A Study of the English Modals
—— in view of TEFL ——

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0. Preface

When students begin to study English as a foreign language at school, they are inclined to replace every English word and phrase with Japanese ones which are found as equivalents in an English–Japanese dictionary, such as can for dekiru. As they enrich their vocabulary, however, they encounter many expressions which have synonymous meanings, such as can and be able to, a result of which they are forced to select the appropriate expression from the context. One of the most difficult choices seems to be the selection of English modals whose analysis is difficult unless they have some linguistic knowledge. It is presumed that a teacher of English should have adequate knowledge of semantic modality, a result of which leads the way to good classroom instruction in English. It is hoped that this article will contribute to the improvement of a learner's abilities in using English in a wider sense at the levels of both junior and senior high schools. In earlier stages of instruction, can (ability) is introduced first, and be able to follows. Both are translated into Japanese as dekiru. We shall notice, however, that can and be able to do not have exactly the same meaning, especially in the past tense form. For example:

(1) I ran fast, and was able to catch the bus.[1]

In the above case, if was able to is replaced with could, the sentence becomes unacceptable (*):

(2) *I ran fast, and I could catch the bus.[2]

On the other hand, couldn't, in place of could, is conceivable as in the follows:

(3) I ran fast, but I couldn't catch the bus.[3]

The translations simply derived from dictionary references regarding be able to and can are

of no use here.

What is more, two different meanings of <u>must</u> can be introduced as follows:

(4) You must be careful.[4]

(5) You must be careless.[5]

(6) You must be very sympathetic.[6]

<u>Must</u> in (4) means 'You are required to be;' in (5) it means 'it is obvious that you are,' but "must" in (6) can be interpreted in either sense and this brings out ambiguity. On the other hand, in a sentence with <u>must</u>, the term <u>not</u> does not function to deny the modality:

(7) Use a pen. You must not use a ball pen or a pencil. (TAL, II35)[7]

<u>Must not</u> in (7) is interpreted not as 'you are not required to' nor 'it is not obvious that...' but as 'you are required not to,' i.e. here the one in (7) lays the listener's obligation not to act. Thus, <u>needn't</u> is used to deny the listener's obligation not to act. <u>Needn't</u> is used to deny the modal meaning of <u>must</u>.

(8) You <u>needn't</u> use a ball pen or a pencil.

<u>Needn't</u> in (8) can be rewritten as 'you are not required to.' This complicated relationship between <u>needn't</u> and <u>mustn't</u> is neglected at the levels of classroom teaching, and the sentence with <u>must not</u> is understood by most Japanese as if it meant a negative imperative.

The examples above shown, even partly, that modality in English has developed in comparison with that in Japanese, and is hard to understand. In this paper, some general ideas for each English modal are examined with reference to the theory of F. R. Palmer (1990).[8]

I. Theory

The fact that many scholars have dealt with modals and modality in various ways is a clear indication of the complexities of the issues involved and of the difficulty of arriving at any completely simple and completely convincing interpretation. The section aims, therefore, to present an approach to its solution, and to offer some basic guidelines for the subsequent analyses.

A. Outline

The investigation of modality and modals inevitably raises problems concerned with the relation between form and meaning. If we decide to approach it exclusively either from form or meaning, we run into difficulties. We are forced, therefore, to take into account both form and meaning.

There must be some difficulties of a semantic nature to the concept of modality, yet at the same time precisely what is to be handled within the concept will depend on the formal features of the language. In this sense, the formal analyses are the more basic; they allow us to set some fairly clear limits. Yet a formally defined category will contain some semantically heterogeneous items; for example, if we define modality in English in terms

of modal auxiliaries, we shall, by including will, have to include futurity within the system of modality.

Although some scholars have questioned whether modals should be placed in a category separated from that of other verbs, there can be no doubt that native speakers are aware of modals as a set, because there are formal criteria that clearly distinguish will, shall, can, may, must and ought to, and to a lesser extent, used to, dare, need and is to, as modal verbs. Here the criteria used by H.E. Palmer[9] for his anonymous finites, and by Chomsky,[10] may be taken as follows:

[1] Inversion with the subject. (Must I come?)

[2] Negative form with –n't. (I can't go.)

[3] 'Code'. (He can swim and so can she.)

[4] Emphatic affirmation. (He will be there.)

There are not only these four criteria, the 'NICE' properties referred by Huddleston,[11] but also further specifically 'modal' criteria:

[5] No –s form for third person singular.

[6] Absence of non–finite form. (No infinitive, no past nor present participle).

[7] No co–occurrence. (*He may will come.)

According to these seven criteria, will, shall, may, can, must and ought to qualify as the modals, with the exception that may has no –n't form in the present. Must and ought to differ from the others in having no past tense forms, whereas ought to is the only one that requires to.

As we mentioned above, native speakers are aware of the existence of modals as a clearly defined set, not only because modals have some formal criteria, but also because they have a great many common semantic features. It is not necessary to define precisely what kinds of meaning are involved. The formal category is taken as the starting–point, and it is sufficient that the meanings involved are recognized as 'modality'[12]. The basic notions of modality are those of possibility and necessity; they are the core of the modality system.

More specifically, a set of modal verbs is established by formal criteria: the formal status of six such verbs is hardly in doubt, but the others are marginal. Syntheses of the formal and semantic criteria will lead us to go beyond possibility and necessity, and also include other verbs, such as be able to and have to, which are not formally modals, yet relate semantically to possibility and necessity.

The scope of this study will, then, be defined as follows:

(a) may, can, must

(b) ought to, should

(c) shall, will

(d) be able to, have to

The terms 'modal' or 'modal verb' are generally used to refer to the verbs in the narrow formal system, but these expressions are often needed to contrast modals as a single group with other verbs, i.e. 'lexical' verbs which do not signal modality. For this reason, semi-

modals like be able to, and have to, and other similar expressions are in contrast with 'main verbs' which refer to the 'proposition' or 'event.'[13]

B. Kinds of Modality

According to Palmer's theory (1979), English modality can be classified into three types.[14] The first is 'epistemic' modality, the modality of possibility and knowledge. The next is 'deontic' modality, expressing obligations. The last is 'dynamic' modality, the modality of ability and disposition.[15]

1. Epistemic Modality

From the points of view of both syntax and semantics, epistemic modality is the simplest to deal with and is most clearly distinct from the others, having the greatest degree of internal regularity and completeness. Linguists have used the term 'epistemic' to refer to the use of modal auxiliaries may for possibility and must for necessity, though other verbs, notably should and will, are also used epistemically. Examples are as follows:

(9) It's getting cloudy; it may rain soon. (NEG,29)[16]

(10) He must be at home. I see his car in his garage. (NEG,30)

The function of epistemic modality is to make judgments about possibility. In other words, it is normally subjective (performative), i.e. the epistemic judgment rests with the speaker. The relevant modals occur only in the present tense, for the judgment and the act of speaking are simultaneous. Epistemic modality is the modality of propositions rather than of actions, states, events, and so forth.

Epistemic possibility is indicated by may, which can be paraphrased by the phrase, 'it is possible that ...,' as in:

(11) He may be sick.[17]

(11)' It is possible that he is sick.

May is used to relate to propositions of various kinds.[18] It is used to refer to states in the present or the future as in (12), to actions in progress as in (13), to habitual activity as in (14), and to a single future action as in (15):

(12) A top from an aluminum can that is dropped on a beach today may be there, ready to cut someone's foot, during the twenty–first century. (HER,II,16)[19]

(13) He may be telling the truth this time. (SAE,13)[20]

(14) He may keep early hours, because he has never been late for school.

