Believing, Wanting, and *Feeling*: Three Representational Modes of Embedded Propositional Contents

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The modal marker ~ *to omou* is preceded by various types of embedded propositions, such as a speaker's belief, desire, intention, etc. Although Japanese sentences have been categorized by many scholars (e.g., Miyaji 1971; Teramura 1984; Moriyama 1988; Masuoka 1991; Nitta 1991a, b), these categorizations attempt to classify the whole sentences, and therefore are not applicable to embedded propositions preceding ~ *to omou*. Also, although Moriyama's (1992) pioneering study attempts to categorize the propositions into two groups of "subjective" and "objective," its categorization is heavily dependent on contexts, and accordingly it must be taken case-by-case. Here, it is necessary to create a systematic categorization specifically effective for embedded propositions. In this study, according to Searle's (1983) "direction of fit," embedded propositions are classified into three types of representational modes: *Believing, Wanting,* and *Feeling. Believing* refers to the mode of true-or-false, *Wanting* to fulfillment, and *Feeling* to neither true-or-false nor fulfillment.

By attaching *omou,* the degree of the speaker's "commitment" to the propositional contents of *Believing* and his "involvement" to that of *Wanting* and *Feeling* decreases. The speaker's "involvement" in *Feeling* refers to how deeply he is engaged in a state of current feeling, whereas in *Wanting* to how determined he is in fulfilling his desire, intention, etc.

Furthermore, Japanese verbs of mental activity are classified by utilizing the framework of representational modes, and *kangaeru* and *kanjiru* are grouped together with *omou.* It was discovered that the attachment of both *kangaeru* and *kanjiru* creates an implication different from the one of *omou* because of their cognition/affect orientation. This study will improve our understanding of how a human being's mind is related to language when expressing his thought.

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INTRODUCTION

Regarding the function of the attachment of ~*to omou/omotte iru* to embedded propositions, various proposals have been made by linguists. Example sentences[1] introduced by those linguists are as follows:

(1)　*Mōshiwake nai to omotte iru.* (Ando 1982)
　　　(I am thinking that)[2] I am sorry.
(2)　*Watashi, ima no mama o kōfuku to omotte imasu wa.* (Suzuki 1976)
　　　(I think) I am happy with things the way they are now.
(3)　*Boku wa hontō ni anata ni sumanai to omotte iru.* (Suzuki 1976)
　　　(I think) I am really sorry to you.
(4)　*Watashi wa An o shōjiki da to omou/omotte iru.* (Nakau 1979; Kunihiro 1985; Shinzato 1991)
　　　I think/(am thinking) that Ann is honest.
(5)　*Fuan ga nai ningen to iu no watashi wa kachi ga nai to omoimasu.* (Shinzato 1991)
　　　Those who have no worries are not worth much, I think.
(6)　*Boku wa zettai ni Jon ga hannin da to omou.* (Iwasaki 1993)
　　　I positively think that John is the culprit.

These example sentences appear to be classifiable into two groups according to the types of embedded clause. The first group is the one whose embedded clause refers to the speaker's personal feeling and includes sentences (1), (2), and (3). The second group is the one whose embedded clause refers to the speaker's judgment about the other party and includes sentences (4), (5), and (6). In order to appropriately grasp the global function of the attachment of ~*to omou/omotte iru*, it is necessary to systematically categorize embedded propositions preceding ~*to omou/omotte iru*. Therefore, this study will pursue a clear categorization of their types and introduce linguistic phenomena which are explainable within the framework of the proposed categorization. Contributions which this study is able to offer include (1) an account of the fundamental function of ~*to omou/omotte iru*, (2) a categorization of verbs of mental activity, and (3) an account of similarities and differences among the respective interpretations of ~*to kangaeru/omou/kanjiru*.

Previous Studies of Sentence Type Categorization

Sentences in the Japanese language have been categorized by many scholars (Miyaji 1971; Nitta 1979; Teramura 1984; Moriyama 1988; Moriyama 1991;

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[1] These example sentences were originally introduced by linguists to support their respective claims regarding the differences between ~*to omou* and ~*to omotte iru*. This study will not deal with their differences. For further details regarding the differences, refer to Yokomizo (1997).

[2] Throughout this study, parentheses will be added when the English equivalent of Japanese phrases sounds awkward.

Masuoka 1991; Nitta 1991a, b). However, these categorizations are products of attempting to classify 'whole sentences, and therefore are not applicable to embedded propositions preceding ~*to omou/omotte iru*. Here it becomes necessary to create a systematic categorization specifically applicable to embedded propositions.

1 Moriyama's Study of Embedded Propositions plus ~*to omou*[3]

To my knowledge, Moriyama's (1992: 105–16) study is the first attempt to categorize the content of propositions preceding ~*to omou* and which investigates the influence of such content on the resulting interpretation when ~*to omou* is attached. Moriyama states that the basic function of ~*to omou* is "to indicate that the preceding proposition is a speaker's personal information" and assumes that the increase of subjectivity caused by the attachment of ~*to omou* contributes to the decrease of assertiveness. Accordingly, Moriyama claims that the function of ~*to omou* differs depending upon whether the propositional information is 'objective' or 'subjective.'[4] According to Moriyama, 'objective' propositional contents report objective facts which a speaker aims to share with the hearer as common knowledge. The following sentences are Moriyama's examples of 'objective' proposition plus ~*to omou*.

(7) A: *Aitsu, daigaku, kiteru ka na?*
              Has he come to university?
        B: *Haa, kiteru 'to omoimasu.*
              Yeah, I think that he has come.
(8) *Senpō wa sanji ni kuru to omoimasu.*
        I think that the other party will come at 3 o'clock.
(9) A: *Mono no hon? Dono yō na mono deshita?*
              You mean a book about a thing? What kind of thing was it?
        B: *Kyōto no shinise toka iu taitoru no hon datta to omoimasu.*
              I think that it was something like the one titled as Kyoto's shops of old standing.
(10) *Ano atari ni tometa to omou.*
        I think I parked it somewhere over there.
(11) *Tashika, sono hi wa Nichiyōbi datta to omou.*
        If I am correct, I think that that day was Sunday.
(12) *Kono ji, nan to yomu to omou?*
        What do you think is the reading of this kanji?

According to Moriyama, the attachment of ~*to omou* to the 'objective' information leads to increase the subjectivity of the whole sentence and contributes to a speaker's indication of "This is my personal belief although it should be treated as a fact."

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[3] Moriyama does not deal with ~*to omotte iru*.
[4] Single quotation marks are used to indicate that the quoted words are used within Moriyama's definitions.

Moriyama also states that 'subjective' propositional contents express the speaker's subjective mental activity and that the speaker does not aim at sharing the 'subjective' information with the hearer. The following sentences are Moriyama's examples of 'subjective' propositional contents plus ~ *to omou.*

(13) (In a heavy rain) *Nē, gakkō kyō mo yaru to omou?*
      Hey, do you think that school is open today?

