Loss of Overt Wh-Movement in Old Japanese

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1 Introduction

In this paper, I would like to consider the mechanism which drives overt wh-movement. In recent theorizing, Chomsky (1995:ch.4) attributes it to the presence of a strong Q feature on the interrogative C. He claims that the strong feature must be removed by checking as soon as it is introduced into the structure. The wh-feature of a wh-phrase enters into the checking relation with the strong Q, resulting in overt displacement of the (entire) wh-phrase. The wh-feature and the Q feature themselves are [+ Interpretable], so that when Q is weak, no movement or checking has to take place. The language with weak Q, therefore, has only wh-in-situ.

Chomsky (2000), on the other hand, proposes that the wh-feature is [-Interpretable], contrary to Chomsky 1995:ch.4. The reason for this shift is purely theory-internal. The notion of strong features is eliminated in the framework of Chomsky 2000. The EPP feature is instead extended to C and the light verb, accounting for overt phrasal movement in general. The EPP feature alone, however, cannot drive movement. It is proposed that uninterpretable features are responsible for keeping the candidate for movement active. It follows that a wh-phrase must have an uninterpretable feature in order to be eligible for raising. The wh-feature is now given that characterization.

Thus, there are two theories regarding the cause of overt wh-movement. The choice between the two has to do with whether the wh-phrase can have a [-Interpretable] feature. The major goal of this paper is to present empirical evidence that Chomsky's (2000) theory is on the right track.

Our discussion starts by describing the system of wh-questions in Old Japanese in section 2. The core empirical material is based on the recent discovery that overt

displacement of an entire wh-phrase once existed in Old Japanese and was lost subsequently. Section 3 examines this and related changes. Section 4 turns to a theoretical account of these changes.

2 The Text-book Characterization of "Kakarimusubi"

Old Japanese has an interesting system of wh-agreement, called Kakarimusubi in the traditional Japanese philological studies. Kakarimusubi is the system in which the presence of a focus particle induces a change in the inflectional ending of the verb. In wh-questions, a wh-phrase is accompanied by the particle *ka*, and the verb has to take the adnominal ending (rentai-kei). The focus of yes-no questions is marked by *ya*, though *ka* was capable of this function as well in the 8th century. Again, the verb takes the adnominal form. Declarative clauses also take the adnominal form when a focus phrase marked by *zo*[1] or *namu* appears, but they take the perfective form (izen-kei) when the focus particle is *koso*. In declarative clauses without a focus particle, the conclusive form (shuushi-kei) is used.

(1)   Kakarimusubi

        ... XP-particle V

        a. **ya**, **ka**, zo, namu   --> rentai-kei (adnominal form)

        b. koso   --> izen-kei (perfective form)

        c. otherwise   --> shuushi-kei (conclusive form)

In this study, we concentrate on *ya* and *ka* since these are the ones found in interrogative sentences.

    Relevant examples are shown in (2) and (3).

(2)   a. Nihibari Tsukuba-wo sugite *ikuyo*-**ka**   ne-**tsuru**?

            Nihibari Tsukuba-ACC passed how-many-nights-KA sleep-PERF

            "How many nights have I/we slept after passing Nihibari Tsukuba?"

                                    (Kojiki)

        b. ... atamitaru tora-**ka** **hoyuru**? ...

              irritated   tiger-KA roar

            "Is it an irritated tiger that is roaring?"   (Man'youshuu #199)

(3)   Hitoyo-ni-ha   futatabi mie-nu chichi-haha-wo   okite-**ya** nagaku

            one-life-in-TOP again   see-NEG father-mother-ACC leave-YA for-ever

            wa-ga   wakare-na-**mu**?

            I-NOM separate-PERF-will

            "Am I going to separate myself for ever from my father and mother, whom

            I will never see again in this world, leaving them behind?"

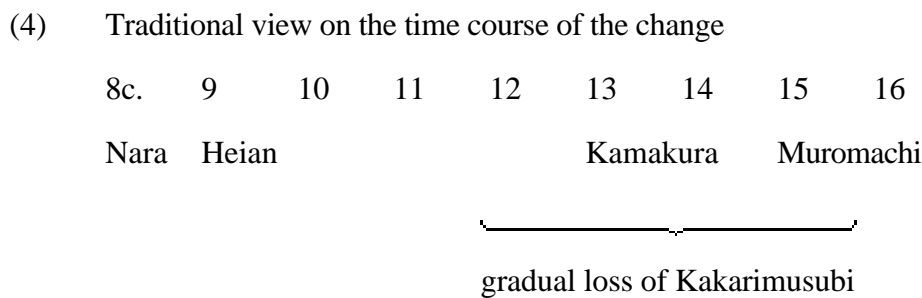   (Man'youshuu #891)

(2a) is an instance of a wh-question. (2b) and (3) are yes-no questions, with *ka* and *ya*, respectively. Note the distinct adnominal forms used in (2), as opposed to the conclusive forms *-tsu* and *hoyu*. Some verbs and auxiliaries, however, have the same ending for the conclusive and adnominal forms, as in (3).

