

# A Contrastive Study of the English and the Japanese Modality Systems

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## 日英語の叙法構造分析

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この小論では、英語と日本語におけるモダリティ体系を比較する。英語のモダリティ体系は Palmer (1990, 2001) などとも参照するが、主として Halliday and Matthiessen (2014) に基づく選択体系機能文法の枠組みを用いる。これは、この枠組みによって日本語を分析した Teruya (2007) と直接の対応が可能であるという理由による。

機能文法におけるモダリティ分析の最も大きな特徴は、モーダライゼーションとモデュレイションという用語であろう。これは Palmer (1990, 2001) などの分類では「命題的」と「事象的」と二分していたのに相当する。機能文法においてモーダライゼーションは蓋然性と通常性、モデュレイションは必要性和志向性という下位分類が立てられている。

これに対して Teruya (2007) による日本語分析では、モーダライゼーションに能力性が加わり、モデュレイションは義務性・許可性・期待性という三つが加えられている。英語では四分類であったのに比べて、日本語モダリティ体系は八分類になっている。本稿では日本語モダリティ体系としてこの八分類を検証してみた。日本語でこのように細かい分類がなされた根拠の一つとして、例えば必要性を表す「なければならない」は助動詞・助詞・動詞・助動詞で二重否定という構成になっており、英語が助動詞 *must* 一語で完結するのと比べて非常に複雑である。このような日本語モダリティ表現の複雑さによって細かい分類がなされている可能性があるというのが本稿における仮説の一つである。

## 1. Introduction

As the title of this paper shows, the main purpose is to contrast the modality systems of English and Japanese, following Kadooka (2015). Since the definitions and the subclassifications of modality are different from one researcher to another, the descriptions depend on the framework. In this paper, the Systemic Functional framework is adopted as the main one in the analyses of English and Japanese modality systems. One of the advantages of adopting the Systemic framework is that a direct comparison is possible based on the study on the English system in Halliday and Matthiessen and the Japanese counterpart in Teruya (2007).

First of all, we will look into various definitions of modality, comparing the concepts and methodologies among the previous studies. Below is the definition of modality in Halliday and Matthiessen (2014 : 176) :

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(1) What the modality system does is to construe the region of uncertainty that lies between ‘yes’ and ‘no’.

Notice that the term *polarity* — which lies between positive and negative — is objective in the sense that the speaker’s attitude or judgment is not included. The detail of the analysis of the English modality system based on this definition will be shown in section 2.

Contrastive with the objective (1) in the Systemic way, below are Palmer (1990 : 2)’ definition quoting Lyons (1977) and the matrix of the English modal auxiliary verbs (Palmer (1990 : 18)) :

(2) . . . Lyons’ (1977 : 452) suggestion that modality is concerned with the ‘opinion and attitude’ of the speaker seems a fairly helpful preliminary definition.

|                          | Prediction | Possibility,<br>capability,<br>permission | Necessity,<br>requirement,<br>prescription |
|--------------------------|------------|-------------------------------------------|--------------------------------------------|
| Absolute, unrestricted   | will       | can                                       | must                                       |
| Contingent, inconclusive | shall      | may                                       | need                                       |
| Morally determined       |            | dare                                      | ought                                      |

Here in this definition, the opinion and attitude of the speaker is subjective. Subjective observations may be arbitrary by the observer’s judgments in some cases, hence this definition may need some further arguments. The matrix shows that the English modal auxiliaries are systematized and that the number is relatively restricted, at least compared with that in Japanese (see next section). The chapters and sections of Palmer (1990) are basically arranged by these auxiliaries. In a sense, each of these auxiliaries represents the distinction in the realization of the English modality systems, as well as the subdivisions of deontic, epistemic and dynamic.

Close to the definition (2) is by Huddleston (2002 : 173) :

(3) Modality is centrally concerned with the speaker’s attitude towards the factuality or actualisation of the situation expressed by the rest of the clause.

It seems simple and convenient as the definition of modality to depend on the speaker’s attitude and opinion, but this way of defining modality may be dangerous to be arbitrary or subjective. Such arbitrariness will be testified for the Japanese modality system in section 3.

