

NEGATION AND WH-QUESTION IN JAPANESE\*

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1. Introduction

This paper is concerned with the question of how negation and wh-question in Japanese interact to yield a seemingly peculiar paradigm. Consider first the following declarative sentences involving negation:

- (1)a. Taroo wa paatee ni de-nai to omoi-masu  
Top party to attend-Neg COMP think-Pres  
"I think that Taro will not attend the party"
- b. Taroo wa paatee ni de-ru to (wa) omoi-masen  
attend-Pres think-Neg  
"I do not think that Taro will attend the party"

As the English translations indicate, the two sentences are almost synonymous with each other, the matrix predicate *omoi*, like its English equivalent *think*, being a so-called Neg-Raising predicate. In spite of the synonymy of the two, however, the corresponding wh-questions given by the substitution of *dare(ga)* "who" for *Taroo(wa)* differ markedly in acceptability:

- (2)a. dare ga paatee ni de-nai to omoi-masu ka  
who Nom Q  
"who do you think will not attend the party"
- b. \*dare ga paatee ni de-ru to (wa) omoi-masen ka<sup>1</sup>  
"who don't you think will attend the party"

Note that this difference in acceptability is grammatical and not stylistic, for the string *omoi-masen ka* is by no means odd in a simple yes/no question like the following:

- (3) Taroo wa paatee ni de-ru to (wa) omoi-masen ka



there is a negative attached to *omow*, the sentence is acceptable if there is no wh-phrase, as in (3); and even if a wh-phrase cooccurs with a predicate involving a negative, the sentence is acceptable if *ka* does not immediately follow the negative, as in (4).

Before entering directly into the problem of how the above paradigm of the interaction between negation and wh-question is to be accounted for, it is necessary to examine the basic properties of wh-questions and negative sentences in Japanese, to which the following two sections are devoted. In section 4, certain differences between simplex and complex sentences will be discussed, particularly with respect to the structural relationship between a predicate and the question morpheme *ka* that follows it, which will be further elaborated in section 5. In section 6, a condition on binding will be proposed which is independently necessary to block certain associations of focus with negation. It will be shown that this condition also applies to exclude certain binding possibilities of a wh-phrase, accounting for the above paradigm and other apparently complex phenomena as well.

## 2. Binding WH

Harada (1972) observes that a wh-phrase (WH) in Japanese must be associated with an appropriate occurrence of *ka* (Q), as shown by the following:

- (7)a. *dare ga paatee ni de-masu ka*  
attend-Pres Q  
"who will attend the party"
- b. \**dare ga paatee ni de-masu*

(7a) is grammatical, with *dare* associated with *ka*. But (7b) is unacceptable, lacking *ka*, with which WH must be associated.<sup>4</sup>

Harada further claims that the appropriate association of

WH with Q can be defined in terms of the notion of "command" (Langacker 1969): Any occurrence of WH must be commanded by some occurrence of Q. This is illustrated by the following:

- (8)a. [<sub>s</sub> [<sub>s</sub> dare ga paatee ni de-ru] to omoi-masu ka]  
 "who do you think will attend the party"
- b. [<sub>s</sub> Taroo ga [<sub>s</sub> dare ga paatee ni de-ru ka] sittei-  
 know  
 masu]  
 "Taro knows who will attend the party"
- c. \* [<sub>s</sub> dare ga [<sub>s</sub> Taroo ga paatee ni de-ru ka] sittei-  
 masu]
- d. [<sub>s</sub> dare ga [<sub>s</sub> Taroo ga paatee ni de-ru ka] sittei-  
 masu ka]  
 "who knows whether Taro will attend the party"

In (8a), although WH *dare* and Q *ka* are in different clauses, the former is commanded by the latter and the sentence is grammatical. In (8b), which is also grammatical, WH is in the same clause as, and is therefore commanded by, Q. In (8c), which is unacceptable, *dare* is not commanded by *ka*, the latter being in the clause subordinate to the clause containing the former.<sup>5</sup> In (8d), although WH in the matrix clause is not commanded by Q in the embedded Q, it is commanded by the matrix Q, hence the sentence is grammatical.

With Harada's observations in mind, let us define the notion of binding as follows:

- (9)  $\alpha$  is bound by  $\beta$  if  $\alpha$  is coindexed with and commanded by  $\beta$ .

This definition of binding is in effect the same as Chomsky's (1981: 184) except that Chomsky's definition requires "c-command" rather than "command." We will return to this matter.



- (12) [<sub>s</sub> Akiko wa [<sub>s</sub> {*dono kyouju*}]<sub>i</sub> ga {*dare*}; o  
 suisensitei-ru {*ka*}, ] sittei-masu {*ka*}; ]

Since in this case the matrix *ka* binds *dono kyouju*, the sentence is a wh-question with the interpretation "for which x, x a professor, he knows whom x recommends," which calls for an answer with *dono kyouju* filled filled with an appropriate value for it, as in the following:

- (13) (Akiko wa) Tanaka kyouju ga dare o suisensitei-ru ka  
 sittei-masu  
 "(Akiko) knows whom Professor Tanaka recommends"

Not all speakers readily accept the interpretation represented by (13), due to the so-called wh-island condition, whose effect is, as Nishigauchi (1990: 33-40) points out, not only susceptible to dialectal variation but also affected by such factors as the choice of a wh-word, intonation patterns, word order, etc. However, the point is that indexing is in any event necessary to specify which WH is bound by which Q.

### 3. The Scope of Negation

A negative element in Japanese is in general realized as part of a predicate or as (part of) an auxiliary; *tabe-nai* is a negative counterpart of the predicate *tabe* "eat," *masen* is a negative counterpart of the politeness auxiliary *mas*, *mai* is an obligatory suppletive form of \**nai-yoo* "Neg-will (first person)" or an optional suppletive form of *nai-daroo* "Neg-will (non-first person)," etc. Since *mas* is a suffix which must be directly attached to the adpredicative form ("ren'youkei") of a verb, it cannot follow the negative affix (a)*nai*; \**omow-anai-mas* "think-Neg-Pol(ite)" is morphologically ill-formed and the correct form is *omoi-masen*, where *omoi* is the adpredicative form of *omow*. Since every negative element is bound to or

dependent on some predicate or auxiliary, let us use the term "negative predicate" as a cover term for any independent predicate with a negative element in it; thus *tabe-nai*, *tabe-masen*, *tabe(-ru)-nai* are all referred to as a negative predicate, but *nai*, unless it is a negative counterpart of the verb *ar(-u)* "be(-Pres)", is not a negative predicate since it is a bound morpheme. Likewise, auxiliaries like *masen* and *mai* are not negative predicates. Technically, we assume that a negative predicate has the feature [+neg(ative)] percolated up from a negative element; *tabe-nai* is [+neg] since the feature [+neg] of *nai* is percolated up to the entire predicate. The same is true of such negative predicates as *omow-anai*, *tabe-masen*, *omoi-masen*, *ari-masen* (where *ari* is the adpredicative form of *ar*), *tabe(-ru)-nai*, etc.

With this much in mind, let us consider what element can be a focus of negation. We associate a focus with negation by coindexing it with a negative predicate, which, by assumption, has the feature [+neg]. Also, a focus of negation will be sometimes marked with *wa*, a particle which marks not only a topic but also a focus. Examples follow:

- (14)a. *boku wa {tuma to}<sub>i</sub> paatee ni {de-mai}<sub>i</sub>*  
           wife with  
           "I shall not attend the party with my WIFE"
- b. *boku wa {tuma to}<sub>i</sub> wa paatee ni {de-mai}<sub>i</sub>*

In both examples above, *tuma to* is intended to be a focus of negation, and in fact it can: the sentences may imply that it is not with my wife that I will attend the party. Now consider the following examples involving embedding:

- (15)a. [<sub>s</sub> *boku wa* [<sub>s</sub> *{tuma to}<sub>i</sub> wa paatee ni de-yoo*] *to*  
           {*omoi-masen*}<sub>i</sub> ]  
           "I don't think that I will attend the party with

my WIFE" or: "it is not with my wife that I think that I will attend the party"

- b. [<sub>s</sub> Taroo wa [<sub>s</sub> {okusan to}<sub>i</sub> wa paatee ni  
 wife  
 {de-nai}<sub>i</sub> ] to ittei-masu]  
 say-Pres

"Taro says that he will not attend the party with his WIFE" or: "Taro says that it is not with his wife that he will attend the party"

- c. \* [<sub>s</sub> {Taroo}<sub>i</sub> wa [<sub>s</sub> okusan to paatee ni {de-nai}<sub>i</sub> ]  
 to ittei-masu

- d. [<sub>s</sub> {Taroo}<sub>i</sub> wa [<sub>s</sub> okusan to paatee ni de-nai] to  
 {ittei-masen}<sub>i</sub> ]

"TARO doesn't say that he will not attend the party with his wife" or: "it is not Taro that says that he will not attend the party with his wife"

The similarity of the above paradigm to the paradigm (8) suggests that the same condition that is operative in the association of WH with Q also applies to the association of a focus with negation; that is, just as an occurrence of WH must be commanded by an occurrence of Q, a focus of negation must be commanded by [+neg]. Thus in (15c) *Taroo* cannot be a focus of negation since *de-nai*, which is the only negative predicate that appears in the sentence, does not command *Taroo*. All other examples in (15) are well-formed since the focus of negation is appropriately commanded by a negative predicate.

Now consider the following examples:

- (16)a. [<sub>s</sub> boku wa [<sub>s</sub> {daremo}<sub>i</sub> {ko-nai}<sub>i</sub> ] to omoi-masu]  
 anyone come-Neg

"I think that noone will come"

- b. [<sub>s</sub> boku wa [<sub>s</sub> {daremo}<sub>i</sub> ku-ru] to {omoi-masen}<sub>i</sub> ]  
 come-Pres



"I don't think that anyone will come"

*Daremo*, when it assumes the accent pattern of LHH (Kato 1985: 146-7), is a negative polarity item (NPI), requiring an associated negative. Thus a sentence like *daremo kuru* is not acceptable unless it is a complement to a so-called Neg-Raising predicate like *omow* or what Kato (1985) calls a bridge expression.<sup>6</sup> Note that *daremo* in (16) is commanded by *ko-nai* or *omoi-masen*, both of which are negative predicates. If *daremo* appears in a position that is not commanded by a negative predicate, it cannot be taken as an NPI with the accent pattern of LHH; *daremo* in sentences like (17) below cannot be associated with the embedded negative predicate *ko-nai*:

- (17)a. \*<sub>S</sub> {*daremo*}<sub>i</sub> [<sub>S</sub> Taro ga {*ko-nai*}<sub>i</sub> ] to  
omottei-masu]<sup>7</sup>  
"anyone thinks that Taro will not come"
- b. [<sub>S</sub> {*daremo*}<sub>i</sub> [<sub>S</sub> Taro ga *ko-nai*] to  
{*omottei-masen*}<sub>i</sub> ]  
"noone thinks that Taro will not come"

Although all these observations indeed indicate that the structural condition involved in the association of focus with negation is the same as the one involved in the association of WH with Q, a closer examination shows that a stricter condition is at work in the association of focus with negation. Consider, for example, the following yes/no question counterparts of (16):

- (18)a. [<sub>S</sub> (*anata wa*) [<sub>S</sub> {*daremo*}<sub>i</sub> {*ko-nai*}<sub>i</sub> ] to  
omoi-masu ka]  
"do (you) think that noone will come"
- b. \*<sub>S</sub> [<sub>S</sub> (*anata wa*) [<sub>S</sub> {*daremo*}<sub>i</sub> *ku-ru*] to  
{*omoi-masen*}<sub>i</sub> ka]  
"don't (you) think that anyone will come"

Curiously enough, the yes/no question counterpart of (16b), namely (18b), is unacceptable under the intended interpretation; *daremo*, even if taken to be an NPI read with LHH, cannot be associated with the commanding negative predicate *omoi-masen*. Note, further, that the following sentence is acceptable in sharp contrast with (18b):

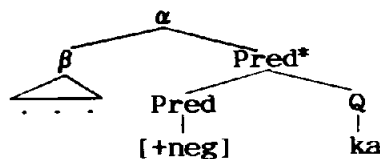
- (19) (anata wa) {daremo}<sub>i</sub> ku-ru to {omow-anai}<sub>i</sub> no desu ka  
 "do (you) not think that anyone will come"

Since the only crucial difference between (16b) and (18b) is the absence vs. presence of *ka*, it must be that *ka* in (18b) blocks the association of *daremo* with *omoi-masen*. This association is indeed blocked under the following assumptions:

- (20) (i) Q (*ka*) is adjoined to the preceding independent predicate.  
 (ii) The scope of negation is the set of nodes c-commanded by [+neg].

The assumption (20ii) is a special case of the definition of scope given by May (1985): The scope of  $\alpha$  is the set of nodes c-commanded by  $\alpha$ . Since any focus of  $\alpha$  must be within its scope, it follows from (20ii) that a focus of negation must be c-commanded by [+neg]. Now, it follows from the assumption (20i) that any constituent outside of a negative predicate fails to be c-commanded by its feature [+neg] if Q (*ka*) is adjoined to it, as is clear from the following structure:

(21)



Under the classic definition of c-command in terms of "first branching node" (Reinhart 1976),  $\beta$  (and anything within it) is not c-commanded by [+neg], since  $\text{Pred}^*$  is branching. But suppose we adopt (22) below as the definition of c-command, along with the assumption (23) (May 1985, Chomsky 1986):

(22)  $\alpha$  c-commands  $\beta$  iff  $\alpha$  does not dominate  $\beta$  and every  $\gamma$  that dominates  $\alpha$  dominates  $\beta$ .

(23)  $\alpha$  is dominated by  $\beta$  only if it is dominated by every segment of  $\beta$ .

Under this definition of c-command also,  $\beta$  in (21) is not c-commanded by [+neg], since  $\text{Pred}^*$ , which dominates [+neg], does not dominate  $\beta$ . Let us from now on understand "c-command" as in (22), adopting the assumption (23), which has direct relevance to adjunction structures.

In (21), since nothing outside  $\text{Pred}^*$  is c-commanded by [+neg], nothing is within the scope of [+neg]. Thus *daremo* in (18b) fails to be c-commanded by the negative predicate *omoi-masen*, since *ka* is adjoined to the latter. *Daremo* is therefore outside the scope of negation and the sentence is unacceptable. Why, then, is (19) acceptable? Notice that in this sentence *ka* is not adjoined directly to the negative predicate *omow-anai* but rather to the copular predicate. Furthermore, *no* before the copula is a complementizer embedding the sentence *daremo kuru to omow-anai*. The structure for (19) is therefore something like the following:

(24) [<sub>s</sub> [<sub>s</sub> {daremo}<sub>i</sub> ku-ru] to {omow-anai}<sub>i</sub> ] no desu ka]

In this structure *daremo* is properly c-commanded by the negative predicate *omow-nai*. The same is true of the informal version of (24) in which *desu ka* is absent; see the last paragraph of note 2.

#### 4. Simplex vs. Complex Sentence

A problem arises as to the status of a simplex sentences like (25a) below, as compared to (25b):

- (25)a. {daremo}<sub>i</sub> {ki-masen}<sub>i</sub> ka  
           come-Neg  
           "will noone come"  
 b. {daremo}<sub>i</sub> {ko-nai}<sub>i</sub> no desu ka

(25b) is unproblematic; like (24), *ka* is not adjoined to the negative predicate, which therefore c-commands *daremo*, as required. But in (25a), if the assumption (20i) is correct, *ka* is adjoined directly to the preceding negative predicate *ki-masen*, which then does not c-command *daremo*. Under this assumption, therefore, (25a) should be barred. However, although (25a) might not sound as perfect as (25b), nonetheless it is far better than (18b). There is some evidence, in fact, that if (25a) sounds odd at all, it is not related to the negative polarity of *daremo* per se, but to its quantificational force; the NPI *daremo*, similarly to English *anyone*, can be analyzed either as a universal quantifier that requires a negative that c-commands it but nevertheless has wider scope than the negative (perhaps via Quantifier Raising in the sense of May (1977)), or as an existential quantifier that must be within the scope of negation. Thus even if the subject of *ki-masen ka* is not an NPI, the sentence is as odd as (25a) if the subject is quantificational; compare (26) with (27):

- (26) {Taroo / kare / anata} ga ki-masen ka  
       he       you  
       "will {Taro/he/you} not come"  
 (27) {daremo / dareka / minna} ga ki-masen ka  
       everyone someone all-men  
       "will {everyone/someone/all-men} not come"

There is no problem with (26), where the subject position is not filled with a quantificational expression. In (27), *daremo* is NOT an NPI if it is Case-marked with *ga*, in which case it is read as HLL with the quantificational meaning "everyone." But the sentence with *daremo ga* as subject is odd as compared with (26), although its declarative and affirmative counterparts, *daremo ga ki-masen* "everyone will not come (=no one will come)" and *daremo ga ki-masu ka* "will everyone come" are both all right. Similar remarks apply if *dareka ga* or *minna ga* is chosen as a quantificational subject. Note that it is a quantificational force of the subject and not its indefiniteness that makes sentences like (27) odd; if the subject is an indefinite without a quantificational force, the sentence is by no means odd; compare (28) with (29):

- (28) {hito / gakusei / kodomo / yakuza} ga ki-masen ka  
 person student child gangster  
 "will {people/students/children/gang(sters)} not come"
- (29) {ooku no / nannin ka no } gakusei ga ki-masen ka  
 many of some(-number of)  
 "will {many/some} students not come"

(28), where the subject position is filled with an indefinite, is quite on a par with (26). Note in passing that we can add *sono* "the" to the subject in (28) and make it definite, as in *sono hito ga ki-masen ka*, with no change in acceptability. (29) is as odd as (27) since *hito* is modified by a quantifier, with the result that the entire subject phrase is made quantificational. As in the case of (27), the declarative and affirmative counterparts of (29) are quite fine, as in *{ooku no / nanninka no} gakusei ga ki-masen* "{many/some} students will not come" and *{ooku no / nanninka no} gakusei ga ki-masu ka* "will {many/some} students come." It should be noted, also, that a quantificational expression that does not

occupy the subject position does not create oddness:

- (30) {daremo / dareka / minna} ki-masen ka  
 (31)a. {daremo / dareka} hito ga ki-masen ka  
       b. hito ga {daremo / dareka} ki-masen ka  
 (32)a. nanninka hito ga ki-masen ka  
       b. hito ga nanninka ki-masen ka

If we take the Case-less quantificational expressions in (30) to be something like vocatives that do not occupy the subject position, the sentences are fine. For example, it is possible to take *daremo* in (30) to be referring to all the addressees, in which case it is not an NPI; the vocative-like *daremo* can be used without any negative, as in *daremo yoku yat-ta* "everyone did well," which may be used to praise every addressee or every person related to the speaker, say, those working under the speaker. *Daremo/dareka* in (31) is related to *hito* by whatever mechanism it is that may also relate *nanninka* in (32) to *hito*, but while *hito*, being Case-marked with *ga*, is clearly the subject, *daremo/dareka* and *nanninka* do not occupy the subject position, in these quite natural examples.

All these observations conspire to indicate that if there is something wrong with (25a), it has nothing to do with the negative polarity of *daremo*. In fact, consideration of anaphoric reference indicates that the sequence *daremo ga ki-masen* forms a constituent in which *daremo* is c-commanded by *ki-masen*. Observe first the following dialogue:

- (33) A: Daremo ko-nai no desu ka? (= (25b))  
       ("Is it (so) that no one will come?")  
       B: Hai, sou desu. ("Yes, it is so.")

In B's response, *sou* is a pro-form referring back to the proper part of A's question, namely *daremo ko-nai*, which is definitely

a constituent, since it is a clause embedded by the complementizer *no*. Now observe that the same *sou* can be used in response to (25a), as in the following:

- (34) A: Daremo ki-masen ka?  
 B: Hai, sou desu.

