Constructing Concessive Conditionals

1. AN OVERVIEW Despite agreement that concessive conditionals are a type of conditional as the name indicates, the source of conditionality is not always apparent. Concessive conditionals in Japanese may be a good example, as there is no overt conditional morpheme/structure. I present an analysis that compositionally derives the 'even if' meaning in Japanese. The key is that the conditionality is build up from the interaction of a clausal 'and' conjunction and a morpheme that expresses unexpectedness with respect to the speaker's knowledge about the normal situation. This approach enables us to deal with the concessive conditionals without an overt conditional morpheme and gives us a number of theoretical implications.

2. DATA Guerzoni and Lim (2007) derive the concessive conditional meaning in English by applying *even* to the conditional *if* sentences. Following Karttunen and Peters (1979), *even* is considered to be an element that introduces two kinds of presuppositions: (i) the additive/existential meaning, and (ii) the scalar meaning. Their approach, which assumes the conditional construction/meaning as given, is not directly applicable to the Japanese counterpart (1), since there is no conditional morpheme, cf. (2).

(1) *John-ga   kite-mo   Mary-wa   kigen-ga   warui*
     John-NOM   come.GER-***mo***   Mary-TOP   mood-NOM   bad.NONPAST
     'Even if John came, Mary would be in a bad mood all day.'

(2) *John-ga   kitara   Mary-wa   kigen-ga   warui*
     John-NOM   come.**if**   Mary-TOP   mood-NOM   bad.NONPAST
     'If John came, Mary would be in a bad mood.'

The *even if* meaning in Japanese is built up on the gerundive subordinate clause followed by the particle *mo*, which contributes to the additive meaning 'also' by itself. Without this particle, the gerundive construction (3) simply results in an 'and' conjoined sentence.

(3) *John-ga   kite   Mary-wa   kigen-ga   warui*
     John-NOM   come.GER   Mary-TOP   mood-NOM   bad.NONPAST
     'John came, and (so) Mary is in a bad mood.'

The sentence (3) means that John came and Mary is in a bad mood, thus no conditionality. My analysis tackles this problem of the emergence of conditional force by not only accounting for the particle *mo*, but also for the gerundive construction (3) that derives the conjunctive meaning. This analysis has an advantage over other analyses which may work smoothly only when the conditional morpheme is apparently observable in the concessive conditionals.

3. ON GERUND First, I propose a denotation for the gerundive morpheme as in (4).

(4) $[\![\text{GER}]\!] = \lambda p_{\langle s,t \rangle} \lambda q_{\langle s,t \rangle} \lambda w.\ p(w) \wedge q(w) \wedge \forall w'[w' \in \text{NORM} \rightarrow [p(w') \leftrightarrow q(w')]]$

This is a function that adds one proposition to another and tells us that they are both true in the evaluation world w, i.e. $(p(w) \wedge q(w))$. The rest of the denotation indicates what is presupposed to be 'normal' in the present discourse which is described in terms of w' and its accessibility condition ($w' \in \text{NORM}$). Here, w' is a world in which the two propositions hold the same truth value, i.e. either both true or both false. To see what has been said about the evaluation world w again, we can tell that w is one of those presupposed-to-be-normal cases represented in terms of w'. I suggest that this relationship of worlds derives the 'and **so**' interpretation in (3), which signals the speaker's assumption that Mary's being in a bad mood is a situation that reasonably follows from the situation of John's coming. In other words, the 'so'-like meaning is based on what is presupposed to be normal for the speaker.

4. ON *Mo* As a next step, I propose a denotation for the additive particle *mo* as follows.

(5) $[\![mo]\!] = \lambda f_{\langle st,st\rangle}\lambda q_{\langle s,t\rangle}\lambda w.\ q(w)\wedge \exists q'[q' \neq q \wedge f(q')] \wedge \forall q'[q' \neq q \rightarrow f(q) < f(q')]$

The first argument f will be filled with the gerundive clause [John-NOM come.GER], a function that takes another proposition, and the next argument q with [Mary-TOP mood-NOM bad]. What *mo* does is the following: first, it asserts the truth of q in the evaluation world, introduces an alternative proposition q', and states a relationship of q and q' with respect to f by the measurement of likelihood (represented with '<'). Importantly, what fills the slot f, the gerundive clause, has the notion of expectedness already. That was derived by my gerundive morpheme in (4), where I suggested how the 'so'-like interpretation arises. The denotation (5) is also motivated by the following fact, where *mo* is attached to an adjunct phrase 'three pieces' to express the speaker's surprise to the abnormality.

(6) *John-ga   keeki-o   san-kire-**mo**   tabeta.*
      John-NOM   cake-ACC   three-pieces-*mo*   eat.PAST

‘John ate three pieces of cake.’ (Eating three pieces of cake is unusually a lot.)

5. GERUND-*mo* When *mo* is applied to the gerundive construction, the main clause that Mary is in a bad mood (that fills q in (5)) is assigned to be true in the evaluation world w, but says nothing about the truth of John's coming in w.

(7) $[\![(1)]\!] = 1$ iff, in the evaluation world w, $in\text{-}a\text{-}bad\text{-}mood(Mary)(w)\wedge$
$\exists q'[q' \neq in\text{-}a\text{-}bad\text{-}mood(Mary)\wedge [\![\text{GER}]\!](came(John))(q')]\wedge$
$\forall q'\left[\ q' \neq in\text{-}a\text{-}bad\text{-}mood(Mary) \rightarrow \left[\begin{array}{c} [\![\text{GER}]\!](came(John))(in\text{-}a\text{-}bad\text{-}mood(Mary)) \\ < [\![\text{GER}]\!](came(John))(q') \end{array}\right]\ \right]$

The gerundive marked clause [John-NOM come.GER] is used as a tool to derive the alternative q' and as a part of the expectedness comparison made between q and q'. As a whole, the meaning of concessive conditionals here has three components: it says that (i) Mary is in a bad mood in the evaluation world, (ii) there is an alternative proposition q' other than Mary's being in a bad mood given John's coming, and (iii) the expectedness represented in the sentence 'John came, and **so** Mary is in a bad mood' is less than the expectedness represented in (ii), i.e. 'John came, and **so** q'.' The meanings (ii) and (iii) correspond to the additive/existential and the scalar presuppositions in the sense of Karttunen and Peters (1979). The derived meanings (i-iii) formally recapture Fujii's (1989) general description of the gerundive-*mo* construction.

6. CONSEQUENCES The present analysis gives us a new look at the construction/meaning of concessive conditionals and its representation in a linguistic model. A possible world framework as presented here enables us to link between conditionals and modal expressions (Kratzer 1981, 1986). It is worth noting that the combination of the gerundive morpheme and *mo* also does appear in the Japanese deontic modal construction. One can extend this analysis to a well-examined 'even' element in Japanese, *demo*, as in [*Mary*]-*demo kuru* 'Even Mary would come'. Although it is often treated as one word, *demo* actually consists of the copula *da* in the gerundive form *de* and *mo*. Since *mo* could appear independently as in (6) to express unexpectedness meaning, Nakanishi (2006) assumes *demo* and *mo* are the same. My proposal will argue against such a view, supporting Yoshimura's (2007) claim that they are indeed different. Another important aspect of *mo* is its relationship with wh-phrases. For example, by just substituting *John* with *dare* 'who' in (1), the sentence then turns into 'whoever comes, Mary would be in a bad mood'. Gawron (1999) calls this the Universal Concessive Conditional, who argues that it is indeed a kind of conditionals and the antecedent clause is closely related to the question formation. Contrary to previous research (Nishigauchi 1991, Shimoyama 2006), which does not take into account the role of gerundive construction, my account may shed light on wh-phrases in Japanese from a different perspective.

REFERENCES: FUJII, S. 1989. Concessive Conditionals in Japanese: A Pragmatic Analysis of the S1-TEMO S2 Construction. GAWRON, J.M. 1999. Universal Concessive Conditional and Alternative NPs in English. GUERZONI, E. & LIM, D. 2007. Even If: Factivity and Focus. KARTTUNEN, L. & PETERS, S. 1979. Conventional Implicatures. KRATZER, A. 1981. The Notional Category of Modalilty. KRATZER, A. 1986. On Conditionals. NAKANISHI, K. 2006. Even, Only, and Negative Polarity in Japanese. NISHIGAUCHI, T. 1991. Construing WH. YOSHIMURA, K. 2007. Focus and Polarity: 'even' and 'only' in Japanese.