Thus, there are two elements involved in the system of Kakarimusubi: a focus particle and the associated verbal ending. Both of them were lost in the history of Japanese, so that Kakarimusubi no longer exists in Modern Japanese. In the literature of traditional Japanese studies (Funaki 1987:302 and Ohno 1993:344-345, among others), the demise of Kakarimusubi is often attributed to the collapse of the distinction between the adnominal and the conclusive forms which took place in the 12th through 15th century and is considered to have been completed by the Muromachi Period (15-16th century). According to this view, the focus particles were lost because the

associated verbal ending lost its distinctive status. In other words, the change in the inflectional system is causally prior to the loss of the focus particles.

In the following discussion, however, I claim that this picture must be modified significantly. As far as wh-questions are concerned, the traditional explanation is shown to be completely wrong: both the change in the inflectional system and the loss of the wh-particle *ka* were caused by another change which took place earlier. A closer examination reveals that the demise of Kakarimusubi started much earlier than is usually thought.

Below, the time course of the change traditionally conceived is shown together with the names of the periods, which correspond to different political systems.

(4)   Traditional view on the time course of the change

8c.	9	10	11	12	13	14	15	16
Nara	Heian				Kamakura		Muromachi	

gradual loss of Kakarimusubi

In the account presented below, I demonstrate that the essential change had already taken place in wh-questions by the beginning of the 11th century, when *The Tale of Genji* was written. The adnominal-conclusive distinction was still alive at that time.

3   Loss of Overt Wh-Movement

In this section, I will discuss findings that force us to change our views about when Kakarimusubi was lost in the history of Japanese. The key factor is the role played by overt wh-movement in the syntax of Old Japanese.

3.1   *Overt wh-movement in the Nara Period*

A significant observation in understanding Kakarimusubi is made by Nomura (1993). He has shown that the wh-phrase must precede the nominative-marked subject in the Nara Period (8th century). I interpret this as due to obligatory overt wh-movement. Kakarimusubi should then be analyzed as an instance of wh-agreement.

Some examples displaying this word order restriction are given in (5).

(5)　a.　Kasugano-no fuji-ha　　chiri-ni-te　*nani-wo-**ka**-mo*　mikari-no
　　　　Kasugano-GEN wisteria-TOP fall-PERF-CONJ what-ACC-KA-MO hike-GEN
　　　　hito-**no**　　　ori-te　　kazasa-**mu**?
　　　　person-NOM pick-CONJ wear-on-the-hair-will
　　　　"Since the wisteria flowers at Kasugano are gone, what should hikers pick
　　　　and wear on the hair?"　　　　　　　　　　　(Man'youshuu #1974)

　　　b.　Kado tate-te　　to-mo　　sashi-taru-wo　*izuku-yu-**ka***　　　imo-**ga**
　　　　gate close-CONJ door-also shut-PAST-ACC   where-through-KA wife-NOM
　　　　iriki-te　　yume-ni　mie-**tsuru**?
　　　　enter-CONJ dream-LOC appear-PERF
　　　　"From where did my wife come and appear in my dream, despite the fact
　　　　that I closed the gate and shut the door?"　　　　(Man'youshuu #3117)

Even though the wh-phrase does not appear in the absolute clause-initial position, it appears in front of the nominative subject, which is marked by *ga* or *no*. In fact, the focus particle *ka* was not limited to wh-phrases in the Nara Period. It could be attached to a non-wh-phrase, as we have seen in (2b) above. Nomura (1993) examines the ordering restriction on *ka*-marked phrases in *Man'youshuu*, and concludes that the *ka*-marked phrase must come after the *ha*-marked topic but must precede the nominative-marked subject, whether it is a wh-phrase or not. The finding by Nomura is summarized in (6), where the number of examples instantiating each ordering pattern is given.

(6)   Ordering of the subject and the KA-marked phrase in *Man'youshuu*

(Nomura 1993)

			instances
I.	Nominative subject:	XP-ka ... Subj-no/ga ...	approximately 90
		Subj-no/ga ... XP-ka ...	4 (or 5)
II.	Topicalized subject:	XP-ka ... Subj-ha ...	2 (or 3)
		Subj-ha ... XP-ka ...	approximately 50
III.	Bare subject:	XP-ka ... Subj ...	13
		Subj ... XP-ka ...	approximately 30

The status of unmarked subjects is not clear, but when it comes to marked subjects, the ordering restriction is obeyed in the overwhelming majority, as shown in (6I, II). Nomura (1993) only counts *ha*-marked topics functioning as subjects, but Sasaki (1992:19-20) independently reaches the conclusion that the *ha*-marked topic, whether the subject or not, must precede the *ka*-marked focus phrase. Thus, Old Japanese during this period is subject to the word order restriction shown in (7a).[2]

(7)   a. Topic (...) Wh-/Non-wh-focus (...) Subj$_{Nom}$... V

b. ... Hatsuse-no   kawa-**ha** ura   na-mi-**ka**   fune-**no**

Hatsuse-GEN river-TOP shore absent-ness-KA boat-NOM

yori-ko-nu?...

approach-come-NEG

"Is it because Hatsuse River has no shore that no boat comes near?"

(Man'youshuu #3225)

All the three can appear together in the designated order, as in (7b).

Nomura (1993) also observes that the *ya*-marked focus phrase obeys the same word order restriction. I would like to propose that the ordering restriction reflects the clause structure in (8), which is proposed by Puskas (1997) for Hungarian, following Rizzi's (1997) split C system.[3]

(8)   [$_{TopP}$ Spec Top [$_{FocP}$ Spec Foc [$_{IP}$ Subj VP I]]]

The *ka-* or *ya*-marked phrase is raised to Spec of Foc(us)P(hrase) during the Nara Period.

