The Concept of "Distance" and English Modal Verbs[*]

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1. Introduction

Regarding it as a fundamental principle of English modal verbs that they are polysemous, I shall survey the tendency of semantic diachronic change in language and consider the relationship between subjectivity and objectivity. Looking at its confrontational relationship, I will examine whether this relationship influences the semantic extension that underlies the concept of distance. Moreover, referring to Roland Barthes's *"Le Degré Zéro De L'Ecriture"*, I would like to reconsider modality and clarify how the tense of English modal verbs is connected with the concept of distance.

2. Semantic Change of English Modals and Subjectivity

It became clear that the polysemy of English modals is very complicated and has somewhat different properties from polysemy in other English words. Then, how, empirically and historically, has each modal come to bear its current meanings? How should we interpret the relation between modals and the other components of expressions and the connotations to which these relations give rise? Several diachronic studies of English modals have proved that semantic change in them is unidirectional; they have changed from *deontic* (root) to *epistemic* meanings, and the reverse movement is impossible. Given this fact, it can be presumed that the influence of this unidirectional semantic change on the nature and behavior of English modals has led to the development of an important relation between the meanings of these modals and the characteristics of human cognition in English speakers. What is the exact nature of this relation, and what makes modals polysemous?

We can infer that there is a vague boundary between semantic and pragmatic meanings (in this case, of modal verbs), but it is difficult for us to determine exactly where that boundary is. We could simply say that English modal verbs are polysemous and leave it at that, but it is hard to specify or clarify the multiple meanings of each modal.   However, it is possible to some extent to describe the representative meaning of a modal, which is the fundamental meaning each modal shows. It appears that meanings change over time (diachronically); the basic meaning of the time for a word is the one explicitly written in dictionaries and similar reference works. However, a word—any word—being used in practice gradually comes to *extend* its fundamental meaning into a cluster of related meanings.

However, modal verbs seem to extend their meanings differently from other words. Furthermore, the dictionary sense is not identical with uses in context, whether oral or written. This is where the semantic/pragmatic problem arises; therefore, it seems natural to have the sense that we can accept a certain degree of polysemy in English modals but can see the pragmatic problem if one of the polysemous meanings becomes independently extended in the process of communication.

English modal verbs have two tense forms: *present* and *past*. The former may either parallel the latter or not; in other words, it can be presumed that we do not merely grammatically convert the present tense form *can* into past *could*, but that both present and past tense forms undergo a peculiar change in order to exist with their given meanings at a given time. Then, the network of polysemous meanings of each modal seems to be partially modular or articulated.

To make this more concrete, let us consider an example. We cannot simply assert that could is the past tense form of can. For example, the following is a sentence using could:

(1) *Could* you come and see me tomorrow?

(Kenkyūsha's New English–Japanese Dictionary, 6th edition)

The basic sense of *could* is the past tense of can; further, *Kenkyūsha's New English–Japanese Dictionary, 6th edition,* elucidates the connotation that *could you…?* is more polite than *can you…?* Thus, the past tense form does not necessarily denote a temporally past meaning but conveys or adds politeness.   Therefore, it seems reasonable to assume that while the semantic meaning of *could* is one of (past) "possibility," the pragmatic meaning is one of "politeness."

As already mentioned, it is difficult to determine the exact location of the boundary between the semantic and pragmatic fields. Universally to a certain extent, people can perceive which sense of a polysemous word is fundamental and which senses are extensive, which would seem to make it easy to boundary between senses. Yet basic meanings are not static, but change.   It is the characteristics of these changes that make modals what they are, in that these changes led the modals to become what they are.   Moreover, it can be inferred that the development of the various meanings of English modals is very intricate, involving many kinds of (linguistic and non-linguistic) factors, which leads us toward the matter of polysemy of modals.

Looking at the meanings of English modals from a historical and diachronic point of view, it may be presumed that the structure of their changing meanings emerges out of a complex interaction of semantic and pragmatic fields, and overlap in senses from the partial merger of these fields. However, given that there is necessarily a basic sense of a word that has gradually been acted on by pragmatic factors and acquired modified semantic meanings, it is appropriate to state that knowledge of diachronic change leads us to comprehend the

synchronic meanings of modals and natural to assume that there is an important clue to understanding the essence of English modals in the intersection of diachronic and synchronic change.

Many diachronic studies in linguistics have elucidated tendencies in the semantic change of language. It appears that this tendency to change is associated with the development of human cognition and helps explicate the relation between human thought and language. Further, given the existence of this tendency, the question arises as to how the English modals have historically behaved semantically, what functions they now have, and what basic meanings they now have. Finally, we should bear in mind that sociological factors bear on basic meaning as well.

Nakano (1993) elaborates a diachronic analysis of English modals based on Traugott (1989). He characterizes the general tendency of semantic development of language as follows:

1. generalization
2. metaphorical extension, metaphorization
3. pragmatic strengthening

(Nakano 1993: 387-388)

Traugott (1989: 34-35) (and following her Nakano) divides semantic change into three stages or tendencies and states the subjectification of meaning and order of change for each:

Tendency I: Meanings based in the external described situation > meanings based in the internal (evaluative/perceptual/cognitive) described situation.
This subsumes most of the familiar meaning changes known as pejoration and amelioration (e.g. boor "farmer" > "crude person"); a wide range of metaphorical extensions, most of them shifts from concrete to abstract; and the tendency identified by Sweetser to use vocabulary from the external (sociophysical) domain in speaking of the internal (emotional and psychological) domain […]." (1984: 56)

(Traugott 1989: 34)

Tendency I implies that in the first stage, semantic change of words takes place from the "exterior" of the speaker to the "interior." This seems to mean that the perspective of that person has moved from outside their own self to inside.

Tendency II: Meanings based in the external or internal described situation > meanings based in the textual and metalinguistic situation.

> By "textual situation" I mean the situation of text-construction. […] By "metalinguistic situation" I mean the situation of performing a linguistic act […].
>
> (Traugott 1989: 35)

Traugott states that change of "textual situation" refers to "the development of lexical and morphological forms into connectives coding cohesion," which appears to mean change in which a word with a certain meaning comes to obtain a grammatical function; in contrast, "metalinguistic situation" is "the shift from a mental-state to a speech-act verb," which appears to mean that a word with mental content comes to have a metalinguistic meaning in the process of movement from the first stage to the second:

> Tendency III: Meanings tend to become increasingly based in the speaker's subjective belief state/attitude toward the proposition.
> This tendency subsumes the shift of temporal to concessive while and a large number of other changes. […] Tendency III also encompasses changes such as the development of the action verb go into a marker of immediate, planned future and […], of epistemic meanings.
>
> (Traugott 1989: 35)

Traugott states that a word attains a subjective meaning in the stage of Tendency III. Here, one's internal attitude is reflected in linguistic meanings. These tendencies imply the proceeding of cognition from physical to mental, from the outside world to the inside and from objective to subjective. Thus, in summary, Traugott models semantic change in English epistemic modal verbs as follows:

> (MV = main verb; PM = premodal):
>
> | I | II | III | III |
> |---|----|-----|-----|
> | MV > PM > deontic > | | weak epistemic | > strong epistemic |
> | | | habitual | |
> | | | prophetic / rel. future | |
>
> (Traugott 1989: 43)

Nakano (1993), again following Traugott (1989), acknowledges the phenomenon of "subjectification" of English modals and he spells out the semantic growth of English modals as follows:

> dynamic modality   (→ deontic modality) → epistemic modality
>
> (Nakano 1993: 391)

On the basis of Nakano (1993) and Traugott (1989), it seems reasonable to suppose that the movement of pragmatic strengthening from generalization corresponds to the one from objective to subjective. This shows that grasping an event in the outside world is a generalized process and that the tendency of word use becomes fixed as individual thoughts gradually come to be expressed linguistically, which might affect current words by means of pragmatic strengthening.

However, Traugott (1989) assumes that with regard to semantic change of words, "a form may maintain its original meaning alongside its newer one […]. The newer meaning may peter out. Alternatively, only the newer meaning may survive, while the original meaning is expressed by another form" (Traugott 1989: 33). In other words, though the meaning of a word tends to change from objective to subjective, it may be the case that while a word has both objective and subjective meanings at a given moment, it has either of the two. Moreover, Traugott (1989: 36) states that the meaning of a modal verb does not suddenly change from deontic to epistemic but instead gradually comes to take on a weak epistemic meaning and then to express a strong epistemic meaning.   Therefore, we can make a distinction between objective and subjective meanings of English modal verbs.

