 'to have' and 'to do' as a set of anomalous
finites. He only recognizes the fact that some of these verbs
have modal meanings. He discusses the characteristics of all
the above verbs together.

Strang (1962) distinguishes some of the
so-called modal auxiliaries as a separate set of a larger
grammatical system of auxiliaries. She distinguishes a closed
system of verbal forms that contains the following items:
(p. 137)

'am, is, are, was, were, being, been, has, have,
had, get, gets, getting, got, do, does, did, will,
would, shall, should, can, could, may, might, must'.

There is also another system of marginal verbs that only
partly shares the characteristics of the above system. These
verbs are the following:

'need, dare, use(d) to, be (about to), be going
to, have to, want to, ought to'.

Various common characteristics of the first set of verbs are
listed in order to show how they belong to one system, and how
other verbs are of a marginal nature. Having done so, Strang
divides the first set into two groups. It is said that the
first group of seventeen items form something akin to ordinary conjugations, but the remaining nine items do not. It is further said that functionally, the first group is an 'envelope' class, concerned with indicating sentence type, voice, tense and aspect, while the second group has a different and narrower function, which may be regarded as that of indicating mood. (p.139) The second group of 9 non-conjugational items is said to be the group of modals, while the rest are called non-modal operators.

Sledd (1959) distinguishes a set of modal auxiliaries. In a glossary of grammatical terms (p.226) he lists them as 'can', 'could', 'may', 'might', 'must', 'ought', 'shall', 'should', 'will' and 'would'. The common characteristic that binds them together as members of the same system is said to be their occurrence before a bare infinitive. 'Ought' is regarded as the only exception, as it precedes a marked infinitive.

Martin Joos (1964) distinguishes a system of the modals, 'will', 'shall', 'can', 'may', 'must', 'ought to', 'dare' and 'need'. He divides them into the following six classes:

(1) Causal modals (will, shall, can, may)
(2) Stable modals (must, ought to, dare, need)
(3) Adequate modals (will, can, must, dare)
(4) Contingent modals (shall, may, ought to, need)
(5) Assurance modals (will, shall, must, ought to)
(6) Potentiality modals (can, may, dare, need)

(p.149-50)

The classification is notional, as Joos says that readers with a visual habit of thought can easily place the modals at the eight corners of an abstract semological cube. In the above list he only lists four belonging to each face of the cube.

Twaddell (1965) distinguishes a system of eight modals: 'can', 'may', 'shall', 'will', 'must', 'ought', 'dare' and 'need'. The first four, which are regarded as a major class, are paired as they have past tense forms, but the last four, which are regarded as a minor class, are unpaired, as they have, in his own words, "no specifically 'unactual' form and no differentiation for sequence of tenses." (p.13) Twaddell thinks that some of the unpaired modals are passing into the category of catenatives (with/following 'to') and their former semantic functions are being increasingly taken over by other modals, or catenatives, either wholly or partly via suppletion (p.13).

Ehrman (1966) distinguishes the same system of eight modals as Twaddell does. It seems the system of modals is somewhat clearly recognized by the sixties. Ehrman defines
modal auxiliaries as "that closed class of verbs which may occupy the first position of a verb phrase, which may not be immediately preceded by another verb, which may invert with the subject in interrogation, and which are negated directly by 'not'" (p.9). The modals listed are 'can', 'may', 'will', 'shall', 'must', 'ought', 'dare' and 'need'.

Leech (1971) includes in his system of modal auxiliaries 'may', 'can', 'must', 'have (got) to', 'will', 'shall', 'need', 'ought to', 'am/is/are to', '(had) better'. Items like '(had) better' are treated as modals on the basis of similarity with other modals. He says that '(had) better' is like 'ought to' in that although it is past tense historically and in outward form, in present day English it has no present tense equivalent, and in meaning is 'present' rather than 'past'. (p.98) Similarly, 'am/is/are to' is said to be similar to 'have (got) to' and 'ought to'. 'Need' is considered to be the negative and interrogative counterpart of 'must' in both the senses of 'compulsion' and 'logical necessity'. (p.85) 'Dare' does not find a place in Leech's system.

Quirk, Greenbaum, Leech and Svartvik (1972) distinguish eight modal auxiliaries. They are 'can', 'may', 'will', 'shall', 'must', 'ought to', 'dare' and 'need'. They treat 'have to' and 'be to' as semi-auxiliary verbs. They also include 'used to
as a marginal modal auxiliary. Besides the criteria that are used to define auxiliaries as such, they also discuss those morphological and syntactic criteria that are relevant to defining modal auxiliaries.

Palmer (1974) includes 'will', 'shall', 'can', 'may', 'must', 'ought', 'dare' and 'need' in the secondary pattern of the simple verb phrase. He calls them modal auxiliaries (p.94). He treats 'used to', 'be to' and 'have to' as marginal verbs and '(had) better' and 'used to' only as quasi-auxiliaries.

Culicover (1976) introduces 'do' as a modal along with other modals in his transformational analysis of the English verb phrase. He supports the analysis which includes 'do' in the set of modals in the deep structure, and proposes transformational rules for 'do' deletion and 'do' replacement. He refers to Emonds (1970) who first proposed the analysis of the English auxiliary involving 'do' replacement. This makes 'Modal' an obligatory element in the structure of a sentence. The modal that exists in sentences that lack a superficial modal is 'do'. He tries to justify this rule on a number of syntactic grounds. However, 'do' differs from other modals like 'may', 'can' etc., in various respects. Its morphology is different from them. While other modals may be followed by perfective and progressive aspects, and also by
the passive voice, 'do' cannot. It is followed by the main verb only, with 'not' in between in negative sentences. Culicover disregards these differences as superficial and includes 'do' in the central system of modals for theoretical reasons.

The above brief historical account in which we have included only some of the prominent grammarians of English of the present century shows how there has been a controversy even with regard to the system of modal auxiliaries. In fact, as our account shows, it has taken a long time for a clear recognition of the system of modal auxiliaries to emerge. Even after it has emerged, there is yet no unanimity among grammarians about the precise membership of this system.

2. **Classification of Modal Auxiliaries**

We have referred to the classes into which Joos divides the English modals. It is a notional scheme in which several modals have overlapping functions. Let us now look at another scheme of classification that has been justified both on syntactic and semantic grounds. That is, Palmer's scheme of three classes of English modals, namely, Discourse-oriented (Abbr. DO), Subject-oriented (Abbr. SO) and Epistemic (Abbr. Ep) classes.
Palmer says: "Most scholars who have considered the semantics of the modals have seen that they appear to be paired: 'will' and 'shall', 'can' and 'may', 'must' and 'ought', 'dare' and 'need'." (1974:100)

This pairing is said to be related to subject-orientation and discourse-orientation, and is considered to be a classification not of the modals themselves but of their uses. Palmer says: "With certain qualifications 'will' and 'can' are subject-oriented, while 'shall' and 'may' are discourse-oriented. It is these four that we shall use for illustration here; but the distinction is also relevant to 'ought' and 'must' (5.2.8), and perhaps obvious, but less important, for 'dare and need' (5.2.9)." (1974:100) He also points out that even 'can' is discourse-oriented, as for most speakers of English today, 'may' is replaced by 'can' for giving permission; for example, 'you may go', and 'you can go' have the same sense in respect of granting permission to the addressee to go.

The SO modals relate semantically to some kind of activity, quality, status etc., of the subject of the sentence, while the DO modals relate rather to the part played by one of the participants in the discourse (the speaker in statements, the hearer in questions). He may seek or grant permission. He may impose obligation, or demand something from the addressee.
Further, Palmer draws a distinction between epistemic and non-epistemic modals. This is said to involve 'will', 'may' and 'must', though some of the other modals have epistemic uses also. These modals imply the speaker's attitude towards the truth of the proposition, based on his personal knowledge. In short, they represent epistemic modality.