What does *sou* refer back to in B's response in (34)? Naturally the question marker *ka* is not part of its reference, but it must refer to both *daremo* and *ki-masen*. Therefore, *daremo ki-masen* must be a constituent under the standard assumption that what a pro-form refers to must be a constituent. It must be, then, that *ka* in (25a) is not adjoined to the preceding predicate, but to the whole sequence *daremo ki-masen*. Note that the negative polarity of *daremo* and negation are irrelevant to the constituency. Thus consider the following:

- (35) A: Minna ga ki-masu ka?  
 B: Hai, sou desu.

*Minna* is not an NPI and there is no negative in A's utterance, which is quite a natural sentence in contrast to somewhat odd sentences like (25a) and (27) involving negation. But the point is that *sou* in B's response refers to what A said minus *ka*, namely *minna ga ki-masu*, which then must be a constituent.

Does it follow from this that the assumption (20i) is wrong? The answer is in the affirmative only in a certain class of cases. That is, in a simplex sentence in which there is no clausal complement of the sentence, *ka* is adjoined to the entire sentence, as suggested by the observation above, but in a complex sentence in which there is a clausal complement of the sentence, *ka* is adjoined to the predicate of the sentence. This latter claim also is supported by consideration of anaphoric reference. Thus consider the following dialogues:

- (36) A: *Ima-demo koros-are-ta koibito no koto o*  
 now-even kill-Passive-Past love(r) of thing Acc  
*omoi-masu ka?* ("Do you think of the love(r)  
 who was killed even now?")
- B<sub>1</sub>: Hai, *omoi-masu*.  
 B<sub>2</sub>: \*Hai, *sou omoi-masu*.  
 B<sub>3</sub>: Hai, *sou desu. #Omoi-masu*.
- (37) A: *Ima-demo koibito ga koros-are-ta to omoi-masu ka?*  
 ("Do you think that your love(r) was killed even  
 now?")
- B<sub>1</sub>: Hai, *omoi-masu*.  
 B<sub>2</sub>: Hai, *sou omoi-masu*.  
 B<sub>3</sub>: Hai, *sou desu. Omoi-masu*.

In B<sub>1</sub>'s response to A's question in (36), there is an ellipsis before *omoi-masu* that corresponds to the NP complement *koros-areta koibito no koto (o)* in A's utterance. Let us assume that there is a null complement anaphor (NCA) in the position of the occurrence of such an ellipsis. The appropriateness of B<sub>1</sub>'s utterance in (36) indicates that the antecedent of an NCA can be an NP, and that an NCA can refer back to something in the utterance made by a discourse participant other than the speaker. The inappropriateness of B<sub>2</sub>'s response in (36) shows that the pro-form *sou* cannot refer back to an NP, although it can refer back to an S, as in *sou* in B<sub>2</sub>'s response in (37), which refers to the clausal complement *koibito ga koros-are-ta (to)*. Now consider B<sub>3</sub>'s response in (36). What does *sou* here refer to? Both syntactically and semantically, it cannot refer to *koros-are-ta koibito (no koto)*; syntactically, since *sou* cannot refer to an NP; semantically, since if *sou* referred to *koros-are-ta koibito (no koto)*, the response in question would not make sense in this discourse. It must be, then, that *sou* here refers to all of what A said minus the question marker *ka*. If so, then *ka* in A's utterance in (36) must be adjoined



not to the preceding predicate *omoi-masu* but to the entire matrix clause, which is a simplex sentence because, while there is a relative clause modifying *koibito*, the *koto*-phrase containing the relative clause is an NP complement to the matrix predicate *omow*.

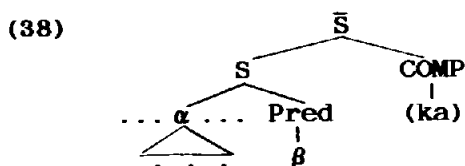
Note that in B<sub>3</sub>'s response in (36), the continuation of *omoi-masu* is awkward after *sou desu*, although it is quite natural directly after *hai*, as in B<sub>1</sub>'s response. On our assumption, there is an NCA before *omoi-masu* whose reference must be to the NP complement *koros-are-ta koibito no koto (o)* in A's utterance. The awkwardness of *omoi-masen* in this context as contrasted with the naturalness of *omoi-masen* in the context of B<sub>1</sub>'s utterance indicates that the required referential linkage is blocked by the intervening possible antecedent for the NCA, namely *sou*. Notice that *sou* is a possible antecedent for an NCA, since although *sou* cannot refer to an NP but to a clause as noted above, an NCA can refer not only to an NP as in the case of B<sub>1</sub>'s utterance in (36), but also to a clause, as in the case of B<sub>1</sub>'s utterance in (37), where the antecedent for the NCA before *omoi-masu* is the clausal complement *koibito ga koros-are-ta (to)* in A's utterance. Assuming that an NCA must refer to the nearest possible antecedent, the NCA that we assume to be present before *omoi-masu* must refer to *sou* in B<sub>3</sub>'s utterance in (36). But *sou* here refers, as noted, to all of what A said minus *ka*, which means that the reference of the NCA here includes *omoi-masu*, as well as its NP complement, leading to redundancy.

