A Contrastive Study of the Lexicogrammar of 'Modal Verbs' in English and Japanese: A Systemic Functional Approach

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1. Introduction

This paper is aimed at examining the differences and similarities in the treatment of 'modal verbs' in English and the semantically equivalent expressions in Japanese, which are referred to generally as 'jodooshi' (= 'auxiliary verb') in traditional Japanese grammar. The focus will be on the contrastive analysis of modal verbs and 'jodooshi' in the two languages at the level of form, rather than describing the semantic interpretations of these expressions at the level of meaning.

It is generally assumed that we can safely recognize 'modal verb' as a relevant category in grammar of English. For most scholars it includes the items can, could, may, might, will, would, shall, should, must, ought to, and perhaps dare and need. Quirk et al. (1985: 137), for instance, proposes four ‘modal auxiliary criteria’, which distinguish the ‘central modals’ from other auxiliaries and main verbs. Thus, the categorization of the set of these items into ‘modal verb’ in English grammar is primarily based on the view that the category can be defined explicitly in terms of some syntactic properties that these items have in common. At
the same time, however, it seems that the modal verbs, as its name implies, are characterized as a grammatical device which inherently expresses 'modality'. As we will shortly see, I will claim that the 'modal verbs' in fact have potential of carrying richer meanings than 'modality', and that the term 'modal verb' should be abolished in a functional analysis of English. (Nonetheless, we will find that the term has some use as a label for a set of items at the level of form.)

In recent studies of Japanese linguistics, some scholars have attempted to apply the concept of 'modality' to the interpretation of certain 'auxiliary verbs', which are referred to generally as 'jodooshi' in Japanese. However, most of such descriptions are based primarily on English grammar. For those scholars, the expressions which are used to denote 'modality' are regarded as 'modal expressions', some of which are referred to particularly as 'jodooshi', because some meanings expressed in this item can be related, at a conceptual level, to the modal verbs in English. However, it is not in fact possible to identify a category in Japanese which is equivalent to the 'modal verbs' in English in terms of some syntactic criteria which can be seen in Section 2. The purpose of this paper is to examine the treatment of 'jodooshi' to see whether it actually recognized as a marker of the unified concept of 'modality'.

The theoretical framework adopted in this study is Systemic Functional Linguistics, as developed by M.A.K. Halliday and other scholars (e.g. Halliday 1993, 1994, 1998; Halliday and Matthiessen 1999).¹ Note that the descriptive model of grammar is distinguished from the
2. Theoretical framework of SFL in general. The general theory of SFL provides the essential views on language such as 'metafunction', 'level' and 'system', which are common basis of analyzing any language. Yet the relevant model of describing a particular language should be developed in its own terms so that the language can be described in the light of the actual use of linguistic expressions, i.e. a 'text'. In this paper I will particularly refer to Halliday and Matthiessen’s grammatical model in the analysis of the modal verbs for English. On the other hand, in the analysis of 'jodooshi' in Japanese, I will draw on Tatsuki's model, which is recently referred to as the Kyoto Grammar.

2. Criteria for identifying the modal verbs in English

Halliday (1970: 330) shows the list of properties which are the criteria for identifying the modal verbs in English as follows:

(i) they have only finite forms: there is no to can, canning (forms such as to be able are not modalities)
(ii) they form negative and interrogative without expansion, the negative also being reducible: he cannot (can't), can he?, not he doesn't can, does he?
(iii) they are used as 'code verbs' in ellipsis: 'can you swim?' yes I can; so can I.
(iv) they have three prosodic values, remiss (unstressed), ictus (secondary stress) and tonic (primary stress): // he can // go //,
// / he / can / go // , // / he / can / go // , the unstressed form being normally reduced; these are systematic variants, differing in meaning in a regular way.

