Hurford Conditionals in Japanese
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Introduction Mandelkern & Romoli (2018; M&R) observe that although (1) and (2) have the same logical structure as in (3), (1) is infelicitous whereas (2) is felicitous. M&R call the conditionals with the form of (3) \textit{Hurford Conditionals} (HCs), and point out that existing theories of informational oddness (e.g., Stalnaker 1974, Kratzer 1986, von Fintel 1999, Schlenker 2009, a.o.) cannot capture the contrast in BAD and GOOD. Focusing on Japanese, we attempt to find a satisfying explanation of this contrast, and propose that concessive conditional morphemes render BAD less infelicitous, and that in the absence of these morphemes, BAD becomes tautology, which thereby contributes to its infelicity.

(1) **BAD**: #If John is not in Tokyo, he is in Japan.
(2) **GOOD**: If John is in Japan, he is not in Tokyo.
(3) If \(\neg p^+\), then \(p\) (where \(p^+\) is a sentence which asymmetrically entails \(p\))

Key data As observed in (1) and (4a), BAD is odd, but in Japanese, a certain conditional morpheme like \textit{toshitemo} ‘even if’ can make BAD felicitous, as in (4b). As in (4c), this ‘rescuing’ seems to be optional in GOOD. How can we explain this contrast?

(4) (A detective is wondering about where a wanted man named Lupin the Third is:)
   a. #Rupan-ga Tokyo-ni inai nara, kare-wa Nihon-ni iru.
   L-NOM Tokyo-LOC exist.NEG if he-TOP Japan-LOC exist
   ‘#If Lupin is not in Tokyo, he is in Japan.’
   L-NOM Tokyo-LOC exist.NEG even.if he-TOP Japan-LOC exist
   ‘Even if Lupin is not in Tokyo, he is in Japan.’
   L-NOM Tokyo-LOC exist {if / even.if} he-TOP Toyko-LOC exist.NEG
   ‘(Even) If Lupin is in Japan, he is not in Tokyo.’

Semantics of Japanese conditionals We assume the \textit{nara}-conditional as a prototypical conditional construction without any special meanings, and define its interpretation as in (5a), following Kratzer’s (1986) analysis of the \textit{if}-clause; (5a) amounts to saying that in all the best worlds according to the ordering source \(g\) in which \(\psi\) is true, \(\phi\) is true. Unlike the \textit{nara}-clause, we suggest that the toshitemo-conditional derives the concessive/unlikely meaning as a presupposition, as in (5b). Following Ippolito’s (2004) analysis of the concessive \textit{still}, we argue that toshitemo introduces a scalar meaning, where the relevant ordering is the order of worlds according to their \textit{likelihood} with respect to a certain proposition. Moreover, toshitemo conveys that the speaker believes the antecedent \(\psi\) to be false, \(\text{BELIEVE}_{sp}(\neg\psi)\), which is motivated by the acceptability in (6): \textit{toshitemo}(\(\psi\))(\(\phi\)) is felicitous only if the speaker is certain that \(\neg\psi\).

(5) a. \(\nabla \text{nara}(\psi)(\phi) \supset \text{NEC}_{f,g}(\psi)[\phi]\), where NEC_{f,g} is a covert necessity operator.
   b. \(\nabla \text{toshitemo}(\psi)(\phi) \supset \text{NEC}_{f,g}(\psi)[\phi]\) \textbf{presupposes}: \(\text{max}_{\leq,w} \{w : w \in \psi \land w \in \phi\} \ll \text{likely}\)
   \(\max_{\leq,w} \{w : w \in \psi \land w \in \neg\phi\} \land \text{BELIEVE}_{sp}(\neg\psi)\), where:
   (i) \(\ll \text{likely}\) intuitively means ‘less likely’ and;
   (ii) for any \(p\), any similarity relation \(\leq\), and any \(w:\)
   \(\max_{\leq,w} (p) = \{w' : p(w') = 1 \lor \forall w'' : p(w'') = 1 \rightarrow w' \leq w''\}\)

(6) a. Rupan-wa Tokyo-ni inai nitigainai kedo, Tokyo-ni inai \{ #toshitemo / nara \}
   L-TOP Tokyo-LOC exist.NEG must but Tokyo-LOC exist.NEG \{ even.if if \}
   kare-wa Osaka-ni iru.
   he-TOP Osaka-LOC exist
   ‘I’m sure Lupin is not in Tokyo, but even if Lupin is not in Tokyo, he is in Osaka.’
b. Rupan-wa Tokyo-ni *iru* nitigainai kedo, Tokyo-ni *ina*i [toshitemo / nara].

L-TOP Tokyo-LOC exist must but Tokyo-LOC exist.NEG { even.if if }
kare-wa Nihon-ni *iru*.

he-TOP Osaka-LOC exist

‘I’m sure Lupin is in Tokyo, but even if Lupin is not in Tokyo, he is in Osaka.’