The next definition is from Narrog (2009 : 9, footnote 1) :

(4) In 2005, I suggested the following definition : “Modality is a linguistic category referring to the factual status of a state of affairs. The expression of a state of affairs is modalized if it is marked for being undetermined with respect to its factual status, i.e. is neither positively nor

negatively factual.”

It is remarkable here that ‘neither positively nor negatively factual’ reminds us of the Systemic definition of modality given in (1). It is strange, however, that this definition is given in a footnote, not in the main text. More interesting is the description such as follows in Narrog (2014 : 14), original in Japanese and translation mine :

(5) After all, subjectivity or the speaker’s attitude cannot be restored to any particular grammatical categories whatever understanding of meaning is tried. Therefore, it seems meaningful to deal with ‘subjectivity’ (or the speaker’s attitude) and modality as independent concepts, and to pursue the interaction of modality and subjectivity, rather than define modality with subjectivity.

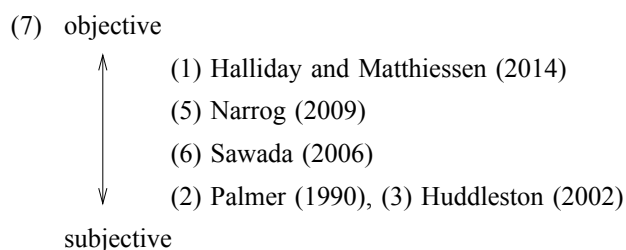
With regard to the Systemic approach, as for the definition of modality as in (1) above, consideration of subjectivity seems crucial within the domain of the lexico-grammar. Further investigation of the relation between subjectivity or the speaker’s attitude and the meaning and function of modality will be given to next occasions.

The last definition to be referred to in this section is from Sawada (2006 : 2), written in Japanese (translation mine) :

(6) Modality is a semantic category which simply does not describe in the way that the things (i.e. situations and the world) exist, but describes how they exist or how they should be, or expresses the perceptions and feelings toward the things.

As a definition of modality, (6) is a bit more minutely mentioned than in (2). Yet the definition itself is subjective utilizing the tools of ‘perceptions’ and ‘feelings’ instead of attitude and opinion. It would be plausible to regard (6) close to (2), and distant from (1) and (5).

As a summary of the definitions of modality, let us illustrate in the following diagram arranged in the subjective—objective axis. The numbers correspond to the above citations :



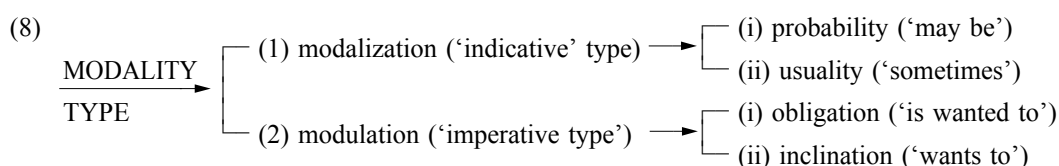
Palmer (1990) and Huddleston (2002) can be regarded as almost exactly similar ones, the latter

with simplified wordings. In the following sections, the Systemic approach (1) will be adopted as the definition of modality, with the reasons presented in the beginning of this section. In the following sections, those subcategories of modalization and modulation will be parenthesized as <probability>, <obligation> and so on in the main text.

## 2. Modality in English

In this section, we will briefly look at the modality systems in English adopting the Systemic definition. The subcategories of modalization and modulation will be testified with the illustrations. As a comparison, we will also refer to Palmer (1990, 2001) since these are based on the *subjective* view of the modality system in English, as reviewed in section 1.

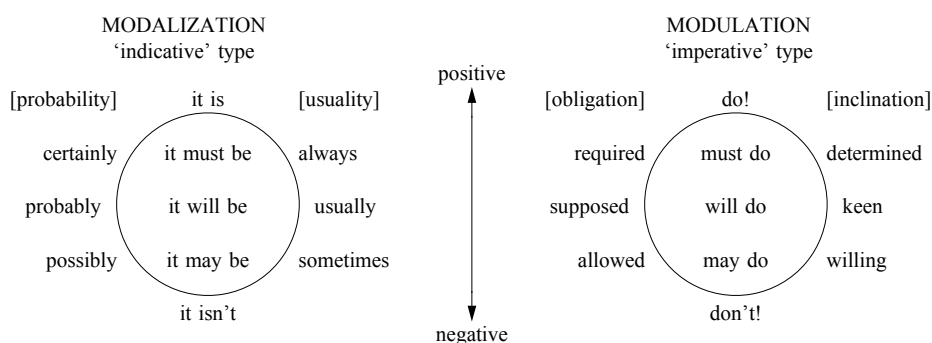
First, the subcategories of the modality systems are schematized below (Halliday and Matthiessen (2014 : 691) ) :<sup>1)</sup>



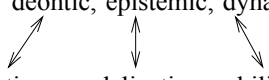
This system network illustrates that the types of modality in English are divided into modalization and modulation, then the former is subcategorized into <probability> and <usuality>, while the latter into <obligation> and <inclination>. My rough impression of this categorization is that the subdivision of modalization and modulation has been intentionally made coarse. That is to say, more minute subdivision would be possible, for example, in the analyses of the modality systems in other languages than in English. This possibility of this ramification would be verified in section 3 for the analysis of Japanese.

Next, let us look into a diagram illustrating the conceptual structure of modalization and modulation as subcategories of the English modality system under this Systemic framework. The following is the figure from Halliday and Matthiessen (2014 : 691) :

(9) Relation of modality to polarity and mood (Halliday and Matthiessen 2014 : 691, Fig. 10-6



Here, the degrees of the polarity between positive and negative are arranged in a stratificational way : modal adverbs *certainly, probably, possibly* for <probability> ; *always, usually, sometimes* for <usuality> ; for <obligation> and <inclination>, on the other hand, there listed predicatives *required, supposed, allowed* for the former and *determined, keen, willing* for the latter. The inner circled instances should be interpreted as concerned with the both subcategories : *it must be, it will be, it may be* for <probability> and <usuality>, and *must do, will do, may do* for <obligation> and <inclination>. Compared with the classifications in Palmer (1990, 2001) and Huddleston (2002), it will be plausible to regard the correspondences, shown with the arrows, as follows :

- (10) Palmer (1990, 2001), Huddleston (2002) : deontic, epistemic, dynamic  
  
 Halliday and Matthiessen (2014) : modulation, modalization, <ability>

This is to say, generally speaking, the *deontic modality* corresponds to modulation in the Systemic framework, so does *epistemic* to modalization. The definition of epistemic modality in Palmer (2001 : 8) and that of modalization in Halliday and Matthiessen (2014 : 691) are as follows :

- (11) . . . speakers express their judgments about the factual status of the proposition. (Palmer 2001)  
 (12) If the clause is an ‘information’ clause (a proposition, congruently realized as indicative), this means either (i) ‘either yes or no’, i.e. ‘maybe’ ; or (ii) ‘both yes and no’, i.e. ‘sometimes’

Though the ways of descriptions are different in (11) and in (12), the definitions are similar to each other.

Then the definition of deontic modality in Palmer (2001 : 9) and that of modulation in Halliday and Matthiessen (2014 : 691) :

- (13) . . . the conditioning factors are external to the relevant individual . . . Thus deontic modality relates to obligation or permission, emanating from an external source.  
 (14) If the clause is a ‘goods-&-services’ clause (a proposal, which has no congruent form in the grammar, but by default we can characterize it as imperative), it means either (i) ‘is wanted to’, related to a command, or (ii) ‘wants to’, related to an offer ; in other words, some degree of obligation or of inclination.

Thus, the definitions of both deontic/epistemic and modalization/modulation are given in similar formats. While the Systemic definitions (12) and (14) adopt peculiar terms such as *proposition*,

*proposal, goods-&-services*, Palmer's (11) and (13) are *general* in the sense that other linguists will also use those terms such as *judgments, factual status, obligation, permission* when they discuss modality. Though the terminologies are not alike between the Systemic approach and that of Palmer, subcategories deontic modality—modalization, and epistemic modality—modulation correspond to each other, respectively. Notice that the definition of <obligation> is given as 'is wanted to' and that of <inclination> as 'wants to.'

<Ability> must be considered from another respect since <ability> is not included in modulation and modalization, but mentioned as follows (Halliday and Matthiessen (2014 : 696) :

- (15) There is one further category that needs to be taken into account, that of ability/potentiality, as in *she can keep the whole audience enthralled*. This is on the fringe of the modality system. It has the different orientations of subjective (implicit only) realized by *can/can't*, objective implicit by *be able to*, and objective explicit by *it is possible (for . . .) to*.

