

The Semantics and Pragmatics of Deontic MUST, HAVE TO, and HAVE GOT TO

Masao Takaji, Harumi Sawada, and Shizu Oguma

Modality, which is deeply related with the mental state of human beings, has long been an important theme of linguistics, philosophy, psychology, etc. Since we cannot represent the situation without expressing our mental attitude towards it, we examine the modality of the utterance whenever we interpret it. Therefore, modality is on the spot where semantics and pragmatics meet.

Key words: Modality, Deontic Modality, Obligation, Permission

1. Introduction

The aim of this paper is to clarify the internal structure of deontic modality in English by focusing on adverbial modifiers which motivate the speaker's deontic attitudes, and to account for the semantic and pragmatic differences among must, have to, and have got to mainly based on Doyle and Christie's literary works. We have tried to take into consideration how and why the form is used in the context. We hope our research will make a meaningful contribution to the teaching of English in Japanese colleges and high schools.

2. The Semantic and Pragmatic Interface of Deontic Modality in English

2.1 Introduction

Observe the following sentence:

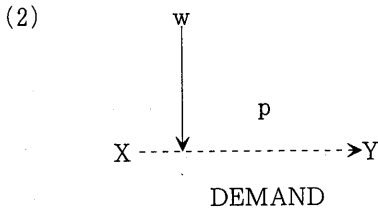
- (1) But if I am to go I must pack at once, for I have only half an hour.

(Doyle, "The Boscombe Valley Mystery") (The underline is ours.)

The sentence in (1) contains two clauses: an if-clause of purpose and a for-clause of reason. Then, how are these two clauses related with the semantic content of deontic must (=obligation)? To put it differently, what part of the sentence do the clauses modify in the whole sentence?

The aim of this section is to argue that the basic semantic structure of the deontic

modality (=obligation) can be represented essentially in terms of the four factors, w , X , Y , and p , which represent respectively the desirable situation, the source of the modality, its goal, and the propositional content of the modality. The following scheme shows that the authority X demands the obligation p of the agent Y in order to realize the desirable situation w .



Notice that w is one of possible worlds which is expected to be realized and which motivates the obligation p . In other words, p is essential for w because it is impossible to realize w without performing p .

Let us now assume the following equation along the lines of well-known deontic logic (von Wright 1951:37)

(3) $O_p \equiv \sim P \sim p$, where O , P , and p stand for obligation, permission, and propositional content, respectively.

It is true that the equation in (3) is sufficient to clarify the internal logical structure of the deontic modality (=obligation), but it is not necessarily sufficient to provide a base for the semantics and pragmatics of deontic-modal expressions in natural language since (3) does not include any factors which identify where the obligation comes from, where it goes to, or what motivates it.

Based on the scheme in (2), I propose the following logical condition on deontic modality:

(4) Logical Condition on Deontic Modality (=Obligation):

For the situation w , p is necessary, i.e. non- p is impossible.

Notice that it is often necessary to take into consideration the context of the utterance in order to establish the expected situation w because often w is not expressed overtly in the sentence. This means that we have to make a pragmatic analysis of the sentence by inference.

Let us consider example (1) again to clarify w , X , Y , and p . First, it is clear from the context of the story that X is the speaker (i.e. Dr. Watson), Y is also the speaker in this case, and p is to pack at once. Then, what is w ? The context shows

that *w* is an expected or necessary situation in the future in which the speaker will go. In other words, in order to realize the situation *w*, it is impossible not to pack at once. In this case, *w* motivates the necessity of the speaker's immediate packing. We can represent the four factors as follows:

- (5)a. *w*=the situation in which the speaker will go
- b. *X*=the speaker
- c. *Y*=the speaker
- d. *p*=for the speaker to pack at once

2.2. Tregidgo (1982)

Tregidgo (1982) presents an excellent analysis of the modals must. He proposes the following formula:

- (6) $a \text{ must } b = X \text{ DEMAND } Y - Y \text{ CAUSE } -ab$ (Tregidgo 1982:78)

In (6), a and b respectively stand for grammatical subject and object of the must-sentence, while *X* and *Y* respectively stand for the deontic source and goal. The deontic source and goal are often less determinate, and is only interpretable in the light of the wider context. The following examples are accompanied by informal glosses to show what entity *X* is:

- (7)a. This door must be kept closed. ('The authorities demand it of staff and visitors.')
- b. All cars must have number-plates. ('The law demands it of car-drivers')
- c. All men must die. ('Nature or God demands that this should happen.')

(Tregidgo 1982:79)

These examples show that *X* is an entity such as the authorities, the law, or Nature. Tregidgo states about the deontic source as follows:

- (8) When the external deontic source is broader and less personal, it is easier for the speaker to declare the demand without implicating himself in it personally. Hence MUST is frequently used to declare the demands of the law or nature or circumstances or cause and effect.

(Tregidgo 1982:80-81)

Tregidgo states here that it is easier for the speaker to declare the demand directly in the case of the law or Nature than in the case of some specific person, say Mary. However, we are assuming in this paper that *X* is an entity which can exert force or power over someone whether it is the speaker, the law, or Nature. Anything can be *X*

if it is forceful or powerful enough. Must expresses the exerting of force and power, or subjective mental attitude.

There is a well-known doctrine that must is different from have to in that the former is speaker-oriented (=internal) while the latter is used mostly to talk about obligation that come from 'outside.' Compare the following examples:

- (9)a. I must stop smoking. (I want to)
 b. I've got to stop smoking. Doctor's orders.

(Swan 1995²:352)

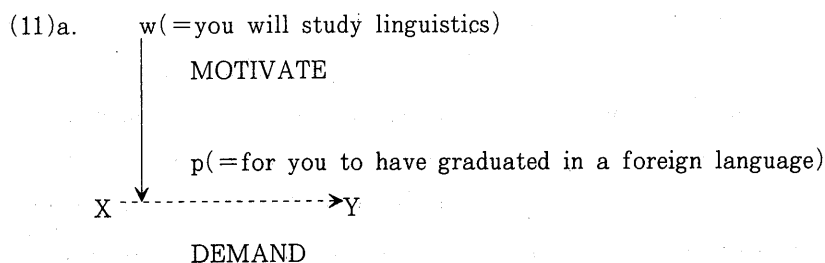
However, this explanation based on the distinction between internal and external deontic sources is not always persuasive because the modal must can be used to talk about external deontic sources such as the authorities, laws, or regulations, as shown by the above examples in (7). In our view, we can explain the semantic difference by assuming that must is concerned with X's demanding to create the present obligation while have (got) to is concerned with Y's state of being obliged, resulting from some previous demand.

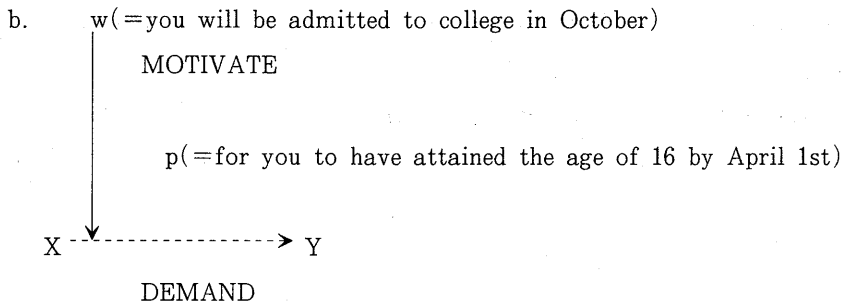
Therefore, we can assume here that the factors of X and Y in Tredidgo's formula in (6) are the same as those of X and Y in our scheme in (2). Then, how can we account for the following examples?

- (10)a. If you want to study linguistics you must first have graduated in a foreign language. ('The regulations demand that you should have done so.')
- b. Candidates for admission in October must have attained the age of 16 by April 1st. ('The regulations demand it, i.e. if admission is to be considered.')

(Tredidgo 1982:82)

Notice that b-sentence as well as a-sentence can be interpreted as a purpose sentence: the subject Candidates for admission in October means "if they want to be admitted to college in October," or "in order for them to be admitted to college in October." Though Tredidgo's analysis does not take w into consideration, our analysis explains the two sentences in a parallel way, as in:





We should notice that w can only be identified in the light of the wider context of the utterance.

3. The World of W: How Does W Motivate the Act of Demanding?

This section discusses how w is realized in various examples of must and have (got) to (=deontic) in English. The discussion will be an indirect support for our scheme in (2).

3.1. Infinitive Clauses

The first set of examples are concerned with infinitive clauses of purpose:

(12)a. I must buy a bicycle to get to college quickly every day.

(Papafragou 1998:8)

b. It is a hereditary matter, so in order to give you an idea of the facts, I must go back to the commencement of the affair.