We have drawn a distinction between deontic and dynamic modality by saying that while the former involves a speech act by which the speaker may oblige or permit the addressee to do something, the latter is merely the speaker's assertion of his ability, intention or willingness to do something. From this, dynamic modality appears to be part of the propositional content of a dynamic modal utterance. Palmer says the same thing in drawing a conceptual distinction between the DO and the SO modals. He believes that the 'DO' modals, together with the epistemic ones, are the true modals, those that mark 'modality', as opposed to providing information, or being part of the propositional content of the sentence. He thinks that the 'SO' modals are not true modals in that sense, but are much more like full verbs i.e., catenatives, belonging to complex rather than to simple phrases. The above conceptual distinction holds good only if the DO modals represent subjective deontic modality. With objective deontic modality, which is also represented by the same modals, the conceptual distinction
disappears. Palmer does not seem to realize this fact. Let us look at the following examples:

(1) You must polish the table.
(2) You can polish the table.

(1) may mean, if it is the expression of subjective deontic modality, 'I hereby oblige you to polish the table'. In that case it is surely the speech act of obligation, but if it is the expression of objective deontic modality, it will mean 'I say that you are the one who is obliged to polish the table'. Here the speaker is not necessarily imposing any obligation on the addressee to polish the table, but is only telling him of a certain obligation that he has to fulfil. This eliminates the conceptual distinction between (1) and (2), as (2), meaning 'I say you are the one who has the ability to polish the table', is also uttered to tell the addressee of a certain ability he has. Both are assertions of what the speaker considers true about the addressee. That is, they have the same illocutionary force.

Epistemic modality also raises a similar problem. Look at the following sentences:

(3) He may polish the table.
(4) He can polish the table.

In (3) 'may' is an epistemic modal, but in (4) 'can' is a subject-oriented (dynamic) modal. How can one say with
Palmer then that 'may' is a true modal, as it marks modality, while 'can' is not so as it merely provides information about the subject? Does (3) also not just provide information about the subject, namely, that it is probable for him to polish the table, like (4) which means that he has the ability to polish the table? We think the kind of distinction Palmer wants to draw cannot work if the objective epistemic modality is implied, as in that case (3) will mean 'I say it is probable that the subject will polish the table', or 'I say it is so that his (the subject's) polishing the table is probable'. In this case, the speaker is merely informing the addressee of what is probable for the subject to do, which is similar conceptually to (4) where the speaker informs the addressee of the ability the subject has.

However, let us now look at some of the formal distinctions that underlie Palmer's classification of modals, as they are more relevant than conceptual distinctions for describing the structure of English and classifying its categories. They are the following (1974:100-150):

(1) The SO modals alone have past tense forms for past time. The DO modals 'shall' and 'may' have no such forms. The only restriction is that the past tense/time forms of the SO modals are not used where there is reference to a single past action (with specific exceptions); for example,
(5) You shall not make a noise.

(6) You should not make a noise. (no past time reference).

(7) I can help you

(8) I could help you. (past time reference).

*(9) I asked him and he would come. (reference to a single past action)

(10) Whenever I asked him he would come. (general situation)

The reason is obvious in the case of 'should', as one cannot oblige the addressee to do anything in the past.

(ii) The DO modals usually allow passivization with no change of meaning, whereas it is not so with all the SO modals, for example,

(11) John shall meet Mary.

(12) Mary shall be met by Mary.

(13) John won't meet Mary.

(14) Mary won't be met by John.

Passivization in (12) does not change the meaning of (11), but (14) does change the meaning of (13), as the subject governing the modal is changed with passivization. The volition applies to Mary rather than to John in the passive sentence (14). Unlike sentences with the SO modals, those with the epistemic modals can be passivized with no change of meaning.

(iii) While negation negates only a modal in the case of the SO modals, the situation is more complex with regard to
the DO modals. With 'shall' the full verb is negated, while with 'may' the modal is negated; for example:

(15) I cannot go.
(16) You shall not go.
(17) You may not go.

In (15) the speaker says that it is not possible for him to go. In (16) the speaker imposes an obligation on the addressee (you) not to go. In (17) it is not the case that the speaker permits the addressee not to go, but there is in fact no permission to go.

(iv) Palmer distinguishes all the three types of modals in terms of tense/time marking, by which he means specific temporal reference.

DO modals - no tense/time marking.

SO modals - modal may be marked for tense/time with some exceptions.

Epistemic modals - full verb may be marked for tense/time.

It is the epistemic modals alone which allow 'have' to occur with the main verb to/tense/time, for example, 'you may have
seen that', which means 'It is possible you saw that'. Palmer thinks that 'ought', 'dare' and 'need' are prima facie exceptions, but are not strictly so. He claims that an epistemic modal itself is only very rarely marked for tense/time.

Most of the criteria Palmer has given to distinguish the above three classes of modals from one another are surface criteria. Let us look a little deeper into the phenomenon that underlies the above classes of modals. Look at the following pairs of sentences:

(18) I am sure you can't talk in the library.
(19) I am sure of your not being permitted to talk in the library.
(20) I am sure you can't read French.
(21) I am sure of your not being able to read French.
(22) I am sure you can't reach Delhi by this evening.
(23) I am sure of it(s) being impossible for you to reach Delhi by this evening.

The sentences in each of the three pairs are in paraphrase relationship. There is some sort of syntactic relationship also, as it is the subordinate clauses in (18),
(20) and (22) that appear in non-finite forms in (19), (21) and (23). But it is perhaps difficult for any generative grammarian who follows the standard theory of Chomsky to relate them transformationally. Before we look into their possible underlying structure, we may look at their non-finite forms. Although the finite verbal groups in (18), (20) and (22) are identical in structure, as far as the modal 'can' is concerned, their non-finite equivalents are quite different. The non-finite clause in (19) is passive with 'you(r)' being the goal of the action, while that in (21) is active with 'you(r)' being the agent of whom a certain property has been predicated, and that in (23) 'you' is the agent in the non-finite subordinate clause 'you to reach Delhi by this evening' which is itself part of the larger subordinate clause, 'it(s) being possible for you to reach Delhi by this evening'. The subject 'it' in it is in appositive relationship with the non-finite complement clause 'for you to reach Delhi by this evening'. These differences in the non-finite clauses surely separate these classes of modals from one another, but this may still be in dispute whether these are the legitimate non-finite forms of the clauses having different types of 'can' (i.e., DO, SO and Ep.) in them. For that we shall have to present the underlying
structure of each of the sentences (18), (20) and (22). The underlying structure presented seems to be close to the underlying semantic representation of the sentences concerned in which the modals look like full verbs in the form of features, which can be realized either by modals or by lexical verbs alternatively.
I'm not sure of it.

Someone may, permit etc.

You talk in the library.
I'm not sure of it.
I'm not sure of it. You reach Delhi by this evening (may, possible etc.)
In each of the above cases, there is a possibility of realizing either the modal or the lexical verb by means of the features specified. The selection of the features and the realization of a particular entity will determine the further transformations and configuration of elements. For example, if \( + V + \text{Modal} + \text{DO} + \text{Permission} \) are all selected in (18) 'can/may' will have to be introduced. Along with that the deepmost \( S_3 \) (you talk in the library) will undergo for - to transformation. Other transformations like Equi NP and 'it' deletion will finally have under the rightmost NP 'to talk in the library'. 'You' will now be raised to the place of 'someone' and 'someone' will be deleted. With the Neg. placement along with 'can', we can have 'You can't to talk in the library' under \( S_2 \). 'To', the infinitive marker, will be dropped, as modals, except 'ought', take only bare infinitives at the surface.