Recognizing overt wh-/focus-movement in Old Japanese makes it possible to understand why it used to have the system of Kakarimusubi.

There is a strong cross-linguistic tendency that wh-agreement is triggered by overt movement of an entire wh-phrase. Wh-agreement is a phenomenon in which verbal inflection and complementizers display distinct morphosyntactic properties in the clauses which immediately contain the displaced wh-phrase and its traces. Its exact mechanism is controversial, but it is safe to assume that the presence of a wh-phrase or its trace in Spec of CP is crucially involved. See Watanabe 1996 for discussion of the phenomenon in various languages and references. Here, let us illustrate its sensitivity to overt wh-movement with Moore, a language discussed by Haïk (1990). Consider (9), from Haïk 1990:349, 354.

(9)   a.   A Bil ri-a-**lame**/*ri-a.

             Bila ate-it-R/   ate-it-IR

             "Bila ate it."

        b.   Aŋ́da (n) ri-a /   *ri-a-**lame**?

             who   ate-it-IR/ate-it-R

             "Who ate it?"

c. a Pok yã-**a**/*yã ãnda zaame?

Poko see-R/see-IR who yesterday

"Who did Poko see yesterday?"

In Moore, declarative clauses use the realis morphology, as in (9a). In wh-questions, the irrealis form must be used when overt wh-movement takes place, as shown in (9b). Wh-in-situ, however, requires the realis form, as in (9c). This is not a pattern limited to Moore. It is the generalization which applies to most cases of wh-agreement. In fact, the only instances that I know of where wh-agreement is triggered within the logical scope of the wh-phrase which is not yet raised to its scope position are deletion of the downstep in Kikuyu (Clements 1984), and special verbal morphology in Sinhala (Kishimoto 1992). These two exceptional cases, however, are also anomalous in their morphological realization. Kikuyu has an additional tone-related wh-agreement phenomenon which conforms to the generalization.[4] The special verbal morphology in Sinhala alternates with a Q particle which can attach to the verb under certain contexts. For this reason, it may not be appropriate to characterize these two phenomena as typical wh-agreement. Thus, we can conclude that if a language exhibits a wh-agreement phenomenon, it always shows sensitivity to overt wh-movement.

To return to Old Japanese, it is now very plausible to consider Kakarimusubi as a well-behaved example of wh-agreement triggered by overt wh-movement. It is movement to Spec of FocP, strictly speaking, but it is A-bar movement anyway. The use of the adnominal form is a modification of verbal morphology typical of wh-agreement. There is nothing special about the existence of Kakarimusubi in Old Japanese from the viewpoint of UG.[5]

3.2   *Failure of raising and related changes in the Heian Period*

Kakarimusubi is considered in the literature to have coexisted with wh-in-situ in the Heian Period (9-12th century). The standard position had been that the same is true in

the Nara Period. As we have seen in the previous section, however, Nomura's (1993) study has shown that overt wh-movement takes place in the Nara Period. It is therefore interesting to note that Nomura (1996) points out that the word order restriction in clauses containing a *ka*-marked focus no longer holds in the Heian Period.[6] Here is an example of such wh-in-situ, where the nominative subject precedes the wh-phrase.

(10)   Medurashiki hodo-ni-nomi aru gotaimen-**no** *ikade*-**ka**-ha   oroka nara-mu?

              rare   extent-in-only is   meeting-NOM how-KA-TOP slack be-will

              "How could such an infrequent rendez-vous not be passionate?"

                                                                              (Genji, Sakaki)

In fact, examples containing an overt nominative subject marked by *ga* or *no* seem to be quite rare among wh-questions. Though Nomura does not give statistical data on this, my search turned up no relevant example in the first four volumes of *The Tale of Genji*, a 54-volume series of stories in the early 11th century, considered to be the best literary work of the period. Further search in the next six volumes yielded only three. (10) is one of them. Perhaps it is more accurate to say that there is no more evidence for overt wh-movement in the Heian Period.

It should be noted that the adnominal ending was still consistently used in wh-questions at this time. (10) happens to have a final auxiliary which has the same form for the adnominal and conclusive endings, but when the finite verbal element has distinct forms, the adnominal ending was used.[7] If Kakarimusubi is an instance of wh-agreement, it would be very surprising to find it still alive in the absence of overt wh-movement. There is reason to believe, however, that the loss of overt wh-movement indeed undermined the special status of the adnominal form, though a little more gradually than is expected, the slow pace of the change being due to an additional complicating factor. Space limitation prevents me from discussing this additional

factor, which has to do with the relation between Nominative Case and verbal inflection. In this paper, we will look into the mechanism of overt wh-movement itself.

Three other significant changes also took place in the grammatical system of interrogative clauses during the Heian Period.

First, association of the particle *ka* with the wh-phrase was considerably weakened. Funaki (1968) observes that wh-questions without a focus particle increased in the Heian Period, on the basis of comparison between *Man'youshuu* and writings in the Heian Period. Among them are the first four volumes of *Genji.* The result is summarized in (11), where the form of the wh-phrase and that of the clause-final particle are indicated.

(11)　　Wh-questions in *Man'youshuu* and *Genji* (Funaki 1968)

		Man'youshuu	Genji (first 4 volumes)
a.	wh-zo ... ø	9	1
b.	wh-ka ... ø	**117**	27
	---		
c.	wh-ø ... ø	22	**44**
d.	wh-ø ... zo	---	8
e.	wh-ø ... zo-ya	---	1
f.	wh-ø ... ya	6	---
g.	wh-ø ... ka	2	---

The most frequent form of wh-questions in *Man'youshuu* is the one in which the wh-phrase is accompanied by *ka* and there is no special particle in the clause-final position, namely, (11b). In *Genji*, on the other hand, (11c) outnumbers (11b), even though the latter still appears to be a major type of wh-question.

Independently of Funaki's work, Isobe (1990) examines the form of wh-questions in the entire 54 volumes of *Genji.* Isobe's statistics are shown in (12).

(12)   Forms of wh-questions in *Genji* (Isobe 1990)

   a. wh-ka ... ø   176

   b. wh-ka ... zo   3

   ----

   c. wh-ø ... (V)-ni-ka (ara-mu, etc.)   167

   d. wh-ø ... zo   180

   e. wh-ø ... ø   ?

He does not count wh-questions which are found by Funaki (1968) to be the most frequent in the first 4 volumes, namely, type (12e). The question mark indicates this. Isobe, however, isolates a significant type which is not given recognition in Funaki's study, namely, (12c). It is not clear whether Funaki (1968) includes the examples of the type in (12c) in his statistics. But if so, it becomes easy to assume that (12) is a more or less faithful projection of the partial counting in (11), because (11b) should be the combination of types (12a) and (12c).[8]

   Among the forms in (12), (12c) and (12d) are the major innovations in the Heian Period. Significantly, the wh-phrase itself is free from a focus particle in both of them. The point is less obvious in (12c), because the particle *ka* appears after all. But the particle *ka* here is located in the clause-final part of the sentence, though it itself is not clause-final. (12c) is related to a new construction introduced in the Heian Period, where the adnominal form of the verb is followed by the clause-final sequence *ni+ari* "be", which fuses into *nari*. The particle *ka* in (12c) comes between the particle *ni* and the copular verb *ari*, preventing the fusion.

   (12d) involves a clause-final particle *zo*, which can appear in declarative clauses as well. (12d) becomes the dominant form of wh-questions in later periods, especially in the Muromachi Period, as shown in Nagase 1967. See also Yamaguchi 1990 and Yanagida 1985.

Representative examples of the major types are given in (13).

(13) a. *itsu-no-ma*-ni-**ka**   funade-shi-tsu-ramu?   (= 12a)

　　　　　when-GEN-second-LOC-KA sailing-do-PERF-would

　　　　　"When on earth did he sail out?"   (Genji, Akashi)

　　　b. *Ikani* motenai-tamahan-to suru **ni**-**ka**?   (= 12c)

　　　　　how treat-give.HON.V-C° do   LOC-KA

　　　　　"How is he going to treat me?"   (Genji, Azumaya)

　　　b'. *Ta*-ga   ohasuru-**ni**-**ka**   ara-mu?   (=12c)

　　　　　who-NOM be.HON-loc-KA be-will

　　　　　"Who is coming here?"   (Genji, Yume-no-Ukihashi)

　　　c. Kono nishi-naru ie-ha   *nani-bito*-no   sumu-**zo**?   (= 12d)

　　　　　this   west-be   house-TOP what-person-NOM live-Q

　　　　　"What person lives in this house to the west?" (Genji, Yuhugaho)

　　　d. *Ikanaru hito*-no   sumika nara-mu?   (= 12e)

　　　　　what   person-GEN house   be-will

　　　　　"Whose house would it be?"   (Genji, Yuhugaho)

Judging from (11) and (12), we can conclude that wh-phrases tend to appear without the particle *ka* in the Heian Period. Recall the traditional conception of Kakarimusubi as the adnominal form of the verb being induced by the presence of a focus particle (section 2). From this viewpoint, Kakarimusubi had already started to collapse in the Heian Period, at least in its focus part. This is a very surprising conclusion, because the Heian Period has been considered to be the Golden Age in which the classical grammatical system of Old Japanese flourished.[9] Careful investigation of the data, however, has shown that the traditional conception is an illusion. This illusion arises from two confusing factors. One is the fact that the other focus particles such as *ya*, *namu*, and *zo* were still alive in the Heian Period. It is only

in wh-questions that the Kakarimusubi system started to be lost. Second, type (12a) appears to remain as a major form of wh-questions, even if (12c) is put aside. This second point, however, must be called into question, because wh-questions with the particle *ka* are no longer what they used to be.

According to Isobe (1990) again, more than half of the cases of type (12a) (and (12b)) wh-questions in *Genji* are rhetorical questions. This tendency is not found with the other major forms of wh-questions. (14) indicates the break-down of the 179 examples that constitute (12a) and (12b).

(14)   *Ka*-marked wh-questions in Genji (Isobe 1990)
         genuine questions: 84
         rhetorical questions: 95

In *Man'youshuu*, on the other hand, only 12 examples of type (11b) are reported to be rhetorical questions, according to Omodaka (1941:137). Thus, the ratio of genuine wh-questions without the focus particle in Heian Period is a lot greater than (12) shows.[10] Yamaguchi (1990:128) also observes that wh-questions with *ka* attached to the wh-phrase tend to be rhetorical questions. This tendency was strengthened in later periods, with the form with *ka* further developing into an existential quantifier as in Modern Japanese. Cf. Ogawa 1976-77.

