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Comments Welcome

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1. *Introduction: Bound Variables and KARE in Japanese*

It has been noted that, unlike English pronouns, the so-called overt pronoun kare 'he' in Japanese cannot be construed as a bound variable. This is illustrated in (1).¹

(1) a. daremo_i-ga [NP[S zibun_i-ga/*kare_i-ga/ec_i tukut-ta]
everyone-NOM self-NOM he-NOM make-PAST
omotya]-o kowasi-ta
toy-ACC break-PAST
'Everyone_i broke the toy that he_i had made.'

b. daremo_i [NP[S zibun_i-ga/*kare_i-ga/ec_i tukut-ta]
no one self-NOM he-NOM make-PAST
omotya]-o motte konakat-ta²
toy-ACC not brought along-PAST
'No one_i brought along the toy that he_i had made.'

The purpose of this paper is to consider why kare cannot be construed as a bound variable. Let us start tackling this puzzle by considering the relationship between kare and the Japanese deictic system.

2. *THE JAPANESE DEICTIC PARADIGMS AND KARE*

As described by Sakuma (1936), Japanese possesses an extremely productive system of deictics, so-called the ko, so, a, do paradigm. Consider the paradigms in (2), (3) and (4).

¹ That kare cannot be construed as a bound variable has been discussed in Nakai (1976, 1977), Saito (1981), Kitagawa (1981), Nakayama (1982); it has received a great deal of attention since Saito and Hoji (1983). Many works have subsequently appeared discussing the bound variable construal of overt pronouns, in contrast to the empty pronoun, in other languages as well (Montalbetti (1984) on Spanish, Hong (1985) on Korean and Aoun (1986) on Chinese).

² It is not clear that the negative polarity item daremo in (1) is in an argument position. It is perhaps an adverbial with the matrix subject being an empty category, as suggested in Hasegawa (1985).

(2) nominals

- a. kore 'this (thing)' as in "I like this." (close to the speaker)
- b. sore 'that (thing)' (far from the speaker and close to the hearer)
- c. are 'that (thing)' (far from both the speaker and the hearer)
- d. dore 'which (thing)' (among 3 or more)

(3) prenominal modifiers

- a. kono 'this' as in "I like this book."
- b. sono 'that'
- c. ano 'that'
- d. dono 'which'

(4) a. koko 'here'

- b. soko 'there'
- c. a(so)ko 'there'
- d. doko 'where'

In each of these paradigms, ko, so, a and do are followed by a distinct morpheme. In the case of (3), they are followed by no, which is identical to the so-called genitive case marker. Several other morphemes can follow them, yielding expressions such as aa/soo 'that way,' doitu 'which guy/thing (derogatory when used for a person), konnani 'this much' and the adverbial koo 'like this.'

Yasuda (1928, p.327 in Hattori et.al. (1979)) places kare in the same slot as are 'that (thing)' in his deictic chart.³ In fact, it is stated in the 1977 edition of Sanseido's Dictionary of Classical Words, that ka in classical Japanese corresponds to the present day are. (Cf. also Mikami (1972a, p. 50).)

While ka differs from ko, so, a, and do in the modern day Japanese in that it does not allow a full range of morphological combination, as indicated by the illicit expressions in (5), the historically deictic status of ka, and its syntactic resemblance to ko, so, a, do, can still be seen in the well-formed expressions such as kano (ka + no) as in (6), which is still used in formal speech.

- (5) a. *ka(so)ko (intended as: a(so)ko 'that place')
- b. *katira (intended as: atira 'that way')
 - c. *kaa (intended as: aa 'in that way')
 - d. *kannani (intended as: annani 'that much')

- (6) kano yuumeina Chomsky-ga kita
famous -NOM came
'(that) famous Chomsky came.'

The substitution of ano for kano in (6) does not seem to affect the meaning of the sentence.

³ In Mikami's (1955, published as Mikami (1972b)) chart (p.174) as well, kare is treated together with the a system.

A historical consideration thus makes it plausible to assume that kare (ka + re) is analogous to are (a + re), which consists of a, one of the four deictic morphemes, and re.⁴

We will now turn to evidence from the contemporary grammar of Japanese that ka in kare is closely related to a in are. In discussing the so-called "anaphoric" use of a and so, Kuno (1973) claims the following.⁵

The a-series is used only when the speaker knows that the hearer, as well as the speaker himself, knows the referent of the anaphoric demonstrative. The so-series, on the other hand, is used either when the speaker knows the referent but thinks that the hearer does not or when the speaker does not know the referent. (Kuno; 1973, p. 283)

As observed by Kuno, certain contexts force the choice between ano hito 'that person' and sono hito 'that person.' Kuno's (1973, pp. 283-284) examples are reproduced in (7) and (8) below.