Now if the features \( + V - \text{Modal} + \text{DO} + \text{Permission} \) are selected the lexical verb 'permit' will have to be introduced. In that case, passive transformation along with some of the transformations given above may give us 'you are not permitted to talk in the library'. From this the non-finite form 'your being not permitted to talk in the library' could easily be derived.

In (20) \( V \) under \( S_2 \) could be realized as 'can' or 'be able' depending on the features selected. With other well-known
transformations we can easily derive 'you can't read French' or 'you are not able to read French'. The non-finite form derived will then be 'your not being able to read French'.

Similarly in (22) V under $S_2$ can be realized by 'can/ may' or 'be possible', depending on the features selected. Different sets of transformation will then apply to give us either 'You can't reach Delhi by this evening' or 'it is not possible for you to reach Delhi by this evening'. The non-finite form can then be derived from the latter.

We have tried to show here the differences in the deep as well as the surface structure with regard to different classes of modals. We shall say no more to justify the classification, but shall now discuss the syntax and semantics of the English modals.

3. The Syntax of the English Modals

We have so far tried to show that the English modals are given different treatment by different grammarians. But the major difference of treatment that we see today is between treating them as auxiliaries and as full verbs. The issue continues to be controversial. Even those who treat the English modals as one of the elements of the Auxiliary in the structure of the English verb phrase are divided into those who treat them as optional and those who treat them as obligatory.
elements. We have referred to Culicover's analysis only to show that following Emonds's analysis, some linguists now postulate rules like 'do' deletion and 'do' replacement, and include 'do' as a modal along with other modals. In that case 'do' is supposed to be present in the deep structure, if other modals are absent. It makes the modal element as obligatory as the Tense element in the structure of the English verb phrase.

Before we take up the issue of treating modals as main verbs, let us point out some of their surface syntactic features. We exclude 'do' and other marginal modals like 'have (got) to', 'be to', 'used to' etc., for the moment:

(i) As Palmer has shown (1974:95), some modals like 'shall', 'can', and 'may' have past tense forms, while others like 'must', 'ought', 'dare' and 'need' do not have them.

(ii) Except 'ought', the modals are followed by the bare infinitive.

(iii) It is a bit odd for the modals to occur with the passive voice, and both the perfective and progressive aspects all at the same time.

That is why sentences having 'will have been being taken', 'would have been being taken' etc., are considered to be
doubtful in acceptability (Palmer, 1974:95). Palmer treats even sentences having 'will be being taken', 'would be being taken', in which the progressive aspect and the passive voice occur with the modal, as marginal in acceptability. He prefers them to be replaced by non-progressive forms as below:

? He'll be being examined, while we are there.
He'll be examined, while we are there.

(iv) The modals do not have non-finite forms, as other verbs, including other auxiliaries like 'do', 'be' and 'have'.

Let us now look at some of the arguments that are advanced to distinguish the modals as auxiliaries. The main features by which auxiliaries are identified are said to be the following:

(i) Negation, (ii) Inversion, (iii) Code, and (iv) Emphatic Affirmation (Palmer, 1974:20-25; Huddleston, 1976:212); for example:

(i) He doesn't play in the evening.
(Negation) He can't play in the evening.

(ii) Does he play in the evening?
(Inversion) Can he play in the evening?
(iii) I He plays in the evening and so do I.
(Code) I He can play in the evening and so can I.

(iv) I He does play in the evening.
(Emphatic Affirmation) I He can play in the evening.

Pullum and Wilson (1977:742-43) identify some more features like Auxiliary Reduction, Quantifier Floating, Adverb Placement, 'DO' support etc., to distinguish the modals as auxiliaries, while arguing at the same time for treating them as main verbs.

Besides the above features, Palmer also notices some peculiar features that make the modals look more similar to full verbs than to the primary auxiliaries (do, have, be). He first distinguishes simple from complex verb phrases (1974:16-18), and considers auxiliaries as characteristic of simple phrases, and full verbs, i.e., catenatives, as characteristic of complex phrases. The peculiar features referred to above are (i) Tense Marking, (ii) Negation, and (iii) Passivization. Let us look at them:

(1) Tense Marking: Tense is marked only once in a simple verb phrase, but may be marked more than once in a complex one; for example:

(24) He happens to live there.
(26) He can't live there.
(26) He happens to have lived there last year.
(27) He can't have lived there last year.

While in (24) and (25) tense is marked only once as they have simple verb phrases, in (26) and (27) tense is marked twice: Present Tense with 'happen' and 'can', and Past Tense with 'live' in both. In this case 'can' behaves exactly as 'happen', which is a catenative.

(ii) Negation: Negation is marked only once in a simple verb phrase, but may be marked more than once in a complex one; for example:

(28) I don't prefer to come.
(29) I don't prefer not to come.
(30) I can't come.
(31) I can't not come.

In the above sentences 'can' behaves exactly as 'prefer' in respect of negation. The presence of 'prefer' and 'come' makes the verb phrase complex; in the same way, the presence of 'can' and 'come' also does the same with negation marked separately with each.

(iii) Passivization: Passivization may bring about no change of meaning, if a simple verb phrase is passivized, but the meaning changes when a complex verb phrase is
(32) John has seen Mary.
(33) Mary has been seen by John.
(34) John wants to see Mary.
(35) Mary wants to be seen by John.
(36) John will see Mary.
(37) Mary will be seen by John.

(32) and (33) have simple verb phrases, the meaning therefore does not change with passivization, but the meaning changes when (34) is passivized to (35) just because (34) has a complex verb phrase. Similarly, the meaning changes when (36) is passivized to (37). That proves that (36) and (37) have complex verb phrases in which 'will' behaves like a full verb. This argument is a bit weak for two reasons: (i) This happens only with the subject-oriented modals, not with the discourse-oriented and epistemic ones, and (ii) some sentences even with complex verb phrases can be passivized with no change of meaning, such as

(38) John happened to see Mary.
(39) Mary happened to be seen by John.

This is so probably because the underlying structure of (38) is quite similar to that of the sentence, 'John may see Mary', as shown below:
(38) John may see Mary

(40) John happened to see Mary.
Apart from the argument of passivization, this shows that even in a case of simple verb phrase the modal, at least the Ep. one, may function like the catenative 'happen'. Ross (1969) advances a similar argument to prove that auxiliaries are main verbs.

However, the above tests do not impress Palmer much. Because the modals lack the freedom of combination that the catenatives have, he is prepared to distinguish them not as main verbs, but as part of a close-knit sequence (1974:100). In a recent paper in Lingua (1979, vol.47:1-25) he argues that modals are not completely like main (or full) verbs. He does not deny that they are verbs, but he says: "They are verbs of a rather different kind from main verbs" (p.1) He tries to meet the arguments of Huddleston for treating auxiliaries as main verbs, but he considers only those arguments valid that concern derived structure, and are specifically related to the description of English. He ignores such arguments as try to show that a main verb analysis is more appropriate for a particular theoretical modal.

Palmer suggests that some verbs are clearly auxiliaries, some clearly main verbs, and others only intermediate or borderline cases. He believes that gradients are common in language and in other kinds of experience. Thinking of
the English verb, he finds a gradient at one end of which we have 'be', 'have' and 'do' and at the other catenatives like 'want', 'propose', 'like' etc. The modals are found some way along the gradient as are the subject complementation verbs like 'happen' and 'seem'. A further division may show modals falling on one side, and 'happen' and 'seem' on the other.