Lastly, the nature of the particle *ka* changed in another respect, too. Recall that *ka* could be used to indicate the focus in yes-no questions in the Nara Period, as in (2b). That is no longer the case in the Heian Period, however. This change is well-known since Omodaka 1941. Omodaka, in fact, has shown that the change was already under way during the Nara Period, pointing to the following pair in *Man'youshuu*:

(15)   a. Aratahe-no Fujie-no ura-ni   suzuki tsuru ama-to-**ka**   mira-mu
             epithet-GEN Fujie-GEN shore-LOC sea bass fish fisherman-as-KA see-will

tabi-yuku ware-wo?

travel me-ACC

"Will people take me going on a trip to be a fisherman who is fishing sea

bass off the shore of Fujie"? (Man'youshuu #252)

b. Shirotahe-no Fujie-no ura-ni izari-suru ama-to-**ya** mira-mu

epithet-GEN Fujie-GEN shore-LOC fish fisherman-as-YA see-will

tabi-yuku ware-wo?

travel me-ACC

"Will people take me going on a trip to be a fisherman who is fishing off the

shore of Fujie"? (Man'youshuu #3607)

(15b) is considered to be a rendition of (15a) during the mission to Korea in A.D. 736. (15a) itself is attributed to a period much earlier than that. Note the replacement of *ka* by *ya*. Ogawa (1976-1977) examines the use of *ka* in *The Tale of Taketori*, written in the early 10th century. By this time, it was no longer possible to attach *ka* to a non-wh-phrase.

(16)   distribution of *ka* in *Taketori* (Ogawa 1976-1977, 213)

with a wh-phrase   34
without a wh-phrase   0

Putting together the second and the third changes, it seems that the particle *ka* was being confined to rhetorical wh-questions in the Heian Period. That means that the form wh+*ka* functioned as a polarity item restricted to rhetorical questions.

To summarise, four major changes took place between the Nara and Heian Periods: i) loss of overt wh-/focus-movement, ii) decrease in the use of *ka* with the wh-phrase in genuine wh-questions, iii) the limited use of wh-*ka* in rhetorical questions, and iv) incompatibility of *ka* with non-wh-focus.

4   Theory of Wh-Movement

Let us now consider why these four changes took place, both in terms of the UG mechanism and from a diachronic point of view.

4.1   Bach's generalization and loss of overt wh-movement

In trying to account for the diachronic changes that took place during the Heian Period in Old Japanese, it is instructive to consider the theoretical status of Bach's (1971) generalization that SOV languages tend to have wh-in-situ.

(17)   Bach's generalization

Question movement should be confined to non-SOV languages.

Since the clause-final complementizer tends to be found in SOV languages (Dryer 1992, Greenberg 1963), Bresnan's (1970) complementizer substitution universal amounts to almost the same thing as Bach's generalization.

(18)   Bresnan's complementizer substitution universal

Only languages with clause-initial COMP permit a COMP-substitution

transformation.

Now, throughout its history, Japanese has been SOV, with a clause-final complementizer. In light of the two generalizations about wh-movement, Old Japanese during the Nara Period can be characterized as having a marked option of overt wh-movement. Its loss in the Heian Period is a return to the unmarked system from this viewpoint.

Kayne (1994) suggests that consistently head-final languages raise IP to Spec of CP, resulting in agglutination. At the same time, overt wh-movement is prevented in this type of language because Spec of CP is taken up by IP. This analysis bars overt wh-movement categorically in SOV languages, but Kayne is aware that there are SOV languages like Imbabura Quechua where overt wh-movement is obligatory. For this type of exceptions, Kayne mentions Luigi Rizzi's suggestion that there is an initial C, realized as a question particle attached to the preposed wh-phrase. Imbabura Quechua indeed has such a particle attached to the wh-phrase.

Following this suggestion, Whitman (1998) proposes that the *ka*-marked wh-phrase in Old Japanese should receive the analysis in (19).

(19)   [$_{CP}$ Wh [$_{C'}$ [$_C$ ka] IP]]

Under this analysis, (2a), repeated below, should have the structure in (20).

(2)   a.   Nihibari Tsukuba-wo sugite *ikuyo*-**ka**   ne-**tsuru**?
              Nihibari Tsukuba-ACC passed how-many-nights-KA sleep-PERF
              "How many nights have I/we slept after passing Nihibari Tsukuba?"

                                                                          (Kojiki)

(20)   [$_{CP}$ *ikuyo* [$_{C'}$ [$_C$ **ka**][$_{IP}$ pro t$_{wh}$ ne-**tsuru**]]]

Whitman himself does not present evidence that Old Japanese had overt wh-movement, but his analysis can be applied to overt wh-movement during the Nara Period.

The difficulty with this analysis, however, is that it leaves little room for an explanation of why overt wh-movement was lost in the Heian Period. Besides, the phonological sequence comprising wh-/focus-*ka* alone does not force children to analyze *ka* as C. *Ka* could be part of the preposed phrase, and I claim that it is. Recall that overt wh-movement is analyzed as raising into Spec of FocP in section 3.1. (2a)

has the structure in (21) according to this analysis, putting aside the question of exactly where the adjunct clause *Nihibari Tsukuba-wo sugite* is attached.