(14) *Nihon no ima no iryō seido wa machigatte iru to omou.*
      I think that the current medical system in Japan is not good.

(15) *Sengo no tadashii kyōiku o uketa wakamono ni tadashii handan o shite morawaneba naranai to omoimasu.*
      I think that we have to let the young people who received proper post-war education make a correct judgment.

(16) *Kore dake oishii mono ga staa ni narenai hazu wa nai to omou.*
      I think that there is no reason for a delicious thing like this to not be a popular food.

(17) *Inasaku nōkō bunka ga teichaku shita igo ni, haru aki ga daihyōteki kisetsugo to natta no darō to omoimasu.*
      I think that spring and autumn became typical words of the seasons after the culture of rice growing agriculture had become established.

(18) *Kanpai shitai to omoimasu.*
      (I think) I want to give a toast.

(19) *Dōka kongo mo suenagaku goshujin to tomo ni tōten no shōhin tesuto o tsuzukete itadakitai to omoimasu.*
      (I think) I would like you to continue your checking our goods with your husband from now on, too.

Moriyama claims that ~ *to omou* following the 'subjective' information behaves differently from the case of the 'objective' one. According to Moriyama, the attachment of ~ *to omou* to the 'subjective' information does not indicate the lack of the speaker's conviction. Rather, it has the function of enhancing the speakerhood: The information itself is subjective and need not to be shared by the hearer. The speaker attaches an additional marker of subjectivity (~ *to omou*) in order to emphasize clearly that the embedded proposition is a personal one, and as a result the assertiveness of the whole sentence decreases. Thus, Moriyama assumes that the increase of subjectivity contributes to the decrease of assertiveness. Then, he concludes that the attachment of ~ *to omou* to the 'subjective' information frequently occurs in formal situations where a speaker hesitates to assert a personal opinion.

In addition, Moriyama states that *Watashi wa ureshii to omou* (I think I am glad) is a bit awkward for reporting the speaker's feeling at the time of utterance. Then, Moriyama speculates that the same sentence will become natural if it implies the speaker's guess on an uncertain matter as in *Moshi sō nareba ureshii to omou* (I think I will be glad if it becomes so), and concludes that *ureshii* at the time of utterance is not a mental activity of cognition but a state of feeling.

Although Moriyama's claim contributes to clarifying the necessity to investigate the types of embedded propositions preceding ~*to omou*, his claim holds a limitation which suggests the necessity of a further investigation regarding the categorization of the embedded propositions.   Moriyama states that the distinction between 'objective' and 'subjective' can be made mostly by predicates and sentence ending forms,[5] but at the same time he introduces an ambiguous case with the example sentence *Burukkunaa wa tensai da to omou.*   (I think Bruckner is a genius.)   He claims that the proposition becomes 'subjective' if a speaker is a big fan of Bruckner's symphony, while it becomes 'objective' if the fact that Bruckner is a genius has been widely accepted as a common knowledge.   Here lies Moriyama's limitation: Since Moriyama utilizes the concepts of 'objective'/'subjective,' which are relative[6] and cannot be treated as two absolute dichotomous categories in order to divide propositional contents into two groups, the categorization of propositional contents itself became relative and is heavily dependent on contexts, and accordingly the categorization of embedded propositions must be taken case-by-case.   Considering these limitations of Moriyama's claim, I conclude that a more systematic and universal categorization of embedded propositions is needed.

Believing/Wanting/Feeling

Since embedded propositions preceding ~*to omou/omotte iru* express a speaker's mental activity, their categorization must lie within the framework of how a human being's mind is related to language.   I will argue below that embedded propositions can be classified into three categories: *Believing, Wanting,* and *Feeling.*   This categorization is the product of adopting and modifying Searle's (1983) proposal regarding the categorization of intentional states.

1 Searle's Speech Act Theory and Intentionality

Searle (1979) has proposed in his book *Expression and Meaning* the classification of utterances according to "illocutionary acts,"[7] and it has been summarized by Levinson (1983: 240) as follows:

  1. *Assertives* which commit the speaker to the truth of the expressed proposition[8]

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[5] Moriyama does not clearly introduce concrete examples of predicates and sentence ending forms which are useful to distinguish 'objective' and 'subjective' information.

[6] According to Lyons (1982: 105), "the distinction between the subjective and the objective is gradual, rather than absolute."

[7] Levinson (1983: 236) introduces the definition of "illocutionary act" by Austin (1962): "the making of a statement, offer, promise, etc., in uttering a sentence, by virtue of the conversational force associated with it."   This study adopts this definition.

[8] Levinson (1983: 240) uses the term "Representative" which Searle originally used to label this category.   However, Searle (1979: vii) states that he prefers "Assertives" over "Representatives" "since any speech act with a propositional content is in some sense a representation."   This paper adopts "Assertives" for this category.

2. *Directives* which are attempts by the speaker to get the addressee to do something
3. *Commissives* which commit the speaker to some future course of action
4. *Expressives* which express a psychological state
5. *Declarations* which effect immediate changes in the institutional state of affairs and which tend to rely on elaborate extra-linguistic institutions

In his following book *Intentionality* (1983), Searle focuses on "an account of how the mind/brain relates the organism to reality (p. vii)" and pursues his theory of Intentionality.[9] Searle (1983: 1) defines "Intentionality" as follows: "Intentionality is that property of many mental states and events by which they are directed at or about or of objects and state of affairs in the world."

Then, Searle lists the following examples of Intentional states:

> belief, fear, hope, desire, love, hate, aversion, liking, disliking, doubting, wondering whether, joy, elation, depression, anxiety, pride, remorse, sorrow, grief, guilt, rejoicing, irritation, puzzlement, acceptance, forgiveness, hostility, affection, expectation, anger, admiration, contempt, respect, indignation, intention, wishing, wanting, imagining, fantasy, shame, lust, disgust, animosity, terror, pleasure, abhorrence, aspiration, amusement, and disappointment (p. 4).

In exploring his analyses, Searle attempts to clear up the notion of representation[10] and the role it plays within a theory of mind and language. As Liedtke (1990: 202) points out, Searle assumes that "different kinds of illocutionary acts can be regarded as different modes in which utterances represent reality." As a result, Searle claims the following five basic representational modes.

1. Assertive mode
2. Directive mode
3. Commissive mode
4. Expressive mode
5. Declarative mode

However, as Liedtke (1990: 203) points out, "Expressives and Declaratives are the categories of illocutionary acts made merely by their communicative functions," and therefore "it is difficult to imagine the possibility to explain an expressive mode and a declarative mode purely in terms of representational semantics without allusion to communicative transactions." In order to classify representational modes, a classification criterion which is independent of a classification of illocutionary acts is needed. Liedtke maintains the use of "direction of fit," which is originally proposed by Searle (1983), as a possible criterion of classification.

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[9] Searle insists on the consistent use of the capital 'I' for 'Intentionality' throughout his book. This study follows Searle's use of Intentionality.

[10] Liedtke (1990: 197) states that Searle conceives "representation" as "the capacity of the mind to relate the organism to the world by way of Intentional states." This paper adopts this definition.

2   Direction of Fit

The concept of "direction of fit" was originally introduced in Searle's *Expression and Meaning* (1979: 1–27) in the analyses of his speech act theory and has been carried over to Intentional states.   According to Searle (1983: 7–8), there exist three types of direction of fit: mind-to-world, world-to-mind and null direction of fit.   Each type of direction of fit will be briefly explained below.

2. 1   *Mind-to-world Direction of Fit*

Mind-to-world direction of fit characterizes a representational mode which can be true or false.   Searle utilizes "beliefs" as its example and states as follows:

> If my beliefs turn out to be wrong, it is my beliefs and not the world which is at fault, as is shown by the fact that I can correct the situation simply by changing the belief. . . .   Beliefs like statements can be true or false, and we might say they have the "mind-to-world" direction of fit (p. 8).

2. 2   *World-to-mind Direction of Fit*

World-to-mind direction of fit characterizes a representational mode whose fulfillment is the issue.   Searle utilizes "intention" and "desire" as its examples and states as follows:

> If I fail to carry out my intentions or if my desires are unfulfilled I cannot in that way correct the situation by simply changing the intention or desire.   In these cases it is, so to speak, the fault of the world if it fails to match the intention or the desire.   . . . Desires and intentions . . . cannot be true or false, but can be complied with fulfilled, or carried out, and we might say that they have the "world-to mind" direction of fit (p. 8).

2. 3   *Null Direction of Fit*

Null direction of fit characterizes a representational mode whose propositional content is neither true-or-false nor fulfillment.   In other words, Searle uses the term "null" as an additional category of representational mode which cannot be explained well by either mind-to-world or world-to-mind direction of fit. Searle utilizes "sorrow" and "please" as its examples and states as follows:

> If I am sorry that I insulted you or pleased that you won the prize, then, though my sorrow contains a belief that I insulted you and a wish that I hadn't insulted you and my pleasure contains a belief that you won the prize and a wish that you won the prize, my sorrow and pleasure can't be true or false in the way that my beliefs can, nor fulfilled in the way my desires can.   My sorrow and pleasure may be appropriate or inappropriate depending on whether or not the mind-to-world direction of fit of the belief is really satisfied, but my sorrow and pleasure don't in that way have any direction of fit (pp. 8–9).

3　Direction of Fit and Representational Modes

I argue that these three types of direction of fit contribute to classifying representational modes of intentional states into three categories.[11]

> Group I: Mind-to-world direction of fit
>
> This category is identical to Searle's assertive mode (1983: 7), which includes "feeling certain, having a hunch, supposing, and many other degrees of conviction" (1983: 29).
>
> Group II: World-to-mind direction of fit
>
> This category includes "wanting, wishing, lusting, hankering after and many other degrees of desire" (1983: 29). Searle's directive mode and commissive mode belong to this category.

Regarding the categories of Groups I and II above, as Searle (1983: 30) states, traditional philosophers label them cognition and volition. I would like to utilize the terms *Believing* and *Wanting* for this study following Grice (1973) who suggests the possibility to treat them as two primitive propositional attitudes.

> Group III: Null direction of fit
>
> The propositional content of this category is neither true-or-false nor fulfilled or not. Representational mode of this category is to simply express the relevant psychological state of the speaker. This category includes Searle's expressive mode.[12]

I label Group III as *Feeling*.

As a result, the following categories of representational modes can be made according to their direction of fit as shown in Figure 1.

Representational Mode	Direction of Fit
Believing	Mind-to-world
Wanting	World-to-mind
Feeling	Null

Fig. 1　Three Representational Modes and Direction of Fit

The example sentences for each category are as follows:

Believing

(20)　*Jon ga hannin da.*　　John is the culprit.

(21)　*An wa shōjiki da.*　　Ann is honest.

Wanting

(22)　*Fukuoka e kaeritai.*　　I want to go back to Fukuoka.

(23)　*Anata ni kite hoshii.*　　I want you to come.

Feeling

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[11]　Liedtke (1990: 207–8) does not include the use of null direction of fit as a criterion of representational modes. On the other hand, I utilize all three types of direction of fit.

[12]　Liedtke (1990: 204) claims that "declarations have to be taken into consideration within a taxonomy of communicative acts; but they must be left out if one wants to develop a taxonomy of representational modes." This study follows Liedtke's claim.

(24) *Ureshii.*   I am happy/glad.
(25) *Sabishii.*   I am lonely.[13]

4 Attachment of ∼*to omou/omotte iru* to Three Types of Representational Modes

I here argue that the fundamental function of ∼*to omou/omotte iru* is "to decrease the speaker's either commitment to or involvement in the propositional contents," and that the selection between "commitment" or "involvement" is determined by the representational mode of the proposition.   Stubbs (1986) points out that a speaker expresses different degrees of commitment to and detachment from the proposition by selecting how he expresses it.   He states that "the expression of commitment and detachment . . . can be seen as a central organizing principle in language (p. 4)." According to Stubbs, "commitment has to do with whether a proposition is presented as true, false, self-evident, a matter of objective fact or of personal opinion, shared knowledge, taken for granted or debatable, controversial, precise or vague, contradictory to what others have said, and so on (p. 8)."   This study will use the term "commitment" following Stubbs's definition.   Also, regarding the term "involvement," Makino (1994) defines it as "a state of being fully engaged with the topic and the interlocutor."   In this study, I define "involvement" as "an affective state of mind being engaged with representational mode."

The function *of* ∼*to omou/omotte iru* will be discussed below in terms of each representational mode, namely, *Believing, Wanting,* and *Feeling.*

4. 1 ∼*to omou/omotte iru and Believing*

Several scholars (e.g., Nakau 1979; Kamio 1990; Masuoka 1991; Iwasaki 1993; Sawada 1993) have pointed out that ∼*to omou/omotte iru* is an expression of epistemic modality.[14]   For example, Nakau (1979) introduces the

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[13] It is important to state here that sentences ending in the perfective form of the verb ∼*ta* are categorized into *Believing*.   As Moriyama (1988: 235) maintains, when a speaker describes an event with ∼*ta* form, he reports the "fact:' that the event occurred at a time in the past.   In other words, a speaker's utterance indicates his belief regarding the occurrence of the event in the past.   Examine the following sentences:

(20′) *Jon ga hannin datta.* (I believe the fact that) John was the culprit.
(22′) *Fukuoka e kaeritakatta.* (I believe the fact that) I wanted to go back to Fukuoka.
(24′) *Ureshikatta.* (I believe the fact that) I was glad.

Thus, sentences ending in ∼*ta* form are categorized into *Believing*.

[14] This study adopts Lyons's (1977: 452) definition of "modality": Modality is "the speaker's opinion or attitude towards the proposition that the sentence expresses or the situation that proposition describes."   According to Lyons, modality can be divided into two types: epistemic modality and deontic modality.   "Epistemic modality is concerned with matters of knowledge, belief (p. 793) or opinion rather than fact (pp. 681–82)."   Palmer (1986: 51) claims that epistemic modality is to be interpreted as "the degree of commitment by the speaker to what he says" or "the status of the speaker's understanding or knowledge" in relation to proposition.   On the other hand, deontic modality is concerned with the necessity or possibility of acts performed by morally responsible agents (Lyons 1977: 823).

sentence, *Watashi wa An o shōjiki da to omou* (I think that Ann is honest) and claims that both *omou* and its English equivalent "I think" are expressions of epistemic modality.

Regarding the speaker's motivation to attach "I think (that)" to the proposition, Lyons (1977: 738) refers to Urmson's (1952) proposal: "to modify or weaken the claim to truth that would be implied by a simple assertion." In other words, "I think" is attached in order to "release speakers from total commitment to propositions (Stubbs 1986: 18)," or to "indicate the level or lack of speaker's confidence in the truth of the relevant proposition (Maynard 1993: 53)." Similarly, Masuoka (1991: 112) states that ~*to omou* is attached to the proposition since the speaker hesitates to make his judgment of the truth by simply presenting the proposition by itself. Kamio (1990: 235), within his own theoretical framework called "territory of information,"[15] maintains that the attachment of ~*to omou* / "I think" is a type of communication strategy in which the speaker softens the utterance by intentionally selecting an "indirect form" (i.e., utterance with ~*to omou* / "I think") instead of a "direct form" (i.e., utterance without ~*to omou* / "I think"), even though the information is within the speaker's own territory. Kamio points out that directly expressing information within the speaker's territory results in not only emphasizing ownership of the information, but also emphasizing the information as not belonging within the hearer's territory, and therefore the speaker purposely selects an indirect form. Thus, like "I think," ~*to omou* is used to decrease the speaker's commitment to propositions.

Nakau (1979), Masuoka (1991), Iwasaki (1993) and Sawada (1993)[16] agree with the claim that ~*to omou/omotte iru* is an epistemic modal marker, and their analyses are limited to the case of *Believing* plus ~*to omou/omotte iru*. Examine the following examples:

Nakau (1979)

(4)　*Watashi wa An o shōjiki da to omou/omotte iru.*
　　　I think/(am thinking) that Ann is honest.

Masuoka (1991)

(26)　*Boku no kangae da to, kimi wa kōfuku sugiru no da to omou ne.*
　　　In my opinion, I think you are too happy.

Iwasaki (1993)

(6)　*Boku wa zettai ni Jon ga hannin da to omou.*
　　　I positively think that John is the culprit.

Sawada (1993)

(27)　A:　*Watashi wa [Tomu ga shinhannin da to] omou.*
　　　　　I think Tom is the real culprit.

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[15] For details, refer to Kamio (1990).

[16] Nakau (1979) and Sawada (1993) agree that *omotte iru* cannot function as an epistemic modal expression. Their claim will not be considered further since it is beyond the scope of this study and this study has defined modality in a broader sense according to Lyons (1977).

> B: *Hontō desu ka?*
> Is it true that Tom is the real culprit?

(28)   A: *Watashi wa (ima de mo) [Tomu ga shinhannin da to] omotte iru.*
       I (still) think Tom is the real culprit.

> B: *Hontō desu ka?*
> Is it true that you think that Tom is the real culprit?

Thus, the representational mode of embedded propositions of all the examples above belongs to *Believing*; and therefore the validity of their claims is limited to the case of *Believing*: in the case of *Believing*, ~ *to omou/omotte iru* functions as an epistemic modality marker which decreases the speaker's commitment to the truth of embedded propositions.

4. 2   ~ *to omou/omotte iru and Wanting*

The attachment of ~ *to omou/omotte iru* to the representational mode of *Wanting* has not received much attention by scholars when compared to the case of *Believing*. I mentioned that in the case of *Believing*, the issue is how much conviction a speaker holds, namely, how sure he is about the truth of the embedded proposition. I argue here that the attachment of ~ *to omou/omotte iru* to *Wanting* has the function of decreasing the degree of the speaker's involvement in the propositional contents. In the case of *Wanting*, proposition is not true-or-false but fulfilled-or-unfulfilled. Accordingly, the issue is how much determination a speaker holds, namely, how serious he is toward the fulfillment of his desires, intentions, hopes, wishes, etc.

4. 3   ~ *to omou/omotte iru and Feeling*

I acknowledge the plausibility to treat *Feeling* plus ~ *to omou/omotte iru* in the similar manner as in the case of *Wanting* plus ~ *to omou/omotte iru* since the representational modes of both *Wanting* and *Feeling* are not true-or-false. Accordingly, I argue that the attachment of ~ *to omou/omotte iru* decreases the speaker's involvement in the propositional contents. However, there exists a difference between *Wanting* and *Feeling* regarding how a speaker's mental activity influences his world. Unlike *Wanting* which has world-to-mind direction of fit, Feeling has null direction of fit. As a result, in the case of *Feeling*, the issue is not how much determination a speaker holds, namely, how serious he is toward the fulfillment of his desires, intentions, hopes, wishes, etc. Rather, the issue is the degree of involvement a speaker includes in a state of feeling which the propositional contents express.

The preceding discussion can be summarized as follows:

A.   Embedded propositions preceding ~ *to omou/omotte iru* are categorized into three types of representational modes according to their direction of fit.

1.   *Believing*: Mind-to-world direction of fit
2.   *Wanting*: World-to-mind direction of fit
3.   *Feeling*: Null direction of fit

B.   The basic function of ~*to omou/omotte iru* is to decrease either the speaker's commitment to or involvement in the propositional contents of embedded clauses.

C.   Whether the function of ~*to omou/omotte iru* is the commitment to or involvement in the propositional contents is determined by the representational mode of the propositions.

1.   *Believing*: To decrease the speaker's commitment to the truth of the propositions.

2.   *Wanting*: To decrease the speaker's involvement in the propositions. (The degree of the speaker's determination towards fulfillment is the issue.)

3.   *Feeling*: To decrease the speaker's involvement in the propositions. (The degree of the speaker's involvement included in a state of feeling is the issue.)

In the following sections I will introduce linguistic phenomena which are explainable within the framework of the categorization of the three representational modes: (1) a categorization of verbs of mental activity and (2) similarities and differences between the attachment of ~*to kangaeru/omou/kanjiru*.

Categorization of Verbs of Mental Activity

In Japanese, there exist verbs of mental activity other than *omou*. They can be classified according to (1) the possibility to be attached to "a proposition plus *to*" and (2) their relationship with representational modes. Forty-four "basic" verbs of mental activity have been chosen from *Nihongo kihon dōshi yōhō jiten* (Kojima et al. 1989), which introduces 728 verbs as basic verbs in Japanese. Among them, verbs of mental activity which generally occur after "a proposition plus *to*" are as follows:[17]

1.   *inoru*, to wish, hope (in mind)
2.   *utagau*, to doubt
3.   *omou*, to think
4.   *kaishaku-suru*, to interpret
5.   *kangaeru*, to think
6.   *kanjiru*, to feel
7.   *kanshin-suru*, to be impressed
8.   *kibō-suru*, to hope, wish
9.   *kesshin-suru*, to decide, determine
10. *gokai-suru*, to misunderstand
11. *shinjiru*, to believe
12. *shinpai-suru*, to worry

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[17] Kojima et al. (1989) introduce sentence patterns in which each verb is used generally in a daily life. I will use sentence patterns they introduce as the guideline to determine if verbs are generally used after "a proposition plus *to*."

13. *sōzō-suru*, to imagine
14. *negau*, to wish, desire
15. *nozomu*, to wish, want
16. *handan-suru*, to judge
17. *mayou*, to be at a loss
18. *mitomeru*, to recognize, acknowledge, agree
19. *rikai-suru*, to understand
20. *wakaru*, to know, understand

I will further investigate these 20 verbs of mental activity, which are generally used after "a proposition plus *to*," as possible candidates to be used as modal phrases like *omou* since their categorization can be made according to the types of representational modes of embedded clauses.

1 Verbs of Mental Activity and *Believing/Wanting*

It has been pointed out that ~*to omou/omotte iru* can be attached to both types of representational modes (namely, *Believing* and *Wanting*).[18] Examination on whether the 20 verbs of mental activity can be attached to both types of representational modes or to only one type enables me to classify the verbs into three groups as shown below. I label the three groups as *General* verbs of mental activity, *Believing*-specific verbs of mental activity, and *Wanting*-specific verbs of mental activity, respectively.

General verbs of mental activity: verbs which can be normally attached to both types of representational modes (*Believing* and *Wanting*)

1. *omou*, to think
2. *kangaeru*, to think
3. *kanjiru*, to feel

Believing-specific verbs of mental activity: verbs which can be normally attached only to *Believing*

1. *utagau*, to doubt
2. *kaishaku-suru*, to interpret
3. *kanshin-suru*, to be impressed
4. *gokai-suru*, to misunderstand
5. *shinjiru*, to believe
6. *shinpai-suru*, to worry
7. *sōzō-suru*, to imagine
8. *handan-suru*, to judge
9. *mayou*, to be at a loss
10. *mitomeru*, to recognize, acknowledge, agree
11. *rikai-suru*, to understand
12. *wakaru*, to know, understand

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[18] The attachment of *omou/omotte iru* to *Feeling* is possible but limited. Therefore, the criterion of whether or not verbs can be attached to *Feeling* is excluded.

Wanting-specific verbs of mental activity: verbs which can be normally attached only to *Wanting*

1. *inoru*, to wish, hope (in mind)
2. *kesshin-suru*, to decide, determine
3. *kibō-suru*, to hope, wish
4. *negau*, to wish, desire
5. *nozomu*, to wish, want

Both *Believing*-specific and *Wanting*-specific verbs of mental activity will be investigated below first, and *General* verbs of mental activity will be discussed in detail later.

2 *Believing*-specific Verbs and *Wanting*-specific Verbs of Mental Activity

Although selected as candidates for verbs to be used in modal phrases, both *Believing*-specific and *Wanting*-specific verbs of mental activity are not able to function as a part of a modal phrase even if they are preceded by their specific representational mode. Each verb implies its specific mental activity, and therefore its attachment to a proposition emphasizes the existence of its specific mental activity rather than indicating the degree of the speaker's commitment or involvement. As a result, "a proposition plus *to*+a verb" functions as "I have a specific mental activity indicator," and each activity is as follows:

Believing-specific verbs of mental activity:

1. ~*to utagau*, I have a doubt indicator
2. ~*to kaishaku-suru*, I have an interpretation indicator
3. ~*to kanshin-suru*, I have an impressed feeling indicator
4. ~*to gokai-suru*, I have a misunderstanding indicator
5. ~*to shinjiru*, I have a belief indicator
6. ~*to shinpai-suru*, I have a worry indicator
7. ~*to sōzō-suru*, I have an imagination indicator
8. ~*to handan-suru*, I have a judgment indicator
9. ~*to mayou*, I have a confusion indicator
10. ~*to mitomeru*, I have an agreement indicator
11. ~*to rikai-suru*, I have an understanding indicator
12. ~*to wakaru*, I have an understanding indicator

Wanting-specific verbs:

1. ~*to inoru*, I have a wish indicator
2. ~*to kesshin-suru*, I have a determination indicator
3. ~*to kibō-suru*, I have a hope indicator
4. ~*to negau*, I have a wish indicator
5. ~*to nozomu*, I have a hope indicator

Interestingly, the simple present tense of these verbs does not imply a state of mental activity. Rather, it sounds as if the speaker declares to start a specific mental activity at the time of the utterance. For example,

(29) *Watashi wa Tanaka-san ga hannin ja nai to shinjimasu.*
　　　 I am now starting to believe that Mr. Tanaka is not the culprit.

(30)   *Watashi wa Tokyo ni ikitai to negaimasu..*

I now announce my desire to go to Tokyo.

In order to imply a state of mental activity, the present progressive form should be used as follows:

(29′)   *Watashi wa Tanaka-san ga hannin ja nai to shinjite imasu.*

I believe that Mr. Tanaka is not the culprit.

(30′)   *Watashi wa Tokyo ni ikitai to negatte imasu.*

I wish to go to Tokyo.

This phenomenon indicates that both *Believing*-specific and *Wanting*-specific verbs are [+resultative][19] as other verbs of non-mental activity, such as *iku* (go) and *kaeru (return home)*. Interestingly, this phenomenon is limited to [+volitional] verbs and does not occur in the case of [−volitional] verbs. This is because "declaration" of starting a mental activity requires the speaker's volition. According to Kojima et al. (1989), among *Believing*-specific and *Wanting*-specific verbs of mental activity, *kanshin-suru* (to be impressed), *gokai-suru* (to misunderstand), *mayou* (to be at a loss), and *wakaru* (to know, understand) are [−volitional]. Examine the following example sentences:

(31)   *Watashi wa Tanaka-san ga hannin da to gokai-suru.*

I (will) misunderstand that Mr. Tanaka is the culprit.

(31′)   *Watashi wa Tanaka-san ga hannin da to gokai shite iru.*

I have misunderstood that Mr. Tanaka is the culprit.

Sentence (31) indicates the speaker's prediction of the occurrence of his misunderstanding in his imaginary future, while sentence (31′) indicates the existence of his misunderstanding from before until the time of utterance. This holds true in the cases of *kanshin-suru* and *mayou*, too. However,

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[19] The meaning of *te-iru* has been examined by many researchers ever since Kindaichi's 1950 article entitled "A classification of Japanese verbs *(kokugo dōshi no ichi-bunseki)*." Kindaichi (1976) divides verbs into four categories, according to whether a verb can, must or cannot co-occur with *te-iru*, and what meaning the verbal phrase takes when it occurs: *Jōtai Dōshi* (Stative Verbs), *Keizoku Dōshi* (Continuative Verbs), *Shunkan Dōshi* (Instantaneous Verbs) and *Daiyonshu no Dōshi* (Type Four Verbs). Kindaichi's work has been followed and modified by Fujii (1976). Fujii proposes a distinction between result and non-result for both continuative and instantaneous verbs. Fujii regards result verbs as verbs which indicate animate/inanimate movement that later brings a certain result. He claims that it is necessary to set up a distinction between result and non-result verbs crosscutting the one between continuative and instantaneous verbs. Consequently, the following four categories can be made and examples are given.

    A.   Continuative-Result Verbs *(ochiru* "fall," *kiru* "put on," *iku* "go," *kuru* "come")

    B.   Instantaneous-Result Verbs *(kekkon-suru* "marry," *tōchaku-suru* "arrive," *owaru* "end," *shagamu* "crouch, squat")

    C.   Continuative-Non-result verbs *(yomu* "read," *kaku* "write," *kiku* "listen," *utau* "sing")

    D.   Instantaneous-Non-result verbs *(shiriau* "get acquainted," *mokugeki-suru* "witness," *sōgū-suru* "encounter")

Fujii claims that it is not instantaneous verbs, but the result verbs (A and B above) whose *te-iru* form indicates the state as a result of an already completed event. This study adopts Fujii's claim and utilizes the term [+resultative] to explain a phenomenon of *Believing*-specific and *Wanting*-specific verbs.

wakaru indicates the existence of the speaker's understanding at the time of utterance by both the simple present tense form and the present progressive form.   For example,

(32)   *Watashi wa Tanaka-san ga hannin ja nai to wakaru.*
         I know that Mr. Tanaka is not the culprit.
(32')   *Watashi wa Tanaka-san ga hannin ja nai to wakatte iru.*
         I know that Mr. Tanaka is not the culprit.

This phenomenon appears to suggest the plausibility to treat *wakaru* as [+volitional] contrary to the claim of Kojima et al.

3   *General* Verbs of Mental Activity: *Kangaeru/Omou/Kanjiru*

Kangaeru, *omou*, and *kanjiru* have been grouped together in the category of *General* verbs of mental activity according to the fact that they can be attached to propositional contents of both *Believing* and *Wanting*.   There exist similarities and differences between the attachment of ∼ *to kangaeru/omou/kanjiru*. The similarities and differences will be discussed below respectively.

3. 1   *Similarities between* ∼ *to kangaeru/omou/kanjiru*

Unlike the case of *Believing*-specific and *Wanting*-specific verbs of mental activity, both the single present tense form and the present progressive form of *General* verbs of mental activity express a state of mental activity; and like ∼ *to omou*, the attachment of ∼ *to kangaeru* and ∼ *to kanjiru* functions to decrease the degree of a speaker's commitment to/involvement in propositional contents. For example,

Believing
   Jon ga hannin da to kangaeru/kangaete iru.
   Jon ga hannin da to omou/omotte iru.
   Jon ga hannin da to kanjiru/kanjite iru.
   I think/feel (am thinking/am feeling) that John is the culprit.
Wanting
   Tokyo ni ikitai to kangaeru/kangaete iru.
   Tokyo ni ikitai to omou/omotte iru.
   Tokyo ni ikitai to kanjiru/kanjite iru.
   (I think/feel/am thinking/am feeling that) I want to go to Tokyo.

3. 2   *Differences of Kangaeru/Omou/Kanjiru*

Several linguists (e.g., Nagashima 1979; Kojima et al. 1989; Iwasaki 1993) have investigated the differences of *kangaeru*, *omou*, and *kanjiru*.   According to Nagashima, *kangaeru* is "logical and processed" and *omou is* "intuitive and emotive" (pp. 104–12).   Iwasaki maintains that the difference between *kangaeru* and *omou* lies "in the degree of a cognizer's intention or initiative in the thought process" and adds that "*kangaeru* represents a deliberate mental process while *omou* represents a spontaneous thinking process (something close to "feel" in English) (p. 69)."   Kojima et al. interpret *kanjiru* as "to hold a cer-

tain feeling in one's heart toward a person or thing (p. 153)."[20]   Morita (1977: 139–41) points out that *omou* covers a wide range of mental activity from holding a feeling in heart (affect-oriented mental activity) to using one's intellect (cognition-oriented mental activity) and illustrates the relationship among *kangaeru*, *omou*, and *kanjiru* as in Figure 2:
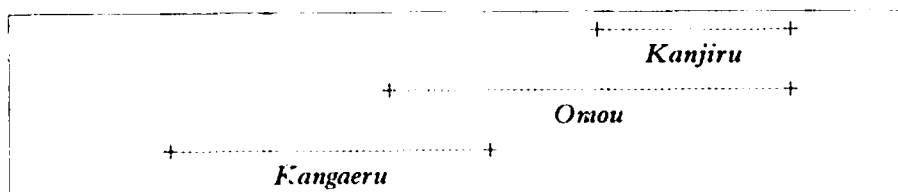
```
                                          +·········           ·+
                                              Kanjiru
                     +·   ····   ···························+
                                    Omou
       +···········  ·······························+
                     Kangaeru
```

Fig. 2   Morita's *Kangaeru/Omou/Kanjiru*

This relationship can be combined with the cognitive/affective orientation as in Figure 3:

```
                                         +·········    ········+
                                             Kanjiru
                       +··················           ············+
                                      Omou
        +···········   ················+
                     Kangaeru
   Cognition···   ········                               ········  Affect
```
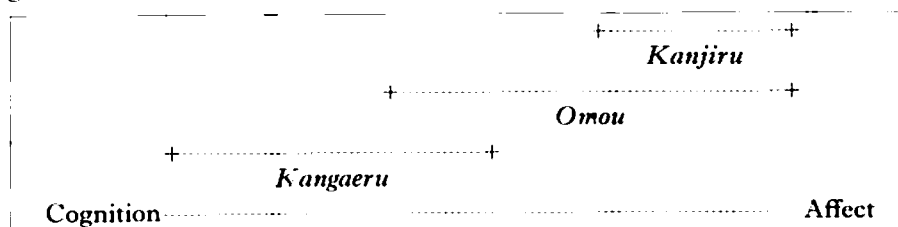
Fig. 3   Cognitive/Affective Orientation of *General* Verbs of Mental Activity