The main basis of Palmer's distinction between an auxiliary and a main verb is still his distinction between the simple and complex verb phrases. He has already shown (1974) how modals sometimes occur in complex verb phrases, and seem to behave like main verbs. He only tries to reinforce that position with some more arguments in the paper mentioned above. For instance, he admits that sometimes there is independent tense-marking for the modals, and in that respect they are more like catenatives than 'be', 'have' and 'do'. Stating his position categorically he says: "My position is of course, that the modals are further along the continuum towards the main verbs than are other auxiliaries." (1979:11)

However, Palmer finds good reasons like the paradigm-test and the modifier-head argument for making a distinction between auxiliary and main verbs. His conclusion, specifically related to modals, is: "The modals are intermediate but there are several uses of the modals and the same verb may have fewer or more characteristics depending on its use." (1979:24).
Palmer's moderate middle position may seem more satisfying to those who do not want to ignore the derived structure altogether, but, as Palmer himself admits, the issues before those who claim that auxiliaries are main verbs in the underlying structure are of a different nature. They may regard the constraints associated with the modals or any other kind of auxiliaries in the derived structure, which Palmer considers important, as of a superficial nature which do not substantially affect their characterization as main verbs in the underlying structure.

However, let us now look at the kind of arguments that linguists like Ross, Huddleston, Pullum and Wilson etc., have advanced, for theoretical reasons, to prove that the English auxiliaries are main verbs. We do not want to go into the whole controversy, and examine the validity of each argument, but only want to present a select few of them just to show the trend of thinking in this direction, and also to highlight some of the features of the deep syntax of the English modals.

There is a lot of literature on the subject. The main contributors to the discussion are Ross (1969 & 1972), McCawley (1971), Lakoff (1971), Borkin (1972), Huddleston (1974 & 1976), Newmeyer (1975), Anderson (1976) and Pullum & Wilson (1977). We shall present below some of the main ideas
of Ross, Huddleston and Pullum & Wilson. We are leaving out others not because they are less important, but because it will make the discussion unwieldy, if we try to reproduce all the arguments given by various people. Let us start with Ross (1969) who first proposed the new analysis of auxiliaries as main verbs:

Ross has put forth 12 arguments of which we shall present only the central ones to indicate the trend of his thinking on the subject.

(1) Look at the following sentences:

(i) I hope that we will win in Vietnam, but no sane person hopes so.

(ii) It may seem we will win, to our glorious president, but it doesn't seem so to me.

So in the above sentences functions as pro-s. It follows the main verb and replaces the complement clause.

Now look at the following sentences:

They said that Tom likes ice-cream and so he may be here, is working hard, had left, might have been singing.

| does   | I
| may    | |
| is (has)| |
| (had)  | |
| (might have been) | |
| (might have) | |
| (might) | |
This proves that auxiliaries like 'may', 'is', 'has', 'had', 'might' etc., are main verbs as they behave here exactly like the verb 'does', each having 'so' as the substitute for the complement clause.

Ross questions the analysis of auxiliaries in Chomsky's *Aspects of the Theory of Syntax* which does not treat 'might have been', 'might have' and 'might' as constituents in the same way.

(2) Look at the following sentences:

(i) I know that our cause is lost, but no one else knows that our cause is lost.

(ii) I know our cause is lost, but no one else knows it.

The underlined $S$ in (i) which is the comp. of 'knows', is deleted and the pronoun it is substituted for it in (ii).

Now look at the following where the same thing happens:

(iii) Max was chortling.

(iv) Max was chortling when I got up yesterday morning and he was at it when I went to bed that night.

This is possible only when we postulate the following deep structure for (iii) where the auxiliary was functions like the main verb.
(3) The following sentence is ambiguous, as it may have both deontic and epistemic interpretations:

(1) Windows may be broken by rioters.

*May* thus appears as a transitive as well as an intransitive verb, as the following deep structure PPs of the above sentence show:
I may it rioters break windows
The sentence can be disambiguated at the surface by using the adverbials gladly and possibly, as below:

(i) Windows may gladly be broken by rioters.  
    (deontic)  

(ii) Windows may possibly be broken by rioters.  
    (epistemic)  

If we now add the expletive 'there' to the above sentences, we may get the following sentences:

*(iv) There may gladly be windows broken by rioters.  

(v) There may possibly be windows broken by rioters.  

(v) is quite parallel to those sentences which have intransitive main verbs like 'happen', 'turn out', etc.; for example:

(vi) There happened to be a commission present.  

(vii) There turned out to be a cat-fish in the train.  

4. The following sentences are considered to have different deep structures in the Aspects analysis, just because need is treated as a main verb in (i), and as an aux. in (ii):

(i) Ella doesn't need to go.  

(ii) Ella need not go.  

If we treat need as a main verb in both, we can simplify the analysis, and postulate the same deep structure for both as shown below:
Ross extends this analysis to **dare** also.

5. Greenberg notes in *Universals of Language* (1963) that the auxiliary follows the main verb in SOV languages, but it precedes the main verb in SVO languages. These facts can be explained adequately by treating auxiliaries as main verbs and the following or preceding sequences as objects. Look at the following sentence:

(i) Bill was writing a letter.

**was** is the main verb here and **writing a letter** is the object as shown in the following phrase marker:
Ross has given several other arguments also to prove his thesis including some with the help of data from other languages like German and Japanese. They can be looked up in his paper "Auxiliaries as Main Verbs" (1969). Let us now look at some of the arguments advanced by other linguists.

The main arguments presented by Huddleston in favour of treating auxiliaries as main verbs are the following (1976:217-22):

(1) **PS rules can be simplified by dispensing with the categories VGP, Aux and M.**
(2) The feature \( \exists^+ \text{Verb} \) can be dispensed with, and \( V \) can be the third term of the Affix Hopping rule. This may improve the internal adequacy of the grammar of the verb phrase according to the standard theory in a way that replacing \( \exists^M, \) have, be, \( V \) by \( \exists^+ \text{Verb} \) may not. In both versions of the old analysis the elements round which the affixes are moved have nothing else in common, whereas in the new analysis they are all daughters of \( V \).

(3) The new analysis makes \( \exists^+ \text{Aux} \) a rule-feature much more naturally than the old one. All \( \exists^+ \text{Aux} \) items will now be dominated by \( V \), and thus all the rules can be governed by the Verb. Formalizing \( \exists^+ \text{Aux} \) as a rule-feature under the old analysis requires a much less tightly constrained theory of rule-government than under the new.

(4) The new analysis allows a more general account of complementizers, as they are selected not merely by lexical verbs, but also by the so-called auxiliary verbs like 'ought', 'be' etc.

(5) A more general analysis is possible if we treat 'need' and 'dare' uniformly as lexical verbs, and not as auxiliaries here and main verbs there. They can be analysed as verbs taking infinitival clauses as object complements in all cases.
The so-called modals may have a tense/time reference different from the main verbs with which they occur; for example, 'John may have gone yesterday' and 'you needn't have come until tomorrow'. They can be paraphrased as 'It may be that John went yesterday' and 'You didn't need to come until tomorrow' respectively.

In the first sentence, the modal 'may' is in the present tense and 'go' in the perfective aspect referring to past time. Similarly, in the second sentence, the modal 'need' is in the past tense, while the verb 'come' has a future time reference. This phenomenon forces us to acknowledge verb phrases with modals as complex verb phrases in which modals behave like main verbs.

We shall not give any more of Huddleston's arguments, nor shall we go into any more details, as it would make the present work unwieldy. The main purpose of presenting the above arguments is to give some idea of the considerations which have motivated Huddleston and various other linguists to distinguish auxiliaries as main verbs.