(21)   [$_{TopP}$ Spec Top [$_{FocP}$ *ikuyo*-**ka** Foc [$_{IP}$ pro t$_{wh}$ ne-**tsuru**]]]

I would like to propose that the loss of overt wh-movement should be explained in terms of learnability considerations, based on the analysis in (21).

   Now consider how children can learn that the system which they are acquiring has overt wh-movement (into Spec of FocP). If the primary data consists of examples like (2a) with the analysis in (21), it is impossible to tell whether overt phrasal displacement takes place. Suppose that the trigger for overt wh-movement is the word order information and the structural analysis available from it. Under this view, there must be a robust word order cue in order for children to detect overt wh-movement. It is interesting at this point to compare the situation in Hungarian, given that we have adopted Puskas's (1997) analysis for Old Japanese. The guiding idea behind Puskas's analysis of Hungarian is that the adjacency effect between the focus and the finite verb should be captured in terms of the Spec-head configuration. The wh-phrase and the finite verb must be next to each other in Hungarian, as shown in (22).

(22)   a. Melyik filmet **làtta** Jànos tegnap   este?
            which film   saw John yesterday evening
            "Which file did John see last night?"
        b. *Melyik filmet Jànos **làtta** tegnap   este?
            which film   John saw yesterday evening

(22a) is assigned the structure in (23) under Puskas's analysis.

(23)   [$_{TopP}$ Top [$_{FocP}$ *melyik filmet* **V+I+Foc** IP]]

Given this adjacency effect, it is easy to see that overt displacement of the wh-phrase into Spec takes place.

In Old Japanese, however, the finite verb is not necessarily adjacent to the raised wh-phrase. The nominative subject and other phrases can appear between the verb and the wh-phrase. (24) is an example where the direct object intervenes.

(24)   … *izure-no   hi*-ni-**ka**   waga-sato-wo   mi-mu?
         which-GEN day-LOC-KA my-home-town-ACC see-will
         "When shall I be able to see my home town?"   (Man'youshuu #3153)

What, then, can tell children that the target grammar has overt wh-movement? The very evidence which tells linguists the same thing: the ordering restriction on the wh-phrase and the nominative subject discussed in section 3.1.

This answer in turn brings us to the central question of this section, why overt wh-movement was lost in Old Japanese. The logical step to take here is to say that examples with the wh-phrase preceding the nominative subject became unavailable to children. But how did that happen?

It is important in this connection to observe another very peculiar grammatical property of Old Japanese during the Nara Period. Consider again (6a), repeated below.

(6)   a. Kasugano-no fuji-ha   chiri-ni-te   *nani-wo*-**ka**-mo   mikari-no
             Kasugano-GEN wisteria-TOP fall-PERF-CONJ what-ACC-KA-MO hike-GEN
             hito-**no**   ori-te   kazasa-**mu**?
             person-NOM pick-CONJ wear-on-the-hair-will
             "Since the wisteria flowers at Kasugano are gone, what should hikers pick
             and wear on the hair?"   (Man'youshuu #1974)

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If the relevant part of this sentence is to be rendered in Modern Japanese, it becomes something like (25).

(25)   … *nani-o*   mikari-no hito-**wa**/*-**ga**   ot-te

         what-ACC hike-GEN person-TOP/-NOM pick-CONJ

     kazashi-mashou-ka?

     wear-on-the-hair-POLITE-will-Q

The archaic vocabulary in nouns and verbs is retained in (25), so it cannot be a Modern Japanese sentence, strictly speaking, but the point is that the nominative Case marker on the subject is highly unnatural in (25). Sasaki (1992:18-19) indeed remarks that the *no/ga*-marked subject should be replaced with the topicalized subject in many cases if *Man'youshuu* is to be rendered in Modern Japanese. In my judgment, there are at least 34 such cases, out of the 90 examples with a *no/ga*-marked subject in (6I). It is also remarkable that the *no/ga*-marked subject outnumbers the topicalized subject in (6).

The system of topic marking must have undergone a change since the days of *Man'youshuu*. And I would like to claim that it took place between the Nara and Heian Periods. In *Man'youshuu*, I have found that 32 instances of *ka*-marked wh-questions have a *no/ga*-marked subject which follows the preposed wh-phrase, out of the total of 117 in (11b), as opposed to 13 *ka*-marked wh-questions with a topicalized subject. Recall from section 3.2, however, that wh-questions with a *no/ga*-marked subject are quite rare in *Genji*, zero in the first four volumes which contain 81 wh-questions. I have found 11 instances with a *ha*-marked topicalized subject, in contrast.

It seems reasonable to conclude that the increase of Topicalization is a fifth change in the transition from the Nara to the Heian Period, and that this change is at least partially responsible for eliminating the word order trigger for overt wh-movement,[11] because the topicalized subject would precede the wh-phrase in the grammatical system of the Nara Period.

More generally, Bach's generalization should be given the same explanation: the SOV order tends to hide from children the evidence for movement to Spec. When overt wh-movement takes place in SVO languages, it crosses the verb in most of the cases, providing an unambiguous trigger for children. No such trigger is available in SOV languages, unless the verb undergoes head movement to the adjacent position or an overt subject follows the wh-phrase.

Returning to Whitman's (1998) analysis, we immediately see why it leaves no room for a learnability explanation for the loss of overt wh-movement. If the particle *ka* could be analyzed as C, it would indicate to children very strongly that the wh-phrase is placed in its Spec.