This is to be understood as a kind of an analysis of ability/potentiality in the Systemic framework, not a definition. 'This is on the fringe' seems to imply that the category ability/potentiality could be included in the modality system in the Systemic framework, but it is not in the actual descriptions in Halliday and Matthiessen (2014). As will be shown in the next section, <ability> is included in modalization in the analysis of the Japanese modality system. This may suggest that the same analysis is possible in English — that is to say, <ability> is one of the subcategories of modalization. The detail will be discussed with regard to the Japanese modality system in section 3.

Palmer (2001 : 10), on the other hand, defines dynamic modality as follows :

- (16) . . . dynamic modality relates to ability or willingness, which comes from the individual concerned. . . . Ability, . . . , has to be interpreted rather more widely than in terms of the subjects' physical and mental powers, to include circumstances that immediately affect them (but not, of course, deontic permission).

This seems to be the minimum description of the definition of the dynamic modality using the terms *ability* and *willingness*. Ability in the narrow sense will directly correspond to someone's mental or physical potentiality. The following from Huddleston (2002 : 185) will be more in detail than (16) :

- (17) Ability is a matter of internal properties on the part of the subject-referent ; it represents a grammatically distinct use in that *may* is excluded even in the most formal style. Two sub-classes can be distinguished : potential and currently actualised.

In the most general understanding, it seems, that ability is closer to the potentiality than actualization. To summarize, the subject of the terms such as ability, dynamic modality, are essentially the subject of the classification ; in other words, the systematization of modality is structured as the synthesis of subclasses such as ability, usuality, probability, obligation and inclination in the SFL framework, and deontic, epistemic and dynamic modalities of the Palmer's framework.

Now let us have a look at each subcategories in the SFL framework with examples from Halliday and Matthiessen (2014 : 692-693). The ones in (18) are the introduction of modal operators *can't*, *will ('ll)*, *should* and *won't*, (19) direct negative and (20) transferred negative :

(18) Modal operators (underline added)

Probability : There can't be many candlestick-makers left.

Usuality : It'll change right there in front of your eyes.

Obligation : The roads should pay for themselves, like the railways.

Inclination : Voters won't pay taxes any more.

(19) Direct Negative

Probability : it's likely Mary doesn't know

Usuality : Fred usually doesn't stay

Obligation : John's supposed not to go

Inclination : Jane's keen not to take part

(20) Transferred Negative

Probability : it isn't likely Mary knows

Usuality : Fred doesn't usually stay

Obligation : John's not supposed to go

Inclination : Jane's not keen to take part

As for the modal operators in the four categories in (18), Halliday and Matthiessen (2014 : 692) state that '[t]heir use is more restricted in usuality and in inclination than in the other two types, but as a class they cover all these senses. This brings out what it is that the four types of modality have in common : they are all varying degrees of polarity, different ways of construing the semantic space between the positive and negative poles.'

(19) and (20) are given as the examples with the median value of two negative types : (19) are the ones of the direct negative, which can be paraphrased as the negation in the proposition, while (20) are the ones of the transferred negative, or the negation in the main predicate. In the direct negative or the proposition negation in (19), the <probability> example 'it is likely (that) Mary doesn't know' is the most straightforward one in the sense that the negation is manifested with the  $\beta$  clause 'Mary doesn't know.' In the <obligation> 'John's supposed not to go' and in the <inclination> 'Jane's keen not to take part,' the negations are realized with the in-

finitives. The third type of the negation is in the <usuality> example, as the negation of the main predicate ‘doesn’t.’ Notice that the difference with the transferred negation in (20) is the position of the adverb *usually* : it is before the predicate ‘doesn’t’ in (19) whereas it is after that in (20).