(Doyle, "The Five Orange Pips") (The underline is ours.)

c. To identify a poison you must be able to either to carry out a chemical analysis or observe the poison at work on the victim.

(Collins Cobuild English Grammar) (The underline is ours.)

d. To buy some cigarettes, Harry must go out.

e. They must be married, to join the club. (Antinucci and Parisi 1971:31)

f. "I'll have to unfasten this too, to get the berry out," she said.

"Let me get it," I urged. "You don't want the juice all over your fingers."

(Caldwell, "The Strawberry Season") (The underline is ours.)

Though (12a) might be a typical construction, infinitive clauses can be reposed into the

sentence-initial position to clarify that the clauses motivate the act of demanding, as in (12b) through (12d). Alternatively, there is sometimes a comma intonation in front of infinitive clauses, as in (12e) and (12f). Notice that examples in (12a) through (12e) express the present obligation or necessity while the one in (12f) expresses a future obligation or necessity (see Westney 1995:128-131 for the discussion of the future obligation).

3.2. If-clauses

The second set of examples are concerned with if-clauses:

- (13)a. But if I am to go I must pack at once, for I have only half an hour.

(Doyle, "The Boscombe Valley Mystery Band") (The underline is ours.)

- b. I fear that I bored you with these details, but I have to let you see my little difficulties, if you are to understand the situation.

(Doyle, "A Scandal in Bohemia") (The underline is ours.)

- c. If you want to study linguistics you must first have graduated in a foreign language. (=34a)

- d. John must go if he wants to catch the bus. (Papafragou 1998:3)

These if-clauses express the speaker or the hearer's present desire to do something. The desire is to realize *w*, the possible worlds or situations in the future. Therefore, in order to realize *w*, it is necessary to carry out *p*.

3.3. For-clauses

The third set of examples are concerned with for-clauses stating reason or motivation:

- (14)a. "This must be preserved, for it will figure in the trial," said Holmes, as he handed the bag with its contents to the Inspector.

(Doyle, "The Dancing Men") (The underline is ours.)

- b. He must guard himself, for he may find that there is someone more cunning than himself upon his track.

(Doyle, "The Speckled Band") (The underline is ours.)

- c. And now, Miss Stoner, we must leave you, for if Dr. Roylott returned and saw us, our journey would be in vain.

(Doyle, "The Speckled Band") (The underline is ours.)

- d. I must go home now, for dad is very ill, and he misses me so if I leave him.

(Doyle, "The Boscombe Valley Mystery Band") (The underline is ours.)

- e. I perceive that all is as it should be. But we have to be careful, for we have twice been deceived by wigs and once by paint.

(Doyle, "The Red-headed League") (The underline ours.)

It is true that these reason-clauses express why the speaker say so, and they do not directly represent w , the possible worlds or situations, but they imply what are such possible worlds or situations in the future. For example, (14a) implies w , in which the bag will figure in the trial, and (14e) implies w , in which we will not be deceived by wigs or paint.

3.4. Before-clauses

The fourth set of examples are concerned with before-clauses of reason or motivation:

- (15) Of course he must recall the snake before the morning light revealed it to the victim.

(Doyle, "The Speckled Band") (The underline is ours.)

I am assuming here that the before-clauses express w , the possible worlds or situations negatively: For example, (15) implies that the morning light will not reveal the snake. This is supported by the fact that (15) can be paraphrased by the following sentence:

- (16) Of course he must recall the snake in order for the morning light not to reveal it to the victim.

3.5. Or-clauses

The fifth set of examples are concerned with or-clauses of reason or motivation:

- (17)a. There you must stay, or you lose your billet.

(Doyle, "The Red-headed League") (The underline is ours.)

- b. You must speak to her in the morning, or I will, if you prefer it.

(Doyle, "The Beryl Coronet") (The underline is ours.)

- c. You must act, man, or you are lost. Nothing but energy can save you.

(Doyle, "The Five Orange Pips Band") (The underline is ours.)

As in examples in the previous section, these examples imply w negatively: (17a) implies w , the possible worlds or situations in which "you" will not lose "your" billet.

3.6. In-phrases

The fifth set of examples are concerned with in-phrases:

(18)a. In opening a game of chess, the players must move a pawn.

(Papafragou 1998:24)

b. In this game, you must/?should/??ought to carry an egg in a spoon and be careful not to drop it. (Papafragou 1998:26)

Notice that these in-phrases can be paraphrased by infinitival clauses as in:

(19) In order to open a game of chess, the players must move a pawn.