The examination of the reference of *sou* in B<sub>3</sub>'s utterance in (36), as well as that of *sou* in a discourse like (34) and (35), has shown that *ka* can be adjoined to a simplex clausal constituent. Let us now turn to the case of *ka* following a predicate that takes a clausal complement. In (37), The NCA before *omoi-masu* in B<sub>1</sub>'s utterance and the pro-form *sou* before *omoi-masu* in B<sub>2</sub>'s refers, as noted above, to the

clausal complement *koibito ga koros-are-ta (to)*. Now consider  $B_3$ 's response to A's question in (37). Unlike *omoi-masu* in  $B_3$ 's utterance in (36), the continuation of *omoi-masu* after *sou desu* in (37) is not awkward. This means that *sou* in  $B_3$ 's utterance in (37), unlike in (36), does not refer to all of what A said minus *ka*, indicating that what A said minus *ka* does not form a constituent, which is a direct consequence of the assumption (20i). Then *sou* here must refer only to the clausal complement *koibito ga koros-are-ta (to)*. If so, the NCA can refer to *sou* without redundancy. Note that *sou* referring only to the predicate *omoi-masu* leads to redundancy, so this possibility is excluded; this is because the NCA before *omoi-masu* then in effect refers to the same predicate *omoi-masu*.

### 5. The Position of Q

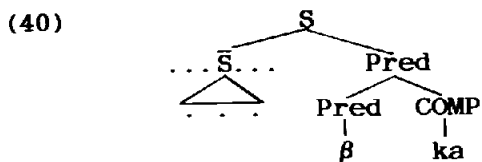
We have seen at the latter half of the last section that the assumption (20i), namely that Q is adjoined to the preceding independent predicate, seems to be valid in a complex sentence but not in a simplex sentence. In a simplex sentence, Q seems to be in a sister-relation to the sentence. Let us therefore adopt the traditional phrase structure with S-bar expanding into S and COMP, where COMP may be occupied by the question morpheme *ka*, in which case COMP acquires the feature [+Q] from *ka* by percolation. (The following discussion should be easily translatable into the current X-bar theory in which S-bar is a projection of C(OMP) and S is a projection of I(NFL), to which a predicate may be moved by "V-raising to I"; see Chomsky (1986).) Thus a simplex sentence has a structure of roughly the following form, where  $\alpha \neq S(-bar)$  and  $\beta$  is [+neg] or [-neg]:



If an NPI appears somewhere in S, it is properly c-commanded by a negative predicate in (38). Thus an NPI such as *daremo* that appears in a sentence like (25a) is within the scope of  $\beta = [+neg]$  in (38), the reason for its oddness lying elsewhere, as discussed in the previous section. Now suppose that in (38), a wh-phrase occurs somewhere in S, and it is coindexed with *ka* in COMP. Let us assume that the index as well as the feature [+Q] of *ka* is taken over to its dominating COMP. Since COMP c-commands everything in S, a wh-phrase in S is also c-commanded by COMP. We can therefore replace the definition of binding given in (9) by the more familiar definition (39):

- (39)  $\alpha$  is bound by  $\beta$  if  $\alpha$  is coindexed with and c-commanded by  $\beta$ .

But we have seen that *ka* in a complex sentence is attached to the preceding predicate. Let us assume that this is effected by "C(OMP)-lowering to Pred (or I)," which is similar to "I-lowering to V" and whose direction is opposite to "I-raising to C" as well as V-raising to I." Cf. Emonds (1985), Chomsky (1989). Note that C-lowering to I fill in the gap that is theoretically predicted but so far has not been attested in the literature; if there is a movement that raises I to C, as well as one that either raises V to I or lowers I to V, it would be an accidental gap if there were no movement that lowers C to I.<sup>8</sup> Now after C-lowering, the structure is something like the following:



In (40), if there is a wh-phrase coindexed with *ka*, hence with

COMP, c-command requirement for binding still holds, since COMP is not dominated by Pred but by only one of its segments; see (22) and (23). However, a negative predicate under Pred, namely  $\beta = [+neg]$ , does not c-command anything (other than COMP; see below), and thus no element outside of the upper segment of Pred in (40) is within the scope of negation. This accounts for the fact that while (1a) and (1b), repeated below, are synonymous with each other, their yes/no question counterparts are not:

- (1)a. Taroo wa paatee ni de-nai to omoi-masu  
 "I think that Taro will not attend the party"  
 b. Taroo wa paatee ni de-ru to (wa) omoi-masen  
 "I don't think that Taro will attend the party"  
 (41)a. Taroo wa paatee ni de-nai to omoi-masu ka  
 "do you think that Taro won't attend the party"  
 b. Taroo wa paatee ni de-ru to (wa) omoi-masen ka  
(= (3))  
 "don't you think that Taro will attend the party"

(1a) and (1b) are synonymous with each other since, in addition to the semantic property of *omow*, which is a Neg-Raising predicate, the constituents in the clausal complement to *omow* are within the scope of negation in both examples. In contrast, (41b) is not synonymous with (41a), since, unlike in (41a), no constituents in the clausal complement in (41b) are within the scope of negation. This is confirmed by the fact that while the NPI *tittomo* "(not) a bit" can appear within the clausal complement to *omow* in (41a) as well as in (1a,b), it cannot appear in (41b):