(15) I may go up at the end of August. (MEM,43)[21]

Epistemic necessity is represented by must, the strongest form of epistemic modality, which means "the only possible conclusion is that...,"[22] rather than 'it is necessary that ...'[23] Epistemic must is related to states or activity in the present and habitual activity as follows:

(16) A: That's why we try to make other people laugh. It helps us forget our own loneliness.

B: Then you must all be Pagliaccis at heart. (SAE,3)

(17) He must travel to London regularly. (MEM,44)

As seen in the examples above, "the reasons for the conclusion are either stated or implied."[24] Epistemic must seldom occurs with future time reference, because it is usually open to dynamic interpretations as in:

(18) He must come tomorrow.

The form be bound to must be introduced here, as it almost has an epistemic sense, with the main verb relating to the future:

(19) Self exploration and exploration in a small group at that level of complexity and so on is bound, it seems to me, to generate special languages.(MEM,45)

Both must and be bound to have the meaning of epistemic necessity, but they are not identical in meaning. There is a difference between the following:

(20) John must be in his office. (MEM,45)

(21) John's bound to be in his office. (MEM,45)

Must in sentence (20) expresses a likelihood that the speaker is drawing the most obvious conclusion, in response to a comment that the lights were on in John's office.[25] On the other hand, be bound to occurs in a context "where it has been questioned whether John is in his office and the speaker wishes to assert as positively as he can that this is in fact the only possibility."[26] When be bound to is used with future time reference, it may sometime mean that 'it is inevitable that...,' with a partly dynamic sense as in:

(22) If the Government deals with the situation realistically the cost is bound to be great. (MEM,46)

There is also a third degree of epistemic modality indicated by will, which can be paraphrased by the expression, 'it is probable that...,' for instance:

(23) He'll be on it all right. He always comes home on the five-thirty bus. (SAE,142)

Epistemic will, with present time reference, refers to what is reasonable to expect, expressing a "confident statement."[27]

The following sentence contains two modals, will and must:

(24) Ben will be in his office now. Yes, the lights are on, he must be there.

The two modals have different meanings in that the meaning of the latter shows a confident conclusion with the evidence, while the former is, a confident statement.

Should[28] also gives epistemic examples as follows:

(25) I've got a perfect view of the street from here. There's a bus coming now. This should be him. (SAE,142)

It expresses rather "extreme likelihood, or a reasonable assumption or conclusion,"[29] but it allows the speaker to be mistaken.[30]

2. Deontic modality

Another type of modality can be classified as 'deontic'. Like epistemic modality it is essentially performative in the sense that a speaker is the one who obliges, permits, or forbids. Modals have no past tense forms, for by their very nature judgments cannot be made in the past. By uttering a modal the speaker actually gives permission (may, can,),

makes a promise or threat (shall), or lays an obligation (must.) Examples are as follows:

(26) May I use your telephone?

(27) You must do as you are told. (Egawa,337)[31]

The difference between deontic and dynamic modality lies not in modes of obligation, but in what is 'discourse oriented' or performative, versus the rest.[32]

Deontic possibility, expressed by can, or may, consists basically of giving permission. May, if not epistemic, is usually used deontically:[33]

(28) "May I bring a bone to Ricky?" "Oh, yes," she said. "You may give him one if you would like. We don't like dogs very much. We got Ricky only for the children." (Yasui, 1982)

Can is more informal than may, and most of the occurrences of can for permission are colloquial. Can is said to be used to convey a command, often of a somewhat impolite kind:

(29) A: Well, how much will the ticket be?

B: The fare will be seventy four dollars. You can buy air insurance. (SAE,109)

(30) Can I borrow your dictionary for a few minutes? (Egawa,335)

To give permission may be interpreted as requiring something to be done.[34]

There are plenty of occurrences of deontic necessity must. This modal has some implication of authority on which the speaker relies, or at least the implication that he imposes his authority, as in the following:

(31) You'll just have to trust me when I tell you you must come home. (SAE,24)

(32) You must give us four days before you get your money. This is the rule, you know. (BGE,5)

When the subject of a sentence is in the first person, the speaker imposes the obligation on himself and at the same time by so doing actually performs the act, like the following:

(33) Well, I must apologize for the way I acted just now. (SAE,47)

Sentence (33) may have a similar meaning to that of the following sentence:

(33)' Well, I do apologize for the way I acted just now.

We must introduce here the form shall. By means of shall, the speaker gives guarantees that the event will take place. Shall is stronger than must in that it does not merely create an obligation, but actually guarantees that the action will occur.[35] For example:

(34) You shall have a bicycle of your own when you're older. (Egawa,209)

(35) He looked straight at old Dr. Conklin. "No one shall cut off that leg!" he said. (BGE,79)

In both sentences above, shall is used deontically.

Deontic modals do not normally occur with I and we (first person) as their subject.[36] With can and may, it would be a little strange to give oneself permission to do something. With must, there seems to be "clear discourse orientation" only in the examples suggested above and less used.[37] With shall, it is regularly used for futurity.

3. Dynamic Modality

Dynamic modality is concerned with ability and disposition:

(36) The dikes along the lower course of the river have to be built higher and higher to keep the water out of the lowlands. (HER,II,31)

(37) Yes. We can kill two birds with one stone. (SAE,102)

Generally speaking, dynamic modality means that "there are circumstances in the real world which make possible or necessary the coming into reality of this conceptual state of affairs,"[38] in contrast with deontic modality which means that the speaker performatively creates the possibility or necessity for the coming into reality of the conceptual state of affairs.

There are two degrees to this modality: possibility (can and be able to) and necessity (must, have to and have got to).

a. Dynamic Possibility

Palmer (1979) distinguishes the use of can into four classes: neutral, ability, implicative and private.

The first one, neutral, is used to indicate that an event is possible. Examples are as follows:

(38) Even rabbits can be dangerous at times. (SAE,45)

(39) I don't know about that but the difference between Western etiquette and Oriental etiquette can give rise to occasional misunderstandings. (SAE,133)

These sentences refer to what sometimes happens. If the subject of a sentence is impersonal you or the sentence itself is passive in its form, the neutrality becomes more clear as in the following:

(40) You can go from village to village, never getting out of your boat, and often this is the only way you can go. (HER, II, 32)

(41) It was only for a moment but sometimes much can be said in short periods of time. So she felt sure that the two were in love. (HER,II49)

The sentences above can be paraphrased by 'it is possible for...,' which represents judgments about the extent to which the actions are possible.

Here let us refer to some differences between the following two sentences:

(42) The dollar may be devalued.

(43) The dollar can be devalued.

Sentence (42) means that 'it is possible that the dollar will be devalued,' while sentence (43) signifies that 'it is possible for the dollar to be devalued,' or else 'the dollar is devaluable' in theory, but this sentence does not say anything about the potentiality of the realization of the event referred to. There seems to be no deontic source, the necessity arising only from circumstances or possibly from the subject's disposition.[39]

The second class, ability, indicates that "the subject has the necessary 'qualities' or 'power' to cause the event to take place."[40] The ability can be explained by the term 'subject orientation'. Examples are as follows:

(44) Crocodiles can travel for about a week even if they are not given any food. (BGE,38).

