Deontic modality in Japanese: Positioning the recommendation-type modal expressions

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Expressions of obligation (e.g. must) and those of permission (e.g. may) are often regarded as deontic necessity and possibility modals respectively. According to the orthodox view, deontic necessity and possibility are considered as dual—i.e. (may $P$ iff $\neg$(must $\neg P$)) and (must $P$ iff $\neg$(may $\neg P$)). Existing frameworks suggest that necessity modals, as universal quantifiers over sets of worlds, entail possibility modals which are existential quantifiers (i.e. must $P$ entails may $P$) (Kratzer 2012). Within necessity modals, there is a further strong/weak distinction (von Fintel and Iatridou 2008), in which strong necessity modals (e.g. must) quantify over a larger set of worlds than that of weak necessity modals (e.g. should), given the same domain of quantification. Strong necessity modals can reinforce weak ones (but not vice versa). Also, weak necessity modals are compatible with the negation of strong necessity modals (but not vice versa). The dual relations and strengthen distinction are observed in Japanese modality as well (Kaufmann & Tamura, t.a.).

Recently Beddor (2017) exposed an overlooked conceptual gap in the deontic modal framework. Since there are two types of necessity modals it would be natural to expect there being two for possibility modals as well—each standing in the dual relation with their necessity counterpart, and displaying also the strength distinction. As it is often taken that permission stands in the dual relation with strong necessity, the counterpart for weak necessity ($\neg$(should $\neg A$))—faultlessness, as Beddor calls it—is the much neglected piece. Revising Beddor’s notion of faultlessness, we suggest that recommendation-type deontic expressions in Japanese such as (ta)hou-ga-ii fits perfectly for this missing conceptual gap. We present empirical data illustrating:

1. (-ta)hou-ga- ii has a dual relation with -bekida
2. Necessity type modals entail possibility type modals under the same domain of quantification: $P$ -beki da entails $P$ (-ta)hou-ga-ii
3. Strong modals entail weak modals under the same domain of quantification: $P$ (-ta)hou-ga-ii entails $P$ -temoi, as revealed in the facts that,
   i) $P$ (ta)hou-ga-ii can reinforce $P$ -temoi
   ii) $P$ -temoi is compatible with the negation of $P$ (-ta)hou-ga-ii

The first two findings explore the structural correspondence between the should/recommend and the must/may pairs (i.e. between necessity and possibility), whereas the third pertains to the correspondence between the recommend/may and the must/should pairs (i.e. strong vs. weak modals). The convenient expressions of (strong/weak) obligation, permission and recommendation can then be analyzed in terms of quantification and strength. A taxonomy of deontic modals shows that each deontic expression in Japanese correspond to a combination along these two parameters (where arrows indicate entailment relations).

<table>
<thead>
<tr>
<th>Necessity (i.e. universal quantifier)</th>
<th>Strong</th>
<th>Weak</th>
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<tbody>
<tr>
<td>-nakereba naranai</td>
<td></td>
<td>-bekida</td>
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<th>Possibility (i.e. existential quantifier)</th>
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<tbody>
<tr>
<td>Weak</td>
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<tr>
<td>-temoi</td>
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<tr>
<td>Strong</td>
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<td>(-ta)hou-ga-ii</td>
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The data (numbering corresponding to the three claims)

1. Equivalence proofs for duals from contradiction
(1) $P \text{-bekida} \equiv \neg \neg P (-ta) \text{hou-ga-ii}$ iff $P \text{-bekida} \bot \neg P (-ta) \text{hou-ga-ii}$

a) kusuri-o nomu bekida medicine-ACC take bekida
‘(You) should take the medicine.’

b) kusuri-o nom-anai hou-ga-ii medicine-ACC take-NEG hou-ga-ii
‘It is better that (you) do not take the medicine,’ where (1a) $\bot$ (1b).

2. Entailment relation followed from quantification
(2) $P \text{-bekida}$ entails $P (-ta) \text{hou-ga-ii}$ (but not the other way round)

a) kusuri-o nom-da hou-ga-ii / demo sore-wa nomu bekida toiu kotodewanai medicine-ACC took hou-ga-ii but that-TOP take bekida NEG
‘It is better to take the medicine, but it is not the case that (you) should take (it).’

b) # kusuri-o / demo sore-wa nom-da hou-ga-ii toiu kotodewanai medicine-ACC take bekida / but that-TOP took hou-ga-ii NEG
‘(You) should take the medicine, but it is not the case that it is better to take (it).’

3. Consequences followed from the strength distinction
(i) Logically weaker modals can be reinforced by logically stronger modals

(3a) kusuri-o nom-demoi / toiu-yori nom-da hou-ga-ii medicine-ACC take-demoi / in.fact took hou-ga-ii
‘(You) may take the medicine. In fact, it is better to take (it).’

(3b) # kusuri-o / toiu-yori nom-demoi medicine-ACC take-PST hou-ga-ii / in.fact take-demoi
‘It is better to take the medicine. In fact, you may take (it).’

(ii) Logically weaker modals are compatible with the negation of logically stronger modals

(4a) kusuri-o nom-demoi / demo sore-wa nom-da hou-ga-ii toiu kotodewanai medicine-ACC take-demoi / but that-TOP took hou-ga-ii NEG
‘(You) may take the medicine, but it is not the case that it is better to take (it).’

(4b) # kusuri-o / demo sore-wa nom-demoi toiu kotodewanai medicine-ACC took hou-ga-ii / but that-TOP take-demoi NEG
‘It is better to take the medicine, but it is not the case that you may take (it).’

References: