On the Cartography of Modality in Japanese

The structure of the left periphery proposed by Rizzi (1997) has been discussed for various languages in generative grammar. In Japanese, research has been done mainly for root sentences (i.e., main clauses), but not much for other clauses, such as embedded and relative clauses. The aim of this paper is to investigate the cartography of modality, in terms of occurrence of modals in relative clauses (RCs) in Japanese.

Based on Nitta (1991), it has been argued that the modal forms in Japanese main clauses can be roughly classified into two types: G(enuine)-modals and Q(uasi)-modals.

(1) a. G-modals: mai ‘won’t’, daroo ‘will’, mashoo ‘shall’, etc.
   b. Q-modals: kamosirenai ‘may’, ni-tigainai ‘must’, beki ‘should’, etc.

One of the formal criteria for differentiating between G-modals and Q-modals is that the former is disallowed to be morphologically tensed or negated, while the latter is allowed.

(2) a. Taro-wa pizza-o tabe-mai/*-mai-ta/*-mai-nai.
   ‘Taro won’t eat/-wouldn’t eat/-won’t not eat pizza.
   b. Taro-wa hon-o yomu-kamoshirenai/-kamoshirena-katta/-kamoshirenaku-wa-nai.
   ‘Taro may/-might/-may not read books.’

These two types of modals are assumed to have their own projections as in (3). (Inoue 2008)

(3) a. Shacho-ga kokoni kuru-bekida-tta-daroo.
   President-Nom here come-have to (Q-modal)-Past-will (G-modal)
   ‘The president would have to come here.’

Although the exact syntactic positions of the two modals remain unclear, it can be argued that the position of G-modals is higher than that of Q-modals.

Furthermore, it is recognized that the G-modal can be classified from semantic and pragmatic points of view: U(utterance)-modals and E(pistemic)-modals.

(4) U-modals: na ‘don’t’, mashoo ‘shall’
   E-modals: daroo ‘will’, mai ‘won’t’, deshoo ‘will’

In her syntactic approach, Ueda (2008) claimed that the former is a C-type property which determines a sentence type and the latter is a T-type property that indicates how to construe a proposition. She also proposed that these two should be differentiated from the viewpoint of person restriction, and that U-modalP is higher than E-modalP as shown in (5).


From the data of Koto-clauses with E- and U-modals as in (6), Ueda (2008) proposed that U-modalP does not exist in the Koto-clauses.
(6) a. [watashi-ga Taro-ni tegami-o okuru-daroo-koto]-wa (E-modal)
   I-Nom Taro-to letter-Acc send-E.mod-NL-Top
   ‘That I will send the letter to Taro is…’

   b. *[watashi-ga Taro-ni tegami-o okur-oo-koto]-wa (U-modal)
   I-Nom Taro-to letter-Acc send-U.mod-NL-Top
   ‘That I shall send the letter to Taro is…’

   Note, however, that both E-modals and U-modals do not appear in RCs. Consider the examples in (7).

(7) a. *Taro-ga taberu-na oyatsu
   Taro-Nom eat-U.mod snack
   ‘the snacks that Taro must not eat’

   b.* Taro-ga taberu-deshoo oyatsu
   Taro-Nom eat-E.mod snack
   ‘the snacks that Taro will probably eat’

   This shows that G-modals are banned in RCs, no matter whether they are U-modals or E-modals, and that the CP-size of RCs should be smaller than that of Koto-clauses.

   In addition, according to Akaso & Haraguchi (2010), the structure of RCs with nominative subjects is FocP and that with genitive subjects is TP. Their claim comes from the different grammaticality of the data with a Focus Particle ‘-dake’, which can be assumed to be licensed by Focus-head in the CP-zone, along with Rizzi’s (1997) cartographic approach.

(8) Taro-dake-ga/*no non-da kusuri
   Taro-only-Nom/Gen take-Past medicine
   (‘the medicine that only Taro took’)

   Keeping this in mind, let us examine the relation between the FocP and E-modalP in RCs with nominative subjects. Consider example (9).

(9) *Taro-dake-ga nomu-deshoo kusuri
   Taro-only-Nom take-E-mod. medicine
   (‘the medicine that only Taro will take’)

   Since E-modals cannot appear in RCs, the position of E-modalP should be higher than that of FocP.

   As for Q-modals, RCs with nominative or genitive subjects allow them to occur.

(10) a. Taro-ga/no yomu-ni-tigainai hon
    b. Taro-ga/no miru-beki eiga
    Taro-Nom/Gen read-must book
    Taro-Nom/Gen watch-should movie
    ‘the book that Taro must read’
    ‘the movie that Taro should watch’

   This supports Inoue (2008) in that the positions of Q-modals are inside TP.

   Our proposal on the cartography of modality is summarized as shown in (11).

(11) [[…U-modalP…[E-modalP…[FocP…[…[TP [Q-modalP…]...]]]...]]]

   Conclusion: We have examined the hierarchy of modals such as U-, E-, and Q-modalPs, in terms of RCs. As for U-modalP, it is higher than any other modalP since it doesn’t appear in RCs. With respect to the hierarchy of E-modalP, we propose that it should be in CP-domain and that it can be higher than FocP. Finally, since Q-modals are allowed in RCs with both nominative and genitive subjects, positions of the Q-modalP should be inside TP.