(45) He can stand on his hands. (Egawa,333)

Mainly animate creatures may have ability, but Palmer himself admitted the ambiguity between ability and neutral use.

Can is used, as mentioned above, to say what is possible or what one can do, but the next type, extended 'implicative' use, is actually used to suggest, by implication, that "action will, or should be taken,"[41] as follows:

> (46) But this I can tell you: if you don't want money but are content to earn just enough to keep body and soul together, then go. (HER,III,55)

> (47) A: The party wouldn't be complete without you. A lot of the neighbors will be there.
>   B: Fine. We can ring in the New year together. (SEA,174)

> (48) He has got the facts, so he can get at the true course of the trouble. (BGE,147)

> (49) ...please tell me which of these bouquets is made of real flowers and which of false. You can always see the truth. (BGE,139)

With the subject in the first person, can is used to make an offer by the speaker, or to combine offer and suggestion. With the third person, the speaker speaks on behalf of someone else.[42] The subject you indicates that the action will be taken by the person addressed.

The last type, the use of can, with 'private' verbs,[43] indicates little sense of ability, i.e. when it occurs with verbs of sensation, for example, see, understand, think, and so forth:[44]

> (50) Yet as we listen to Beethoven's music, we can understand his feelings about the country and its people. (BGE,102)

> (51) Listen! If you shake it you can hear something inside. (SEA,13)

These are rather idiomatic uses.

Another dynamic possibility, be able to, also expresses both ability of the subject to behave in a certain way and neutrality or circumstantial possibility, for instance:

> (52) Yet at the same time, when it comes to personal things, to family things, you're able to be very detached. (MEM,75)

> (53) I feel that the way we operate is one where people who are well read and experienced in modern literature are able to direct themselves into modern drama. (MEM,76)

The second be able to in (53), can be exchanged for can (neutral).

Here let us state some differences between can and be able to with reference to Palmer.[45] First, can has no non-finite forms, so be able to is appropriate after the other modals as in the following:

> (54) You will be able to drive it perfectly after a few more lessons.[46]

Secondly, be able to has no special usage like 'private' or 'implicative.'

Thirdly, be able to is more formal than can, and is used more in written texts. This is, however, only a tendency. Lastly, be able to indicates the action, in addition to the possibility of the action, especially in the present tense:

> (55) Color helps them when they judge distance and shape. Thus they are able to catch

insects in the air or to light on trees.

A sentence containing <u>can</u> signifies the realization of the action in the future rather than the present as in the following:

(56) And if you want to learn to skate, I'll teach you myself. I'm not very good, but I can teach you the basic principles. (SAE,166)

In short, <u>can</u> means future actuality, 'can and will do,' while <u>be able to</u> often signifies present actuality, 'can and does.'[47]

In the past tense, clear distinction between these two modals can be observed. If we want to express actuality in the past, we should use the term <u>be able to</u>, not <u>could</u>. The latter is not used to mean 'could and did,' as follows:

(57) But she held them to her heart, and at last she was able to smile through her tears and say...(BGE,165)

b. Dynamic Necessity

We will deal here with <u>must</u> and <u>have (got) to</u>. <u>Must</u> was considered in the previous section as a deontic or discourse oriented modal, but it sometimes means simply that 'it is necessary for...,' which is completely neutral. But we must note that there seems to be no clear dividing line between deontic and dynamic modals. Examples below show no indication of the involvement of the speaker (neutral):

(58) And as soon as a law is made there must be officials to make people obey it .... (HER,II,54)

(59) Warning signs can now be seen telling automobile drivers that if air pollution reaches an unsafe level they must leave the road. (HER,III,10)

Especially when the sentence has a first person subject, we do not lay obligations upon ourselves:[48]

(60) We must obey the laws of our country. (Egawa,337)

In an interrogative sentence, the meaning of neutrality is strikingly shown as follows:

(61) Must I put you on a chain out there in the country? (BGE,51)

If a <u>that</u>-clause containing <u>must</u> follows a phrase like 'I think,' the speaker is merely expressing his opinion about what is necessary:

(62) "I think we must be going now."

<u>Have (got) to</u> also denotes dynamic necessity. Both <u>have to</u> and <u>have got to</u> never express discourse oriented necessity, but rather neutral or circumstantial necessity, and can be accounted for in terms of 'circumstances compel,' i.e. external necessity. For instance:

(63) That's because our humor doesn't depend on words. A clown has to be a master of pantomime. (SAE,3)

(64) Diplomats have to be especially careful to become familiar with the customs of the country where they are stationed. (SAE,133)

(65) Oh, well, he's got to go into hospital you know. (MEM,92)

These example sentences can be paraphrased by 'obliged to' which suggests that there is some external compulsion and that this is the meaning of these modals. For example:

(63)' .... a clown is obliged to be a master of pantomime.

Between the two modals, however, there are four differences, as follows:[49]

[i] Have to is more formal; have got to belongs to a more colloquial style.

[ii] Have got to has no non-finite forms. Instead, the forms of have to must be used.

[iii] Have got to is much more rare in the past tense, whereas have to is used in its place in addition to actuality.

According to these differences, the two modals are used separately.[50]

Let us contrast have (got) to with must in the dynamic sense. At first, only have to has non-finite forms, as in the following:

(66) But it seems to me that in general the fact of having to wait produces in them a tremendous inner tension, whereas with the British, waiting comes more naturally. (HER,III,71)

(67) *... the fact of having got to wait...

(68) *... the fact of musting wait....

The next point is whether each modal denotes actuality in the present tense. Must only refers to the future, and does not imply actuality, whereas have (got) to refers to present actuality:

(69) It's slow walk down. He's got to fight his way through the crowds: (MEM, 93)

Palmer offered an explanation for this sentence from the viewpoint of actuality:

This refers to a boxer actually in the process of fighting his way through. If must had been used it could only refer to the future, to the necessity in the future to fight his way through; have got to indicates that he is actually doing so.[51]

What is more, must is used when the speaker is in some way involved, even if his involvement is minimal. Of course, it is hard to prove this, but it is clear that must cannot be used where there is external necessity.[52]

On the other hand, as with the case of HAVE TO the speaker is disassociating from the obligation, and is expecting to admit some external forces for assessment, as in the following example:

(70) The unit's night shift, which had shrunk from four people to two, was simply too shorthanded to save all the men, critics say. "More money has to be spent providing protection and the quality of the rest of the community expect for themselves," wrote Pauline Williams in the letter to the Melbourne Herald Sun (TIME.April 22, 1996.p.10)

As it is clear in the above example, the semantic function of HAS TO conveys the meaning of logical necessity. As to the implication of the quoted part, we can say that unless more money is spent for both protection and quality of life, the security of the disabled can not be provided. Exactly the same sort of logical necessity is found in the following example:

(71) To be healthy, a plant has to receive a good supply of both sunshine and moisture. (Quirk, 1985.p.226)

C. Further Issues in Modality

Let us here proceed to discuss modality and events in relation to tense, negation, interrogation, and voice, all of which are helpful in understanding each type of modality well.

1. Tense

Before discussing some basic issues related to tense, a terminological problem must be treated. 'Tense' is a grammatical term in relation to modal forms and used like a 'past tense form.' In English, we have only two tenses: past and present, or non-past. On the other hand, 'time' is a semantic term which can be divided into three subcategories: past, present, and future.

a. past

Let us start with modal forms. Morphologically, will, shall, can, and may, have the past tense forms like would, should, could, and might; but must and ought to do not have them; neither do the modals dare and need.

