

Deontic Modality in Japanese: Positioning the Expressions of Recommendation

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1 Introduction

This paper entertains a logical possibility in the deontic modal ontology suggested in Beddor (2017), by exploring the semantic properties of the expressions of recommendation in Japanese, such as *-ba ii*, *-tara ii* and *-to ii* (roughly, ‘it is good if ...’). We argue that they are a subtype of possibility modals, but differ from the better recognized possibility modal expressions of permission, such as *-temo ii* ‘it is good even if ...’ in Japanese, in terms of logical strength. The distinction mirrors an analogous split in necessity modals (between *must/ have to* and *should/ ought*, as discussed in von Stechow & Iatridou 2008; Silk 2012; Portner & Rubinstein 2016, i.a.).¹

In section 2, we start by reviewing two parameters capturing the differ-

¹ We intentionally exclude a representing candidate of recommendation, namely, *-hou-ga ii*, because it always ‘implies a comparison to some unspecified alternative state-of-affairs’ (Narrog 2009: 86). Such an implicit comparison is lacking in other expressions of recommendation. We leave it to a separate project in the future.

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ences in expressions of deontic modality in Japanese, namely, modal force and relative strength. Against this background, in section 3 we introduce Beddor’s (2017) study on the modal expression *be justified in* in English, which is reportedly (logically) weaker than *should* but stronger than *may*. This fills up the conceptual gap laid down by the two parameters. In section 4, we present data in Japanese that illustrate the taxonomy of deontic modals proposed by Beddor. In particular, we show that the expressions of recommendation stand in dual relation with the weak necessity modal, *beki* ‘should’, in terms of modal force and are (logically) stronger than the possibility modal, *-temo-ii*. In section 5, we conclude the paper with some remarks on the formalization of the semantics of the expressions of recommendation in Japanese.

2 Japanese Deontic Modality and Their Force and Strength

A huge body of literature is devoted to the study of deontic expressions in Japanese. It is worth-noting that modal expressions in Japanese are mostly *conditionalized evaluative constructions* (CECs, Akatsuka 1992). They are conditional clauses with an evaluative consequent, instead of auxiliary verbs as in English. Also, modal expressions in Japanese carry specified flavors. The expressions for deontic modality and for epistemic modality overlap to a limited extent, unlike the expressions of English *must* and *may* which can be used both deontically and epistemically (Kaufmann & Tamura to appear). Apart from these two particularities, the Japanese deontic expressions display similar pattern to English ones, as we will see below.

2.1 Quantificational Force

In the tradition of deontic logic, the necessity modal *must* stands in dual relation to the possibility modal *may*, where $must\ p \Leftrightarrow \neg(may\ \neg p)$. In other words, *must p* contradicts *may ¬p*. The dual relation is also observed in Japanese. Consider the expression *-(a)nakereba naranai* (literally, ‘if not . . . , it does not become’) for deontic necessity (i.e. obligation), and the expression *-temo ii* for deontic possibility (i.e. permission) (e.g. Narrog 2009). The following sentences are set up in the configuration where (1a) represents *must p* and (1b) *may ¬p*. They are reported to be contradictory.²

- (1) a. *kusuri-o nom-ana-kereba nar-anai*
 medicine-ACC drink-NEG-COND become-NEG
 Lit.: ‘If (you) do not take the medicine, it doesn’t become.’ (= ‘(You) must take the medicine.’)

²I thank three Japanese native speakers for their judgement on all the data in this paper.

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- b. *kusuri-o nom-ana-kute-mo ii*
 medicine-ACC drink-NEG-GER-FOC good
 Lit.: ‘Even if (you) do not take the medicine, it is good.’ (= ‘(You) are allowed not to take the medicine.’)

2.2 Relative Strength

Apart from the difference in quantificational force, another distinction is observed among necessity modals. In English (and also many other languages), *must p* and *have to p* are logically stronger than *should p* and *ought p* (von Stechow & Iatridou 2008). In other words, the former asymmetrically entails the latter. It then follows that we can use the former to reinforce the latter in sentences, but not vice versa. Witness the contrast in (2) (examples from von Stechow & Iatridou 2008: 117):

- (2) a. You ought to wash your hands - in fact, you have to.
 b. ??You have to wash your hands - in fact, you ought to.