We shall now have a brief look at some other types of arguments presented by Pullum & Wilson (1977) in this connection:

Some of the arguments in support of the new analysis presented by Pullum & Wilson (1977) are the following:
(1) There is an obvious identity between an epistemic modal like 'may' and a speaker-oriented adverb like 'perhaps', as far as their modal function is concerned, but there is a clear discrepancy between their position in the kind of analysis presented according to the standard theory in that while the adverb is dominated by the S node, and has the subject NP as its sister, the modal is dominated by the Aux node and has only the Tense node as its sister. See below:

This clearly distorts the identity between 'He may go' and 'perhaps he (will) go'. The proposition 'he go' is modalized in both cases in the same way. While adverbs appear in construction with subjects, modals do not. This discrepancy can be removed if modals are treated as main verbs. Then both the epistemic modals and the speaker-oriented adverbs could be represented as below:
A still stronger argument is to postulate the modals as main verbs and account for their auxiliary-like behaviour by means of the Hopping analysis proposed by Akmajian & Wasow. This analysis will allow all the modals to be generated as main verbs in the deep structure of a sentence and then to be hopped into the Aux for their Aux-like features. For example, 'need' behaves like a lexical verb in positive declarative sentences undergoing number agreement, taking the complementizer 'to', permitting 'do' support and optionally taking the full range of auxiliaries with it. But it has the option to behave like a modal auxiliary in negative and interrogative sentences. The old analysis obviously treats 'need' as a lexical verb and as a modal auxiliary differently. 'Need' could now be treated as a single initial-structure lexical item in every sentence and all kinds of distributional differences could be handled transformationally. It is assumed that all the instances of 'need' to which Need-Hopping will apply are in intransitive-initial-structure configurations, as in the following figure:

\[
\begin{array}{c}
\text{Comp} \\
\text{wh} \\
\text{NF} \\
\text{T} \\
\text{Pres} \\
\text{S}_2 \\
\text{V} \\
\text{V} \\
\text{S}_1 \\
\text{Aux} \\
\text{Pres} \\
\text{S}_0 \\
\text{S}_0
\end{array}
\]

(cont'd)
The above analysis is claimed to hold good not merely for giving a uniform treatment to 'need', but also to other surface modal auxiliaries, like 'ought', 'must', 'shall', 'will', 'can', 'may' and 'dare'. A number of advantages of this analysis are shown; such as, if 'ought' is treated as a main verb, we do not have to give any explanation for it taking the complementizer 'to'. The modal 'be' in a sentence like 'He is to leave for Delhi today,' can also be given a parallel analysis. 'Dare' also needs a similar Hopping analysis to account for its behaviour as a main verb and as an auxiliary, and so does 'use(d) to'.

Pullum & Wilson wish to extend the Hopping analysis also to the true modals like 'may', 'can' etc., for two reasons which are the following: "The first is that, once Hopping analyses are admitted into the grammar - as it seems they must be, for maximally general statements - then the true
modals may be derived at no extra cost, using exactly the same mechanisms. Subject-to-subject raising is independently necessary for verbs like 'seem': it could simply be extended to apply to verbs like 'may' and 'will'. There are even verbs which obligatorily undergo subject-to-subject raising, e.g., 'tend' can reach the surface no other way. Whatever mechanism is used for 'tend' can also be used for the true modals. The fact that modals never take complementizer 'to' might seem to argue against deriving them from underlying verbs. But we have seen that 'need' and 'dare' delete their complementizers when they become auxiliaries. One might then make the general claim that when a verb hops into the auxiliary, it automatically does not govern a 'to' in the following infinitive. 'Ought', 'used' (?) and modal 'is' would be the exceptional items here, while the true modals would behave quite regularly. True modals would then be obligatory Hopping verbs, like 'be' for Akmajian & Wasow. Moreover, there are true verbs which take zero tenseless complements ('I made him do it'; 'He helped wash the dishes'); so, lack of the complementizer 'to' is not particular to modal auxiliaries. We have seen that sequencing filters are needed for main verbs like 'used', hence the necessary filters for the main verb analysis of the auxiliary would add nothing new to linguistic theory. Therefore, to move from Akmajian-Wasow type analysis to one in which 'All'
modals are derived from VP-dominated main verbs would demand no descriptive machinery not already in use in the grammar of English.

The second reason for adopting the main verb analysis follows from the first. There is no longer any class of verbs which can unequivocally be called the modals, in the light of our discussion so far. There is no feature of modal behaviour which is not also shared by some verb. It is, in fact, far from the case that modals and verbs have totally different syntactic behaviour (Jackendoff, 100).

Pullum & Wilson, (1977:758:59)

The above arguments are indeed quite impressive, but the issue has not yet been resolved one way or the other. There are still defenders of the old analysis like Emonds (1970), Jackendoff (1972), Jenkins (1972), Lightfoot (1974), Palmer (1974 & 1979) and Akmajian & Wasow (1975). We cannot reproduce their arguments here for lack of space, and also because the main aim of the present dissertation is not to evaluate the different theoretical approaches to the treatment of auxiliaries, but to draw on some of their insights in comparing English and Hindi in respect of modality. We find the new analysis useful, as it helps us handle certain features of the Hindi modals also as insightfully as has been
done above in relation to some features of the English modals. As far as modals are concerned, the analysis has some important syntactic factors to justify it. But if we also look at some of the semantic factors related to them, we find the analysis equally revealing, as the modals, especially discourse-oriented and epistemic ones, seem to be semantically not auxiliaries of the verb, but independent elements that modify the whole proposition as Neg and Q elements do. So, if Neg and Q can be regarded as sentence elements, there is every justification for modals like 'may', 'can' etc., also to be regarded as sentence elements. For example, 'John is not well', and 'John may be well' are absolutely parallel to each other, as we can see below:

John is not well.  

Paraphrase: It is not the case that John is well.

John may be well.

Paraphrase: It is perhaps the case, or it is possible that John is well.

The above logical analysis of the modal element is close to the new analysis in which it occurs as the main verb element of the sentence, and the proposition occurs as its subject, for example:
This is also close to Fillmore's formulation of the underlying structure of a sentence which consists of two main elements: modality and proposition. Although every proposition has its own predicate, which is related to the arguments within the preposition, the modalized preposition may have the modal element as the predicate, and the component-preposition which is of a factual status, as its argument.

4. The Semantics of the English Modals

We shall not discuss here the meanings of the English modals individually, as such studies are easily available (Ehrman, 1966, Leech, 1971). Besides these specialized studies of meaning, almost every grammar of English gives the meanings of the modals. We are also not breaking them into basic meanings, overtones and use, as Ehrman (1966) has done. These distinctions may be useful, but they are not always discrete enough to account for all the facts regarding the
meaning of the English modals. (Huddleston, 1969) We cannot also use them as common categories to compare English and Hindi modals. What we propose to do is to discuss the meanings of the modals with reference to the different types of modality. We shall therefore now deal with these different types of modality and see which modals in English represent different aspects of them. Having done that, we shall examine what other meanings the English modals may have. It is, indeed, difficult to claim exhaustiveness in any account of the semantics of the English modals. So, what we hope to achieve in this section is a rough chart of most of the meaning associations they have with the logical categories of modality, and also with different types of illocutionary force which together constitute their meaning potential.

Modality, as we have shown in the second chapter, may be divided into four classes, alethic, epistemic, deontic and dynamic. It must be remembered at this stage that the modals perform different types of function in relation to the above kinds of modality of which the qualification of the factuality of the proposition is only one. Sometimes the modal itself is part of the proposition whose factuality the speaker asserts.

4.1 Alethic modality

The central concepts in alethic modality are those of logical necessity and logical possibility which we have already
ought to: John ought to be in Delhi now.