Nakano (1993), in accordance with Lyons (1977), subdivides the epistemic modality into *subjective* and *objective*; the deontic modality into *performative* and *non-performative* (Nakano 1993: 19-20); and the dynamic modality into *neutral* and *subject-oriented*, citing the terminology of Palmer (Nakano 1993: 32). Then, conceptualizing epistemic and deontic modalities in terms of subjectivity and objectivity, Nakano (1993) discerns epistemic and deontic expressions as follows:

> Here I will compare subjective/objective epistemic expressions with performative/non-performative deontic expressions […]. Since subjective epistemic expressions represents the epistemic judgment of the speaker, and performative deontic expression represent permission/obligation which the speaker gives, these expressions resembles each other in that their meanings are speaker oriented.   On the other hand, objective epistemic expressions and non-performative deontic expressions are similar to each other, for possibility/necessity and permission/obligation objectively exist separate from (the subjectivity of) the speaker.
>
> (Nakano 1993: 29; underlines are Nakano's, translation is mine)

Moreover, Nakano decides that when a pair of subjective epistemic expression and performative deontic expression belongs to a "subjective (speaker-oriented) system" and a corresponding pair of objective epistemic expression and non-performative deontic expression, to an "objective (non-speaker-oriented) system," dynamic modal expression will then belong to the latter system (Nakano 1993: 35).

In light of the above argument, it is likely that the changing dynamic–deontic–epistemic process as shown above can be equated to a series of changes from objective to subjective. Then, it becomes obvious that the subjectification of the meaning of a word will bring about a variety of polysemy. As can be seen from the fact that a modal verb is a main verb, modal verbs which originally held only an objective meaning came to encompass a subjective meaning as well, as it became necessary for people to make a declaration of their "inside." This need might come about to avoid competition, or conveying our real intention to the hearer more plainly. At any rate, it is an undoubted fact that using words has promoted semantic change in them, which in turn correlates with the development of human cognition. With this growth, the senses of words will complicate and multiply, on the assumption that the confrontational relationship between objectivity and subjectivity also applies to the other relationship. It may be necessary to consider some relationships of opposite or paired concepts to examine how they contribute to the diversification of meanings of English modal verbs.

3. From Space to Time

The intention of the speaker who utters a sentence including a modal verb is to display his/her thought about a certain event confronting him/her, whose content will differentiate the methods and forms of linguistic expression employed. First, we can roughly divide expressions into *assertive* and *nonassertive*. However, it may be clear that the connotations of these terms are very complex and various. Furthermore, the opposition between them seems to be interpretable in diverse ways. One interpretation, for instance, of assertion is that an assertive expression may be something like a fundamental form or means of describing an event: when a speaker encounters or witnesses an event and speaks in a way to reflect this, as though s/he has seen it as it is , it appears possible to assert that the statement is a factual one. There seems to be no feeling involved in this kind of linguistic expression. On the other hand, in a nonassertive expression, the speaker introduces linguistic constituents expressing that it is not possible to assert some fact when telling the hearer his/her interpretation of an event, since s/he is not confident that the observation in question *is* a fact as opposed to only a feeling. This means, however, that non-assertive expression may carry the speaker's intentions or feelings, separating them from basic expressions.

In English, a modal verb can be used to reveal a nonassertive stance; it shows a mental attitude to a proposition, yet has only a necessarily "basic" expression. That is, it can be assumed that the basic expression specifies the subjective assertion of the proposition in which the speaker's mental attitude is excluded without limit (to zero).   Therefore, we may say that modal expressions modify and make additions to a basic expression.

I will expand this argument about basic and extensive expression into another idea. We cannot but imagine something like "space" or "distance" between base and extension. Further, we can imagine a gradual, continuously transferring relation of meaning between

basic and extensive expressions, which makes us perceive the flexibility of shrinking and stretching "distances." Thus, it can be predicted that diverse expressions will occur to us to encode the extent of diverse distances, and in fact we can see that this is the case in diverse everyday linguistic phenomena.   Then, how do we recognize and encode such distances? Encountering a certain event, people interpret it and its circumstances and develop linguistic expression as necessary to indicate the characteristics of their interpretation. Therefore, in linguistic expressions, we can understand "distance" as the distances between basic expressions and modified or extensive expressions.

It seems possible to understand that "distance between persons" as a base or prototype for other forms of linguistic distance. It is possible to interpret the signification of distances between persons as extending from a basic physical to an extended psychological aspect. It goes without saying that such an interpretation of distance has a linguistic effect on expressions referring to it. The point I wish to emphasize is that the analysis of modal expressions to ponder the essential concept of distances is crucial to defining polysemy in modal expressions. Moreover, it may also help us grasp key points to improve and smooth communication by better understanding the characteristics of modal phenomena.