Accordingly, *must* and *have to* are regarded as strong necessity modals, whereas *should* and *ought* weak necessity modals. In Japanese, a similar contrast in strength is also reported (Narrog 2009; Kaufmann & Tamura to appear). Consider the example from Kaufmann & Tamura (to appear) below. The expression *beki* ‘should’ suggests that it is the *best* to feed all animals before 10 (a weaker obligation), but it is a *must* to do so with lions, as suggested by *nakereba naranai* (a stronger obligation).

- (3) *Jyuu-ji made-ni subeteno doubutsu-ni esa-o yaru-beki*
 10-o'clock until-DAT all animals-DAT food-ACC give-BEKI
da kedo, raion-ni-wa jyuu-ji made-ni esa-o
 COP but, lion-DAT-TOP 10-o'clock made-DAT food-ACC
yar-ana-kereba nar-anai
 give-NEG-COND become-NEG
 ‘(You) should feed all animals by ten o’clock, but the lions you have to feed by ten o’clock.’

3 Beddor’s (2017) Taxonomy of Deontic Modality

3.1 The Neglected Piece

In section 2 we introduced two parameters to the taxonomy of deontic modals — quantificational force and strength. In particular, the former suggests that

necessity modals are universal quantifiers over sets of worlds, whereas possibility modals are existential quantifiers over sets of worlds; whereas the latter concerns the logical strength, as can be shown by the asymmetrical entailment relations among modals.

According to Beddor (2017), the features of quantificational force and relative strength displayed in existing modal expressions open up a possible conceptual space — which Beddor himself termed as ‘faultlessness’. Consider the taxonomy of modal expressions mapped in Figure 1:

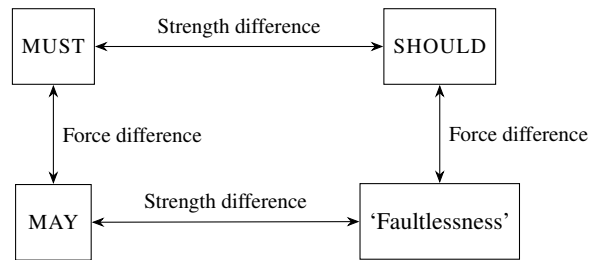


FIGURE 1: A taxonomy of modal expressions proposed in Beddor (2017)

As we can see in Figure 1, the concept in concern should display a strength difference with *may* and a force difference with *should* accordingly. While the distinction between universal and existential quantification is clear, more can be said with regards to the distinction in strength. Beddor proposed that strong and weak necessity modals are universal quantifiers over different domains.

Suppose possible worlds are ranked by some normative standard *N*, strong necessity modals quantify over all of the worlds which are considered *acceptable* by *N*; whereas weak necessity modals quantify over all of those which are considered *optimal* by *N*. Not only is this framework consistent with Portner (2009), it indeed resonates with Portner’s characterization of strong and weak necessity modals — both attempted to explain the asymmetric entailment between *must* and *should* by suggesting that the latter applies a more restricted domain. While Beddor had not informed us about how exactly optimal worlds comprise a more restricted set than acceptable worlds, Portner suggested that this pertains to the fact that the accessibility relation of *should* bases on a wider set of rules when compared to that of *must* (see Portner 2009). Insofar as all optimal worlds are acceptable worlds under *N*, strong necessity modals always entail weak necessity modals. Under this ‘Optimality Interpretation’, as Beddor calls it, *must p* is true iff *p* obtains in all of the acceptable worlds; while *should p* is true iff *p* obtains in all of the optimal worlds (see Figure 2).

As the existential counterpart of *must p*, *may p* is true iff *p* obtains in at

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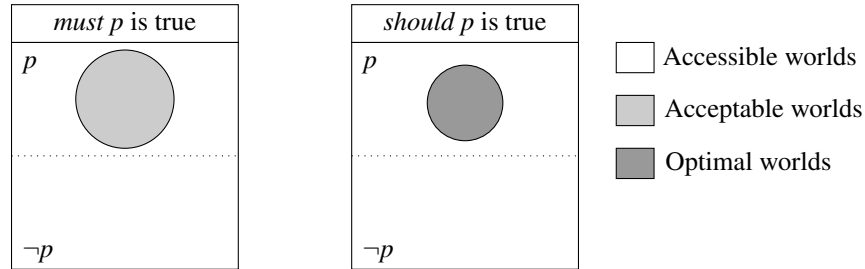


FIGURE 2: Worlds denoted by *must p* and *should p*

least one of the acceptable worlds. On the other hand, Beddor suggested that the dual of *should p*, i.e. faultlessness, is expressed as *be justified in p* in English. Thus, it follows that *be justified in p* is true iff *p* obtains in at least one of the optimal worlds (see Figure 3).

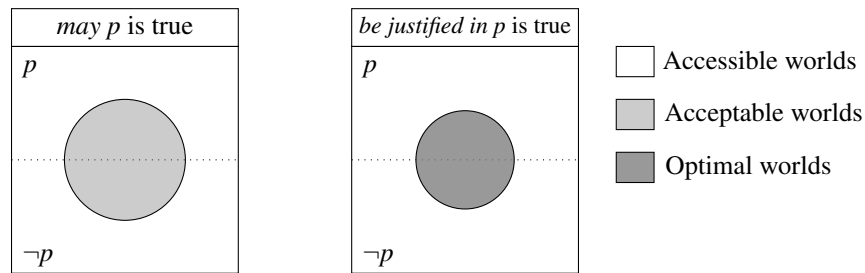


FIGURE 3: Worlds denoted by *may p* and *be justified in p*

Since all optimal worlds are acceptable worlds, all faultless *p* are permitted. As a result, *be justified in p* is in turn logically stronger than *may p*. This flip in logical strength is due to the distinction in quantification. In view of this asymmetrical entailment, one may consider *be justified in p* as strong possibility modal and *may p* as weak possibility modal. Since the notion of strength merely supervenes on quantification and acceptability/ optimality, the contingent fact that *must* and *be justified in* are both named ‘strong’ suggests no essential relation between the two. According to the taxonomy of deontic expressions thus construed, strong necessity modals stand in a dual relation with weak possibility modals; while weak necessity modals correspond to strong possibility modals. To avoid confusion, this paper endorses alternative terminologies — avoiding the talk of strength distinction and partition deontic expressions with quantification and acceptability/ optimality. The deontic expressions in English can be summarized as Table 1.

	Acceptability	Optimality
Universal quantification	<i>must/ have to</i>	<i>should/ ought</i>
Existential quantification	<i>may/ can</i>	<i>be justified in</i>

TABLE 1: English deontic modality on two parameters

For the purpose of this paper, *must*, *should*, *be justified in* and *may* are coined as acceptable necessity, optimal necessity, optimal possibility and acceptable possibility modals respectively.

3.2 The Idiosyncratic Features of *Be Justified In*

Although Beddor (2017) drew our attention to a less-studied but conceptually plausible notion of faultlessness, the expression *be justified in* displays various differences to the classic members of deontic modality in English. Recognized English modal expressions are typically auxiliary verbs, whereas the expression at issue consists of a copula, a participle and a particle. It also takes as its complement a verb phrase in gerund form instead of bare form.

The distribution and frequency of *be justified in* also diverge from other modal expressions. In general, there is no animacy restriction on modal verbs, that is, inanimate subject is allowed (as in (4a)). In contrast, inanimate subject is disallowed with *be justified in* in (4b).

- (4) a. The paper *must/ have to/ should/ ought to/ may* be written in English.
 b. ??The paper is justified in being written in English.

Also, corpus data show that while *justified* is by no means infrequent (6219 entries in The Corpus of Contemporary American English, Davis 2008-), the expression *be justified in* followed by a gerund is rather rare (385 entries), compared to 26376 entries of *ought*, which is also used exclusively deontically. A question remains: Do we have evidence from other languages where the notion of optimal possibility displays similar linguistic properties compared to other deontic counterparts?

4 Expressions of Recommendation as Optimal Possibility Modals

In the case of Japanese, the expressions of recommendation express very weak obligation, even weaker than that of *beki* ‘should’ (Narrog 2009). They suggest that ‘the state-of-affairs expressed in the antecedent is thought to be desirable’ (Narrog 2009: 85). Accordingly, these expressions are usually

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adopted for making recommendations or giving advice. In this section, we present evidence supporting two properties of these expressions of recommendation: (i) They stand in a dual relation to *beki* and (ii) they demonstrate asymmetrical entailment relation to *-temo ii*. We conclude that they should be regarded as *optimal possibility modals*.

Two points should be noted. Recall that although the expressions of recommendation have a number of members (*-ba ii*, *-tara ii* and *-to ii*), they are all underlyingly conditionalized evaluative constructions (CECs), forming a natural class with other deontic expressions (e.g. *-(a)nakereba naranai* and *-temo ii*).

As for frequency, the expressions of recommendation are no less frequent than other deontic expressions in The Balanced Corpus of Contemporary Written Japanese (BCCWJ). For example, there are 12716 entries for *-ba ii*, compared to 7727 entries for *-temo ii* and 22411 entries for *-(a)nakereba naranai*. All these CECs are frequently used. We thus believe Japanese serves as a better testing ground for the taxonomy of deontic expressions proposed by Beddor (2017).

4.1 Quantificational Force with regard to *Beki*

This subsection shows that *beki* stands in dual relation to the expressions of recommendation. Take *-ba ii* as an example. If they are in dual relation, we are expected to see $p \text{ beki} \Leftrightarrow \neg(\neg p \text{ -ba ii})$. Equivalently, $p \text{ beki}$ contradicts $\neg p \text{ -ba ii}$. This is borne out in (5). There is no such situation where (5a) and (5b) are both true or both false. For example, one is inconsistent if s/he believes in both (5a) and (5b) or gives advice of (5a) and (5b) at the same time.

- (5) a. *sensei-to soudansu-beki da*
 teacher-COM consult-BEKI COP
 ‘(You) should consult the teacher.’
- b. *sensei-to soudanshi-na-kereba ii*
 teacher-COM consult-NEG-COND good
 (Lit.) ‘If (you) do not consult the teacher, it is good.’

Given that *beki*, just like *should* in English, expresses a universal quantification over worlds (necessity), *-ba ii*, accordingly, expresses an existential quantification over worlds (possibility), similar to *-temo ii* in terms of quantificational force. A characteristic of possibility modals is that the modalized sentence is compatible with its inner negation. For example, $p\text{-temo ii}$ is compatible with $\neg p\text{-temo ii}$, as shown in (6).

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- (6) *it-te-mo ii ga ik-ana-te-mo ii*
 go-GER-FOC good but go-NEG-GER-FOC good
 Lit.: ‘Even if (you) go, it is good; but even if (you) don’t go, it is good.’
 (= ‘(You) are allowed to go but (you) are (also) allowed not to go.’)

The same does not apply to necessity modals. (7) is a contradiction:

- (7) # *iku-beki da ga ik-anai-beki da*
 go-BEKI COP but go-NEG-BEKI COP
 ‘(You) should go but (you) should not go.’

-Ba ii patterns with *-temo ii* on this score, as in (8), giving no contradictory reading.³

- (8) *ik-eba ii ga ik-ana-kereba sore-demo ii*
 go-COND good but go-NEG-COND that-even good
 Lit.: ‘If (you) go, it is good; but if (you) don’t go, it is still good.’ (= ‘It is good (for you) to go but it is also good (for you) not to go.’)

Therefore, the expressions of recommendation in Japanese are also possibility modals. The next question is, how does it differ from *-temo ii*?

4.2 Relative Strength with regard to *-Temo ii*

Both *-temo ii* and *-ba ii* are arguably possibility modals. However, as suggested by their primary functions, they are by no means the same. We argue with the following two tests that *p-temo ii* is logically weaker than *p-ba ii*.

Recall that in section 2, we see that a weaker sentence can be reinforced by a stronger one. Consider the sentences in (9):

- (9) a. *kusuri-o nom-de-mo ii. jitsuni, kusuri-o*
 medicine-ACC drink-GER-FOC good in.fact medicine-ACC
nom-eba ii.
 drink-COND good
 ‘(You) are allowed to take the medicine. In fact, if (you) take the medicine, it is good.’
- b. # *kusuri-o nom-eba ii. jitsuni, kusuri-o*
 medicine-ACC drink-COND good in.fact medicine-ACC
nom-de-mo ii.
 drink-GER-FOC good
 ‘If (you) take the medicine, it is good. In fact, (you) are allowed to take the medicine.’

³ In the second conjunct *sore-demo* must be added to sound natural.

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(9a) is unproblematic. It can be uttered when the speaker first allows the hearer to take the medicine but later make a stronger claim that he in fact advises the hearer to take the medicine. However, (9b) is infelicitous, because it is unnatural to give the permission to do something after you have already made the recommendation for one to do so. In other words, it is infelicitous because a weaker sentence cannot reinforce a stronger sentence.