(v) they do not take -s on the third person singular: *he can not he cans*

(vi) they do not occur in imperative

(vii) they do not combine with each other

The properties in (v) to (vii) are of particular significance in distinguishing the modal verbs from other 'verbal auxiliaries', such as *be, get, have* and *do*. As you can see in this list, Halliday's seven criteria for identifying the modal verbs are based on the syntactic properties rather than their semantic interpretations. The list provides us with a common framework for comparing the sets of 'modal verbs' in English and Japanese at the level of form. But the question is: 'How is it useful to identify the modal verbs in terms of some syntactic properties that they reveal? Is there any good reason to treat them as a category which realize the functions in a unified area of meaning such as 'modality'? In a functional analysis of language, we look at the instances of the language use from a functional point of view.

In the next section, let us consider Halliday's FUNCTIONAL treatment of the modal verbs in English which fulfill the syntactic criteria shown above. Then, in the subsequent sections, we will inquire into the treatment of the lexicogrammar of 'jodooshi' in Japanese in comparison
with the English modals from the viewpoint Systemic Functional Linguistics.

2.1 Further notes on Halliday's treatment of 'modal verbs' in English

In the previous section, we looked at the syntactic properties of modal verbs at the level of form. In this section we will explore the lexicogrammar of modal verbs in English from a functional viewpoint.

In Halliday's seminal book, *Introduction to Functional Grammar* (IFG), modal verbs are regarded as an element which is referred to as 'Finite modal operator' or simply 'Finite'. Thus if we follow Hallidayan approach, the modal verbs can be interpreted in terms of a tripartite element carrying the properties of 'finite', 'modal' and 'operator'. The term 'finite' is already seen in the first parameter of the syntactic criteria shown in Section 2 above. However, notice that it is used in different senses between Halliday (1970) and IFG. In IFG, Halliday defines 'finite' in terms of a rather functional-oriented point of view. He states as follows: ¹⁴

The finite element, as its name implies, has the function of making the proposition finite. That is to say, it circumscribes; it brings the proposition down to earth, so that it is something that can be argued about.

Halliday goes on characterizing the function of the finite element as
'finiteness' in the systemic description of this element, which 'is thus expressed by means of a verbal operator which is either temporal or modal'. The system for 'finiteness' can be illustrated in Figure 1.

![Figure 1: The system for 'finiteness'](image)

In the system for 'finiteness' in Figure 1, if we choose the feature [modal], it will generate a modal verb. It should be noted, however, that the feature [modal] leads to further system so that the relevant modal verb, such as may instead of will, can, etc., can be obtained properly. The system, or specifically the network of systems, is referred to as 'modality'.

2.2 Modal verbs expressing 'modality' in English

According to Halliday, there are two broad types of 'modality' in English – those of 'modalization' and 'modulation', which are roughly equivalent to 'epistemic' and 'deontic' modality in traditional grammar. Halliday's system network for 'modality' which generates the 'modal verbs' is shown in Figure 2.

Here, to avoid unnecessary discussion, let us ignore the features which are not relevant to the generation of the 'modal verbs'. According to Halliday, 'modality' consists of two major types of meaning,
'modalization' and 'modulation', which lead to further two subtypes respectively, as shown in the system for 'TYPE' in Figure 2 - 'probability' and 'usuality' as types of 'modalization', and 'inclination' and 'obligation' as types of 'modulation'. Halliday argues that all of these four types of 'modality' can be expressed by a modal verb. Note that the features which distinguish the modal verbs from other verbal and non-verbal
forms, such as be sure to and perhaps, can be found in the
‘ORIENTATION’ network, which leads to two sub-systems – one is
classified with the distinction between ‘subjective’ and ‘objective’, and
the other is concerned with the distinction between ‘explicit’ and
‘implicit’. In order to obtain the modal verbs, both [subjective] and
[implicit] have to be chosen simultaneously from the two systems.
‘VALUE’ is another system which distinguishes the degree of speaker’s
confidence about the truth of proposition. For example, if the speaker’s
confidence is ‘high’, it is realized by must. Whereas if the speaker chooses
the feature [low], it is realized by may or can.

Consequently, modal verbs can be seen, in Hallidayan description in
IFG, as an element which realizes the bundle of features that are chosen
simultaneously from the system network for ‘modality’.

2.3 Modal verbs expressing ‘MOOD’ meanings in English

Finally, let us examine the third property of modal verb as a tripartite
element, i.e. the function of the ‘operator’. Let us consider the following
examples:

(1) His testimony can be credible.

(2) Can his testimony be credible?

If we compare (1) and (2), we can find that the modal verb can
contributes to expressing the communication role in an exchange of the
message. In (1), the speaker is giving information to the addressee, whereas in (2) he or she is seeking for the addressee's certification about 'yes' or 'no'. In SFL such meanings of 'information giver' and 'information seeker', or strictly 'polarity seeker', are referred to as types of MOOD, and the above examples clearly demonstrate that the modal verb contributes to expressing the MOOD meanings by its presence at a certain position in relation to the Subject in the clause as well as 'modality'. For this reason, it is possible to regard a modal verb as an operator, in that it serves a grammatical function of forming the Mood structure in the clause. The function of the operator is syntactic rather than semantic, because the basic function of this element is to realize the MOOD meaning by changing the order of the Subject and the Finite. Thus Halliday's term 'Finite modal operator' mixes up the properties which should be dealt with at different levels. On the one hand, 'modality' is an area of meaning which is described as the set of options which can be selected through the traversal of the system network at the level of meaning. The operator, on the other hand, functions as an element of structure of the clause at the level of form. Furthermore, it seems that the terms 'finite' and 'modal' are redundant, because once you enter the system for 'finiteness', you must express either 'tense' or 'modality'.

Up to this point, we have come to the point that the functional label of the so-called modal verbs in English is proposed in this paper. As we have see, Halliday's term 'finite modal operator' has problems of (i) the
confusion of different levels and (ii) the redundancy of the labels. In my opinion, the term ‘Finite’ should be abolished for the reason mentioned above. Instead, I suggest that the modal verbs are simply referred to as the ‘Operator’ at the level of form.6

3 The functional view on ‘jodooshi’ in Japanese

In the previous sections, we looked at a systemic functional approach to the treatment of the modal verbs in English with special reference to Halliday’s descriptive model of SFL. We saw that the English modal verbs may express meanings which are said to be some types of ‘modality’. However, if we analyze these items at the level of form, it serves the function of realizing the MOOD meaning by its presence in the clause. As a consequence, the grammatical function of the modal verbs should be regarded as an element of the clause, and this is referred to as the Operator. In this section, we will look at the expressions which are referred to as ‘jodooshi’ (i.e. ‘auxiliary verb’) in Japanese.

3.1 Basic structure of the simple clause in Japanese

Before analyzing the lexicogrammar of ‘jodooshi’ in Japanese, let us consider the structure of the basic unit in Japanese. Generally speaking, Japanese is typologically classified as an SOV language, whereas English is classified as an SVO language. However, the fact is that a Japanese ‘sentence’ typically ends in a verbal element such as a verb, an adjective, or an adjectival, and the order of the other elements in the sentence is
relatively free — i.e. the order of $S$ and $O$ is determined by another factor. Consider the following example:

(3) Sono kanja wa kinoo byooin de kangofu ni shokuji o
the patient yesterday hospital nurse meal
tabe -sase -temorawa -nakerebanaranakatta -sooda -ne.
eat CAUS BENEFAC msut - PAST TENSE HEARSAY P
(I heard that the patient had to be given hand of a nurse to eat
the meal at the hospital yesterday, didn’t he?)

The hyphen which is put at the initial part of the items in (3) indicates
that it agglutinates to the preceding item and the order of the two items
is not interchangeable. If you look at the example (3), you will find that
all hyphenated items occur after the main verb *tabe* (eat), and each item
carries the function of a grammatical marker rather than that of
expressing a lexical meaning. The structure of (3) can be illustrated in
Figure (3).

Figure 3: The basic structure of a simple clause in Japanese
Let us assume that we can treat the main verb *tabe* as a type of the 'Predicate' (which can be expounded by other types including so-called adjectives and adjectivals). The basic structure of a Japanese simple clause consists of three parts, pre-Predicate elements, a Predicate and Post-Predicate elements.