The cognitive/affective orientation of the three representational modes can be illustrated as in Figure 4:
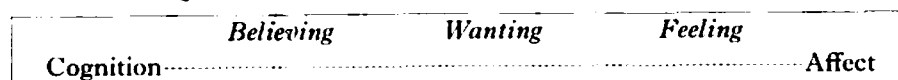
```
               Believing        Wanting        Feeling
   Cognition············  ··                 ······················Affect
```

Fig. 4   Cognitive/Affective Orientation of Three Representational Modes

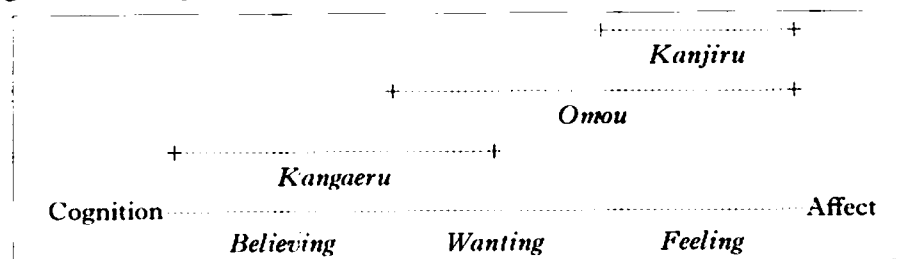Figure 3 and Figure 4 can be united together and is illustrated in Figure 5.

```
                                         +··············    ·+
                                             Kanjiru
                      +················    ·············  ·······+
                                     Omou
        +··········· ·····   ···········+·
                    Kangaeru
   Cognition····   ·····               ····························Affect
                    Believing        Wanting        Feeling
```

Fig. 5   Cognitive/Affective Orientation of Three Representational Modes and *General* Verbs of Mental Activity

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[20]   The original sentence written in Japanese is *Hito ya kotogara ni tsuite kokoro ni aru shu no kimochi o idaku.*   I translated *kokoro* into " heart " and *kimochi* into " feeling."

As Figure 5 indicates, *omou* does not have the same degree of cognitive orientation as *kangaeru* since *omou* does not refer to logical and deliberate cognitive processing. Therefore, by attaching *kangaeru* instead of *omou* to a thought which a propositional content expresses, the speaker can indicate that the thought is logical and deliberate. On the other hand, Figure 5 shows that *kanjiru* has a strong affective orientation and is located at the opposite side of *kangaeru*. This implies that *kanjiru* does not refer to cognitive processing whether or not it is logical/deliberate. Therefore, by attaching *kanjiru* instead of *omou*, the speaker can emphasize that the thought is not the result of one's cognition and that it simply exists as a state of feeling at the time of utterance.

Three Representational Modes plus ~*to kangaeru*/*kanjiru*

The combinations of *kangaeru* with the three representational modes and that of *kanjiru* will be investigated below.

1 *Believing* plus *Kangaeru*

The attachment of *kangaeru* to *Believing* functions to decrease the degree of a speaker's commitment to his belief with a connotation of "this belief is the product of logical process of cognition." Examine the following example sentences extracted from Nagashima (1979: 111):

(33)　*Ashita wa ame da to omoimasu.*
　　　 I think that it will rain tomorrow.

(34)　*Ashita wa ame da to kangaemasu.*
　　　 I think that it will rain tomorrow.

Nagashima points out that sentence (34) is appropriate when the speaker is a weather reporter who utters based upon reference to data such as a weather map, and adds that a weather reporter who utters sentence (33) will be considered unreliable. Thus, the attachment of *kangaeru* to *Believing* emphasizes that the speaker's belief is the result of cognitive mental activity which is logical and deliberate.

2 *Wanting* plus *Kangaeru*

The attachment of *kangaeru* to *Wanting* implies that the desires, intentions, etc., are the result of cognitive processing. Examine the following example sentences extracted from Iwasaki (1993: 69):[21]

(35)　*Boku mo shinō to omou.*
　　　 I think (am thinking) that I will kill myself.

(36)　*Boku mo shinō to kangaeru.*
　　　 I think (am thinking) that I will kill myself.

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[21] Iwasaki's original sentences are in the past tense as follows:
　　(35′)　*Boku mo shinō to omotta.*　I thought I would kill myself.
　　(36′)　*Boku mo shinō to kangaeta.*　I thought I would kill myself.

Iwasaki points out that sentence (35) is "a statement said out of desperation" and sentence (36) is "a statement which results from some careful thinking." Thus, the attachment of *kangaeru* to *Wanting* functions to indicate that the desires, intentions, etc., are the result of logical and deliberate thinking.

3 *Feeling* plus *Kangaeru*

Kangaeru is incompatible with *Feeling* due to the semantic contradiction between propositional contents of *Feeling* and *kangaeru*. Nagashima (1979: 108) introduces the following example sentences:

(37) **Kuyashii to kangaeru.*   I think I am regretful.

(38) **Itai to kangaeru.*   I think I am painful.

I previously stated that *omou* can be attached to *Feeling* and that its attachment functions to objectify one's subjective mental activity and creates the nuance of "This is what I feel if I report what I see inside of me objectively." The attachment of *omou* to *Feeling* is possible since *omou* has an affective orientation. On the other hand, *kangaeru* has a stronger degree of cognitive orientation, and therefore its attachment to *Feeling* leads to emphasize that the propositional contents of *Feeling* are the result of logical and deliberate thinking. However, *Feeling* refers to a state of feeling which exists spontaneously within the speaker at the time of utterance. This spontaneity and simultaneity makes *Feeling* unable to co-occur with *kangaeru* which refers to logical processing in mind.

4 *Believing* plus *Kanjiru*

As in the case of *Feeling* plus *kangaeru*, the semantic contradiction between propositional contents of *Believing* and *kanjiru* is expected to lead to the incompatibility between them. However in fact, unlike *Feeling* plus *kangaeru*, *kanjiru* frequently co-occurs with *Believing* as shown in the following example sentences introduced by Kojima et al. (1989: 153):[22]

(39) *Yappari sensei wa erai to kanjiru.*
    After all, I feel (am feeling) that the teacher is someone to look up to.

(40) *Watashi wa kare ga watashi ni urami o motte iru to kanjiru.*
    I feel (am feeling) that he holds a grudge against me.