As another test, since weak and strong modals are in an asymmetric entailment relation, weak modals are compatible with the negation of strong modals. Consider the sentences in (10):

- (10) a. *tsukare-tara yasun-de-mo ii ga tsukare-tara*
 be.tired-COND rest-GER-FOC good but be.tired-COND
yasum-eba ii toiunodewanai
 rest-COND good SNEG

Lit.: ‘If (you) are tired, even if (you) take a rest, it is good. But, it is not the case that if (you) are tired, (then) if (you) take a rest, it is good.’

(= ‘(You) may take a rest if (you) are tired. But, it is not the case that it is good (for you) to take a rest if (you) are tired.’)

- b. *tsukare-tara yasum-eba ii ga tsukare-tara*
 be.tired-COND rest-COND good but be.tired-COND
yasun-de-mo ii toiunodewanai
 rest-GER-FOC good SNEG

Lit.: ‘If (you) are tired, (then) if (you) take a rest, it is good. But, it is not the case that if (you) are tired, even if (you) take a rest, it is good.’

(= ‘It is good (for you) to take a rest if (you) are tired. But it is not the case that (you) may take a rest if (you) are tired.’)

In a context like physical training, the coach utters (10a) to indicate that taking a rest is allowed but it is suboptimal. Stating the permission of taking a rest may pragmatically give the implicature that the coach is indeed encouraging the hearer to take a rest. But this implicature is canceled by the second conjunct. The weaker *-temo ii* is thus compatible with the negation of the stronger *-ba ii*. However, reversing the order of the two conjuncts results in infelicity as in (10b). Such results suggest that *-ba ii* asymmetrically entails *-temo ii*.

From these two tests, we conclude that *-ba ii* is not only a possibility modal, but indeed an optimal possibility modal, a stronger counterpart of the acceptable possibility modal *-temo ii*. Table 2 gives the proposed taxonomy of deontic expressions in Japanese.

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	Acceptability	Optimality
Universal quantification	-(a)nakereba naranai	-beki
Existential quantification	-temo ii	-ba ii/ -tara ii/ -to ii

TABLE 2: Japanese deontic modality on two parameters

5 Concluding Remarks

In this paper, we argued that the expressions of recommendation in Japanese can be defined in terms of quantificational force and acceptability/ optimality (i.e. relative strength) and hence are *optimal possibility modals*, on a par with other members in the deontic ontology.

It is worth-noting that while the English phrasal expression *be justified in* appears to be an outlier compared to other deontic expressions (which are mostly auxiliary verbs), the expressions of recommendation in Japanese follow the common structure of CEC for deontic modals. Intriguingly, it is the supposed counterpart of *should* in Japanese, *-beki*, that can be regarded as an outlier, for it is not a CEC, but rather have a root with the auxiliary verb *-beshi*. Perhaps these amusing results in English and Japanese reflect that the linguistic realization of the logical space for deontic notions varies across languages.

It should also be noted that for simplicity we have treated the deontic expressions in Japanese (i.e. CECs) syncategorematically. We are not committed to their status as one single lexical element or idiomatic expression. Against such claim, Kaufmann (2017) proposes a compositional analysis for CECs, analyzing them as nonlogical conditionals under the Kratzerian approach to modality.

We have also been agnostic about the precise semantics of this optimal possibility modal. Arguably, it differs minimally from optimal necessity modal (i.e. weak necessity modal) in terms of quantificational force. Any successful attempts to capture the strength difference between necessity modals would naturally extend to possibility modals. To formalize the semantics of *should*, von Stechow & Iatridou (2008) hints at the possibility of a secondary ordering source. Against such claim, Silk (2012) proposes the extension of the modal base by some ‘applicability conditions’. More recent works on graded modality suggest different approaches to the issue (e.g. Portner & Ruthstein 2016 and Lassiter 2017). While a precise semantics of optimal possibility modal remains to be seen, the introduction of such notion should be conservative to any existing semantic formalization.

Acknowledgments

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Glossary

ACC	accusative	GER	gerund
COM	comitative	NEG	negation
COND	conditional	SNEG	sentential negation
DAT	dative	TOP	topic
FOC	focus		

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