To conclude, the loss of overt wh-movement in the Heian Period should be attributed to the weakening of the word order trigger for overt wh-movement caused by the increase in Topicalization. The reason why SOV languages tend to leave wh-phrases in-situ is that the word order trigger for overt movement is not easily available with the SOV order. Bach's (1971) generalization is explained in terms of learnability rather than by the mechanism of the computational system itself.

4.2   Driving force of overt wh-movement

Let us turn to the computational mechanism of overt wh-movement. The loss of overt wh-movement in Old Japanese provides an important clue as to what drives overt wh-movement.

Compare the forms of wh-questions in the Nara and Heian Periods. The major forms are given in (26).

(26)   a.   overt movement: wh-ka [$_{IP}$ … t …] ø   Man'youshuu

         b.   wh-in-situ: [$_{IP}$ ... wh-ø ...] ø/zo/ni-ka (ara-mu)   Genji

As we have discussed above, the wh-phrase tends to appear without the particle *ka* in the Heian Period. Furthermore, there is no special clause-final particle needed, apart from the (V)-*ni-ka* (*ara-mu*) form. The particle *zo* is not limited to wh-questions. It can be used in declarative clauses, as in (27).

(27)   Sore-**ha** oite habere-ba   minikuki-**zo**.

                that-TOP old be-polite-COND ugly-ZO

                "That person is ugly because she is old."   (Genji, Sakaki)

According to Funaki's (1968) statistics, the absence of a particle both at the wh-phrase and at the clause-final position (type (11c) above) seems to be the most frequent form. Thus, the loss of overt wh-movement is correlated with the dropping of the particle *ka* from the wh-phrase. This fact suggests that the presence of a focus particle drives overt wh-movement, and that the loss of overt wh-movement expels the focus particle. What does this mean for the theory of wh-movement?

    The notion of interpretability introduced by Chomsky (1995:ch.4) is helpful in trying to elucidate this problem. Suppose the focus particle *ka* carries information relevant for the interpretation of wh-questions. Since this particle no longer appears in genuine wh-questions in the Heian Period, it should cause problems for the semantic interpretation of wh-questions. But this cannot be the case, because the sentences with a wh-phrase unaccompanied by the particle *ka* function as wh-questions without any problem. We are therefore led to conclude that the feature carried by *ka* is [- Interpretable]. I tentatively suggest that this is a kind of focus feature, because *ka* was also used to mark a focus phrase in yes-no questions during the Nara Period.

(28)   The *ka* particle contains a [- Interpretable] focus feature.

The idea that a focus feature can be [- Interpretable] seems strange at first sight, but this doubt disappears upon careful consideration. Suppose that an operator-variable chain supports focus interpretation as long as the operator is raised into Spec of FocP. Under this conception, it is not necessary for the operator itself to carry the feature that contributes to focus interpretation.[12]   Furthermore, it would be redundant to add a [+ Interpretable] focus feature to a wh-phrase, which is inherently interpreted as focus. Assuming that human language does not tolerate such redundancy, a basic tenet in the minimalist program, we can safely conclude that the focus feature carried by *ka* is [- Interpretable]. If this is a general theory of overt wh-movement, we are led to assume that wh-phrases in languages like English also contain this [- Interpretable] focus feature.

Our conclusion favors the theory of Chomsky (2000) over that of Chomsky (1995:ch.4), though a small revision of the former is needed anyway. The latter's position is that the wh-phrase does not contain a [- Interpretable] feature, and that overt wh-movement is triggered by a strong Q feature on C. Our conclusion refutes this theory. The wh-phrase to be raised must have a [- Interpretable] feature. Our finding is more or less consistent with Chomsky's (2000) theory, which posits that the wh-phrase has a [- Interpretable] wh-feature which drives overt movement. There is a small difference, however. For us, the [- Interpretable] feature is a focus feature. For Chomsky (2000), it is a wh-feature. It is logically possible that the wh-phrase has a [- Interpretable] focus feature in some languages and a [- Interpretable] wh-feature in others. This could be a locus of parametric variation. Without a strong motivation for such parametrization, however, parsimony dictates that it is always a [- Interpretable] focus feature that drives overt wh-movement.

To sum up, the presence of a [- Interpretable] focus feature on wh-phrases drives overt movement.

4.3   Other related changes

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In the previous section, the loss of overt wh-movement is linked to the dropping of the particle *ka* from the wh-phrase. Let us now turn to the other two changes that took place between the Nara and Heian Periods.

4.3.1   Rhetorical questions

When overt wh-movement was lost, the focus particle *ka* was still found in the primary data for children. Since the wh-phrase was no longer analyzed as undergoing raising, it became impossible to attribute a [- Interpretable] focus feature to *ka*. Some other role must be given to it, or else it would disappear from a new grammatical system. What happened was that it now assumed the role of turning an indeterminate element into a polarity item restricted to rhetorical questions.[13] This kind of indefinite elements is not found in an extensive typological study by Haspelmath (1997). The *ka*-marked polarity item in Old Japanese of the Heian Period, therefore, is worthy of note here.

(29)   *ka* as a marker of polarity for rhetorical questions

Some examples are given below.