(7) A. Kinoo Yamada-san ni aimasita. **Ano** (***sono**) hito itumo genki desu ne.

'Yesterday, I met Mr. Yamada. That man is always in high spirits.'

B. Hontoo ni soo desu ne.

'Indeed so.'

(8) A-1. Kinoo Yamada to yuu hito ni aimasita. **Sono** (***ano**) hito, miti ni mayotte komatte-ita node, tasukete agemasita.

'Yesterday, I met a man by the name of Yamada. Since he lost his way and was having difficulties, I helped him.'

B-1. **Sono** (***ano**) hito, hige o hayasita tyuunen no hito desyoo?

'Isn't that person a middle-aged man with a beard?'

A-2. Hai, soo desu.

'Yes, that's right.'

B-2. **Sono/Ano** hito nara, watasi mo sitte-imasu yo. Watasi mo **sono/ano** hito o tasukete ageta koto ga arimasu.

'I know him, too. I have helped that man, too.'

In contexts such as (7) and (8), each occurrence of ano hito 'that person' can be replaced by kare. In other words, wherever ano hito is allowed, kare is also allowed and conversely. This is illustrated in (9) and (10).

(9) A. Kinoo Yamada-san ni aimasita. **Kare** itumo genki desu ne.

'Yesterday, I met Mr. Yamada. That man is always in high spirits.'

⁴ It is not clear exactly what re is. It suffices to say here that it is like a [+N, -V] root with the meaning of 'thing' (and 'person' in a somewhat derogatory sense).

⁵ Kitagawa (1979) argues that the so-called "anaphoric" use of a and so are extension of their deictic use. How the so-called "anaphoric" use of a and so is derived from their deictic use does not affect the point at issue here, which is to establish the correspondence between ka in kare 'he' and a in are 'that (thing)' and ano hito 'that person'. Cf. also Kuroda (1979).

B. Hontoo ni soo desu ne.
'Indeed so.'

(10) A-1. Kinoo Yamada to yuu hito ni aimasita. ***Kare**, miti ni mayotte komatte-ita node, tasukete agemasita.⁶

'Yesterday, I met a man by the name of Yamada. Since he lost his way and was having difficulties, I helped him.'

B-1. ***Kare**, hige o hayasita tyuunen no hito desyoo?

'Isn't that person a middle-aged man with a beard?'

A-2. Hai, soo desu.

'Yes, that's right.'

B-2. **Kare** nara, watasi mo sitte-imasu yo. Watasi mo **kare** o tasukete ageta koto ga arimasu.

'I know him, too. I have helped that man, too.'

The above observation thus suggests the close relationship between kare and ano hito, as compared to that between kare and sono hito, providing us with confirmation of the correlation between ka and a, which has independently been suggested by the historical consideration noted earlier.

3. *Demonstrativity and Bound Variable Construal*

We have seen that ka in kare is closely related to a in are, one of the deictics in Japanese. If kare is essentially demonstrative, it seems natural that it cannot be construed as a bound variable. In this section, I will illustrate, using English data, the general inability of a demonstrative nominal category to be bound by an operator.

First, as noted in Hornstein and Weinberg (1987), the English epithets can be operator-bound.⁷

(11) every linguist_i's mother thinks that the poor s.o.b._i has chosen the wrong field

Notice, however, that if that poor s.o.b. replaces the poor s.o.b. the bound reading becomes impossible.

⁶ If one forces it hard, A-1 in (10) might improve a little. The forced context would be one in which the speaker, upon getting to know Mr. Yamada, became very close to him within the matter of a day. Interestingly, A-1 in (8), with ano hito 'that person', does not improve even in this context. It seems that kare can be less deictic than ano hito. The difference between kare and ano hito will be discussed in section 6.

⁷ The ungrammatical (i) is ruled out by Binding Condition (C).

(i) *every linguist_i thinks that the poor s.o.b._i has chosen the wrong field

Every linguist A-binds the poor s.o.b at S-structure (or since its trace A-binds the poor s.o.b. at LF after the application of Quantifier Raising.) In (11) such an A-binding relation does not hold and the bound reading for the epithet is possible. Here I am not concerned with how the QP in the Spec of NP can "bind" the category that the entire NP c-commands. See Reinhart (1987) as well as Haik (1984) and Heim (1982) for a recent proposal for this type of binding .