Therefore, we can regard (18a) as well as (19) as expressing *w*, the possible world or situation for which it is necessary to carry out the proposition (i.e. moving a pawn). To put it differently, we cannot realize *w*, the possible world or situation in which we open a game of chess without carrying out the proposition (=moving a pawn).

3.7. 'Conditional' Noun Phrases

The seventh set of examples are concerned with NP subjects:

(20)a. Candidates for admission in October must have attained the age of 16 by April 1st.

b. Any tramping about the field must severely damage the crop.

(Tragidgo 1982:79)

c. Soldiers must do their duty. (Papafragou 1998:8)

At first glance, it appears that these examples contain no expressions which imply *w*, the possible worlds or situations. However, We are assuming here that NP subjects in these examples imply *w*, the possible worlds or situations. In (20a), *w* is a possible world or situation in which candidates will be admitted to enter college in October, in (20b), *w* is a possible world or situation in which someone will tramping about the field, and in (20c), *w* is a possible world or situation in which someone will be a soldier.

4. The Semantics of must, have to, and have got to: Mainly Concerning the Data in Doyle's and Christie's Works

4.1. Introduction

This section examines data of must, have to, and have got to in British literary works in order to demonstrate the following three semantic hypotheses:

(21) Hypothesis I:

Must is mainly used to express a specific obligation in the future, but it is also used to express a general obligation.

(22) Hypothesis II:

Have to is used to express not only a specific obligation in the future but also a habitual obligation. The obligation sometimes implies actuality. In order to refer to a future, but not present, obligation, will have to is used.

(23) Have got to is used to express a specific obligation in the future, but not a habitual obligation.

In our analysis, we also take into consideration the subjectivity to objectivity of the three forms.

First, observe the following two tables, which show the frequency of the three forms in Doyle's and Christie's works.

(24) Table 1 (Doyle)

	MUST	HAVE TO	HAVE GOT TO
the first person	80	18	0
the second person	30	5	0
the third person	29	6	0

(25) Table 2 (Christie)

	MUST	HAVE TO	HAVE GOT TO
the first person	27	14	11
the second person	8	7	9
the third person	16	18	7

The above tables show the following points: (i) There are no examples of have got to at all in Doyle's works though there are many examples of it in Christie's works. (ii) There are much more examples of must than have to in Doyle's works. (iii) There are many examples of have to and have got to as well as must in Christie's works. These points show that have got to is a relatively new expression which has become popular since twentieth century.

4.2. MUST

Let us begin by must. It is necessary to consider the nature of the obligation in order to clarify the meaning of must and its context. As we have already seen in section 2.4, Tregidgo (1982) argues that the semantic structure of deontic must can be formulated as follows:

(26) a must b = X DEMAND Y - Y CAUSE - ab

He adduces examples like the following:

(27)a. When you pay your fare, you must receive a ticket. (The rules of the bus company demand it of you and the driver.)

b. The verb must agree with its subject. (Grammar demands of speakers and writers of English)

c. Men must work and woman must weep. (Life or the world demands it)

(Tregidgo 1982:79)

In these examples the deontic source X is expressed by law, regulations, God, life, etc. In other words, X is an entity which is strong and powerful enough to demand some p of Y.

Let us now compare the following examples:

(28)a. You must love your enemies.

b. You have to love your enemies.

(Bouma 1975:324-325)

Bouma (1975) states that must in a-sentence shows that the speaker is regarding the subject as a morally committed agent, while in b-sentence, have to neutrally refers to the obligation itself, and expresses the state of being obliged (see Westney 1995:117). Therefore, we can safely conclude that unlike must, have to does not express any idea of the act of demanding. Observe the following example:

(29) "...Will you not wait and breakfast?"

"No, I must go. My heart is lightened already since I have confined my trouble to you...."

(Doyle, "The Adventure of the Speckled Band") (The underline is ours.)

This is an example of the first person. It is a conversation between Holmes and Miss Storer, who has come to Holmes to consult him about the death of her sister. This example of must expresses the speaker's determination. Therefore, it is subjective.

Let us now consider the following example:

- (30) "I have no doubt that I am very stupid, but I must confess that I am unable to follow you."

(Doyle, "The Adventure of the Blue Carbuncle") (The underline is ours.)