This will lead us further into a consideration of space and time. As mentioned above, it can be inferred that oppositional and paired concepts and relations between them will be the parameters upon which polysemy of English modals is determined. I would like to propose that among these relationships is that between space and time.   Nishikawa (2005) states this relationship as follows:

> First, the infant understands the spatial concept through sensation. Second, cognitive extension from the spatial concept induces understanding of time.   This meta-cognitive process designates the categorization of temporal concept.
>
> The spatial concept is perceived in the three-dimensional world.   Its archetypes are scenography in the case of visual sensation and the perceptions of the auditory sense. In contrast, the temporal concept does not rely immediately on sensation, but in terms of performance, appears as [the categories of] tense, aspect and modality in utterances. These are what auxiliary verbs describe from old times, and all of them are deeply related to human categorization of the temporal concept.
>
> (Nishikawa 2005: 95; my translation)

This can serve as a fundamental way to think about spatial and temporal concepts in order to model the relation among tense, aspect, and modality from a cognitive linguistic viewpoint and explore how the spatial concept precedes the temporal concept[1].

Furthermore, Nishikawa (2005) says that the temporal concept is an abstraction from the spatial concept:

> It is possible that the spatial concept becomes the target of immediate sensation mainly through visual sensation in social life, but it is not possible that the temporal concept does. We can understand that the temporal concept is derived abstractly from the spatial concept.
>
> (Nishikawa 2005: 97; my translation)

Nishikawa presents examples as follows:

(2) a. in front of the desk
     b. behind the desk
(3) a. before 3 o'clock
     b. after two weeks

(Nishikawa 2005: 97; my translation)

In these prepositional phrases, (2) gives spatial concepts and (3) gives temporal concepts. As Nishikawa points out, the former concepts are expressed by means of visual perception, and the latter, analogously, by "making use of the way of describing perceptively (visually)." Thus, he states, the "temporal concept is more abstract and more representative than spatial one" (Nishikawa 2005: 98).

In this way, prepositional expressions signify the shift from spatial to temporal meaning. This discussion is sometimes conceived as a problem of metaphor from space to time. It is plausible to say that acknowledging the directionality from spatial to temporal cognition leads us to the interpretation that there are cognitive operations in which the positional or locative relation between speakers and their referents (things, events and so on) is applied to time cognition.

For further discussion of spatial and temporal preposition, let us consider Bennett (1975). According to his analysis, the spatial uses of prepositions can be classified into five: *locative*, *source*, *path*, *goal*, and *extent*. Further, he states, there appear to be some aspects of spatial and temporal analyses that are by no means parallel, namely, unidimensionality and unidirectionality characterizing a concept of time (Bennett 1975: 95). In other words, here is a suggestion that time is linear (Nishikawa 2005: 106) and proceeds in only one direction, so

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[1] See 5.

the reverse is absolutely impossible. Bennett refers to location, direction, and extent in investigating temporal concepts, as in the case of spatial ones, and gives the following example sentences:

(4) a. The book is on the table.
       b. Trevor walked from Buckingham Palace to Trafalgar Square.
       c. The Mall goes from Buckingham Palace to Trafalgar Square.

(Bennett 1975: 96)

He explains that (4a, b, c) can be respectively considered a locative, a directional, and an extent sentence, and asserts that the following sentence resembles (4b, c):

(5) The film lasted from seven o'clock to nine o'clock.   (Bennett 1975: 96)

However, he points out, it is possible to interpret (4b) in two ways, as expressed by two questions to which it may potentially be a response: *Where did Trevor go?* and *How far did Trevor walk?* He goes on to say that these interrogatives are respectively directional and extent sentences, so that it is understandable that (4b) can be used with both of them (Bennett 1975: 96-97). Furthermore, Bennett (1975: 97) observes that the "extent" reading of (4b) refers to "the extent of something dynamic," and (4c) to "the extent of something static," as shown by the fact that Buckingham Palace and Trafalgar Square in (4b) cannot be exchanged. As a result, he points out, two ways of applying these facts to temporal concepts exist as well: the sentence *I saw Gwyneth at 10 o'clock* is comparable to (4a), while (5), which signifies "the extent of something dynamic," can also be expressed as *The film lasted for two hours*; the interrogative which has (5) (as an answer), *How long did the film last?* parallels *How long is that ruler?* which is classified as a "spatial extent sentence " (Bennett 1975: 97). Since, he says, in (4b) "the noun phrases *seven o'clock and nine o'clock* cannot be reversed without changing the meaning of the original sentence," (5) is an extent expression (Bennett: 1975: 97).

Here, we notice again that space and time are closely connected to each other.   It will be clear from these discussions that the shift of prepositional phrases from spatial to temporal senses contributes to the polysemy of prepositions. At present it may be mentioned that the spatial and temporal meanings of prepositions coexist as the meanings of words, and it may be felt that the temporal use of prepositions is extended from the spatial use.