A typical characteristic of the Japanese language is that any of these three parts can be ellipsed. For instance, we can have various combinations of the three parts as follows:

(4) A: Kimi wa sore o doko de tabeta?
    you it where eat-past
    (Where did you eat it?)

    B: Byooin de tabeta.    [pre-Pred. +Pred.]
    in hospital eat-past
    (I ate it in the hospital.)

(5) A: Kimi wa sore o itsu tabeta?
    you it when eat-past
    (When did you eat it?)

    B: Kinoo kamoshirenai.    [pre-Pred. + post-Pred.]
    yesterday may
    (I may have eaten it yesterday.)

Furthermore, it is possible that each part of these three can solely
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occur as in:

(6) A: Nani ga hoshii?
   what want
   (What do you want?)

   B: Ringo. [pre-Pred.]
      apple
      (An apple.)

(7) A: Ashita no yotei wa nani?
   tomorrow plan what
   (What is your plan of tomorrow?)

   B: Neru. [Pred.]
      sleep
      (I’ll sleep.)

(8) A: Ashita wa ame ga furimasu ka?
   tomorrow rain fall QUESTION MARKER
   (Does it rain tomorrow?)

   B: Kamoshirenenai. [post-Pred.]
      may
      (It may.)

The examples in (4) to (8) demonstrate that it is possible for some
elements to be absent in Japanese, whereas some of the equivalent elements in English have to be expressed overtly (we cannot use the modal verb *may* solely as in *May* in (8) above).

In the next section, we will examine 'jodooshi' (auxiliary verb) in Japanese in comparison with the auxiliary verbs in English.

3.2 Japanese auxiliary verb, 'jodooshi'

Throughout the history of the study of Japanese grammar, there is no agreed view on the treatment of so-called 'jodooshi'. It is a remarkable fact that the term 'jodooshi' was first introduced as the translation of the term 'auxiliary verb' in English in early Meiji period. Thus the treatment of 'jodooshi' in the overall grammatical system is based on grammars of Indo-European languages, especially English and Dutch, but not Japanese. However, this fact does not necessarily lead to discarding the concept of 'jodooshi' from Japanese grammar, because it provides us with a common ground for comparing the phenomena which can be found in both English and Japanese.

Thus Japanese 'jodooshi' covers various meanings which range from certain experiential meanings (such as 'causative', 'giving and benefactive', 'excess' and 'aspect') to meanings concerning 'modality', as shown in (14) to (22), as follows:

(9) 'causative': e.g. *(sa) seru*

(10) 'negative': e.g. *nai*
(11) 'giving and benefactive': e.g. -teageru, -temorau
(12) 'excess': e.g. -sugiru
(13) 'aspect': e.g. -teshima
(14) 'self-evidence': e.g. -(ra)reru
(15) 'probability': e.g. -uru, -kanenai
(16) 'possibility': e.g. -kamoshirenai, -nichigainai
(17) 'prediction': e.g. -daroo
(18) 'guess': e.g. -kashira
(19) 'hearsay': e.g. -rashii, -sooda
(20) 'wish': e.g. -tai
(21) 'volition': e.g. -(y)oo
(22) 'intention': e.g. -tsumorida
(23) 'obligation': e.g. -bekida, -nebanaranai

The criteria for identifying 'jodooshi' listed above would generally be proposed in terms of morphological, syntactic and semantic properties. Firstly, the items classified in 'jodooshi' are said to be ancillary words. Secondly, these items are conjugated. Thirdly, they can be attached to a nominal or a verbal element so that they denote the speaker's intension or judgment about the experiential content expressed in it.

As we have seen, however, it is possible to present a counter example which does not fulfill the three criteria. For example, the item daroo, which expresses the speaker's 'prediction', cannot be conjugated, and thus it cannot end with the past tense marker -ta as in (23), whereas
kamoshirenai, which expresses ‘possibility’, can be conjugated to take the past tense form as in (24):

(23) *Joe wa kuru daroo-ta.
Joe come will

(24) Joe wa kuru kamoshirenaka-tta.
Joe come may

(Joe may have come.)