In this example, Watson is confessing that he cannot follow Holmes. The use of must followed by speech act verbs like confess, say, etc. shows the speaker's feelings that the content of his utterance might be negative or unpleasant to the hearer (see examples such as must ask, must admit, etc.).

The third example is as follows:

- (31) "We were both in the photograph."

"Oh, dear! That is very bad! Your Majesty has indeed committed an indiscretion."

"I was mad--insane."

"You have compromised yourself seriously."

"I was only Crown Prince then. I was young. I am but thirty now."

"It must be recovered."

"We have tried and failed."

"Your Majesty must pay. It must be bought."

"She will not sell."

"Stolen then."

(Doyle, "A Scandal in Bohemia") (The underline is ours.)

This is a scene in which Holmes is persuading a Bohemian king to retrieve from a woman a picture in which the king is with her in order not to expose his old scandal to the public. Each example of must expresses Holmes' personal advice, which is, therefore, subjective.

The fourth example is as follows:

- (32) "Tut! Tut! cried Sherlock Holmes. "You must act, man, or you are lost."

(Doyle, "The Five Orange Pips") (The underline is ours.)

This is a scene in which Holmes is encouraging a poor man when the man suffers a mysterious blow. The subject of must in this example is the second person. Therefore, it is clear from the conjunction or that this sentence is a kind of an imperative sentence. This example of must expresses what the speaker thinks is necessary.

The fifth examples are as follows:

(33) "Pray tell us what has happened to you."

"I will do so, and I must be quick, for I have promised Mr. Rucastle to be back before three. I got his leave to come into town this morning, though he little knew for what purpose."

(Doyle, "The Adventure of the Copper Beeches") (The underline is ours)

(34) "I must go home now, for dad is very ill, and he misses me so if I leave him...."

(Doyle, "The Boscombe Valley Mystery") (The underline is mine.)

Notice that in these examples, must is used with a for-clause of reason. In (33), because the speaker has promised to come back by three, he has to be quick in order to be back by the time. Therefore, we can safely say that the possible world or situation *w* is to come back by 3:00.

In (34), on the other hand, the obligation is motivated by the illness of the speaker's father. In this case, w might be to take care of him, because it is implied by the context that the speaker lives with her father. The speaker wants to go home. If have to were substituted for must, the sentence would imply that she does not want to go home.

The sixth examples are as follows:

(35) "I am no official agent. I understand that it was your daughter who required my presense here, and I am acting in her interests. Young McCarthy must be got off, however."

(Doyle, "The Boscombe Valley Mystery") (The underline is ours.)

(36) "...Whatever he wanted he must have, and whatever it was I gave him without question, land, money, houses, untill at last he asked a thing which I could not give. He asked for Alice"

(Doyle, " The Boscombe Valley Mystery") (The underline is ours.)

In (35) and (36) the subjects of must are the third person. However, they have differnt characteristics from each other. (35) shows Holmes' advice to an dying old man, who has committed a crime. The suspision, however, falls on young McCarthy, who is in love with the old man's daughter. The old man wants to save McCarthy, but can not admit his crime for fear that his daughter would break her heart when she hears that he is arrested. When Holmes says that Young McCarcy must be got off, it is his own

subjective feeling.

In (36), must is heavily accented, and it expresses what Declerck (1991:382) calls “inner compulsion or “an irresistible inward urge”. Therefore, must in (36) does not express the speaker’s feeling of obligation, but the speaker’s viewpoint has shifted to the third person to describe his or her inner states of mind.

The seventh examples are as follows:

- (37) “You will remember that I remarked the other day,
just before we went into the very simple problem
presented by Miss Mary Sutherland, that for strange
effects and extraordinary combinations we must go
to life itself, which is always far more darling
than any effort of the imagination....”
(Doyle, “The Red-Headed League”) (The underline is ours.)

- (38) “I am afraid that it is quite essential’, said he,
‘It is a little fancy of my wife’s, and ladies’
fancies must be consulted. And so you won’t cut your hair?”
(Doyle, “The Adventure of the Copper Beeches”) (The underline is ours.)

- (39) Ex-Inspector Blore came my way quite naturally, some
of my professional brethren discussing the Landor
case with freedom and vigour. I took a serious view
of his offence. The police, as servants of the law,
must be of a high order of integrity. For their word
is perforce believed by virtue of their profession.
(Christie, And Then There Were None) (The underline is ours.)

- (40) “You are in many ways a secretive woman, Madame.”
“Perhaps-up to a point. Knowledge is power. Power must
only be used for the right ends....”