The speaker concludes from the circumstances of John's having left for Delhi three days back, and the train journey to Delhi taking only two days, that he must be in Delhi now. Ought to is weaker than must, as it only indicates the strong guess of the speaker. The speaker is not in a position to affirm the logical necessity of the event, but only puts forward its strong probability on logical grounds.

need: (He is absent) Need John be ill?

Leech considers 'need' to be the negative and interrogative counterpart of must in both the senses of compulsion and of logical necessity (1971:85). In fact, need here is questioning the logically necessary proposition, 'John must be ill'. The speaker is simply asking if it is logically necessary to infer from John's absence that he is ill. Needn't, similarly, denies the logical necessity of anything, such as in 'He needn't be a thief.'

4.2 Logical possibility

It is represented by may and can. Possibility is often considered to be of two kinds: factual and theoretical. They may be two facets of logical possibility, as either certain facts available in the immediate environment make the happening of a certain event actually likely, or the general nature of the
world makes the happening of the event only possible. The fact that the happening of a certain event is not necessarily ruled out from all possible worlds makes it a case of logical possibility. Nevertheless, the distinction between factual and theoretical possibility is important in discussing the meanings of may and can. Look at the sentences:

(1) Shri Rajnarain may become the next Prime Minister.

(2) Shri Rajnarain can become the next Prime Minister.

(1) is a case of factual possibility. The speaker probably has certain facts of the present political situation in mind in the light of which he concludes that it is quite likely that Shri Rajnarain will become the next Prime Minister. He may be wrong in his conclusion, but from his point of view, it is all the same a statement of factual possibility. On the other hand, (2) is a case of theoretical possibility, as here the speaker only claims that Shri Rajnarain's becoming the next Prime Minister is not in any way impossible. It is possible on purely theoretical grounds, as in a democracy it is possible, theoretically, for any citizen to become the Prime Minister.

The above examples may create the impression that theoretical possibility, which is closer to logical possibility, is represented only by 'can'. In fact both 'may' and 'can'
may be used for that, as is evident from the following cases:

Politicians may be dishonest.

Politicians can be dishonest.

Both the above sentences indicate the theoretical possibility of politicians being dishonest, in at least one possible world, or world-state.

4.3 Epistemic Modality

We have already indicated how the modals representing epistemic modality are susceptible to both objective and subjective interpretations. Epistemic modality is also divided into epistemic necessity and epistemic possibility. We have already explained what they mean. Epistemic necessity is also represented by the same modals as represent alethic necessity, namely, 'must', 'will', 'have (got) to', 'ought to', and 'need'. Objective epistemic necessity is, however, very close to alethic necessity, as the speaker's affirmation of necessity is based on his certain knowledge of facts. That is to say, he infers from certain facts within his knowledge the truth of a certain proposition and affirms its epistemic necessity. The following are some examples:
(I know)

(1) Rajendra must have died. (as all the passengers have died in the plane crash).

(2) The trains will be cancelled. (as all the tracks have been badly damaged by the flood).

(3) The Janata Party has to break up. (as it is made up of irreconcilable interests).

(4) The exams ought to be postponed (as the students' strike is not likely to end soon).

(5) The exams need not be postponed (as the students' strike is likely to end soon).

With a slight change of situation the same modal may represent subjective epistemic modality. The speaker in that case will not have any objective knowledge necessary for affirming the necessity of a certain event, but will only have a strong subjective assurance about it, based perhaps on his personal intuition, for example:

(1) Rajendra must have died.

(The speaker may say this as soon as he hears of the plane crash, without any knowledge of the death of all the passengers.)

(2) The trains will be cancelled today.

(The speaker may intuitively feel so even without a knowledge of the bad shape of the tracks.)

(3) The Janata Party has to break up.

(Here also the speaker may give expression to his anger rather than draw inference from anything).
Let us now look at epistemic possibility, which is also of objective and subjective nature. As we have already indicated, if the possibility of an event is quantifiable, and presentable as an objective fact, it is objective, but if it is only based on the subjective impression of the speaker without any possibility of quantification, it is subjective. Epistemic possibility is represented by 'may' and 'can'.

We have already shown how the above modals can be used to indicate factual and theoretical possibility. It should be noticed that it is only in the subjective epistemic sense that the modal can be replaced by the epistemic modal adverb 'perhaps':

He may go to Delhi next month.

Perhaps he will go to Delhi next month.
It is not possible to do so in the case of theoretical possibility which is objective in nature. It is evident from the following:

Lightning can be dangerous.

*Perhaps lightning is/will be dangerous.

Another interesting fact regarding objective and subjective modality is that when the objective possibility of an event is denied the speaker in fact asserts the impossibility of it, as in the following:

Lightning cannot be dangerous.

(It is not possible/impossible for lightning to be dangerous.)

But the subjective possibility is not denied in the same way. Negation in it belongs to the proposition, for example,

He may go to Delhi next month.

He may not go to Delhi next month.

The negative sentence can be paraphrased as 'it is possible that he will not go to Delhi next month', not 'it is not possible that he will go to Delhi next month'.

From the examples of alethic (logical) and epistemic possibility, both objective and subjective, that we have given above, it is clear that alethic possibility and
objective epistemic possibility are very close to each other, as in both the speaker affirms the possibility of a certain event on the basis of his knowledge of facts. It is thus only the subjective epistemic modality represented by 'may' that is in clear contrast with logical possibility. Although 'may' and 'can' overlap in function sometimes in respect of the latter, the occurrence of 'may' alone in respect of the former still maintains the contrast between the modals.

4.4 Prediction

Prediction is an epistemic phenomenon. So we shall talk about it here and see which English modals represent it. Before that we will have to determine the precise epistemic nature of prediction. It can range from a weak guess about the happening of an event in future to a very strong belief, verging on certainty, about it. For example, 'John will go to Delhi tomorrow' may be paraphrased as 'I think/suppose/imagine John will go to Delhi tomorrow', but also as 'I know John will go to Delhi tomorrow'. Notice, in the former paraphrase, the verbs that express the speaker's commitment are not factive, but in the latter 'know' is a factive verb. Although it is logically incompatible to use a factive verb along with a proposition having a future time reference, as one does not know for certain that a certain event will take place, and is thus in no position to assert it as a fact, it is used in actual practice. And it serves a very useful
purpose. It raises prediction to the status of some kind of logical inference which one is entitled to draw, if one has such facts in one's possession as support it firmly. So when one says 'I know John will go to Delhi tomorrow.', one is not really asserting the future event as a fact, but as a logical inference from the facts known to one, such as John having booked a seat for Delhi, having taken leave from the office for that purpose, having already sent a telegram to Delhi to that effect, and so on.

We can thus see that prediction may touch on both epistemic possibility and necessity. It forms a gradient in the speaker's mind with greater or lesser degrees of assurance about the happening of a particular event in future. If the prediction is based on certain known facts, it may be treated as of objective epistemic nature, close to the nature of objective epistemic necessity, but if it is purely personal, not based on any objective facts, it is of a subjective epistemic nature. The use of factive and non-factive verbs in a predictive utterance marks this difference. 'Will' is the modal that is used for representing prediction of any kind.

Besides 'will', another modal used for indicating future happening is 'be to' ('am/is/are to'), for example, 'John is to leave for Delhi tomorrow'. Here also a factive predicator like 'know' can be used. The speaker may say
'I know John is to leave for Delhi tomorrow,' if he knows for certain that the visit has already been planned and is part of his tour-programme. It is perhaps this fact that the speaker asserts as a fact, not the visit as such, which is true only like a logical inference. 'Be to' thus represents only objective epistemic modality. It is for this reason perhaps that non-factive predications do not seem appropriate with it. If they are used, the speaker cannot put forward the proposition as a prediction, but can express only his attitude to it, which is of uncertainty. It is therefore possible to add 'I don't know for certain' parenthetically to it.