**BAD and triviality** We argue that BAD is infelicitous because it is a tautology, which is generated by following steps: (i) the antecedent part of (4a) “Rupan-ga Tokyo-ni *ina*i” ‘Lupin is not in Tokyo’ does **not entail** ‘Lupin is in Japan,’ but rather it **presupposes** ‘Lupin is (in somewhere) in Japan.’ Note that this can be verified by the well-known test for semantic presuppositions: the presupposition ‘Lupin is in somewhere in Japan’ remains when “Rupan-ga Tokyo-ni *ina*i” is embedded under a presupposition hole (e.g., interrogative operators or negations, Karttunen 1973). (ii) Then, the consequent part of (4a) “kare (: Rupan)-wa Nihon-ni *iru*” ‘he (: Lupin) is in Japan’ simply asserts ‘Lupin is in Japan.’ (iii) Thus, in (4a), since the presupposition of the antecedent and the assertion of the consequent express the same content ‘Lupin is in Japan,’ (4a) ends up being a tautology. It is worth noting that a continuity of ‘a presupposition (ϕP) to an assertion (ϕA)’ generally leads to this sort of triviality if ϕP = ϕA (van der Sandt 1992), e.g. (7). Unlike BAD, GOOD is a felicitous concessive conditional, since GOOD has the form [ϕA ⇒ ϕP] (as in (7a)), which is not a tautology.

7 a. It’s raining. John knows that [it’s raining]. (ϕA ⇒ ϕP)
b. John knows that [it’s raining]. #It’s raining. (ϕP ⇒ ϕA)

**Turning a tautology into a concessive conditional** Why does BAD become felicitous when toshitemo occurs instead of *nara*? More specifically, why does the triviality expected to be carried out by BAD disappear in toshitemo-conditional (cf. (4b))? To answer this question, we propose that toshitemo is a presupposition plug (Karttunen 1973), a semantic operator that blocks off the projection of presuppositions. It is reasonable to analyze toshitemo as such since its semantics (in (5b)) contains the meaning identical to the non-factive predicate believe (as ‘BELIEVE’), which has been considered to be a typical plug (cf. Potts 2014). For example, in (8a), the implicative verb *otira* ‘fail’ presupposes the fact that ‘Aya took the exam’ (cf. Karttunen & Peters 1979), but the toshitemo-clause in (8b) does not presuppose it. Given this suggestion, in (4b), the presupposed content ‘Lupin is in Japan’ needs not to be projected since toshitemo as a plug blocks the presupposition, which prevents the sentence from becoming a tautology.

8 a. #Aya-wa senshuu-no *shiken-oti-ta* ga, Aya-wa sono shiken-ni *oti-ta*.

A.-TOP last.week-GEN exam-ACC take.NEG-PAST but A.-TOP that exam-for fail-PAST

‘Aya failed the exam.’

b. Aya-wa senshuu-no *shiken-o ukenakat-ta* ga, Aya-ga sono shiken-ni *oti-ta* 

A.-TOP last.week-GEN exam-ACC take.NEG-PAST but A.-NOM that exam-for fail-PAST
toshitemo, hahaoya-wa okoranakat-ta daroo.
even.if mother-TOP get.mad-NEG would

‘Aya didn’t take the exam last week, but if she failed it, her mother wouldn’t have been angry.’

**Explaining GOOD vs. BAD** Why can GOOD induce the concessive meaning without toshitemo (cf. (4c))? In other words, why does GOOD not become a tautology despite the fact that it has the same underlying form as BAD? We propose that GOOD is essentially the concessive conditional that conveys a notion of ‘concessiveness’ (≈ ‘even if/even when’), which is generated as follows: (i) in (4c) with *nara*, the consequent part q (=‘he(=Lupin) is not in Tokyo’) presupposes ‘Lupin is (in somewhere) in Japan’ (= PRES(q)). (ii) PRES(q) is identical to the antecedent part p (=‘Lupin is in Japan’), p = PRES(q); uttering nara(p) is semantically vacuous in (4c). (iii) This vacuity does not lead to oddness (since GOOD has the form [ϕA ⇒ ϕP], cf. (7a)) but rather conveys an additional implicature—the concessive implicature. As for BAD, however, no such equivalence exists between the antecedent and the consequent; the consequent part (=‘Lupin is in Japan’) has no presupposition which is equal to the the meaning of the antecedent part. Thus, the only strategy for BAD to be a fine concessive conditional is to use toshitemo instead of *nara*. 
Conclusion  In this paper, we have proposed a satisfying explanation of the contrast in HCs that cannot be captured by the existing theories of informational oddness. We will moreover show that it is not the case that the insertion of toshitemo is ‘optional’ in the GOOD case, cf. (4c). We will suggest that this is because the question under discussion (QUD, Roberts 1998) differs from one case to the other: when a ‘general’ QUD (e.g. “Is Lupin in Japan?”) exists in the discourse, toshitemo cannot be used; on the other hand, when a ‘more defined’ QUD (e.g. “Is Lupin in Tokyo?”) exists, toshitemo is felicitous to be used.