(Christie, Mrs. MacGinty’s Dead) (The underline is ours.)

The examples in (37), (38), (39), and (40) are all different from the ones considered so far in that they express the general obligation, but not the futurate specific obligation. Leech (1987²) classifies this use of must into “general course of action”. In the examples considered so far, the speaker feels empathy with the obligation whatever the sources may be. That is, the speaker thinks that the obligation is necessary.

In the above four examples, however, there seems to be no speaker’s empathy, and

the modality is impersonal, as is discussed by Leech 1987²:77).

4.2 HAVE TO

Next, let us enter into have to. First, let us consider the following examples:

(41) "...I shall look into the matter between this and then. Good-by; it is just possible that I may have to come over here again before evening."

(Doyle, "The Adventure of the Beryl Coronet") (The underline is ours.)

(42) "Well, it is not for me to judge you," said Holmes as the old man sighed the statement which had been drawn out. "I pray that we may never be exposed to such a temptation."

"I pray not, sir. And what do you intend to do?"

"In view of your health, nothing. You are yourself aware that you will soon have to answer for your deed at a higher court than the Assizes. I will keep your confession, and if McCarthy is condemned I shall be forced to use it.

(Doyle, "The Boscombe Valley Mystery") (The underline is ours.)

In these examples, have to is preceded by modals, and the time of the the deontic modality is not present, but future. (41) expresses the necessity that will perhaps arise depending on the process of the investigation of the case. We are assuming here that we can interpret the expression may have to as "maybe will have to." In (42), on the other hand, Holmes is speaking to an old man who has committed a crime, and is destined to die of disease in the near future.

The following examples contain the past tense form of have to:

(43) He found Armstrong up and nearly dressed. Mr. Justice Wargrave, like Brore, had to be rosed from sleep. Vera Claythorne was dressed. Emly Brent's room was empty.

(Christie, And Then There Were None) (The underline is ours.)

Lombard, the soldier-of-fortune, noticed that Mr. Logers, the servant, had disappeared in the morning. In order to wake up Blore, the ex-C.I.D., Armstrong, the physician, Wargrave, the judge, Vera, the ex-governess, and Emily, the old spinster, went around the rooms in the hotel. The state of affairs about each person is described objectively.

Here, it is not that someone thinks it necessary that Wargrave should be roused from sleep. Had to simply describes the state that Wargrave was still asleep when Lombard visited him. In other words, had to in this example expresses an objective state of affairs.

Let us now go on to the following example:

(44) Lestrade laughed. "I am afraid that I am still a skeptic," he said.

"Theories are all very well, but we have to deal with a hard-headed British jury."

(Doyle, "The Boscombe Valley Mystery") (The underline is ours.)

Lestrade utters this sentence about the reasoning Holmes presented. In this case the source of obligation/necessity is not very clear, but we may safely conclude that he is referring to English judicial system in mind.

The following example is Holmes' words to Watson:

(45) "I fear that I bored you with these details, but I

have to let you see my little difficulties, if you are to understand the situation."

(Doyle, "A Scandal in Bohemia") (The underline is ours.)

In this example, Holmes is making an excuse for boring Watson by explaining the process of his investigation in too great detail. Holmes states that he is obliged to do so in order to make himself understood well about his situation.

The following example shows the scene in which a man is explaining work or duty to a red-headed man who is working for the office:

(46) "Well, you have to be in the office, or at least in

the building, the whole time. If you leave, you

forfeit your whole position forever. The will is

very clear upon that point."

(Doyle, "The Red-Headed League") (The underline is ours.)

In this example, the obligation does not come from the speaker, but from the regulation of the will, and the sentence "you have to be in the office" is just accounting for the condition of the will of the deceased, so have to is used. Therefore, X is the will of the deceased

The following examples show habitual obligations, which have been repeated until now:

(47) "I perceive that all is as it should be. But we have to be careful, for we have

twice been deceived by wigs and once by paint.

(Doyle, "The Red-Headed League") (The underline is ours.)

- (48) "Always on yor knees scrubbing. And then piles of other people's washing-up waiting for you on the sink when you arrive in the morning. If I had to face that every day, I'd be positivly relieved to be murderd. I really would."

(Christie, Mrs. McGinty's Dead) (The underline is ours.)

- (49) "...Mrs. Courtland -she was lucky- her husband was a nasty perverted bit of work, and the jury acquitted her accordingly. Not justice-just a sentiment. You've to allow for that happening now and again."

(Christie, Mrs. McGinty's Dead) (The underline is ours.)

In (47), a league called red-headed league is looking for a red-headed man for a certain conspiracy. A man visits its office to apply for the job. He succeeds in getting a job interview. When he is talking to the clerk, the clerk suddenly seizes his hair and tugs to make sure whether or not his hair is real. That is necessary for the clerk because he has been deceived many times before. Here, have to is used to express a habitual obligation. It is important that there is an implication that the speaker is in fact taking care (see Declerck 1991:383).

In (48) had to is the past subjunctive form. This example expresses repeated obligations, as is evident from "every day." The pronoun that refers to Mrs. McGinty's monotonous work, which the speaker cannot endure. Therefore, X is not the speaker, but some outside circumstances.

(49) shows repeated or habitual obligations which the speaker feels unreasonable but has to obey reluctantly, as is evident from "now and then."

The data adduced above indicate that the obligation/necessity expressed by have to does not come from the speaker's will, but from outside circumstances. It does not express the speaker's subjective mental attitude. Therefore, we can conclude that it always expresses an objective modality: the subject is in the state of being obliged to do something (Tredidgo 1982:80).

4.3 HAVE GOT TO

Last, we discuss have got to. Let us observe the following example:

- (50) He frowned. No, cut out that kind of stuff. This was business. He'd got to keep his mind on the job.

(Christie, And then There Were None) (The underline is ours.)

In this example, the man is saying to himself that he must concentrate on his own business, but not on a young woman in front of him. Here, had got to is used, but because it is in free indirect speech. Therefore, we can consider that its "original" expression is "I have got to keep my mind on the job." Here, the speaker is exerting his power over himself through a sense of obligation.

The next example shows a scene in which a doctor is looking at a woman on the operating table:

- (51) She was laughing now. No, nurse, don't put the handkerchief back. I've got to see. I've got to give the an aesthetic.

(Christie, And then There Were None) (The underline is ours.)

Here, have got to expresses the speaker is imposing an urgent and critical obligation on himself.

How about the following example?

- (52) "What's the sense of making yourself offensive? We are all in the same boat. We've got to pull together. What about your own pretty little spot of perjury?"

(Christie, And then There Were None) (The underline is mine.)

Two out of ten people have already been killed on this island. The rest are quarreling over what they should do. Captain Philip Lombard says that they must cooperate. Have got to is used here because X is not the speaker, but the circumstances.

The following example is a scene where Rogers, the servant, is upset to find that two little china figures are missing and there are only eight left on the table:

- (53) "You'll think I'm crazy, sir. You'll say it isn't anything. But it's got to be explained, sir. It's got to be explained. Because it doesn't make any sense."

(Christie, And then There Were None) (The underline is ours.)

Here, have got to is used because the speaker accepts the act of explaining as very serious and important. This form, therefore, expresses the speaker's subjective feeling that he wants it to be explained.

The following example of have got to contains an inanimate subject:

- (54) "Your indignation is very natural. Nevertheless you must admit that the facts have got to be faced. Either you or Rogers could have administered a fatal dose with the greatest ease.--"

(Christie, And then There Were None) (The underline is ours.)

In (54) Mr. Justice Wargrave is persuading Dr. Armstrong to admit that facts are

facts. Have got to expresses the speaker's subjective feeling that it is essential that we should face them.

The following is a dialogue between Lombard and Vera:

(55) "Touching faith in me, haven't you, Vera? Quite sure I wouldn't shoot you?"

Vera said: "One has got to trust someone....As a matter of fact I think you're wrong about Blore. I still think it's Armstrong."

(Christie, And then There Were None) (The underline is ours.)

They are discussing about who is the criminal. Lombard thinks that it is Blore. Vera uses have got to in order to emphasize that it is essential that we will trust each other under these circumstances. If have to were substituted for have got to here, it implies that we do in fact trust each other, but this implication is not fit for the situation.

Last, let us consider the following example:

(56) 'Well, there's only one thing to be done. The police have got to hear about this.'

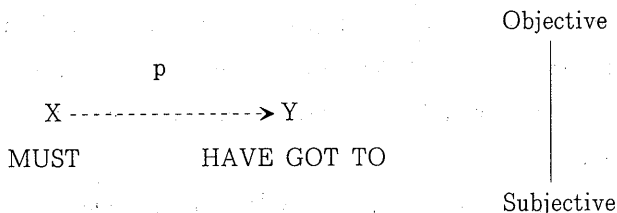
Edna burst into long sniffling sobs.