Consequently, the well-known criteria for ‘jodooshi’ in Japanese should be abolished, and I will tentatively propose an alternative criterion. In this paper ‘jodooshi’ is a grammatical category which is classified in the post-Predicate elements except for the so-called ‘shuujoshi’ (clause final particle), which includes yo, ka, ne, na, sa, wa, ze, and zo. In short, ‘jodooshi’ refers to items which can occur in-between a Predicate and a clause-final particle.

In the next section, I will compare the modal auxiliaries in English with the set of the certain types of ‘jodooshi’ which are particularly concerned with ‘modality’ in Japanese (i.e. in the list of the properties in (14) to (22) above).

3.3 Comparison of the auxiliaries in English and Japanese

In comparing the two sets of the equivalent category of ‘auxiliary’ in
English and Japanese, it will be helpful to borrow some of Halliday's seven criteria so that we can find certain properties that the auxiliaries in the two languages have in common or not in common.8

(i) Finite forms:

It is hardly possible to compare the two sets of auxiliaries in terms of the finite/non-finite forms that they take. However, the following phenomena can be observed in Japanese:

(25a)  Rena wa yubiwa o kau tameni isshokeemmei hataraita.

Rena  ring  buy in order to  hard  work

(Rena worked hard in order to buy the ring.)

(25b) *Rena wa yubiwa o kawa -nakerebanaranaitameni

Rena  ring  buy  must  in order to

isshokeemmei hataraita.

hard  work

(*Rena worked hard in order to must buy the ring.)

If we compare (25a) and (25b), these examples show that -nakerebanaranai (= must) cannot precede a marker of 'motive' (i.e., in this case 'to buy the ring'). In this sense, Japanese auxiliaries are similar to the English modal verbs.
(ii) forming negative and interrogative without expansion, the negative also being reducible:

Compare the following examples:

(26) Can you touch the ceiling?

(27) Kimi wa tenjoo o sawa -reru -ka?

As we say in example (8) in Section 3.1, a question marker -ka is used to express a meaning of a 'question' in Japanese. This clearly demonstrates that the element 'Operator' cannot be recognized in Japanese. That is, the Japanese auxiliary verb does not function as the Operator to contribute to the realization of MOOD by moving it to certain position in the clause.

(iii) code verbs in ellipsis:

According to Sawada (1995: 290), a Japanese auxiliary cannot be used as a 'code verb' in an environment where the main verb is not expressed overtly:

(28) A: Terebi mi -tai?

TV watch want to

(Do you want to watch TV?)
B: *Un, [φ] -tai.

yes

(Yes, I do.)

It is true that -tai requires an overt verb, but some other auxiliary verbs in Japanese are not necessarily the case. For example, consider the speaker B's utterance of -kamoshirenai in (29) below:

(29) A: Terebi miru -kamoshirenai?

TV watch may

(Do you watch TV perhaps?)

B: Kamoshirenai.

(Perhaps.)

(29) shows that the auxiliary expressing a certain type of ‘modality’ can be used in the similar way to the English modals.

(iv) taking -s on the third person singular

The attachment of the suffix of -s on the third person singular is entirely a language-specific phenomenon, and the Japanese auxiliaries nor any verbal elements do undertake the suffixation to indicate the agreement between the Subject and the main verb. Thus the fact that both English and Japanese do not take -s on the auxiliary verbs is a mere coincidence.
English and Japanese share this property. In Japanese the meaning of an ‘order’ is expressed by the conjugation of the main verb, which typically ends with the vowel /e/, such as Tobe! (Jump!), or with /o/, such as Miro! (Look!). Compare the following examples:

(30) *Must be quiet here!

(31) *Koko dewa shizukanishi nakebanare.

here be quiet must

(You must be quiet here.)

The combination of two (or more) modal verbs

Here is another crucial difference of the grammatical features of modal verbs between English and Japanese. Consider the following examples:

(32) *Joe will can help Rena.

(33) Joe wa Rena o tasuke rareru daroo.

Joe Rena help can will

(Joe will be able to help Rena.)

As (33) illustrates, two auxiliaries expressing certain types of ‘modality’ can be combined with each other in Japanese. In (33), the auxiliaries for
'ability' and that for 'prediction' are combined. However, note that every auxiliary verb cannot be combined freely with any other auxiliary verb in Japanese. For example, the following example is ungrammatical:

(34) Joe wa Rena o tasuke -nakerebanar -oo.

Joe Rena help must will

(Joe must be willing to help Rena.)

It should also be noted here that the order of auxiliaries in the same clause is strictly fixed, as illustrated in the following examples:

(35a) Rena wa kuru beki kamoshirenai sooda.

Rena come should may be said to

(It is said that Rena should possibly come.)

(35b) *Rena wa kuru -sooda -kamoshirenai -beki.

Rena come be said may should

To sum, the two sets of auxiliary verbs in English and Japanese share some properties, yet they reveal some crucial differences as well. The similarities / differences are summarized in Table 1:
5. Conclusion

In this paper, I presented a description of modal verbs by comparing the set of syntactic properties which determines the nature of these items between English and Japanese. At this stage, the present paper should be seen as a preliminary study on the controversial issue about the treatment of modal verbs in English and Japanese.

In the first half of this paper, we looked at Halliday's treatment of modal verbs in English. In Halliday's descriptive model, the modal verb is referred to as the 'Finite modal operator' or simply the 'Finite'. There is no place for 'modal verb' as a technical term in his description. However, I claimed that the terms 'Finite' and 'modal' are misleading in that the concept of 'finite' is rather semanticized in SFL, and it is not appropriate to use this term in syntax of English. As a consequence, I propose to use a simple term 'Operator'.

Table 1: Similarities and differences between English and Japanese

<table>
<thead>
<tr>
<th></th>
<th>English</th>
<th>Japanese</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Finite form</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>(ii) Functioning as the Operator</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>(iii) Code</td>
<td>YES</td>
<td>YES/NO</td>
</tr>
<tr>
<td>(iv) -s in an auxiliary</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>(v) Imperative</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>(vi) Combination</td>
<td>NO</td>
<td>YES</td>
</tr>
</tbody>
</table>
In the latter half of this paper, I looked at the Japanese auxiliary verbs, which are referred to as ‘jodooshi’ in Japanese. As we saw in Section 3.2, much more items are regarded as an ‘auxiliary verb’ in Japanese than those in English. However, I pointed out that the term ‘jodooshi’ was not derived from considerations of the Japanese language in itself, but it was a translation from the English equivalents, as it was proposed by some grammarians in Meiji period in Japan. Thus it is not a surprising fact that the criteria to identify the Japanese auxiliary verbs do not provide us with a consistent basis for recognizing these items at any levels of description.

In a functional description of Japanese, there is no need to set out a unified category of ‘modal auxiliary’ at the level of form, because it is not possible to sort out the small number of items by means of the criteria presented above. As we have seen, more than one auxiliary verb are fairly freely occur in the same clause under the certain syntactic conditions, and I argue that it is desirable to treat them separately, and we can label each element in functional terms.

Notes

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5 Ibid.

6 Another reason for abolishing 'Finite' in English grammar is presented by Fawcett (2000a and 2000b). In Hallidayan approach, the Finite is an element of the 'verbal group', although its main function is to contribute to the realization of MOOD at the rank of 'clause' (i.e. it typically precedes the Subject when the clause expresses the 'primary speech function' of 'question'). However, Fawcett argues that the Finite and other elements in the 'verbal group' should be elevated to the function as direct elements of the clause – the result of which is that the 'verbal group' has no function in the description of English. For a detailed discussion of the treatment of the Finite, see Fawcett, R. (2000a) "In place of Halliday's verbal group, part 1: Evidence from problems of Halliday's representations and the relative simplicity of the proposed alternative", Word, 51.2, pp.157-203. and Fawcett, R. (2000b) 'In place of Halliday's verbal group, part 2: Evidence from generation, semantics and interruptability', Word 51.3, pp.327-375.

However, I will not discuss phonological properties here to focus on the similarities and the differences between English and Japanese in terms of the syntactic structures.