Let us now attempt to extend this observation into the English modal verbs. It is feasible to speculate that the space–time relation may be expressed in modals in terms of tense. Time is characterized by unidirectionality, that is, by past, present and future; future is not past, and neither of them is present. However, English modals have only two forms: present and past (some in fact have only a present tense form). It seems natural to presume

that a sentence featuring modal verbs is more influenced by the relation between space and time than one without modal verbs, in that in the former the grammatical operation of tense no longer simply denotes time only. Expressed simply, the concept evoked by a binary opposition between space and time is expressed by modal verbs. The following are typical examples:

   (6) a. Mary walks to school.
        b. Mary walked to school.

The difference between these two is mainly whether they have a present or past meaning. The following set does not differ likewise:

   (7) a. Mary *will* walk to school.
        b. Mary *would* walk to school.

These examples do not express a difference between present and past; in terms of form, they show a difference of time, but it can be explained that in fact (7a) refers to the future of an event or the volition of the subject while (7b) means "a past habit," not simply a literal past. Thus, the content of these sentences is inevitably inferential and associated with the speaker's interpretation of an event and the listener's interpretation of the speaker's intention. Furthermore, the operation of tense in modals extends their senses further:

   (8) a. *Can* you open the door?
        b. *Could* you open the door?

The dissimilarity between the items in (8) is not one of time but one of politeness. It may be justifiable to assume that the tense aspect of modals bears similarities with the operation of semantic extension from space to time.

We can assume that extension from spatial to temporal meaning helps map the relations of speakers and their referents onto the present and past or future. A certain sense of distance will be invoked by grasping the interval between each relation. It is perhaps possible to take the position that spatial distances imply physical distances and temporal distances, mental distances. Cognition of such distances greatly diversifies language use; exactly how linguistic expressions are formed out of an appreciation of the possibilities of the concept of distance depends on the interaction between people and their language use.

It is plausible to assume that English modal verbs express the attitude of speakers, which includes the expression of speakers' mental distance in relation to an event. Considered mechanically, on the assumption that there can exist a basic sentence that does

express only the objective fact, a mental distance is added to this sentence when a modal verb is inserted in it:

(9) a. You eat this cake.
     b. You *may* eat this cake.

(9a) is a plain statement of fact, while (9b) gives permission to eat the cake.   Further, (9a) reflects physical distance; in contrast, (9b) reflects mental distance, which at this point extends to interpersonal distance. In this way, we can readily see that many kinds of distance will emerge.

It is not unreasonable to suppose that the opposition between objectivity and subjectivity partially resembles that between space and time. Another way of saying this would be that in space we can touch the outside world, that is, make contact with society outside the self, while we understand time within the inner world inside the self.   Grasping the difference between these relations enables us to communicate mutually and intelligibly using linguistic expressions; representing the various kinds of potential distance between the self and the subject of cognition will make linguistic forms more complicated. Since the concept of distance can therefore be very diverse, gaining a free command of distance networks will promote the diversification of linguistic communication.

4. Zero Modality[2]

Roland Barthes in *Le Degré Zéro De L'Ecriture* (1953; Writing Degree Zero in English) says:

> As is generally known, a few linguists set up the third category, that is, the neutral or zero category between two categories (singular and plural, past and present and so on) in the polarity.   Between the conjunctive and imperative mood, for instance, the indicative mood looks like an *amodal* form.   I would like to state considering the difference that in the final analysis writing degree zero is writing which is indicative—or I may just as well say *amodal* —.

(Barthes (1953), translated by Ishikawa (2008) into Japanese; my translation; my italics)

As considered in several ways above, language reflects a complex system of opposition of meaning, which it is possible to presume might be established by understanding the self and others. It seems that this underlying opposition might advance and facilitate our understanding of things. We can safely say that in our relation with others we can recognize

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[2] I would like to thank Professor Norimitsu Tosu of Nihon University for providing me with this section title.

ourselves from the other's point of view and learn to interpret the other's position. This interaction between them may be the origin of modality.

The *extent* of *modality* decides the degree of the speaker's attitude, enriching linguistic communication. "Extent of modality" here refers to the mental attitude implied in the modal expression; for example, if the modality shows possibility, it specifies the extent or degree of possibility in relation to the event which the speaker encounters. Thus, it can be easily imagined that there is strength and weakness (that is, varying degrees) in modality, and that extent has a *gradualistic* or analogue character. When elucidating the modal implications of a sentence, it does not appear that consideration of extent of modality is avoidable.

Now, let us look at a sentence that has no modality. Can be there such an expression? English has declarative, interrogative, imperative, and exclamatory sentences, among others. Of them, the declarative or indicative appears to be the template or most basic sentence. Thus, it can be assumed that the declarative without a modal verb is the most objectively underdetermined form of sentence. However, just because a declarative sentence with no modal expression signifies a simple fact, is there then really no modality in it?