Syntactically and semantically, past tense forms have three common features. First, there are very severe restrictions on the past tense forms for past time marking. Could and would may mark past tense time, but only under certain conditions. Might is rarely used for past time, and should never. Secondly, all may occur in the sequence of tenses required by reported or indirect speech:

> (72) A college professor at an American university once boasted that he could put his mind to his work. (SAE, 115)

Thirdly, would, could, and might are used for 'tentativeness' or 'unreality' as in the following:

> (73) If he had thousands of regular policemen all ready to obey his orders, he might use them against the state itself. Who would be able to make him obey the law? (HER,II,55)

When we consider the relation between modality and tense, we may ask whether the modality, or the event, or both, may be marked as past. As for the can (ability), for instance, only the modality can be so marked:

> (74) I can play tennis very well.

> (74)' I could play tennis very well.

Morphologically, only the modals may be marked for tense, for only finite forms mark tense and the main verb is always in a non-finite form. However, it is clear that with the epistemic modality the proposition can be marked as past with have, as in the following:

> (75) I sometimes think you must have been a tomboy, Mary. (SAE,117)

In its finite forms have is associated not with the past, but with the perfect, and yet here there is an indication of past time, and not of the time relation associated with the perfect. With the may of permission, neither the modality nor the event can be so marked. One can neither give permission in the past nor give permission for events in the past. With none of the kinds of modality does it seem that both modality and event can be marked for past tense.

(1) Epistemic Modality

It is clear that the grammar of epistemic modality distinguishes it from the other kinds of modality. The functions of epistemic modals in relation to past tense are almost predictable from the nature of this modality.

First, in general, this modality is in the present only, because judgments are made in the act of speaking, namely, in a performative sense. Therefore, these modal verbs are not normally used in past tense forms to refer to past judgments. Past tense forms are normally tentative with regard to present time reference.

In contrast, the proposition can be in the past, for judgments about past events are possible. This is, as mentioned before, achieved only by the use of <u>have</u> before the main verb:

The following of <u>have</u> shows not only the reference to the past, but also to the present–perfect and the past perfect:

(76) He must have left yesterday.[53]

This usage of <u>have</u> shows not only the reference to the past, but also to the present perfect, and the past perfect:

(77) He must have left already. (77)' Surely he left yesterday.

(78) He must have left before you came. (78)' Surely he has left already.

(79) He must have left by then. (79)' Surely he had left before you came.[54]

Sentence (78) means that 'it is possible that he had left before you came' (present perfect), whereas (79) 'it is possible that he had left by then' (past perfect).

(2) Deontic Modality

Deontic modals have no past tense forms for past time. Neither in the modality nor in the event can there be any indication of past time. One cannot in the act of speaking give permission, lay an obligation, nor give an undertaking in the past or in relation to past events. And yet, a past tense form may occur in reported speech. In this case <u>had to</u> is sometimes used as a suppletive form in place of <u>must</u>.[55]

(3) Dynamic Modality

(a) <u>Can</u> and <u>Be able to</u>

Only the modality can be marked for past tense: there is no independent past tense marking of the event. Although we can refer either to present or to past possibility or ability, we can refer neither to the present possibility or ability to do something in the past nor to the past possibility or ability to do something in the present.

What is most important here, however, is that, in general, the positive past tense form of <u>can</u> is not used in assertion if there is the implication of actuality, i.e. if it is implied that the event took place. In contrast, however, the negative form <u>couldn't</u> will always imply that the event did not take place, and <u>be able to</u> may be used in past tense positive forms with the implication of 'actuality.' The examples in the preface should be compared again as follows:

(1) I ran fast, and was able to catch the bus.

(2) *I ran fast, and could catch the bus.

(3) I ran fast, but couldn't catch the bus.

There are numerous examples of <u>be able to</u> in past tense forms with the implication of actuality. <u>Could</u> would not have been appropriate in any of these examples:

(80) Next day I was able to run much faster than the other boys. (Egawa,334)

(81) The driver was able to get out but the passengers were drowned. (Egawa,334)

Let us refer in detail to the usage and meaning of <u>could</u>, the past tense form of <u>can</u>, for past time reference according to the outline made by Palmer.[56]

(i) <u>Could</u> may be used where there is no implication of actuality, but only a statement of possibility:

(82) Yes. But I was so nervous I could scream. (SAE,142)

The sentence above signals no implication of actuality; namely, I could but I did not. Here is a similar example:

(83) I was plenty scared. In the state she was in, she could actually kill him![57]

(ii) If there is an implication not of a single action but of successive or repeated actions, <u>could</u> may be used, even if there is an implication that the actions took place:

(84) Ricky and I could be friends while the dog lived near me. But now the dog's house is far away beyond the hill...(BGE,49)

(85) Long ago, human beings could throw away waste without any worry. (HER,II,15)

Example (84) implies that Ricky and I were in the successive state of being friends then. <u>Could</u> is permissible in such circumstances, because there was a general possibility over a period of time, not a possibility that resulted in a single definable action.

(iii) There are no restrictions on occurrences of <u>couldn't</u> or <u>could</u> with any of the negative forms, including occurrences in semi-negative contexts:

(86) Two mornings later his legs hurt so much that he could not go out to do his work. (BGE,77)

(87) He led me up a flight of rickety stairs. They were so dark, you could hardly see your hand in front of you. (SAE,197)

(88) Rafts were good enough for fishing near the coast, but nobody could cross the Pacific on board a raft! (HER,II,41)

(iv) <u>Could</u> is used where there is a meaning of 'nothing but,' without a negative marker:

(89) A miracle was the only thing they could expect now! (BGE,80)

(v) Where <u>can</u> is used with verbs of sensation or other private verbs, the past tense form <u>could</u> is quite suitable:

(90) I could hear subdued voices. I was prepared for the worst. (SAE, 197)

(91) And he could understand other people's feelings. (BGE,44)

(b) <u>Must</u> and <u>Have (got) to</u>

With neutral necessity, <u>had (got) to</u> is available. As for <u>had to</u>, there is an implication of actuality; the event actually took place. By contrast, if <u>had got to</u> had been used, there would be simply the meaning, "it was necessary...,"[58] without any implication that the event

took place: For instance:

(92) In some ways it cost me more than one of solid–gold. I had to spend a month in the hospital. (SAE,68)

(93) We'd got to make a special trip down to Epsom anyway, so it did not matter very much. (MEM,97)

As we mentioned before, must has no past tense forms. Deontic must needs no past tense forms because deontic modals are normally performative, and although must may also be used dynamically, the use of must does not differ from that of have (got) to.

b. Future

Modal verbs, even in their present tense forms, often refer to future events. Indeed there is no way of marking them formally for future, because they cannot occur with will or shall, nor with any other forms like be going to, all of which are used to indicate future time.

Epistemic may and might will refer to the present or the future:

(94) Which of you will become a scientist? Several of you may. (BGE,49)

(95) It's getting cloudy; it might rain soon. (NEG,29)

By contrast, epistemic must is usually used only to refer to the present. For future time reference be bound to is preferred. Epistemic will may be used to refer to future events, which is very difficult to distinguish from the use of will simply referring to the future.

For a sentence with deontic modals, the event always has future time reference; one can only give permission for events to happen after the time of speaking.