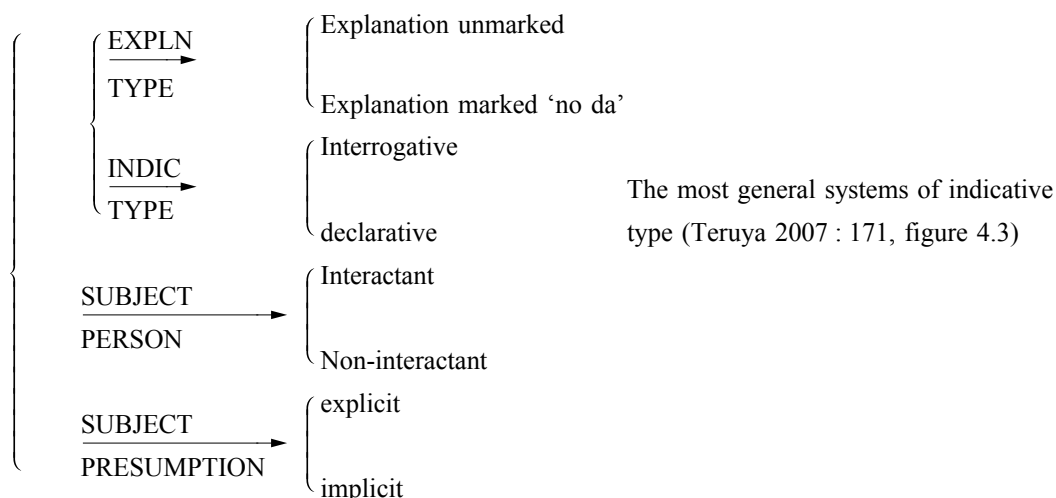
The transferred negatives or modality negations in (20) show similar differences. In the <probability> *it isn’t likely Mary knows*, the negation is realized in the main predicate *it isn’t likely* followed by the subordinate *Mary knows*. In the other instances <usuality> *Fred doesn’t usually stay*, <obligation> *John’s not supposed to go*, and <inclination> *Jane’s not keen to take part*, the negations are realized in the main verbs.

We will accept the system of Modality in English following Halliday and Matthiessen (2014), and then go on to discuss the Japanese counterpart in the next section.

### 3. Modality in Japanese

In this section, we will look at the Japanese modality system under the SFL framework. One of those main sources that we will follow in this section is Teruya (2007), which not only illustrates the modality system or the Interpersonal metafunction, but also covers the whole aspect of the Japanese language from the SFL viewpoints. Below is a system network illustrating the main part of the modality system in Japanese, from Teruya (2007 : 171) :

(21)



When we compare this with the system network of MOOD in English in Halliday and Matthiessen (2014 : 162 m Fig. 4.13), we notice the following differences among others :

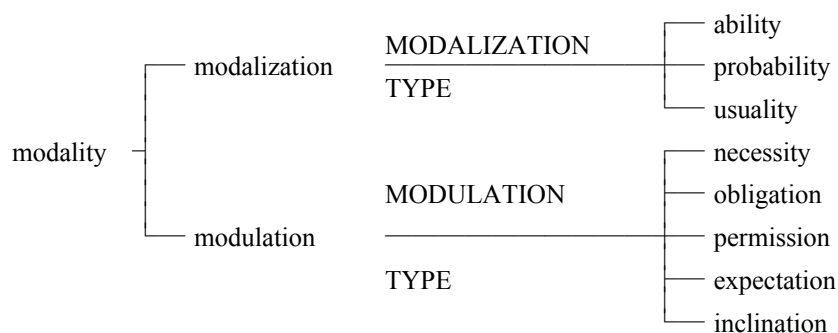
(22) 1. The first choice of Explanation Type in (21) is idiosyncratic in Japanese, as it is realized with *no da*, having no similar functional counterpart in English.

2. The third choice of the Subject presumption explicit or implicit would be unnecessary in English, as IT IS ALWAYS EXPLICIT.

The most important significance with regard to the first point is that there is NO explanatory type in English that is syntactically or functionally similar to the Japanese *no da* expressions. Though I discussed the matter under the title of *A Functional Analysis of the Explanatory Modality in Japanese* in Kadooka (2013), later this concept that the explanatory modality *no da* in Japanese is not within the scope in Teruya (2007). Kadooka (2016 : 52-53) presents the system network of the MOOD system of Japanese, where the Subject person and the Subject presumption choices are dealt differently. See Kadooka (2016) for the detail.