When *kanjiru* is attached to *Believing*, it functions to imply that the speaker's belief is not the result of cognitive processing but rather intuitional. Examine the following example sentences:

(41) *Tanaka-san wa kitto kuru to omou.*
    I think that Mr. Tanaka will surely come.

(42) *Tanaka-san wa kitto kuru to kanjiru.*

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[22] Original example sentences by Kojima et al. are in the past tense as follows:
    (39′) *Yappari sensei wa erai to kanjita.*
        After all, I felt that the teacher was someone to look up to.
    (40′) *Watashi wa kare ga watashi ni urami o motte iru to kanjita.*
        I felt that he held a grudge against me.

I feel that Mr. Tanaka will surely come.

In the case of sentence (41), the speaker's belief about Tanaka's coming may be based on some evidence which supports his belief (e.g., the speaker witnessed Tanaka's buying a ticket to the place where sentence (41) is uttered) or may be purely intuitional. In other words, in the case of *Believing* plus *omou*, the belief may be the result of cognitive processing or of intuition. On the other hand, the interpretation of sentence (42) is limited to that of the speaker's intuitional belief: "This is what I believe because I feel so now." If a belief does not have any evidentiary justification which supports it and is purely intuitional, the degree of the speaker's commitment to the belief, namely, how much conviction he holds, is expected to be smaller. This is because, as Givón (1982: 46) states, "Evidentiality is the source of certainty." Therefore, it can be concluded that when *kanjiru* is attached to *Believing*, the decrease in the degree of a speaker's commitment to propositional contents becomes larger than in the case of *Believing* plus *omou*.

5 *Wanting* plus *Kanjiru*

The attachment of *kanjiru* to *Wanting* implies that the desires, intentions, etc., are not the result of cognitive processing but of momentary thinking. Examine the following example sentences:

(43) *Hayaku sotsugyō shitai to omoimasu.*
      (I think that) I want to graduate soon.
(44) *Hayaku sotsugyō shitai to kanjimasu.*
      (I feel that) I want to graduate soon.

In the case of sentence (43), the speaker's desire to graduate soon may be based on his cognitive processing (e.g., considering benefits that may be received from early graduation such as a long vacation or a better salary) or possibly of pure momentary thinking. In other words, in the case of *Wanting* plus *omou*, desires may be the result of cognitive processing or of what occurred to the speaker momentarily. If a person utilizes his cognition in the process of establishing his desires, it is expected that his involvement in his desires is deep since he has been engaged in them until the time of utterance and has become more or less determined to fulfill them. On the other hand, if desires are momentary, the speaker's determination to fulfill them is expected to be smaller since the desires just occurred to him. The interpretation of sentence (44), namely, *Wanting* plus *kanjiru*, is limited to that of the speaker's momentary desire: "This is what I want to do because I feel so now." Thus, *omou* can indicate that the desires are either the result of cognitive processing or of momentary thinking, and as a result, *omou* can indicate the speaker's larger or smaller degree of determination to fulfill them while *kanjiru* can indicate only the smaller one. Therefore, it can be concluded that when *kanjiru* is attached to *Wanting*, the decrease in the degree of a speaker's involvement in the propositional contents becomes larger than in the case of *Wanting* plus *omou*.

The validity of this claim is supported by the following example sentences:

(45) *Hayaku sotsugyō shiyō to omoimasu.*
       (I think that) I intend to graduate soon.
(46) ??*Hayaku sotsugyō shiyō to kanjimasu.*
       (I feel that) I intend to graduate soon.

Sentence (46) is semantically awkward. This is because, unlike ~*tai* which simply expresses the speaker's desire, ~(*y*)*ō* implies that the speaker confines himself to acting. In other words, ~(*y*)*ō* is the expression of the speaker's determination about his actions. In order to determine one's action, cognitive processing is required. Therefore, ~(*y*)*ō* is incompatible with *kanjiru* which does not refer to cognitive processing.

6 *Feeling* plus *Kanjiru*

A state of feeling expressed in utterances of *Feeling* belongs only to the speaker, and the hearer accepts the expressed feeling of the speaker as the way it is expressed. In this manner, the speaker is released from the necessity of consideration to decrease the degree of his involvement in propositional contents of *Feeling*, and as a result, the speaker does not have much motivation to decrease it. As in the case of *Feeling* plus *omou*, *kanjiru* can be attached to propositional contents of *Feeling*, and its attachment functions to decrease the degree of the speaker's involvement in his personal feelings. However, there exists a difference between *omou* and *kanjiru* regarding the objectification of propositional contents. As stated before, when *omou* is attached to *Feeling*, the whole sentence becomes "objectified" and sounds like a belief on his own feeling from the other party's viewpoint This objectifying function of *omou* is attributable to the fact that *omou* has a cognitive orientation since recognizing one's own feelings objectively is a cognitive processing. *Kanjiru* does not have a cognitive orientation, and therefore its attachment does not objectify propositional contents in the same manner as *omou* does. Examine the following sentences introduced by Morita (1977: 141):

(47) ?*Itai to omou.*[23]   I think I am painful.
(48) ?*Itai to kanjiru.*   I am painful.

According to Morita, sentence (48) indicates the speaker's realization of pain caused by some stimulus, while sentence (47) is the expression of indirect recognition of pain in which he once accepts the pain at heart and gives his judgment on it. Thus, the degree of objectification differs between *omou* and *kanjiru*: The attachment of *omou* objectifies propositional contents to a greater degree than the one of *kanjiru* due to the cognitive orientation of *omou*.

CONCLUSION

In this study, I have attempted to search for a systematic categorization of

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[23] Question mark is added to example sentences (47) and (48) since Moriyama (1992) states they are "a bit awkward" sentences.

embedded clauses preceding ～*to omou*/*omotte iru*. Based upon my proposed categories, namely *Believing*, *Wanting*, and *Feeling*, I expanded my discussion to the categorization of verbs of mental activity and to the examination of similarities and differences between the attachment of ～*to kangaeru*/*omou*/*kanjiru*.

This study also suggests a specific future study: It has been pointed out that *Feeling* and *kangaeru* are incompatible, but *Believing* can co-occur with *kanjiru*. That is, although both combinations have a semantic contradiction between propositional content and verb, only *Believing* and *kanjiru* are compatible. The mechanism which enables *Believing* and *kanjiru* to co-occur awaits discovery.

I have maintained, in this study, the importance of taking into consideration three types of representational modes of propositional contents in order to grasp the global function of the attachment of ～*to omou*/*omotte iru*. Although there are many other devices for the speaker to reflect his mind in language, and the use of *omou*/*omotte iru* is only one of them, I believe that the findings of this study have revealed that the three representational modes can contribute to deepening the understanding of how language reflects on a human being's mind. The applicability of the three representational modes to other phenomena in which a speaker's subjectivity is reflected needs to be searched for in future studies.

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