With dynamic possibility, neutral can may be used to refer to future events, if the possibility can be seen as present. This modal meaning is often used in a general 'timeless' present sense, and this exists not only in the present but also extends into the future. But more importantly, modality itself may be marked as future just like will/shall be able to is. To express future ability, will be able to is usually required. Nevertheless, it is possible to use can in the present tense to refer to a future event, if there is ability which may be actualized in the future:

(96) Liverpool can win the cup next year. (MEM,85)

The team has the ability now, but they will perform the action resulting from this ability later.[59]

Like other modals, dynamic must can refer to the necessity of future events, but will/shall have to will usually occur if there is any suggestion at all that the necessity is in the future:

(97) I'm afraid you'll have to get a wig. (SAE,124)

2. Negation

Since –n't forms occur with auxiliary verbs, we can say that the modal is formally marked for negation. Semantically, however, modals and main verbs can be so marked: the negation of the modality and the negation of the event.

(98) He can speak English but he can't write it very well. (GCE,97)[60]

First, what is negated is the ability to write, which is the meaning carried by the modal;

in the second, what is negated is the meaning carried by the main verb,[61] indicating the necessity for something not to be done. If the negative negates the event, some other form is required to negate the modality. Here the modal needn't is used in place of dynamic mustn't.

If any of the negative words (or semi-negative ones) such as never, no one, nothing, hardly, seldom, occur with non-negative forms of the modals, the same rules as those for the negative forms of the modals are applied.

With epistemic possibility, the proposition is negated by may not (it is possible that...not...), whereas the modality is negated by can't (it is not possible that...):

(99) He may not have been outstandingly brilliant, but nevertheless he probably taught us a lesson in kindness... (SAE,22)

(100) English can't be as hard as you think. (Egawa,334)

Note that can't is usually interpreted as dynamic rather than epistemic in cases where the main verb is a verb of action with future time reference, as in:

(101) She can't come on Monday. (MEM,54)

The modal in (101) means that it is not possible for someone to do something in the future. The meaning of epistemic modality is more clearly suggested if the main verb is the progressive form, as in the following:

(102) He can't be working at this hour![62]

It is not usual to use mustn't and needn't to negate epistemic necessity, except where it is important to make a judgment in terms of necessity rather than possibility. For, in effect, they are not epistemically needed. Palmer explains this as follows:

The logical equivalence of 'Non-possible-Necessary-not' and 'Not-necessary-Possible not' allow the possibility forms to be used instead. The difference between possibility and necessity is simple that the negation of proposition and modality is reserved.[63]

A paraphrase of epistemic needn't is "it is not the only possible conclusion that..."[64] (not-necessary):

(103) He may be there, but he needn't be. (MEM,54)

There is no clear example of epistemic shouldn't.

With deontic modality, the same modals, may and can, are used to negate modality; namely, to refuse permission:

(104) Borrowers may not take out of the library more than two books at a time. (Egawa,336)

(105) You can't smoke here. (MEV,87)

If an emphatic not is used, the sentence will be taken as a very emphatic refusal:

(106) You may not disturb us. (MEV,88)

To negate the modality for necessity, there is no appropriate form of must, but needn't may be used as in the following:

(107) Your Japanese host will certainly insist on your eating something, so you needn't
      worry about going hungry. (SAE,134)

Mustn't negates the event. It lays an obligation not to do something as in the following:

(108) You must not use a pen or a pencil. (TAL,II,35)

There is no way of negating modality with shall; it cannot be used to refuse to take on
an undertaking:

(109) She shan't have any; she has been most rude. (Egawa,209)

    With dynamic possibility, only the modality is normally negated. Can has the negative
forms can't (cannot) and couldn't (could not). With be able to, either be is negated or unable
is used in place of able. Examples are as follows:

(110) I who cannot see find hundreds of things to interest me through mere touch.
      (HER,III,90)

(111) There was something in his look that she could not understand. (BGE,163)

(112) Most of the applicants were unable to answer this question. (SAE,150)

It is possible to negate the event by using emphatic nót:

(113) We can/can't nót go. (MEM,79)

    Like deontic modality, dynamic mustn't negates the event and expresses an obligation
not to act:

(114) But we'd better get on home. We mustn't keep the wife waiting you know.
      (SAE,47)

It is possible to deny the whole sentence with negative words and appropriate stress. For
instance:

(115) You never múst do it. (MEM,94)

There are no forms of mustn't negating modality. Instead, needn't is used as in the following:

(116) He needn't go now. (GCE,83)

The negative forms of have (got) to can be in the negation. Have to requires forms with
do, like do/does/didn't have to, and have got to has the negative forms has/have/hadn't
got to (rare). For example:

(117) But after all, Mr. Budd didn't have to arrest the man himself. (HER,II,84)

The negative forms normally negate the modality. The forms above mean 'not necessary
for....' Very occasionally the forms are used to negate the event. 'You don't have to do that'
can mean 'You mustn't do that.'

3. Interrogation

    In negation, either the modality or the event may be marked, but in contrast, with a
question, it is only the modality that can be so marked. In general, if the negative form
of the modal negates the modality, this form is used for interrogation.

(118) You can type.

(119) You can't type.

(120) Can you type?

If the negative form negates the event and another different verb is used for negation, this

other verb is generally used for interrogation. For epistemic modality, examples are as follows:

(121) It may be true that he is dead.

(122) It can't be true that he is dead.

(123) Can it be true that he is dead?

In negative interrogatives, it is neither the modality nor the event that is negated. In fact, they represent a special kind of question that expects the answer 'yes.' See the following:

(124) But can't you be satisfied with making people laugh? (SAE,4)

The sentence above can be paraphrased as 'Isn't it the case that you are satisfied...?' With modals like <u>must</u> and <u>ought to</u>, where the negative form usually negates the event and a different form is used for negating the modality, negative interrogation is the same as the one used for assertion. For instance:

(125) ...mustn't there be endless stories about this mansion? (MEM,28)

There are tag questions in English, in which a negative tag is used with a positive assertion and a positive tag with a negative assertion as 'You know him, don't you?' and 'You don't know him, do you?' With modals, a positive sentence will use the negative modal for a tag and vice versa as in the following:

(126) He mustn't attend the meeting tomorrow, must he?

(127) He must attend the meeting tomorrow, mustn't he?

(128) *He must attend the meeting tomorrow, needn't he?

We seldom question epistemic modality. As mentioned before, however, the form used in negation is generally used in interrogation.[65] For example:

(129) Can the rumor be true? I can hardly believe it. (NEG,29)

Deontic modals are used, non-performatively, in interrogation to ask if the person addressed gives permission.[66] See the following:

(130) May/can I smoke in here? (GCE,97)

(131) You aren't feeling well, are you? Shall I bring something to drink? (BGE,23)

Negative interrogative forms expecting the answer 'yes' are possible. For instance:

(132) May I not/can't I watch TV now?

When we ask a question about a negative proposition, emphatic <u>not</u> can be used, as follows:

(133) May/can I nót go home soon?

In all these examples, the speaker asks the hearer if he wishes to act; he gives the hearer the responsibility for deciding that the act shall take place. In fact, he is offering to act. (Palmer, 1979., p. 67.)

It is perfectly possible to ask a question about dynamic possibility with <u>can</u> and <u>be able to</u>, as in the following:

(134) Can you tell a scientist by his looks? (BGE,146)

(135) Are you able to run faster than Tom?

This usage of <u>can</u> has the 'conventional implication' of requesting an action. <u>Can't</u> is a normal negative interrogative, including the expectation of answering 'yes,' which implies that you

can, and therefore that you should, as in the following:

(136) Must you really go? Can't you stay a little longer? (BGE,23)

Dynamic necessity is questioned by <u>have (got) to</u> and <u>need</u>. For instance:

(137) "Do we all have to write English and Japanese?"

      "No." (TAL,II,35)

(138) Need I come earlier than usual tomorrow?

Possibly, <u>must</u> can be used, but in a context in which it has already been suggested or implied that there is a necessity, which will be deontic rather than dynamic, meaning "Is it the case that it is necessary...?[67]:

(139) "What shall I do?" Mr.Wilson said in an angry voice to Ricky.

      "Must I put you a chain out in the country?" (BGE,51)

There is a distinction with negative interrogation between <u>mustn't</u> and <u>needn't</u>.:

(140) Mustn't John come with us? (MEM,96)

(141) Needn't John come with us? (MEM,96)

Sentence (140) means 'Isn't it the case that John must come?' and 'Is it the case that John mustn't come?' On the other hand, sentence (141) is used only in the latter interpretation, namely, taken as a positive question about the negative sentence.

4. Voice–Neutrality

We may ask whether modals (modality) are voice–neutral, namely, whether a sentence containing a modal can be passivized without changing the meaning other than the thematic meaning that may be associated with change of subject.

Sentences with epistemic modals are voice–neutral, provided that the proposition itself is voice–neutral. Thus, there is voice–neutral in the following:.

(142) ...he may murmur a silent prayer for a safe journey. (SAE,107)

(142)' ...a silent prayer for a safe journey may be murmured by him.

There is no voice–neutrality in the following:

(143) Tom may want to give Jane a present.

(143)' Jane may want to be given a present by Tom.

Deontic modals are voice–neutral, in that one gives permission for someone to perform an action. The point is whether or not the permission is granted to the subject. If one permits John to meet Mary, one does not necessarily permit Mary to meet John. Passivization is much easier when the agent is not stated, and this is true of other modals, too.

With dynamic modals, <u>can</u> of neutral is certainly voice–neutral, as in:

(144) A peasant can be as deeply moved by a great symphony as a king. (SAE, 187)

Subject–oriented <u>can</u> is complicated. If John can lift a weight, that weight <u>can</u> (in a 'power' sense) be lifted by John. If there is reference to a person who has the ability, however, passivization will not be 'normal', but there is no restriction on the occurrence of a passive sentence if there is no reference to a specific person with the ability. On the other hand, <u>be able to</u> never occurs with a passive verb.

With other dynamic necessity modals, a sentence seems to be voice–neutral.

II. APPLICATION

There are at least two reasons why English modals are difficult to deal with. One is that the relations between positive and negative forms do not exist with contrasts in their meanings. For instance:

modals
- (necessity)
- (unnecessity)
- (permission)
- (prohibition)
- (positive interference)
- (negative interference)

You $\left\{\begin{array}{l}\text{must} \\ \text{need not}\end{array}\right\}$ attend the meeting.

You $\left\{\begin{array}{l}\text{may} \\ \text{must not}\end{array}\right\}$ attend the meeting.

He $\left\{\begin{array}{l}\text{must} \\ \text{cannot}\end{array}\right\}$ attend the meeting.

The other problem is that most of the modals have at least, two levels in the viewpoint of semantics, i.e. deontic and dynamic.

- (epistemic)   You must have broken the window.
- (deontic)   You must obey the law.
- (dynamic)   I must ring him up.

In this chapter, we will consider some useful approaches to teaching English modals, based mainly on Palmer's theories of modality.

A. Permission

In spite of many efforts made by teachers and parents, children in the U.S.A. are said to have a tendency to use more and more the term can in place of may to ask permission, as in 'Can I have lunch?' at least in everyday conversation. The difference between deontic may and can seems to lie in their original meanings: may gives permission with the speaker's authority, but can implies no speaker's authority, only stating that the hearer has permission. In other words, can gives no direct permission to the hearer but simply means that 'circumstances permit' (in this sense, dynamic). The speaker tries to talk about the ability, which must be discussed after the level of permission. That will avoid the problem of authority or who has responsibility for the permission. Therefore, may sounds more strict than can as a statement of permission. In the meantime, must signifies that 'there is no way permissible other than doing so,' which is the most strict form of permission.

A deontic negative may not can be paraphrased as 'the speaker does not permit the hearer to do something,' expressing a passive refusal of permission, whereas must not means that 'the speaker obliges the hearer not to do something,' representing a positive rejection.

These modals can be illustrated systematically as follows:

negative ◄——————— permission ——————►positive
obligation   obligation
must not < may not < cannot < can < may < must
+authoritative   +circumstantial   +authoritative

This tabular statement settles some complicated problems caused by necessity–unnecessity and permission–prohibition contrasts illustrated before.

Here is a good example in a second–year junior high school text, Total English, Vol.II, Lesson 7, the title of which is "Our School Festival."

"We must (a) prepare for our school festival," said Akemi. "First we have to prepare the classroom. Do you have any suggestions?"

"Let's have a picture show," said Kimiko. "Let's draw pictures and show them in the classroom."

"I have a better suggestion," said Sadao. "Let's have a handwriting contest. We can (b) show our English handwriting and our Japanese handwriting. What do you think, everyone?"

"Okay, good!" said the class.

"Must (c) we all write something?"

"Yes, you must (d). Everyone must (e) write something."

"Do we all have to write English and Japanese?"

"No. You don't have to do that. You can (f) write either English or Japanese?

"We can (g) give a prize for the best handwriting. Mr. Doi and our Japanese teacher will be the judges."

"What paper do we have to use for English?"

"Use a large sheet of report paper. Use a pen. You must not (h) use a ball pen or a pencil."

"Mr. Doi, may (i) we bring our friends?"

"Yes, you may (j). We also have to give a play in English. I am thinking about Yu–zuru."

Tadashi stood up. Everyone turned and looked at him. "May (k) I be the crane?" The girls began to laugh.

"No, you may not (l). Be sensible. The crane becomes a woman. Her name is Tsu."

"But I want to be in the play."

"All right. You may (m) be Yohyo. But you must (n) practice hard."

(a)   (must)   A dynamic statement of what is necessary.

(d) (e) (n) (must)   Strict orders by the teacher, who has authority.

(c)   (must)   A question to the teacher who has authority.

(j) (m)	(may)	Permission by the teacher.
(i) (k)	(may)	Requirements for students in the granting of permission.
(b) (f) (g)	(can)	Statements of subject's having permission, without any implication of someone's authority.
(l)	(may not)	A passive negative obligation by the teacher.
(h)	(must not)	An authoritative negative order by the teacher, implying that the speaker obliges the hearers not to act; more forceful than may not.

We will make here a further remark about must not. It is said that the sentence with must not is often rewritten with don't, provided that the subject is you, both of which signify what is called prohibition. Must not chiefly refers to authoritative negative obligation which has the advantage that it is used with every person as its subject; for example, 'He must not sit up late at night.' On the other hand, don't is used only to order something to you, but it shows various degrees of obligation. It can mean a strong prohibition like "Don't strike him! He is your father,"[68] or else a mild reproof like "Darling!" "Don't call me darling"[69] or another a request like "Don't be angry with me."[70] Thus, don't is used more frequently because of its flexibility of meaning, with the help of suitable intonations. You must not is not perfectly interchangeable with don't, except for expressing a strong prohibition. Therefore, to give the instruction to simply rewrite between the two may cause misunderstanding. The important point is that we must take contextual conditions, for example, speakers, hearers, and circumstances, into account to grasp the true meaning of a text.