Now let us look into the subcategorization of modalization and modulation by Teruya (2007). Though not manifesting the reasons why different from the English counterpart (8), Teruya (2007) assumes the modalization and modulation types of Japanese as follows :

(23)



Compared with (8), <ability> is added as the modalization type, and <obligation> is divided into <obligation>, <necessity>, <permission> and <expectation>. As mentioned above, Teruya (2007) gives no reason for the differences between the Japanese system (23) and the English (8). My speculation is that the syntactic complexity of the modality expressions in Japanese, shown below, is one of the reasons. Teruya (2007 : 213-214) lists the modality expressions (the numbers indicated after each category (13 and 14) refers to those of the attested expressions) :

(24) MODALIZATION (13)

<ability> [suru] koto ga dekiru “can [do]” [suru] koto ga dekinai “can’t [do]”

<usuality> [suru] koto ga (mo) aru “it sometimes happens [that]” [suru] baai ga aru “it has the time [that]” [suru] koto wa nai “it never happens [that]”

[shinai] koto mo nai “it never fails [to]” (sic) [shinai] wake de mo nai “it isn’t the case that [not]”

<probability> [suru] ka mo shire-nai / wakara-nai “it is not known whether = maybe”

[suru] ni chigai-nai “must [do]” [suru] to wa kagira-nai “it may not very well be [ in Modalization that]”

(25) MODULATION (14)

⟨**necessity**⟩ [shi] nakere-ba nara-nai “unless . . . does/is = must” [shi] naku-te wa ike-nai / nara-nai / dame-da “must” [suru] hitsuyou ga aru “there is the necessity [to]” [shite] wa ike-nai / nara-nai / dame-da “must not do”

⟨**obligation**⟩ [suru] beki da “ought [to]” [suru] beki de wa nai “not ought [to]”

⟨**permission**⟩ [shite] mo ii “may [do]” [shi-nakute] mo ii “it is all right not to = you need not”

⟨**expectation**⟩ [sure-ba / shita-ra / suru-to] ii “it is good [to], it would be nice [to]” [shi-nakere-ba / shi-nakat-tara / shi-nai to] ii “it is good [not to], it would be nice [not to]”

⟨**inclination**⟩ [suru] tsumori da “it is my intention [that]” [suru] ki de iru “has a mind [to]” [suru] tsumori de wa nai “it is not my intention [that]” [suru] ki de wa nai “has no mind [to]”

Notice that the English glosses after ‘=’ are the semantic equivalencies, while those before ‘=’ are literal translations. All of these paraphrased cases show that the literal translations are syntactically far more complex than the English equivalents which are realized by one-word auxiliaries. Take “ka mo shirenai” for an example : Its literal translation is “it is not known whether” but the gloss is “maybe.”

The underlined Japanese entries above in the (25) list designate those are syntactically asymmetric, all of which belong to the ⟨probability⟩ category of Modalization : [suru] ka mo shire-nai / wakara-nai, [suru] ni chigai-nai, [suru] to wa kagira-nai. Common to these three are that they are syntactic negations, and that the positive counterparts are ungrammatical : \*[suru] ka mo shireru / wakaru, \*[suru] ni chigau, \*[suru] to wa kagiru.<sup>2)</sup> This is because of the asymmetric nature of the verbs *wakaru* (‘to predict<to understand’), *chigau* (‘be different from’) and *kagiru* (‘to limit’) whose negation forms are syntactically marked but semantically unmarked, while these dictionary-entry-forms are syntactically marked in the sense that they are negative.

The others, i.e. those entries not underlined in (25), are basically symmetric, and they overwhelm the asymmetrical ones in number. There are, however, two types of symmetry ; one is the negation in the last predicate, such as *suru koto ga dekiru / deki-nai*. The other one is the negation in the first predicate, such as *shi-nakere-ba / shi-te wa naranai*. The former patterns outnumber the latter, as the latter includes two more pairs *shi-te mo / shi-naku-te mo ii* and *sure-ba / shi-nakere-ba ii*, whereas the former contains five more pairs. For the symmetrical and asymmetrical nature of these forms, see Kadooka (2015).

I hypothesize that these complicated syntactic structures may support the finer subcategorizations of modalization and modulation in Japanese (23) than in English (8). If we would try to

illustrate these complex structures in a table like (9), with the four types of <probability>, <usuality>, <obligation> and <inclination>, it would be a mess.