(Christie, Mrs. MacGinty's Dead) (The underline is ours.)

In this example Mr. Summerhayes is persuading Edna to go to the police because she is reluctant to do so. Have got to is used in this situation because the speaker wants to express his subjective emotion that it is urgent that we should let the police know about this.

We have so far shown that unlike must, have got to is similar to must in the respect of subjectivity despite the fact that have got to and have to are often regarded as synonymous. In other words, have got to and must are subjective expressions. We can explain this as follows:

(57)



(84) shows that X's subjective demanding of the obligation (=p) is expressed by must while Y's subjective acceptance of it is expressed by have got to.

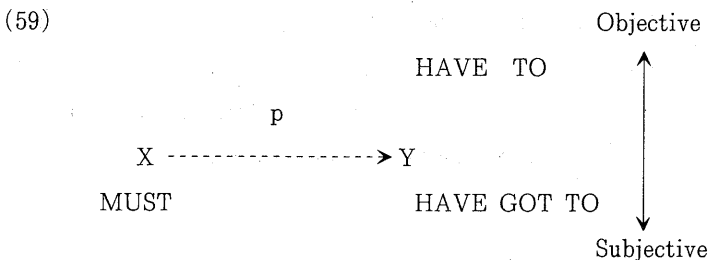
That have got to expresses the speaker's subjective mental attitude is supported by the fact that it cannot become the past tense form unless it is used in the free indirect

speech:

(58)*The police had got to hear about this.

Furthermore, unlike have to, the time of p is always the future in the case of have got to, so we can insert soon or in a minute in the sentence with have got to.

Have to, on the other hand, is used to express the objective state of being obliged, as shown by the following figure:



5. Conclusion

We can summarize our paper by the following points:

- (60) Deontic modality has the following semantic structure: p (the content of obligation) is essential for w (=desired possible world or situation); we have to take into consideration the context of the discourse in order to interpret what w is.
- (61) Deontic modality can be captured in terms of X and Y, where X is a factor which demands or imposes some obligation, and Y is a factor which is demanded or imposed.
- (62) In terms of subjectivity/objectivity, must is subjective in that X demands p of Y by force, have got to is also subjective in that the speaker accepts Y's state of affairs as urgent and important, and have to is objective in that Y's state of affairs is described objectively.

We hope that our analysis will be applicable to modal expressions other than must, have to, and have got to. For example, compare the following examples:

- (63)a. May I put the TV on?
- b. Can I put the TV on?

(Swan 1995²:326)

It is generally said that may is more formal than can. Another difference might be that like must, may is used to grant permission. According to Tredidgo (1982:90), the semantic structure of may, but not can, can be represented by the following formula

- (64) a may b = X PERMIT Y - Y CAUSE ab (Tredidgo 1982:90)

In the case of may, X can be not only the speaker, but also rule, nature, etc. This is parallel with the case of must:

- (65)a. You may call further witness if you so desire. ('I permit you or court procedure permits you.')
- b. Transitive verbs may occur in the passive. ('Grammar permits it of speakers of English.')
- c. The seeds may be sown on open ground at any time of year. ('Nature or normal gardening practice permits it of gardeners.')

In these examples, may is concerned with the present granting of permission. Thus, (65a) implies: 'The speaker or some law grants this permission on you.' In other words, may is basically present-oriented.

Now, observe the following examples:

- (66)a. These days, children can do what they like.
- b. *These days, children may do what they like.
- (67)a. Can you park on both sides of the road here?
- b. ??May you park on both sides of the road here?

(Swan 1995²:326)

Swan(1995²:326) states that can, but not may, is usually used to talk about permission which has already been given, about freedom which people already have, or about rules and laws. We may safely say that may is used to talk about the act of permission, while can is used to talk about permission which has already been given by some authority.

thing.

Though there are many remaining problems, we hope that our research will be meaningful stepping stones towards the inquiry of what modality is.

Notes

*Section 4 is partly based on Oguma's graduation thesis submitted to Gakushuin University in December, 1997.

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Authors

*Masao Takaji: Professor of Miyazaki Municipal University

*Harumi Sawada: Professor of Kansai Gaidai University

*Shizu Oguma: Graduate student of Kansai Gaidai University and member of the Pragmatics Society of Japan.