In conclusion, we will add a persuasive dialogue, which is very helpful to understand the difference between can and may:

Son: Mama, can I have another doughnut?
Mom:What did you say dear?
S: Can I have another doughnut?
M: It's not "Can I have another doughnut..." it's "May I have another doughnut?"
S: May I have another doughnut?
M: Another doughnut, what?
S: May I have another doughnut, please?
M: Another doughnut, please, what?
S: May I have another doughnut, please, mother?
M: No, dear, you've had three of them already.[71]

B. Possibility and Necessity

Leech explains the relation between possibility and necessity (epistemic) as follows:[72]

MAY	factual	MUST	(Logical)
CAN	theoretical	HAVE TO	necessity

Possibility ... necessity

On the basis of this table, we will systematize epistemic modals including negation.

There are three examples with an epistemic sense, and each is followed by explanatory sentence:

(145) You can't be wrong.
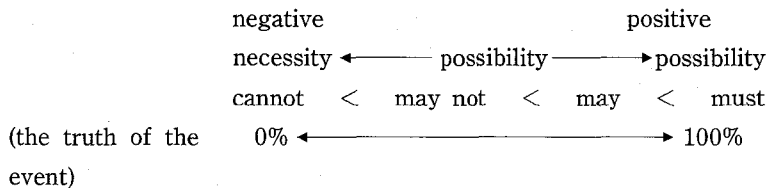
(It can't happen that you are wrong.)

(146) You may or may not be wrong.

(It may or may not be that you are wrong.)

(147) You must be wrong.

(It must necessarily be true that you are wrong.)

From these it is conceivable that, may, expressing possibility in a mild sense by both negative and positive forms, is placed in the middle,[73] cannot insists on zero possibility, and must clearly affirms full possibility or necessity. These are illustrated in the next table:

negative   positive

necessity ◄——— possibility ———► possibility

cannot ＜ may not ＜ may ＜ must

(the truth of the 0% ◄———————————————► 100%

event)

Here, Leech's system is enlarged by inclusion of the negation. Through this table, the use of must, which has the meaning of necessary conclusion, may be explained. For example:

(148) All men must die.

This sentence is not understandable if fixed translations of must, such as nebanaranai or nichigainai, are adopted. In their place, we can think of several explanatory words with the help of the table above, like shinu monda, shinuyori hokaninai, or shinazaruo enai, expressing one hundred percent insistence by the speaker.

III. CONCLUDING REMARKS

One of the crucial questions in the side of teachers who are concerned with English education is how they put theories into use in the practical teaching of the language, and conversely speaking, how they connect everyday lessons with theories. In particular, the concept of Japanese modals is remarkably different from that of English, so that fundamental knowledge and precise analyses of modals are helpful in the understanding of the common features and differences between the two languages.

In this paper, we tried to examine modality in detail based upon the work of Palmer (1979). According to his theory, English modals are classified into three categories. The first

is epistemic modality, which means the speaker's assessment of the relations between the propositions and the real world. This modality is expressed by must, may, will, be bound to, shall, and should. The second is deontic modality, which is originally performative or discourse-oriented. It is almost always used in the present tense, as with must, may, and can.

Thus, the utterance of a sentence is regarded as giving permission, laying an obligation, or taking on an undertaking. The last is dynamic modality, which expresses the subject's disposition or ability, chiefly with must, have to, can and be able to.

English modals are taught as if each had several meanings; for example, can of ability, of permission, of inference, and so forth:

> (149) I can ride a monocycle.

> (150) Can I ride this monocycle?

> (151) You can't ride a monocycle.

At first view, they are indeed thought to have entirely separate meanings, but on second thought, the relation of respective meanings of the modal may be seen as if they had a common core. This kind of abstraction may is necessary for both teachers and learners.

Above all, from the viewpoint of instructors, teaching the usage of each modal in detail by applying Japanese words seems to be important, but systematic understanding of meanings like epistemic and deontic, as well as the pursuit of respective meanings, helps leaners grasp the appropriate meaning of sentences in which modals are involved.

Modality is an expression of the speaker's evaluation of the statement he is making. It functions as a buffer or neutral zone which may soften the conclusion drawn by the listener. This means that modals reflect the speaker's standpoint, his viewpoints, the hearer's status, the scene and the place of the utterances, previous conversation, and so forth. All of these circumstances are involved in the use of modals, and the sentence is never analyzed clearly without taking into consideration these circumstances in the text.

Although English modals tend to be taught being detached from a context, they should be taught in the context in order to help the learners grasp the real meaning of the English modality.

Notes

1) F. R. Palmer, "Modals and activity,"Journal of Linguistics, XIII (1977), 5.

2) Loc. cit.

3) Loc. cit.

4) M.A.K. Halliday, "Functional Diversity in Language as Seen from a Consideration of Modality and Mood in English," Foundation of Language, VI (1970), 326.

5) Loc cit.

6) Ibid., p.328.

7) F. Nakajima et al., Total English, Tokyo: Shubun Shuppan, 1982, II, 35, hereafter abbreviated as TAL, II.

8) F. R. Palmer, Modality and the English Modals, New York: Longman, 1979.

9) H.E. Palmer and F. G. Blandford, A Grammar of Spoken English in a Strictly Phonetic Basis, Cambridge: Heffer, 1939, pp. 112ff., quoted in F. R. Palmer, op. cit., pp.8–9.

10) N.A. Chomsky, Syntactic Structures, The Hague: Mouton, 1957, pp. 61–9, quoted in F. R. Palmer, op. cit. p.9.

11) R. D. Huddleston, "Some Theoretical Issues in the Description of the English Verb," Lingua, XI (1976), p.333.

12) Modality can be expressed by expressions other than modals. Halliday (1970) divided the ways of expressing modality into two: 'verbal' and 'non-verbal' forms. The former are the modal auxiliaries, may, must, and the latter are modal items, such as possible, certain, which may occur like certainly, it is certain that..., I am certain that..., he is certain to..., there is a certainty that....

13) The relation between modality and 'proposition' is explained clearly by Yasui (1980), who said that if the part referring to the modality and the part expressing the proposition were analyzed semantically, a sentence could be represented as follows:

$S = M + [NP + VP]prop$

Palmer (1979) adopted the term 'event' to refer to the concept of the proposition in the context where non-epistemic modals are used, following Joos (1964), who noted that 'event' is a "key technical term here, signifying the sort of thing that is specified by verb-bases, thus perhaps relations [RESEMBLE, etc.] and states [WORRY, BE COLD] as well as deeds [SHOW]." 'Event' in this sense subsumes 'proposition'.

14) The term 'kind' of modality will be used as a technical term to refer to the distinction between 'epistemic' and 'deontic'. On the other hand, the term 'degree' will be used to draw the distinction between 'possibility' and 'necessity'. It will sometimes be necessary to refer to a kind and a degree simultaneously like 'epistemic possibility'.

15) Palmer (1974) classifies English modals into three groups: epistemic, subject-oriented, and discourse-oriented modals.

16) T. Egawa et al., A New Guide to English Grammar, Tokyo: Tokyo Shoseki, 1981, p.29, hereafter abbreviated as NEG.

17) Epistemic may can be used with the subject it, as in 'It may be that we are still not much nearer a solution of these problems.' This usage may clearly show the time of the event referred to.

18) Might is used instead of may, which merely indicates a little less certainty about the possibility, as in "Tokyo might be referred to as 'The Gateway to the Orient,' but in many ways it is more like a Western city." (SAE,195)

19) T. Sasaki. et al., Highroad to English Reading, Tokyo: Sanseido, 1982, II, 16, hereafter abbreviated as HER, II.

20) W. L. Clark. Spoken American English—Advanced Course, Tokyo: Kenkyusha, 1978, p. 13, hereafter abbreviated as SAE.

21) F. R. Palmer, Modality and the English Modals, New York: Longman, 1979, p.43, hereafter abbreviated as MEM.

22) Ibid., p. 41.

23) Ought to is used to weaken the force of must. The speaker has doubts about the soundness of his conclusion, as in 'This is where the treasure ought to be.' He acknowledges that there might well be something wrong with his assumption or his conclusion. (Leech,1971)

24) Ibid., p.41.

25) Ibid., p.46.

26) Ibid., p.45.

27) Ibid., p.47.

28) We notice that should has nothing in common with shall, except when it is formally used with the sequence of tense rule for reported speech. Should is essentially an independent modal, with no past time reference.

29) Ibid., p.40.

30) In American speech, have got to is also commonly used in an epistemic sense, with strong reproach. 'You've got to be joking.' (Oshima and Konishi,1973)

31) T. Egawa. A New Guide to English Grammar. Tokyo: Kaneko Shobo. 1981, p.337, hereafter abbreviated as Egawa.

32) Palmer, op. cit, p. 58.

33) May in the sense of 'possibility' is stressed, whereas in the sense of 'permission' it is usually unstressed. Thus, the ambiguity in a written sentence like 'He may leave tomorrow' rarely arises in speech.

34) The deontic possibility modal is may only. Can is, in fact, never deontic in its basic meaning, and always expresses dynamic possibility, but to say what is possible is often to imply that the speaker will not object; namely, he gives permission.

35) Ibid.,p. 62.

36) Ibid.,p. 63.

37) 'Subject–Oriented' modals refer to the ability or willingness of the subject of a sentence and that it is this that indicates the action. While 'discourse–oriented' modals relate to the action of the speaker in giving permission, making a promise, or laying an obligation. The term 'discourse–oriented' is used here in place of the term 'speaker–oriented', because one may, for instance, not merely give permission, but also ask permission with the modal may (May I come in?). The permission then relates to the hearer and not the speaker.

38) Ibid., p. 39.

39) The difference between can and may is also explained in terms of 'known possibility' and 'unknown possibility'. Thus, sentence (43) means that we know from previous experience that this is true, and that we say these things can happen precisely because they have happened. On the contrary, sentence (42) can be paraphrased as 'we do not know at the moment, but perhaps the dollar will be devalued,' a far more worrying situation. (Goshima and Oda, 1977)

40) Ibid., p. 73.

41) Loc cit.

42) Ibid., P. 73.

43) Ibid., p.74.

44) Palmer used the term 'private verbs' to refer to the verbs like see (and other verbs of sensation), understand, remember, think, afford, stand, bear, face, be bothered, and so forth.

45) Ibid., pp. 76-8.

46) R. A. Close, English as a Foreign Language, London: George Allen & Unwinn, 1962, p. 123.

47) In a conversation between a native speaker of English and a Japanese, be not able to is often used instead of can't to make the meaning of a sentence more clear, because for a Japanese learner of English final [-t] is hard to deal with:
　　A: I can't go to the station at seven thirty.
　　B: You mean you aren't able to go there at seven thirty?

48) Palmer, op. cit., p. 91.

49) Ibid., p. 92.

50) From the point of phonetics, have got to almost always takes the contracted forms like 've got to or 's got to. Besides, the contracted parts are often omitted like got to or gotta in the U.S.A.

51) Ibid., pp. 93-4.

52) Must expresses the speaker's approval for, nor objection to the proposition. Therefore, if he has some opposition to the duty, he must use have to as in 'My girl has to be home by 10 o'clock.... I think it's ridiculous.' (Imai,1979)
　　Should and ought to can also be included among dynamic modals. There is no clear distinction between them. They are largely interchangeable, as in 'He ought to come tomorrow, shouldn't he?'

In contrast with <u>must</u>, they often have an implication of non–actuality: the subject failed to reach the standard suggested; for example, "You should think before you speak." (NEG,31) The forms like <u>should have</u> and <u>ought to have</u> clearly imply non–actuality.

     <u>Need</u> is also used dynamically. Formally, <u>need</u> is in many respects very much like <u>dare</u>. There is a modal and a non–modal form. Modal <u>need</u> supplies the forms for negative necessity modality and for questioning it (in contrast with <u>must</u>). Negative past form <u>needn't have</u>, negating the modality, implies actuality that the event did take place, as in 'You needn't have gone there,' in which the implication is that you went there, whereas <u>didn't need to</u> may mean that it wasn't necessary.

53) M. Yasui, "Hono Jodoshi ni okeru Jisei," <u>Eigogaku Ronsetsu Shiryo</u>, Tokyo: Kitatatsunai Co., Ronsetsu Shiryo Hozonkai, 1980, XII, No. 3, p. 501.

54) Loc. cit.

55) <u>Had better</u> is used in contexts where the speaker advises the hearer of his best course of action, and is fairly firm about his advice. It can imply that "unpleasant consequences may follow if it is not taken" (Palmer, 1979), as in "But you'd better be prepared for a few falls." (SAE,116) In cases where the subject is more concerned with hinting at the consequences, however, it opens the way to a dynamic interpretation.

56) Palmer, op. cit., pp. 80–83.

57) M. Ehrman, <u>The Meaning of the Modals in Present–Day American English</u>, The Hague: Mouton & Co., 1966, p. 20.

58) Palmer, op. cit., p. 97.

59) Ibid., p. 85.

60) R. Quirk et al., <u>A Grammar of Contemporary English</u>, London: Longman, p. 97, hereafter abbreviated as GCE.

61) Quirk (1972) distinguishes the negation of modal auxiliaries by dividing them into two kinds, according to the scope of the negation. One is 'auxiliaries negation', in which the negation may include the meaning of the auxiliary itself. The other is 'main verb negation', negating only the meaning expressed by the proposition.

62) G.N. Leech, <u>Meaning and the English Verb</u>, London: Longman, 1971, p. 71, hereafter abbreviated as MEV.

63) Palmer, op. cit., p. 54.

64) Loc cit.

65) There is some restriction as to the occurrence of epistemic <u>may</u> and <u>must</u>. In interrogative sentences, the occurrences are limited to rhetorical questions, or to tag questions. (Ota,1980)

66) Ibid., p. 65.

67) Ibid., p. 96.

68) K. Ishibashi et al., <u>A Dictionary of Current English Usage</u>, Tokyo: Taishukan Shoten, 1978, I, 546.

69) Loc cit.

70) Loc cit.

71) T. Goshima and M. Oda, <u>Eigoka Kyoiku Kisoto Rinsho</u>, Tokyo: Kenkyusha, 1977, p. 203.

72) G. Leech, <u>Meaning and the English Verb</u>, London: Longman, 1971, p. 75.

73) Nakajima (1980) contrasted <u>may</u> with <u>may not</u>, and dealt with the latter as if it were an independent modal.

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