Then, next are the instances of each type of modalization (26)-(28) and modulation (29)-(33), all from Teruya (2007) :

#### Modalization

##### (26) <ability>

Hu-hitsuyou-na toko dake o kesu koto ga deki-mashi-ta ka?  
unnecessary part only ACC erase thing NOM able-POL-past INTERROGATIVE  
“Were you able to erase only the part that is unnecessary?”

##### (27) <usuality>

Ali ni at-ta koto ga aru no kai!  
Ali DAT meet-PAST thing NOM exist EXPLANATIVE EXCLAMATION  
“You have met Ali before?!”

##### (28) <probability>

Yama ni bessou o kau koto mo dekiru kamo shirenai.  
mountain in villa ACC buy thing also able maybe unknown  
“I might be able to buy a villa in the mountain.”

#### Modulation

##### (29) <necessity>

Sou-iu jinzai o motto sagashi-dashite, kokusai-gaikou ni tsukawa-nakereba naranai.  
such person ACC more search international-diplomacy DAT use-MUST  
“Such a talented person must be adopted as a diplomat.”

##### (30) <obligation>

Chosen-jin no mondai wa Nanboku Chosen ga jishuteki-ni kimeru beki da.  
Koreans DAT problem NOM south-north Korea NOM independently decide ought-to  
“As for the Korean problem, south and north Korea should decide on their own.”

##### (31) <permission>

Doko he itte, nani no shigoto o shi-te mo ii.  
wherever to go whatever work ACC do also good  
“You can go wherever you like, and do whatever job you like.”

##### (32) <expectation>

Karada ni shitagat-te koudou sure-ba ii.  
body DAT follow act do-TENTATIVE good  
“You can behave following your body.”

##### (33) <inclination>

Shikashi, sore o oginau dake no kunren wa tsunde-iru tsumori da.  
but that ACC make-up-for only DAT training TOPIC pile-up intention AUX

“But I think I have much training to make up for it.”

Here are the analyses of the Modalization types, with the first one of <ability>. (26) is the instance of the polite past version of the ability auxiliary *dekiru*. If it had been the simple past, it would have been *deki-mashi-ta* and the simple interrogative would be *deki-masu ka*. The English translation of the former half should be something like ‘such personnel should be more needed to be searched for,’ if it had been more literal. The usuality instance (27) is given as the one of the past experience in Teruya (2007 : 215). The intention of the past experience is somewhat deviant from that of <usuality>, as a naive impression of mine. As closer example of the usuality, ‘Shocchuu (often) Ali ni at-ta koto ga aru no kai’ would be preferable with the addition of the adverb ‘shocchuu’ (often). In the probability example (28), the meaning of the potentiality is realized with the structure *ka mo shire-nai* (particle *ka* ^ particle *mo* ^ the imperfect form of the verb *shiru* (to know) ^ negative aux. *nai*). It is apparent here that the complexity of the Japanese construction can be contrasted with the simple English auxiliary *might*.

Next are the analyses of Modulation. (29) is the most typical <necessity> expression in Japanese, with the complex and lengthy double negation construction *nakere-ba nara-nai* (‘without-do-not’). Syntactically, this is the succession of *nakere* (continuative form of the negative auxiliary *nai*) ^ *ba* (postpositional) ^ *nara* (continuative from of the verb *naru*) ^ *nai* (aux.). The contrast between the simplicity of the English auxiliary *must* and the complexity of the Japanese collocation would be one of the keys to focus on the contrastive studies in these two languages in terms of the syntactic constructions. The meaning of <obligation> seems close to that of <necessity>, as both are glossed as ‘it must be’ in (9) in section 2, lacking the <necessity> counterpart expressed with *should* in English. The meaning of the <permission> category is opposite to <obligation> and <necessity> in that it is typified by the auxiliary verb *may*. In the English translation (31), the intention of the permission is realized with another auxiliary verb *can*, instead of *may*, however. The paratactic structure of (31) can be paraphrased as ‘doko he it -te mo ii, nani o shi-te mo ii’ (You can go wherever you like, and you can do whatever you like). In the <expectation> one in (32), *-ba ii* sounds interchangeable with the permission meaning ; the direct English translation of Japanese would be ‘to follow your body should be good.’ *Tsumori* in (33) sounds like an intention of the speaker that he/she is going to do in the future, but the particular meaning in this instance is that the speaker has a strong self-confidence that he/she has much training.