- (1')a. Taroo wa paatee ni tittomo de-nai to omoi-masu  
 "I think that Taro will not attend the party a bit"  
 b. Taroo wa paatee ni tittomo de-ru to (wa) omoi-masen

- "I don't think that Taro will attend the party a bit"
- (41')a. Taroo wa paatee ni tittomo de-nai to omoi-masu ka  
 "do you think that Taro won't attend the party a bit"
- b.\*Taroo wa paatee ni tittomo de-ru to (wa)  
 omoi-masen ka  
 "don't you think that Taro will attend the party a  
 bit"

Note that the only difference between (1'b) and (41'b) is the absence vs. presence of *ka*. That the NPI *tittomo* cannot appear within the clausal complement to *omow* in (41'b) clearly shows that the complement is not within the scope of negation, due to the question morpheme *ka* that is adjoined to the negative predicate. The situation changes if *omoi-masen ka* is replaced by *omowa-nai no desu ka*, as in (42):

- (42) Taroo wa paatee ni tittomo de-ru to omowa-nai no  
 desu ka  
 "is it (so) that you don't think that Taro will  
 attend the party a bit"

This indicates that C-lowering does not apply if the complementizer is *no*, and (42) is acceptable for the same reason (1'b) is acceptable. Note that the version of (42) without *desu ka* is again acceptable, as the reader can easily verify (note 2, esp. the last paragraph).

##### 5. The Neg-Island Condition

In section 2 we noted that the interpretation represented by (12) is subject to the *wh*-island condition. In this section I will point out that there is a condition concerning negation whose effect is parallel to the *wh*-island condition. This condition will be referred to as the Neg-Island Condition (NIC).

To see what effect NIC has, consider the following:

- (43)a. [s [s {tuma to}<sub>i</sub> wa {Tanaka sensei ni}<sub>j</sub> wa  
teacher  
{aw-mai}<sub>i,j</sub> ] to omoi-masu]  
meet-won't  
"I think that I won't meet Mr. TANAKA with my WIFE"
- b. [s [s {tuma to}<sub>i</sub> wa {Tanaka sensei ni}<sub>j</sub> wa  
aw-oo] to {omoi-masen}<sub>i,j</sub> ]  
meet-will  
"I don't think that I will meet Mr. TANAKA with my  
WIFE"
- c. \* [s [s {tuma to}<sub>i</sub> wa {Tanaka sensei ni}<sub>j</sub> wa  
{aw-mai}<sub>j</sub> ] to {omoi-masen}<sub>i</sub> ]  
\*"it is not with my wife that I think that it is  
not Mr. Tanaka that I will meet"<sup>9</sup>

(43a) is a well-formed representation in which both *tuma to* and *Tanaka sensei ni* are foci of the embedded negative predicate *aw-mai*. (43b) is also a well-formed representation in which both *tuma to* and *Tanaka sensei* are foci of the matrix negative predicate *omoi-masen*. However, the representation (43c) is ill-formed; *tuma to* cannot be a focus of the matrix negative predicate *omoi-masen* even though it is within its scope. Clearly the presence of the negative predicate that c-commands *tuma to*, namely *aw-mai*, blocks the association of *tuma to* with *omoi-masen*. It should be noted that the mere intervention of one negative predicate does not always block the association of focus with another, as shown by (44):

- (44) [s {boku wa}<sub>i</sub> [s {Tanaka sensei ni}<sub>j</sub> wa {aw-mai}<sub>j</sub> ]  
to {omoi-masen}<sub>i</sub> ]  
"I don't think that I won't meet Mr. TANAKA" or:  
"it is not me that thinks that it not Mr. Tanaka that  
I will meet"

In (46), although the negative predicate *aw-mai* intervenes between *boku wa* and *omoi-masen*, it does not block the interpretation of *boku wa* being a focus of *omoi-masen*. The reason is, obviously, that *aw-mai* does not c-command *boku wa*.

NIC also blocks the association of *daremo* with *omoi-masen* in an example like (45b) below:

- (45)a. [<sub>S</sub> boku wa [<sub>S</sub> {daremo}<sub>i</sub> ku-ru] to {omoi-masen}<sub>i</sub> ]  
 (= (16b))  
 "I don't think that anyone will come"
- b. \* [<sub>S</sub> boku wa [<sub>S</sub> {daremo}<sub>i</sub> ko-nai] to {omoi-masen}<sub>i</sub> ]  
 \* "no one is such that I think he doesn't come"<sup>10</sup>

The same is true of what Kato (1985) calls bridge expressions like *S+hasu da* "it must be that S," *S+hazu ga nai* "it cannot be that S," as in the following:

- (46)a. [<sub>S</sub> [<sub>S</sub> {daremo}<sub>i</sub> {ko-nai}<sub>i</sub> ] hazu da]  
 "it must be that no one will come"
- b. [<sub>S</sub> [<sub>S</sub> {daremo}<sub>i</sub> ku-ru] hazu ga {nai}<sub>i</sub> ]  
 "it can't be that anyone will come"
- c. \* [<sub>S</sub> [<sub>S</sub> {daremo}<sub>i</sub> ko-nai] hazu ga {nai}<sub>i</sub> ]  
 \* "no one is such that it must be that he won't come"

Let us turn to the proper formulation of NIC. Notice that the notion of binding covers the association of focus with negation if a constituent intended to be a focus of negation is c-commanded by and coindexed with a negative predicate, as well as the association of WH with Q. We can then state NIC in the following way:

- (47) The Neg-Island Condition (NIC):  
 Any binding of  $\alpha$  by  $\beta$  is blocked if a negative predicate c-commands  $\alpha$  and is c-commanded by  $\beta$ .