Furthermore, it is established that English has indicative, subjunctive, and imperative moods. Sawada (2011) acknowledges them as modal in nature:

> In contemporary English, it is generally recognized that there are three
> kinds of mood: indicative, subjunctive and imperative mood. Like modal
> verbs, mood is one of the grammatical methods (namely the inflectional
> system of verbs) to signify modality.
>
> (Sawada 2011: 32; my translation)

Even though an expression may remain a mere statement of fact in surface form, words uttered to convey something necessarily also reflect intentions—minimally, the intention to make a report of the fact. It seems hard to imagine that there is no thought for uttering language.

In linguistic terms, however, it seems possible to assume a *zero modality*. Next, the problem of zero modality will be tackled in terms of the intention of the speaker uttering an expression.

It may be supposed that a sentence containing modal verbs departs in some direction and to some degree from a zero-modal point. Modal distance may of course be remote, and grammatical distance may be equated with mental distance in this regard.   To put it another way, the extent of modality may draw on the remoteness of the distance.

Kashimoto (2005) explains the meaning of imperative sentences as follows:

Many native speakers intuitively understand that the two following utterances are almost equivalent as expressions indicating the imperative for the hearer:

(10) a. Come back home before it gets dark.
      b. You must come back home before it gets dark.

Both (10a) and (10b), considered as utterances, are acts of command to the hearer, but the imperative as a grammatical form (10a) and the declarative with a modal verb (10b) *must* differ in scope of potential meaning.   Grammatical imperatives like (10a) turn the utterance into an act of command, accepting no refusal, and can be an act of motivation holding various forces of strength depending on contexts.

(Kashimoto 2005: 206; my translation except (10))

That is, both the grammatical imperative and the declarative sentence with an imperative mood have the same meaning of command, but the latter with its modal verb is different from a basic indicative sentence. Further, he states as follows:

The imperative sentence is specified for the strength of command and demand relying on contexts. It is, so to speak, the unmarked form of the imperative expression, while the utterance used a deontic modal verb comes to be the form marked by the specific speech act of command, demand, permission and so on, respectively. [… W]e can say that the deontic modal verb becomes a form of expression that operates and controls the locutionary force of an act of command.

(Kashimoto 2005: 207; my translation)

From Kashimoto's observation, we can see that the strength of command (which in this analysis is a form of degree of modality) in the imperative sentence with no modal verb cannot be discerned unless we observe the peripheral components (contexts, social circumstances, etc.), while the imperative with a modal verb is explicitly linguistically connected with the mental attitude of the speaker, allowing the hearer to interpret the intention of the speaker intelligibly. The existence of modal verbs may thus render speaker and hearer intentions reciprocally transparent and exchangeable; in particular, allowing them to read the distance between them.

Moreover, Kashimoto (2005) elucidates the nature of epistemic modal verbs as follows:

The declarative sentences without a modal verb are unmarked forms that can express the strength of many kinds of statements or acts excluding statements. On the other hand, sentences with epistemic modals are marked forms that can realize acts of statement with the strength modal verbs hold.

(11) a. His story was nothing but a dream.

  b. His story must have been nothing but a dream.

(12) a. She visited the post office on her way home yesterday.

  b. She may have visited the post office on her way home yesterday.

On the assumption that on the scale of strength of statements the unmarked declarative sentence is located on one pole while the interrogative sentence is located on the other pole, which means it is at the extremity of zero force of the [possible range of] statement[s], epistemic modal verbs can express the strength of various kinds of statements in their interval and work to control locutionary force of [these] acts of statements.

(Kashimoto 2005: 207; my translation)

In other words, (11a) and (12a) simply assert and report, while (11b) and (12b) are related to and reflect the judgment of the speaker regarding necessity or possibility. These facts can also be applied to sentences containing verbs of perception:

(13) a. I see the mountain.

  b. I *can* see the mountain.

It seems that both sentences stated above refer to the same event, but the intentional content is different. That is, (13a) reports simply seeing the mountain under normal or unremarkable conditions, while (13b) adds self-consciousness: the subject of (13b) seems to intend to see the mountain and focuses on his/her ability to see it.

   Kashimoto (2005) identifies certain features of meaning in common between deontic and epistemic modal verbs: "[…] according to the mechanism of establishing and operating acts of utterances, it can be inferred that two kinds of modal verbs appear to have common functions which make fine adjustments to utterances established by sentential forms" (Kashimoto 2005: 207-208; my translation). In the context of this statement, it should be recalled that the etymology of *modality* is from the Latin word *modus*, which means 'measure' (Nishikawa 2005: 97).