(12) *every linguist_i's mother thinks that that poor s.o.b._i has chosen the wrong field

The pair in (13), provided by an anonymous reviewer, illustrates the same contrast.

- (13) a. every machine_i's designer thinks that the thing_i will give him a million
b. *every machine_i's designer thinks that that_i will give him a million

Even for those speakers who can marginally accept (12), the bound reading in (14b) is not possible.

- (14) a. ?no linguist_i's mother thinks that the poor s.o.b._i has chosen the wrong field
b. *no linguist_i's mother thinks that that poor s.o.b._i has chosen the wrong field

It is not the case, incidentally, that s.o.b. cannot be coreferential with an R-expression, as illustrated in (15).

(15) John_i's mother (always) complains that that poor s.o.b._i has chosen the wrong field

Let us conclude therefore that the demonstrative nominal cannot be construed as a variable bound by an operator. We have seen in section 2 that kare is closely related to one of the deictics in Japanese, namely, the a system. Given the assumption that kare is demonstrative, we can now assimilate the failure of the English demonstrative epithet to be construed as a bound variable in (12) and (14b) to the failure of kare to be so construed.⁸

4. *The A and So Paradigms in Japanese*

In the preceding section, we have observed that if a nominal is demonstrative, it cannot yield bound variable construal even when it appears in configurations in which a personal pronoun or a non-demonstrative epithet can be bound by an operator. In this section, we will first see that not all members in the Japanese ko, so, a, do "deictic" system are used exclusively as deictic. More specifically, we will see that while a must be used deictically, so may be used either deictically or non-deictically. Given that so, but not a, may be used non-deictically, our conclusion in the previous section naturally leads us to expect that so, but not a, can be construed as a bound variable. As we will witness directly below, it is indeed the case that while the members of the a system cannot be construed as bound variables, those of the so system can. Given the independent evidence that a and ka (in kare) are closely related with each other as observed in section 2, this result corroborates the claim that the reason for the impossible bound variable construal for kare is due to its highly deictic nature.

⁸ That kare is not like personal pronouns in English has been noted in the literature. Kuroda (1965) claims that kare is more like a Name. Fiengo and Haruna (1987) also claim that kare in Japanese is not a pronoun.

Kitagawa (1981, p. 71) in fact attributes the "specific reading" of kare to its demonstrative nature and states "a historically more accurate rendering of kare may be 'that one in question' rather than 'he.'" (p.71)

That the so paradigm, unlike the a paradigm, can be used non-deictically has been noted in the past literature. Mikami (1970, p.149) claims that only the so paradigm can be anaphoric as well as deictic. He states in Mikami (1953, reprinted as Mikami (1972a, p. 52)) that Japanese does not yet have personal pronouns like English it and that the so paradigm is closest to become a personal pronoun like English it.

One phenomenon peculiar to the so system that Mikami notes is its idiomatic use, as illustrated in (16).

- (16) a. sorewa sorewa 'extremely'
 b. sorega 'however'
 c. soreni 'in addition'
 d. soretomo 'or'

Such expressions do not have the deictic sense and they do not have a counterparts. Thus the forms in (17), which we obtain by substituting a in place of so in (16), are all unacceptable.

- (17) a. *arewa arewa 'extremely'
 b. *arega 'however'
 c. *areni 'in addition'
 d. *aretomo 'or'

A few more examples of this nature are provided in (18).

- (18) a. sono hi gurasi
 that day life
 'a hand-to-mouth life'
 b. sono ta 'etc.'
 c. sono mukasi 'a long time ago'
 d. sono uti ni 'in a short while'
 e. soretonaku 'indirectly'

If we substitute a for so in (18), the resulting phrases are completely unacceptable.

- (19) a. *ano hi gurasi
 b. *ano ta
 c. *ano mukasi
 d. *ano uti ni
 e. *aretonaku

We have seen that the so paradigm, unlike the a paradigm, can be used non-deictically. We therefore predict that the so system, but not the a system, can yield bound variable interpretation. It has in fact been observed in Saito (1981), Nishigauchi (1986) and Yoshimura (1988) that the so paradigm can yield bound variable interpretation. This is illustrated in (20).

- (20) a. Nanimok [[ec_i sore_k-o tyuumon-sita] hito_i]-no uti]-ni(-wa)
 nothing that-ACC order-PAST person-GEN house-to(-CONT)
 todokanakatta
 did not arrive
 'Nothing_i arrived at the house of the person who had ordered that_i.'
- b. Dono baka_i-ga [Mary-ga soitu_i-ni horetei-ru to] it-ta no
 which fool-NOM Mary-NOM that guy-to love-PRES that say-PAST
 'Which fool_i said that Mary loved that guy_i?'
- c. Nani_k-ga [[ec_i sore_k-o tyuumon-sita] hito_i]-no uti]-ni todoi-ta no
 what-NOM that-ACC order-PAST person-GEN house-to arrive-PAST
 'What_i arrived at the house of the person who had ordered that_i.'
- d. ?Daremo_i-ga sono hito_i-no hon-o sute-ta
 everyone-NOM that person-GEN book-ACC throw away-PAST
 'Everyone_i threw away that person_i's book.'

Examples such as (21), by contrast, illustrate that bound reading is not possible for the a paradigm just as in the case of kare.

- (21) a. *Nanimok [[ec_i are_k-o tyuumon-sita] hito_i]-no uti]-ni(-wa)
 nothing that-ACC order-PAST person-GEN house-to(-CONT)
 todokanakatta⁹
 did not arrive
 'Nothing_i arrived at the house of the person who had ordered that_i.'
- b. *Dono baka_i-ga [Mary-ga aitu_i-ni horetei-ru to] it-ta no
 which fool-NOM Mary-NOM that guy-to love-PRES that say-PAST
 'Which fool_i said that Mary loved that guy_i?'
- c. *Nani_k-ga [[ec_i are_k-o tyuumon-sita] hito_i]-no uti]-ni todoi-ta no
 what-NOM that-ACC order-PAST person-GEN house-to arrive-PAST
 'What_i arrived at the house of the person who had ordered that_i.'
- d. *Daremo_i-ga ano hito_i-no hon-o sute-ta
 everyone-NOM that person-GEN book-ACC throw away-PAST
 'Everyone_i threw away that person_i's book.'

In this section, we have seen that the a system and the so system differ crucially from each other in that while the former must be used deictically, the latter need not. As predicted, while the so system is capable of yielding bound variable construal, the a system is not, reflecting a close

⁹ See footnote 2.

correlation between the availability of bound variable construal of them and the possibility of their non-deictic use. Given the close relation between kare and the a system noted in section 2, it is therefore natural to consider kare's inability to be construed as a bound variable as a consequence of its deictic nature.

5. *D-Linking and Bound Variable Construal*

It is noted in Hoji (1984) that kare can be bound by dono hito 'which person' more readily than by dare 'who.' Thus we have the contrast in (22) and (23).

(22)

- a. *dare_i-ga [Mary-ga kare_i-o butta to] itta-no
 who-NOM Mary-NOM he-ACC hit that said-Q
 'Who_i said that Mary had hit him_i?'
 b. ??dono hito_i-ga [Mary-ga kare_i-o butta to] itta-no
 which person-NOM Mary-NOM he-ACC hit that said-Q
 'Which person_i said that Mary had hit him_i?'
 (23)

- a. *[dare_i-ga kare_i no saifu-o nakusita ka]-ga mondai-ni natta
 who-NOM he-GEN wallet-ACC lost Q -NOM issue-DAT became
 'who_i lost his_i wallet has become an issue'
 b. ??[dono hito_i-ga kare_i no saifu-o nakusita ka]-ga mondai-ni natta
 which person-NOM he-GEN wallet-ACC lost Q-NOM issue-DAT became
 'which person_i lost his_i wallet became an issue'

Kare can thus be referentially dependent on dono hito 'which person' to some extent while it cannot be so dependent on dare 'who.'

Since we have considered that poor s.o.b. as analogous to kare, we expect that that poor s.o.b. too can be bound by which phrases. The prediction is indeed born out, as illustrated by the following examples.

- (24) a. which man_i's friends think that that man_i is a genius?
 b. which linguist_i's mother thinks that that poor s.o.b._i has chosen the wrong field?

Who(se), on the other hand, cannot bind that poor s.o.b. as easily as which man and which linguist, as indicated in (25a) although it can bind the poor s.o.b., as indicated in (25b).

- (25) a. ?*whose_i mother thinks that **that poor s.o.b.**_i has chosen the wrong field?
 b. whose_i mother thinks that **the poor s.o.b.**_i has chosen the wrong field?

Thus dono hito 'which person' and which linguist can bind kare and that poor s.o.b. more easily than dare 'who' and who , respectively.

It is not clear, however, that the relevant dependency in (22b) and (23b) (and for that matter that in (25)) involves bound variable construal. Consider the examples in (26), in which kare 'he' and kanozyo 'she' are referentially dependent on dono -phrases 'which-phrase.'

(26) a. ?dono dansigakuseij-ga karej-no kaban-o nakusita no
 which male student-NOM he-GEN bag-ACC lost
 'which female student_i lost his_j bag?'

b. ?dono jyogakuseij-ga kanozyoj-no kaban-o nakusita no
 which female student-NOM she-GEN bag-ACC lost
 'which female student_i lost her_j bag?'

If kare 'he' and kanozyo 'she' in (26) were indeed construed as bound variables on a par with he and she in English, we would expect (27) in Japanese to be as acceptable as (28) in English.

(27) *?dono gakuseij-ga [kare ka kanozyo]_i-no kaban-o nakusita no
 which student-NOM he or she -GEN bag-ACC lost
 'which student_i lost [his or her]_j bag?'

(28) Which student_i lost [his or her]_j bag?

The fact that the Japanese sentences corresponding to those in (29) are all unacceptable confirms the difference between kare ka kanozyo 'he or she' and English he and she in terms of their ability to be construed as a bound variable.¹⁰

- (29) a. who_i brought [his or her]_j book
 b. everyone_i brought [his or her]_j book
 c. no one_i brought [his or her]_j book
 d. someone_i brought [his or her]_j book

It therefore seems that the referential dependency in sentences such as (22a) and (23a) does not have to do with bound variable construal. I want to suggest that kare and the dono -phrase in (22a) and (22b) are "coreferential" with each other.¹¹ The contrast between (22a) and (23a), I suggest,

¹⁰ The actual Japanese examples are not supplied here for space limitation.

¹¹ Notice that, just as kare ka kanozyo 'he or she' cannot be referentially dependent on dono gakusei 'which student' in (27), so that bastard or that bitch cannot be referentially dependent upon which linguist .

(i) *'which linguist_i's mother thinks that [that bastard or that bitch]_j has chosen the wrong field?

It therefore seems plausible that in (24) that man and that poor s.o.b. are not construed as variables bound by which man and which linguist , respectively, but are "coreferential" with the latter.

is due to the difference degrees of "referentiality" between dono hito 'which person' and dare 'who.' A distinction between which-phrases and who/what is in fact made in Pesetsky (1987) based on the notions "D-linked and non-D-linked WH-phrases" According to Pesetsky (1987, p.107) "[r]oughly, which-phrases are discourse-linked (D-linked), whereas who and what are normally not D-linked. When a speaker asks a question like Which book did you read?, the range of felicitous answers is limited by a set of books both speaker and hearer have in mind. If the hearer is ignorant of the context assumed by the speaker, a which-question sounds odd." (pp.107-108) He characterizes D-linked and non-D-linked wh-phrases as in (30).

- (30) A. (his (33)) Non-D-linked wh-phrases are quantifiers and adjoins to S'.
 B. (his (34)) D-linked wh-phrases are not quantifiers.

If dono hito 'which person' is not a quantifier and if dare is, it is natural that the former is more "referential" than the latter, thereby giving credence to the view that the referential dependency between kare and the dono-phrase in (22b) and (23b) is that of coreference rather than that of bound variable construal.¹²

If it is the case, as argued by Pesetsky, that D-linked dono hito 'which person' need not be raised at LF while dare must, we could account for the contrast noted in (22) and (23) by Hong's (1985) and Aoun and Hornstein's (1986) proposal that kare cannot be A'-bound. By assuming that a demonstrative nominal cannot be A'-bound, we could also account for the contrast in English noted in (24) and (25). The contrast reported in (22)-(25) may thus appear to support Hong's (1985) and Aoun and Hornstein's (1986) claim that kare cannot be A'-bound.

There is some complication here, however. If non-demonstrative epithets such as the bastard can indeed be construed as a bound variable, on a par with he and she, we should expect the sentence in (ii) to be as good as (iii).

(ii) ^{*/??}which linguist_i's mother thinks that [the bastard or the bitch]_i has chosen the wrong field?

(iii) which linguist_i's mother thinks that [he or she]_i has chosen the wrong field?

The unacceptable-to-marginal status of (ii), as compared to acceptable (iii), is left as a unsolved problem in this paper.