To conclude, the English categorization (8) is too coarse to distinguish the meanings of, for example, obligation, necessity and permission.

#### 4. Comparison and Conclusion

In the previous sections, we roughly contrasted the modality systems in English and Japanese focusing on the types of modalization and modulation. This section concludes the whole discus-

sion by comparing these two languages. Though the semantic distinctions of obligation, necessity, permission and expectation are necessary in English, these categories are grouped in the one category of <obligation> in (8) by Halliday and Matthiessen (2014).

To summarize the comparison essentially, the English auxiliaries are arranged schematically as in the table (2) in section 1 on the one hand, and the Japanese modality expressions are far more complicated than the English counterparts due to the combinations of various parts of speech, as shown in (24) and (25), on the other hand. The number of the auxiliary verbs realized in the modality expressions in English is smaller than those of Japanese. In Japanese, not only auxiliary verbs such as *dekiru*, *da*, *nai*, but also verbs *aru*, *chigau*, *kagiru*, *wakaru* and nouns *koto*, *beki*, *tsumori* participate in the modality expressions.

It would be probable that the relatively small number of the auxiliary verbs in English brings the *double* meanings of the deontic and the epistemic modalities. Below are from Palmer (1990 : 5) :

(34) John may be there now.

John must be there now.

John may come in now.

John must come in now.

On the general interpretation, the first two are classified as epistemic and the latter two as deontic. In these examples, both *may* and *must* have double meanings of the judgment about the probability of the truth of the proposition (epistemic) and the permission and the imposing of the action of John's coming in (deontic). With the systemic terms, the epistemic modality is realized as <probability> of Modalization, whereas the deontic modality is realized as <obligation> of Modulation.

Similarly, *can* has double meanings. The first one in the examples below is the epistemic, and the second one dynamic (from Palmer (1990 : 27, 28), emphasis added) :

(35) In themselves the effects aren't devastating, but chugging can sometimes trigger off a bit of screaming. (W.1.2 b.21)<sup>3)</sup>

I was going to suggest that we might look through Habitat and see if we can find her anything. (S.7.2 b.9)

The epistemic *can* in the first one can be paraphrased with *may*, but it is not possible in the second one of the dynamic modality. Paraphrasing of the dynamic *can* would be done with *be possible* or *be able to* : ' . . . and see if we are able to find her anything.'

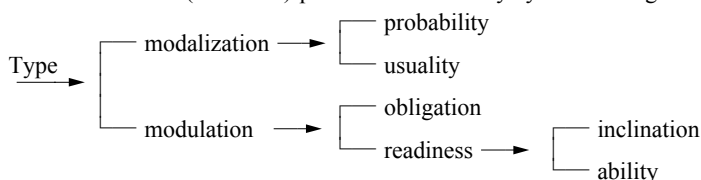
When we compare the types of Japanese Modality in (23) with the English counterpart in (8), the former is more complicated in that <ability> is added in Modalization by Teruya (2007).

So is the Japanese Modulation, which contains added subcategories of <necessity>, <permission> and <expectation>, other than <obligation> and <inclination>, which are ‘inherited’ from the English system in (8). It has been hypothesized in this paper that these additions resulted in the finer types in the Japanese analysis than in its English counterpart, due to the possible reason that the syntactic structures of the Japanese modality expressions are far more complicated than those of English.

Another possible category, which is included as one of the Modalization types in Kadooka (2016), is evidentiality. If this is added to the Modalization system, the number of types would be four, instead of three as verified in this paper.

### Notes

- 1) Martin and White (2005 : 54) presents the modality system of English as follows :



The differences between this and (8) above are : <inclination> in (8) is substituted by <readiness> here, and <inclination> becomes a subcategory of <readiness> together with <ability>. These differences seems quite insightful when discussing the modality system in English, but the opportunity to discuss this issue will be given to other occasions due to the limit of pages.

- 2) In the sense that ‘one just has to do something’ we can say *suru ni kagiru*, which seems to have a meaning similar to necessity. In this particular case, the positive *kagiru* and the negative *kagira-nai* make a semantic pair.
- 3) The source of the examples from Palmer (1990) is the Survey of English Usage located in the Department of English at University College London. W, S stand for written and spoken corpora, respectively. For the detail, see Palmer (1990 : 26).

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