(51)  $\alpha$  excludes  $\beta$  if no segment of  $\alpha$  dominates  $\beta$ .

With the definition of c-command as in (49), Pred in (48) does c-command the wh-phrase, since the upper segment of Pred dominates the wh-phrase. Therefore NIC blocks the binding relation in question and the sentence is ruled out.

In contrast, sentences like (2a) and (4) are well-formed since after *dare* is moved to the COMP dominating *ka* at LF, the negative predicate *de-nai* or *omow-anai* does not c-command *dare*, and NIC does not apply.

Note that NIC does not apply to a simplex wh-question like the following:

(52) *dare ga ki-masen ka*  
 "who will not come"

This is because C-lowering does not take place in a simplex sentence and therefore the negative predicate does not c-command COMP, hence a wh-phrase adjoined to it. If a sentence like (52) sounds somewhat odd at all, it is because the quantificational nature of *dare*. See section 4.

NIC also exclude a certain interpretation of questions involving a wh-phrase. Thus consider the following:

(53) *Akiko wa dono kyouju ga dare o suisensitei-ru ka*  
*sittei-masu ka* (= (10))

As noted in section 2, a sentence like above is ambiguous according to whether *dono kyouju* takes a embedded clause or a matrix clause as its scope. However, that wh-phrase cannot take the matrix scope if the matrix predicate is [+neg]:

(54) *Akiko wa dono kyouju ga dare o suisensitei-ru ka*  
*siri-masen ka*



- (ii)a. Dare *ga* *paatee* ni de-ru no *desu ka*?
- b. Dare *ga* *paatee* ni de-ru no *desu*?
- c. Dare *ga* *paatee* ni de-ru no *ka*?

In (ii), the a-sentence in which no "deletion" is involved is the least informal form. If *ka* is "deleted" from it, we have (iib). If the copula is "deleted," we have (iic). If both are "deleted," we have the informal (i). For some reason that is unclear to me, the replacement of *desu* with its non-polite counterpart *da* is impossible in (iia), but it is possible in (iib):

- (iii)a. \*Dare *ga* *paatee* ni de-ru no *da ka*?
- b. Dare *ga* *paatee* ni de-ru no *da*?

However, (iiia) becomes acceptable under embedding, as in (iv):

- (iv) Dare *ga* *paatee* ni de-ru no *da ka wakari-masen*.

know-Neg

"I don't know who will attend the party."

Thus we may assume that the "deletion" of *da* (but not *desu*) is obligatory in the main clause if *ka* is not "deleted" as well. For some comments on the "deletion" of *ka*, see note 4.

If the assumption that a question ending with *no* is derived from, or at least related to, a corresponding question ending with *no-Cop-ka* is correct, then the version of (4) without *desu ka* should be equally acceptable, and in fact it is:

- (v) Dare *ga* *paatee* ni de-ru to (wa) *omow-anai no*?

<sup>3</sup> Here and below, capital letters indicate heavy stress, or a focus of the sentence. This device will not be used in a cleft sentence, as in the first version of English translation here, since what is focalized is syntactically indicated in a cleft sentence; the focus comes after *it-(Aux)-be*. In the case of the personal pronoun *I*, the italicized '*I*' will be used to indicate heavy stress.

<sup>4</sup> (7b) is acceptable if *de-masu* is read with a special, particularly rising, intonation. I assume that in a case like this either *ka* is deleted at PF or a phonetically null

question morpheme which triggers the special intonation is present in the position of Q. (This latter possibility is also suggested by Nishigauchi (1990: 18).) Note that the "deletion" of *ka* is possible only in a main clause and is therefore an instance of what are often called main clause phenomena (MCP):

(i) Taroo wa paatee ni de-ru no (ka)?

"Will Taro attend the party?"

(ii) Taroo wa paatee ni de-ru no \* (ka) wakari-masen.

"(I) don't know whether Taro will attend the party."

In general, MCP result from what there is every reason to believe are marked operations; the "deletion" of *ka* may well be among such.

<sup>5</sup> Again, this sentence would be acceptable if read with a marked intonation, in which case it is synonymous with (8d).

<sup>6</sup> See Kato (1985: 163-4) for examples of bridge expressions that allow an NPI to occur in their complement, where it is not the predicate of the complement clause but that of the bridge expressions that involves a negative associated with an NPI.

<sup>7</sup> This sentence would be acceptable if *daremo* is read with HLL, in which case it is not an NPI. Whatever the accent pattern may be of *daremo*, however, it cannot be a focus of *ko-nai*.

<sup>8</sup> See Homma (1989) for an argument for I-raising to C in Japanese as well as in English.

<sup>9</sup> I am indebted to S. Homma for this English paraphrase.

<sup>10</sup> This paraphrase is also due to S. Homma.

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