(30)   a. *nani-goto*-wo-**ka**   notamaha-n-koto-ha   uketamahara-zara-n?
            what-thing-ACC-KA say.HON-will-thing-top accept-NEG-will
            "What will I not accept which you will say?"
            "Whatever you will say, I'll accept."   (Taketori)

        b. kore-yori hito-zukuna naru tokoro-ha *ikade*-**ka** ara-n?
            this-than people-few is   place-TOP how-KA be-will
            "How can there be a place less populous than this?"

                                                          (Genji, Hahakigi)

The *ka*-marked indeterminate further developed into an existential quantifier during the Muromach Period, according to Yamaguchi (1990:241). Cf. Ogawa 1976-77. This function of the particle *ka* is retained in Modern Japanese as well.

Thus, the loss of overt wh-movement prompted reanalysis of the focus particle *ka* first as a polarity quantificational element limited to rhetorical questions and then as a more general existential quantifier later.

4.3.2 Incompatibility of ka *with yes-no questions*

The incompatibility of the particle *ka* with yes-no questions is also due to the shift in the nature of the particle *ka*. The phenomenon in question is that the use of *ka* in yes-no questions as a focus marker was found in the Nara Period but disappeared in the Heian Period. This is a natural consequence of the fact that *ka* now had the role of turning an indeterminate element into a polarity item restricted to rhetorical questions.

(32)   *Ka* as a rhetorical wh-question marker is incompatible with focus interpretation.

6 Conclusion

The major theoretical results of our investigation are: (i) Overt wh-movement is driven by the [- Interpretable] focus feature, and (ii) the trigger for overt wh-movement, or detection of the [- Interpretable] focus feature on wh-phrases by children, relies on robust word order effects. It is important to note that children cannot use the morpho-syntactic realization of the [- Interpretable] focus feature as the trigger for overt wh-movement. This is because a particular morphosyntactic piece attached to a wh-phrase allows various interpretations for the computational system. It can be [+ Interpretable] or [- Interpretable]. This contrasts with verbal morphology, which is shown in the first language acquisition studies (Hoekstra and Hyams 1998, Wexler 1998) to be acquired quite early and accurately. For wh-movement, word order is more transparent and

reliable, so that there is a particular combination of parametric choices which is allowed by the computational system itself but is ruled out due to learnability considerations, namely, overt wh-movement in SOV languages.

There are open questions as well. The most important is the type of wh-in-situ that wh-questions of the Heian Period belong to. Tsai (1994) argues that Chinese involves unselective binding, in contrast to Modern Japanese, which is claimed by Watanabe (1992) to involve movement of a phonologically invisible entity. See also Aoun and Li 1993. At this point, it is not clear which type Old Japanese of the Heian Period manifests. Further investigation is needed.

Notes

[1]The particle *zo* is also used in wh-questions, though only to a limited extent. See (11) below.

[2]It is very unlikely that this word order restriction arises from the fact that *Man'youshuu* is a collection of verse. The metrical system in Japanese depends on mora counting. The topic particle *ha*, the focus particle *ka*, and the nominative markers *no* and *ga* all constitute one mora. Choice among them should not matter for metrical purposes.

[3]I am not committed to the positioning of the Top and Foc heads on the left in Old Japanese.

[4]See the original discussion in Clements 1984 and note 4 of Haïk 1990.

[5]Ikawa (1998) claims that the *ka*-marked phrase is raised to Spec of AGRP, competing with the nominative-marked subject. The adnominal form in wh-questions and other focus clauses is used to avoid structural nominative Case checking by the Agr-T complex, according to his theory, in which the overt Case particles *no* and *ga* can check the nominative feature of the subject without the help of the Agr-T complex.

Apart from the conceptual problem of having the focus phrase and the nominative subject compete for the same structural position such as Spec of AGRP, Ikawa's theory has nothing to say about the changes that are our central concern in this paper.

[6]He also observes that the same is true with the *ya*-marked focus.

[7]See Takase 1989 for the statistics. The adnominal ending is clearly seen in examples like the following:

(i) Sono kejime-wo-ba   *ikaga* waku-beki.

    that   distinction-ACC-TOP how   divide-should

    "How could we make that distinction?"   (Genji, Hahakigi)

[8]There is another difference in the criteria for counting between Funaki and Isobe. Isobe does not include wh-questions headed by *ikade-ka* "how" and *nado-ka* "why", for the reason that they are fixed forms even though they appear to include the particle *ka*. They are included in Funaki's counting, pushing up the number of examples with *ka* in (11).

[9]Cf. Sakakura 1993:250 on the status of Kakarimusubi in the Heian Period.

[10]Wu (1997) analyzes the number of cases where *ikade-(ka)* "how" is used, the cases excluded from Isobe's counting. Here, rhetorical questions are far more prominent with *ikade-ka*.

(i)	*ikade*	*ikade-ka*
genuine questions:	46	21
rhetorical questions:	12	122

[11]Another possible factor is the null subject, since the subject can be null, as illustrated by examples like (2a) and (24). The exploration of this issue, however, goes beyond the scope of this paper. Cf. Yang (this volume) on the role that the null subject parameter played in the loss of V2 in Old French.

[12]This assumption does not commit us to the position that focus interpretation must always be mediated by an operator-variable chain. The conditional here is only uni-directional. It follows that the in-situ focus phrase requires a [+ Interpretable] focus feature. I would like to claim that this is how the focus particles still alive in the Heian Period such as *ya*, *zo*, and *namu* contribute to semantic interpretation without involving overt displacement.

[13]See Han 1998 for distinct syntactic properties of rhetorical questions.