One interpretation of zero modality is as below:

> Assuming that a sentence with no modal expression carries zero modality
> and constitutes a basic sentence, a sentence with modal expression is one
> that moves to any degree away from it.

To "move away" here basically means to create a situation in which the mental attitude of the speaker toward a certain event is incorporated into the expression. Here, we notice that a sentence that contains a modal expression specifies the distance between speaker and event and extends from the basic meaning. I would like to call this distance the *modal distance*; it is expressed in a great variety of linguistic forms and grammatical constraints. As time proceeds, I would think, the intentional content of specific types of utterances and modals has changed and the contemporary meanings have emerged.

5. Tense and Modal Verbs

As has been frequently pointed out, the relation between present and past tense forms is very intricate, and seems to be inextricably related with the concepts of space and time. The unidirectional movement from space to time and the exchange between present and past may imply that past tense forms render explicit the link with the inside world of the self.

Sawada (2011) explains the *hypothetical construction* as follows:

> […] To interpret a sentence in the hypothetical realm, "shifting tense,"
> that is, "backshift," should be supposed. Shifting tense of the hypothetical
> construction is said to express the mental distance from temporal
> cognition in the realm of reality (Joos (1968^2), Fleischman (1989)).
>
> <div align="right">(Sawada 2011: 38; my translation)</div>

From Sawada's explanation, it seems that shifting tense will play an important role in specifying the mental distance of modal verbs. Then, it can be seen that tense "shift" does not simply refer to grammatical shift.

Nishikawa (2005), as we have already mentioned, spells out the principle that "tense precedes aspect and modality" and illustrates as below:

spatial concept > temporal concept
tense > aspect
tense > modality

<div align="right">(Nishikawa 2005: 98; my translation and summary)</div>

Nishikawa says that "tense is a categorization of the temporal concept and it is general in English that the way of understanding conceptual time is linear, containing present, past and future. Then, the progressive and perfective aspects follow it […]" (Nishikawa 2005: 98; my translation). Further, he explains that "tense precedes modality," on the ground that modal verbs have an equivalent relation with the past tense form as it is called (*will/would*, *can/could*, and so on). Considering these points, we can assume that tense may have a function of controlling modality. Hence, the grammatical operation of tense extends the temporal concept metaphorically to modality. Each modal verb has been individually and independently altered and developed by the influence of tense.

As pointed out in various studies and above in the present study, the past tense forms of modal verbs do not simply refer to the past time. Rather, what past form modals usually signify is periphery in events of the present and future time.

(14) *Could* you sign this now, Doctor? (Genius English–Japanese Dictionary)

(15) Oh, madame, believe me, I *would* not harass your feelings unnecessarily.

(Christie: The Affair at the Victory Ball)

(16) The noise *might* keep you awake at night. (Oxford Dictionary of English)

It is clear that *could* in (14) does not refer to a past time, because it accompanies an adverb which refers to the present time, *now*. Similarly, *would* in (15) refers to present volition. Furthermore, *might* in (16) shows inference of what will (not) happen in the future.

Kashino (2012) states that would has three usages, exemplified as follows:

(17) He *would* often go fishing in the river when he was a child.

(18) She *wouldn't* listen to my explanation.

(19) My son *would* run a fever just when we are about to go on a trip.

(Kashino 2012: 23)

According to Kashino (2012:23), *would* in (17) refers to a "past habit," (18) to "refusal and persistence," and (19) to "typical behavior." He continues to assert that (17) and (18) correspond to the present tense form *will*, but (19) does not:

(20) He will leave his coat on the chair instead of hanging it up. (past habit)

(21) The baby won't eat anything. (refusal and persistence)

(Kashino 2012: 23)

The "typical behavior" usage exemplified in (19) is not well-known to the general public; it "is used when making a statement with a connotation of criticizing a 'typical example of a person's habitual behavior'" (Kashino 2012: 23). It should be noted that although it is the

past tense form of *will*, *would* also has usages which cannot be expressed with *will*.   It seems likely that this fact can serve as evidence that *would* developed from a tense-specified form of *will* while also peculiarly evolving in meaning.

Leech et al. (2009) investigated the frequency of English modal verbs in British English (BrE) and American English (AmE) from the 1960s to 1990s using corpus data. They state that as an overall tendency, the frequency of core modals (*can*, *may* and so on) decreases remarkably over this period, while that of semi-modals increases remarkably. Further, they continue that with regard to *may*, *must* and *should* decrease more than expected. Finally, they point out that a single modal verb tends increasingly over time to correspond to only a single meaning. For instance, of the several meanings of *may* found in the corpora,

MAY
(a) Epistemic possibility
(b) Root/event possibility
(c) Permission
(d) Quasi-subjunctive/formulaic
(e) Unclear

(Leech et al. 2009: 83)

They explain that the epistemic modality, (a), is most common and becomes increasingly common over time.

