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On Kakarimusubi in Old Japanese and Labeling under Minimal Search

Most researches on Kakarimusubi (KM)-constructions in Old Japanese (OJ) ((Ikawa 1998), (Watanabe 2002), and (Aldridge 2009) among others) have assumed that a constituent with a KM-particle such as *ka* moves, and focused on identifying the landing sites of the moved constituent. Not so much attention has been paid to other interesting questions KM-constructions pose listed below.
(1) a. Why can *ka* appear in sentence-medial position and in sentence-final position?
    b. Why is *ka* attached to a larger constituent containing a wh-phrase such as a relative clause?
    c. Why does *ka* always follow case-particles?
I would like to claim that we can provide principled answers for all these questions based on labeling of syntactic objects under minimal search.
    First, as (2a, b) show, *ka* can be in sentence-final position and in sentence-medial position.
(2) a. ... hototogisu   ima-mo naka-nu   **ka**
          little cuckoo now-still sing-not   Q
     '... little cuckoo, do you still not sing for me?'   (Man'yo shu: 4067)
     b. ... nani-**ka** sayareru
          what Q do harm
      '... what does harm?'   (Man'yo shu: 870)
Ka in sentence-final position makes the entire sentence a (yes-no) question in (2a), whereas in (2b), *ka* is attached to the subject wh-phrase *nani* (what) in a KM-construction for a wh-question.   Let us suppose that *ka* is the realization of the Q-feature. In (2a), *ka* can be assumed to be in C, taking the sentence preceding it as a complement, and strong enough to label the entire sentence as <Q> by itself, as in (2a') (Chomsky 2013, 2014).
(2) a'.   [<Q> [hototogisu ima-mo naka-nu] ka<Q>]
    For (2b), in which *ka* is not in sentence-final position, we can assume that <Q> is in C in sentence-final position, but that unlike *ka*, it is not strong enough to label the sentence by itself like [+WH]-C in English.   Then, an XP-YP structure must be created to label the sentence as <Q, Q> based on the presence of matching features in XP and YP.   As in (2b'), *ka* is attached to *nani*, and *nani-ka* is supposed to move to create an XP-YP structure, leaving its copy *<nani-ka>*.
(2) b'. [<Q, Q> [nani-ka<Q>]][[<nani-ka> sayare-ru] [C <Q>]]]
In the presence of <Q> in *nani-ka* and C, the entire sentence can be successfully labeled as <Q, Q>. Thus, we can say that *ka* in sentence-final position and *ka* in KM-constructions instantiate the two typical cases of labeling a syntactic object.
    Given the relevance of labeling for KM-constructions, an answer for (2b) also naturally follows. When a wh-phrase is contained in an island for movement such as a relative clause, *ka* needs to be attached to a larger phrase containing the island ((Ikawa 1993) and (Whitman 2001)).
(3) [[ika naru koto-wo   omowi-keru]   ori-ni] -**ka** yome-ru
     how be   thing-ACC think   Past-aux time-at Q made-Aux(honorific)
    Lit.'What kind of thing did he make this poem while he was thinking about _?' (Tosa nikki: 124)
The wh-phrase *ika naru koto-o* (what kind of thing-ACC) in (3) is contained in the relative clause *[[[ika naru koto-wo] omopi-keru] ori](-ni)* ((at) the time he was thinking of what kind of thing), and *ka* is attached not directly to the wh-phrase, but to the outermost PP containing the relative clause. Suppose that the principle of minimal search dictates that in an XP-YP structure, just the immediate constituents of XP and YP can be checked for matching features.   Then, to label the syntactic object created in a KM-construction with *ka*, *ka* has to be the immediate constituent of the moved phrase. As *ika naru koto-wo* itself cannot move out of the relative clause, to be found under minimal search, *ka* needs to be attached to the larger phrase PP containing the relative clause, inducing large-scale pied-piping, as in (3').

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(3') [[[[ika naru koto-wo omopikeru] ori]-ni-ka<Q>] [C <ika naru koto-wo omopikeru ori-ni-ka>
    yomeru [C <Q>]]]

In (3'), the matching features, <Q> in *ka* and <Q> in C, are successfully identified under minimal search, and the created syntactic object is labeled as <Q, Q>.   In this context, notice that *ka* can be attached even to a complement clause containing a wh-phrase even though it is not an island.

(4) ... [[idure-wo   saki-ni kowi-mu]   -to] **-ka** mi-si
        which-ACC   first   love-Aux(speculation)   that Q think-Aux(past)

    '... Which did I think that I would love first?'   (Kokin waka shu: 850)

Ka can be attached to a larger constituent containing a wh-phrase.   In (4'), the *to*-clause is a larger constituent containing the wh-phrase *idure-wo*.   Then, it is a natural possibility that *ka* is attached to the *to*-clause and induces its movement even though it is not an island for the movement of *idure-wo*.

    The analysis developed above based on labeling under minimal search also gives a principled answer for (1c).   *Ka* cannot be followed by a case-particle.

(5) ... ta-ga   tamoto-wo-**ka** wa-ga   makurakamu
        who-GEN   arm-ACC-Q   I-NOM   make-pillow

    'Whose arm can I make my pillow?'   (Man'yo shu: 439)

In (5), *ka* follows the accusative case-particle *wo*.   Yamada (1936), which has extensively studied texts in OJ, explicitly says that *ka* cannot precede a case-particle.   In order to be found under minimal search, *ka* has to be the outermost element.   In (5), under minimal search, *ka* can be successfully found and contribute to the labeling of the created syntactic object as <Q, Q> as an immediate constituent of the moved phrase *ta-ga tamoto-wo-ka*.   If *ka* were followed by *wo*, the relevant part of (5) should be like (5').

(5') ...[[[ta-ga tamoto]-ka]-wo]

In (5'), *ka* cannot be found under minimal search as it is contained in a phrase headed by *wo*, and the sentence would be left unlabeled.   Unlike *ka*, non-KM particles such as *sura* (even) can precede *wo*.

(6)   ... parusame-**sura**-wo   madukapi-ni suru
        spring rain-even-ACC   watch   as make

    '..., she sent me even spring rain as a watch.'   (Man'yo shu: 1698)

As a non-KM-particle, *sura* should be free from minimal search, and hence can precede *wo*. Furthermore, *ka* in sentence-internal position in Modern Japanese, which just induces an indefinite reading of an interrogative phrase, precedes the accusative case-particle *o*.

(7) John-ga   dare-ka-o   tataita
    John-NOM who-Q-ACC   hit
    'John hit someone.'

If *ka* in sentence-internal position in Modern Japanese lacks a Q-feature and hence does not contribute to the labeling of the sentence, it is natural that it precedes the case-particle *o* as it is free from minimal search.   In this way, labeling under minimal search derives three important characteristics of KM-constructions in OJ.

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