I think/suppose/imagine John is to leave for Delhi tomorrow. (but I don't know for certain.)

'Will' is said to be used in a non-predictive sense also, as in 'The meeting will take place at 4 p.m.' It is said that the speaker here is not actually predicting a particular event, but merely making an announcement about its taking place at a certain time in the future. This is supposed to be the sense of pure or uncoloured futurity. We think even this is a case of prediction as far as the speaker's attitude towards the proposition 'The meeting take place at 4 p.m.' is concerned. He infers from some known facts that a certain proposition will hold true in a future state of the world at such time, and then states it as a prediction. He is in fact committed to it
in the sense 'I say so it will be so that in a certain state of the world at 4 p.m. p is true.'

4.5 Deontic Modality

Like other types of modality, deontic modality also has phenomena of necessity/obligation and possibility/permission which have already been explained. Deontic necessity/obligation is represented by 'must', 'shall', 'will', 'ought to', 'have (got) to', 'be to', 'need', 'dare', 'can' and 'had better'.

(1) You must come back by this evening.
   (obligation imposed by the speaker).

(2) One mustn't cross the road while the red light is on.
   (obligation not imposed by the speaker, but by the traffic law.)

Note: The sources of obligation can be many others besides the speaker, as has been explained earlier.

(3) You shall not come late from tomorrow.
   (the speaker warns, obliges and insists on the addressee not to be late from the next day.)
(4) You **will not** come late from tomorrow.

('With emphatic stress even 'will' can be used as 'shall' to express the idea of insistence.)

(5) You **ought to** be punctual from tomorrow.

The sense of obligation is weaker here. The speaker here neither warns nor insists by virtue of his authority on the addressee to be punctual from the next day, but only exhorts him and expects him to do so.

(6) You **have got to** be punctual from tomorrow.

(Here the sense is of obligation backed by authority. The speaker insists on the addressee, as in (1), to do something.)

(7) You **are to** report back to me tomorrow morning.

(Here 'are to' is used in a quasi-imperative manner. The speaker insists on the addressee, or orders him to do something, in the same way as in (6).)

(8) You **needn't** report back to me tomorrow morning.

(As explained earlier, 'need' functions as a modal only in interrogative and negative sentences. 'needn't' has the sense of no obligation being imposed on the addressee in the negative sentence in which it occurs.)
(9) You *dare* not come late to the office.
(It is a sort of warning by which the speaker makes
the addressee aware of a certain obligation which he
cannot ignore.)

(10) You *can't* come late to the office.
(One can treat 'can't' as having the sense of 'not
permitted'. We would rather treat it here as having
the sense of 'obliged not to'. These senses are of
course related, as whatever is obligatory you are
not permitted not to do. The above sentence may
mean 'You are not permitted not to be punctual in
the office.')

(11) I don't know what you're upto, but when Brenner...
you *can* forget about Brenner too.
(As one of the overtones of 'can' Ehrman (1966) takes
command to be the meaning here, although it is more
likely to be a case of recommendation.)

(12) You *had better* come soon.
(Here the speaker does not insist on the addressee to
come soon, but he only urges him to do so. In negative
sentences it may sound like a warning as in 'You had
better not make this mistake again'.)

Deontic possibility or permission is represented by the following modals, 'may' and 'can'.

(1) You **may** go now.
(The speaker permits the addressee to go.)

(2) You **can** go now.
(It is the same as in (1) in a slightly more informal context.)

Permission may also be sought by means of the above modals as in 'may/can I go now?'

**Note:** While in the case of epistemic possibility any negation of (1) will attach the Neg to the main verb, so that the sentence will mean 'it is possible that you will not go now', with deontic possibility i.e., permission, Neg will remain with the modal, so that 'You may go now' will mean 'You are not permitted to go now'. But if we take tonicity or placement of nuclear stress into account, to which Palmer (1965:139) draws our attention, the 'Neg' bearing nuclear stress may belong to the complement of the permission modal; for example, 'You may not go.' may mean 'You are permitted not to go' (Huddleston 1969:172-73) objects to Ehrman's account of the effect of negation on the modals precisely on this ground. He agrees with Palmer that tonicity may
to a contrast like 'You can't go' (no permission or ability) and 'You can not go' (permission or ability not to go.) With 'can', Neg is normally attached to it but it may change, as has been shown, on account of nuclear stress.)

We have already discussed the sense of 'needn't' in connection with obligation. In fact, as the concepts of obligation and permission are closely related, a sentence like 'You needn't go now.' can also mean 'You are permitted not to go now'. 'Need' is thus a modal that also represents deontic possibility/permission.

4.6 Dynamic Modality

Since this type of modality is subject-oriented, it does not distinguish between objective and subjective senses as other types do. Here the central concepts are the speaker's willingness, intention, determination, ability etc. The listener's williness is also significant in the use of some modals. The modals that represent the above concepts are 'can', 'will' and 'shall'.

1. I can read French.
   (The subject has the ability to read French.)

2. I shall/will submit my Ph.D. thesis to the university next month.
(It is the subject's intention to do something. 'Shall' is normally used in British English with the first person subject, although in speech it is always 'I'll', 'will', with emphatic stress, denotes stronger intention akin to a firm determination to do something.)

3. I'll/shall help you.
(The subject is willing to help you, or intends, or even promises, to help you.)

4. Shall I help you?
(The subject here consults the willingness of the addressee. He wants to know if the addressee would like the subject to help him.)

(Though less often, 'shall' can occur with the third person also in the sense of (4).)

6. Shall/Will you take a holiday this summer?
(The occurrence of 'shall' with the second person here also sounds unusual. But Leech (1971:84) thinks it can be used in the sense of intention. The above sentence means 'Do you intend to ...?')
4.7 Residual Meanings

Here we shall list only such meanings of the English modals as do not fall within the range of any of the above types of modality. They are the following:

1. **May** God bless you with success! (Benediction.)

2. **May** the Devil take you! (Malediction.)

3. **Oil will** float on water.
   (Habitual or characteristic sense. It is a sense somewhere between epistemic and dynamic modalities.)

4. The door won't open
   (It indicates a certain disposition of the door. It is closer to dynamic meaning, although the subject is inanimate here.)

5. You **shall** get back your money.
   (Here the speaker is not imposing any kind of obligation on the addressee for anything, but is only showing his willingness to do something. It may be interpreted as a kind of promise.)

6. You **shall** stay with me as long as you like.
   (Here the senses of willingness and permission seem to be conflated. The speaker is quite willing to accommodate the subject and permits him to stay with him as long as he likes.)
7. Will you open the door?  
Can I

(It is only a request.)

Can

Larkin (1976:389-92) thinks that 'can' sometimes does not have any of the senses of permission, ability and possibility in certain contexts. That may be true as the above three conceptual categories do not fully exhaust the meaning of 'can'. He claims that as literal statements the following sentences are next to meaningless:

1. (a) You can anticipate more conspiracy indictments in the near future.

(b) We can look forward to fewer fluctuations in the market in the months ahead.

(c) Peter can expect to receive an important promotion before Wednesday.

Larkin takes them as statements of facts by means of which the speaker enables the addressee to know something. This may not be true for two reasons: (1) The speaker cannot make a statement of fact regarding a future event. He can at best make a strong prediction by saying 'I predict that ...'; (2) What the speaker enables the addressee to know here is not the proposition in any of the above sentences, but his
own guess or supposition regarding its truth. 'can' therefore functions only as an epistemic modal in all the above sentences. Each sentence can be paraphrased on the following lines:

2. (a) (i) Perhaps there will be more conspiracy indictments in the near future. (Subjective epistemic modality)

(ii) It is possible that there will be more conspiracy indictments in the near future. (Objective epistemic modality.)

Similarly, in the following sentences 'can' does not carry the sense of permission, but it carries the sense of suggestion or recommendation.

3. (a) You can go to hell.
(b) Ralph can just forget the whole thing.

4. (a) You can take these invoices up to the boss now.
(b) The patient in room 4 can get dressed now.

The same sense applies to the following sentences:

5. (a) You can tell Winston to come in now, Miss Jones.
(b) Winston can come in now, Miss Jones.
(c) You can come in now, Winston.
The speaker here suggests or recommends some course of action to the addressee. Larkin overlooks these meanings of 'can', and restricts his argument to the three set meanings of it. We have pointed out those kinds of meanings which are not covered by permission, ability and possibility.

**Will**

'Will' in the sense of 'willing to' is not wholly equivalent to volition indicating 'be going to'. Larkin (1976:387-89) points out the difference in the following sentences:

2. (a) John hires anyone who will tell him some old war stories.

? (b) John hires anyone who is going to tell him old war stories.

He interprets (2.a) as 'John hires anyone who agrees to tell him some old war stories.' For (2.b) he says: "To make any sense, (2.b) would have to refer to a situation where John went about discovering people who intended to tell him a war story and then hired them. Note that 'be going to' in (2.b) is just as volitional and just as indicative of the future as 'will' is in (2.a)." (1976:389) From this Larkin easily concludes that none of the meanings of 'will', such as 'future', 'volitional' 'characteristic', 'habitual
obstinancy' and 'prediction' cover the case of 'will' in the relative clauses of sentences like the above. Such a conclusion is perhaps based on some misunderstanding. 'Be going to' is not volitional in the same manner as 'will'. While the volition, indicated by 'will' in (2.a), is fully acknowledged by 'John', that indicated by 'be going to' in (2.b) is not. It remains constrained to the subject who is to tell the stories. The subject's intention does not necessarily imply any agreement he may have with his employer, while the reverse is strictly necessary, i.e., any agreement necessarily implies the subject's intention.

**Must/Have to**

'Must' is not identical in its sense and with 'have to', as one can see from the following sentences:

(1) John must reach the office on time.

(2) John has to reach the office on time.

One sense of 'must' in the first sentence is that the speaker imposes the obligation of reaching the office on time on John, if he has the necessary authority. Another sense may be that the speaker states the fact that that John is under the obligation of reaching the office on time (the obligation has been imposed by a third person). The speaker, nevertheless, committed to that obligation; that is to say, he identifies
himself with the person who imposes the obligation. But these senses are missing from 'have to'. The first is just not there, the second is somewhat different. In the second sentence, the speaker states the same fact that John is under the obligation to reach the office on time, but he identifies himself now with John, not with the person who imposes the obligation. It is thus an uncommitted assertion of obligation, while the first sentence is not.

4.8 Modals with the Past Tense

The use of the past tense changes the meaning of some modals slightly, and of others completely. There are still some modals like 'must', 'ought to', and 'need' which do not allow any past tense marking. Let us take a few examples to see what happens to the sense of the modals when they were marked for the past tense. The forms are the following:

<table>
<thead>
<tr>
<th>Present</th>
<th>Past</th>
</tr>
</thead>
<tbody>
<tr>
<td>can</td>
<td>could</td>
</tr>
<tr>
<td>may</td>
<td>might</td>
</tr>
<tr>
<td>will</td>
<td>would</td>
</tr>
<tr>
<td>shall</td>
<td>should</td>
</tr>
<tr>
<td>dare</td>
<td>dared</td>
</tr>
<tr>
<td>have (got) to</td>
<td>had (got) to</td>
</tr>
<tr>
<td>is/am/are to</td>
<td>was/were to</td>
</tr>
</tbody>
</table>
**Could**

1. When I was young I **could** walk several miles.
   (Past ability. The past tense refers to past time here.)

2. **Could** you pass the milk?
   (A polite request. No past time reference.)

3. I **could** do it for you.
   (Tentative willingness. No past time reference.)

4. The meeting **could** be at 4 o'clock, (I guess).
   (Possibility of a tentative kind, factual or subjective epistemic modality. Future time reference. Past time reference is possible with 'could have been', but in that case it is the aspect, not the tense which refers to past time.)

5. The Janata Party **could** be defeated at the polls.
   (Theoretical or factual possibility. No specific time reference.)

6. You **could** do it.
   (You have/had the permission to do it (if you like/liked).
   (Permission, or a free option. It is ambiguous as it may have a specific past time reference as well as no such reference.)

7. If I had money I **could** go to a hill-station in summer.
   (Unreal present. No past time reference.)
Might

1. **Might** I use your pen?
   (Permission (rare).)

2. They **might** come this evening.
   (Remote possibility, both factual and theoretical.)

3. I **might** as well do it now.
   (Some kind of tentative willingness.)

Would

1. **Would** you pass the milk?
   (Polite request.)

2. You have failed now; you **wouldn't** listen to me and work hard.
   (The subject insisted on not listening to the speaker and not working hard for the examination.)

3. He **would** come, sit here and waste my time every day.
   (Habitual or characteristic activity on the part of the subject.)

4. That would be the reason for his not coming to the party.
   (Possibility.)

5. (a) I wish he **would** come tomorrow.
   (b) **Would** that he come tomorrow?
   (The speaker's wish.)
6. If it rained the match would be cancelled. (Palmer, 1974:143)
(Unreal present.)

7. Would you like tea or coffee?
(Consulting the subject's willingness.)

Should
1. You should obey your parents.
(Obligation (moral, less categorical), equivalent to 'ought to' in sense. The obligation is always stronger with 'must' than with 'should'. 'Must', as Waisetschläger (1976) rightly points out "marks the safer guess, the stronger advice, the more comforting reassurance, the harsher criticism." (p.110))

2. He should be in Delhi now.
(Epistemic necessity, objective or subjective.)

3. If you should accept the offer, please inform me.
(The subject's willingness, or it being possible for him to accept the offer.)

4. I should love to go to a hill-station in summer, if I had money.
(Unreal present.)
5. It is odd that you should say this to me. (Quirk & collaborators, 1973:55).

(Putative' use after certain expressions, e.g. 'it is a pity that ...', 'I am surprised that ...' etc.)

6. Should I get you a cup of tea?
(Consulting the subject's willingness.)

7. Should it rain, the match would be cancelled.
(Unreal present.)

Dared

He dared not disturb me.
(Past time reference.)

Had (got) to

He had to take the examination.
(Past obligation. Had to is sometimes regarded as the past form of 'must'.)

Was/Were to

He was to leave yesterday for Delhi.
(Past schedule of programme.)

4.9 Modals with the Perfective Aspect

1. He could have passed the examination, if he had worked hard.

(Unreal past.)
2. He **might** have reached Delhi.
   **may**

   (Possibility of the completion of something in the past.)

3. He **can't** have reached Delhi.

   (Impossibility of the completion of something.)

4. He **will** have reached Delhi.

   (Prediction of the completion of something.)

5. You **needn't** have come.
   **shouldn't**

   (You have come, but it was not necessary/obligatory for you to have done so.)

6. He **must** have reached Delhi.
   **should**
   **ought to**

   (Epistemic necessity of the completion of something.
   The necessity with **must** is stronger than with **should**
   and **ought to**, already pointed out.)

7. You **must** have gone there.
   **should**
   **ought to**

   (Obligation unfulfilled.)

   ...