Here I would like to emphasize the relation between *may* and *might*.   Leech et al. spell out the fact that the Brown family corpora show a decrease in the use of *may* as a deontic modal verb, indicating the shift to the use of a deontic *can* instead. What is more, they state that in AmE epistemic *may* diminishes because instead epistemic *might* comes to be used instead. Further, they observe that *might* in AmE decreases less than in BrE.

Leech et al.'s investigation seems to suggest that *may* and *might* have individually developed independent meanings and polysemy. It may safely be assumed that the past tense form *might* has come to lose the sense of past time and has gradually established distinct meanings independent of *may*. The same may be said, no doubt, of the other past tense modals.

6. Conclusion

As we have seen, it is plain that English modal verbs have present and past tense form which exist in a complementary relationship to express actual temporal position, but also that separate from this relationship, each modal also carries partly discrete and peculiar meanings. Therefore, it is plausible to assume that the past tense forms of modals are much more polysemous than the present tense forms. This argument is supported by the concept of modal distance that I have outlined above. I would like to clearly state that this distance exists in

very diversified forms, and that it is the interaction among distances that makes the past tense modals of English polysemous. Further, I wish to systematize this diversification of modal expressions by observing the properties and roles of English past tense modals.

Additionally, I venture to throw out the suggestion that the use of the past tense form is intended to "objectify the subjectivity"; that is, use of the past tense may include the implication that one is looking a certain event as a whole and not only from a subjective or limited perspective. Moreover, I suppose that a speaker should objectify his/her intention by comparing the temporal distance between present and past with the "grasping distance" between him/herself and the event. On this basis, English modal verbs can be understood as the grammatical means by which speakers can achieve a good command of tense by which to manifest their attitude to an event.

Bibliography

Barthes, R. (1953). *Le Degré Zéro De L'Ecriture* [Writing Degree Zero] (Japanese translation: Reido no Ecriture Y. Ishikawa. Tokyo: Misuzushobo. 2008.)

Bennett, D. C. (1975). *Spatial and Temporal Uses of English Prepositions: An Essay in Stratificational Semantics*. Longman Higher Education.

Christie, A. (1999). 'The Affair at the Victory Ball' in *Hercule Poirot: The Complete Short Stories*. Harper Collins Publishers. ('The Affair at the Victory Ball' was first published in The Sketch, 7 March 1923.)

Kashino, K. (2012). *Eigo Gohou Shokai* [Linguistic Studies in Current English Usage]. Tokyo: Sanseido.

Kashimoto, Y. (2005). "Hojyodoshi no Ronritekiimi, Shinritekiimi, Taijinkankeitekiimi [Logical, Psychological and Interpersonal Meanings of Modal Verbs]". In Y, Narita., & A, Hasegawa. (Eds.), *Eigo no Tense, Aspect, Modality* [English Tense, Aspect and Modality]. (pp. 197-209). Tokyo: Eihosha.

Leech, G. et al. (2009). *Change in Contemporary English*. Cambridge University Press.

Lyons, J. (1977). *Semantics 2*. Cambridge University Press.

Nakano, K. (1993). *Eigo Houjodoushi no Imiron* [The Semanitcs of the English Auxiliaries]. Tokyo: Eichosha.

Narita, Y., & Hasegawa, A. (Eds.), (2005). *Eigo no Tense, Aspect, Modality* [English Tense, Aspect and Modality]. Tokyo: Eihosha.

Nishikawa, M. (2005). "Jikangainen no Kategoriika [Categorization of Temporal concept]. In Y, Narita. & A, Hasegawa. (Eds.), *Eigo no Tense, Aspect, Modality* [English Tense, Aspect and Modality]. (pp. 95-106). Tokyo: Eihosha.

Sawada, H. (2006). *Modality*. Tokyo: Kaitakusha.

---(2011). "Modality niokeru Shukansei to Kasousei [Subjectivity and Hypotheticality in Modality]". In H, Sawada. (Ed.), *Shukansei to Shutaisei* [Subjectivity and Identity]. (pp. 25-48).Tokyo: Hitsuji shobo.

Traugott, E. C. (1989). "On the rise of epistemic meanings in English: An example of subjectification in semantic change". *Language 65*. 31-55.

Dictionaries

Unabridged Genius English-Japanese Dictionary. (2001) Tokyo: Taishukan.

Kenkyusha's New English-Japanese Dictionary 6th ed. (2002) Tokyo: Kenkyusha.

Oxford Dictionary of English Second Edition Revised. (2005)