¹² Since D-linked wh-phrases are assumed not to be quantifiers, Pesetsky argues, they "are able to receive a Baker-style interpretation, without movement." (p.108) The absence of the syntactic Superiority effects in (ib) is thus argued to follow from the lack of LF movement of which man in (ib).

- (i) a. (his (21b)) *Mary asked [what_j [who read e_j]]?
 b. (his (29b)) Mary asked which book_i which man read e_j?

Notice the presence and the absence of e_j in (ii), in which the crucial difference at LF is indicated.

- (ii) a. (LF for 27a)) Mary asked [S' who_j what_i [S e_j read e_i]]?
 b. (LF for 27b)) Mary asked [S' which book_i [S which man read e_j]]?

There is, however, some reason to believe that the prohibition against the A'-binding of kare is not the correct way to derive the contrast in (22), repeated below.

- (22) a. *dare_i-ga [Mary-ga kare_i-o butta to] itta-no
 who-NOM Mary-NOM he-ACC hit that said-Q
 'Who_i said that Mary had hit him_i?'
 b. ??dono hito_i-ga [Mary-ga kare_i-o butta to] itta-no
 which person-NOM Mary-NOM he-ACC hit that said-Q
 'Which person_i said that Mary had hit him_i?'

The reason has to do with varying possibilities of dependency between kare and dono-phrases. The acceptability of (22b) varies somewhat among speakers although the sentence is invariably judged better than (22a). What is of interest is that those who find (22b) basically unacceptable typically judge (31a) slightly better than (22b), and (31b) even better than (31a).¹³

- (31) a. ?dono sakka_i-ga [Mary-ga kare_i-o butta to] itta-no
 which writer-NOM Mary-NOM he-ACC hit that said-Q
 'Which author_i said that Mary had hit him_i?'
 b. [dono nooberusyoo-jyusyoo-sakka]_i-ga
 which Noble prize winning author-NOM
 [Mary-ga kare_i-o butta to] itta-no
 Mary-NOM he-ACC hit that said
 'Which Noble prize winning author_i said that Mary had hit him_i?'

The same contrasts are illustrated by another set of sentences below.¹⁴

- (32) a. ??dono hito_i-ga kare_i-no kuruma-de kita no
 which person-NOM he-GEN car-in came
 'Which person_i came in his_i car?'
 b. ?dono sakka_i-ga kare_i-no kuruma-de kita no
 which writer-NOM he-GEN car-in came
 'Which writer_i came in his_i car?'
 c. [dono nooberusyoo jyusyoo sakka]_i-ga kare_i-no kuruma-de kita no
 which Noble prize winning author-NOM he-GEN car-in came

¹³ Those who find (22a) almost completely acceptable judge (31a) and (31b) equally acceptable and do not detect the difference between them.

'Which Noble prize winning author_i came in his_i car?'

If dono-phrases are D-linked and need not be raised at LF, kare can be A'-free in all the examples in (22b), (31) and (32). Hence all of these examples should be equally acceptable if the reason for the unacceptability of (22a) is the prohibition against the A'-binding of kare. (In (22a), dare 'who' has to be raised at LF, according to Pesetsky (1987); hence kare is A'-bound at LF.) If the contrast in (22) is derived by the prohibition against the A'-binding of kare, the three-way contrast noted in (22b), (31) and (32) remains unaccounted for. Notice that the antecedent for kare in (22b), (31) and (32) are all dono-phrases 'which-phrases,' which, under the present assumption, need not be raised at LF. On the other hand, if we account for the contrast in (22) based on the degrees of referentiality of dare 'who' and dono hito 'which person,' as I have proposed, we can account for such three-way contrast noted in (22b), (31) and (32) also in terms of the degrees of referentiality among the different dono-phrases. I would like to suggest (i) that the more semantic content the dono-phrase has (presumably through the "semantic content" of the head N), the more referential it is and (ii) that the more referential the dono-phrase is, the more readily **coreferential** it may be with kare. Take (32), for example. According to this suggestion, dono sakka 'which writer' is not as referential as dono nooberusyoo jyusyoo sakka 'which Nobel prize winning writer' but it is more referential than dono hito 'which person.' Hence the different degrees of acceptability of the examples in (22), (31) and (32) are as expected.

In this section, we have observed that kare and that poor s.o.b. can be referentially dependent on dono-phrases and which-phrases. I have, however, argued that such dependency is not that of bound variable construal but that of coreference. Such coreference is argued to be possible due to the "referential" status of dono-phrases and which-phrases.

6. *Degrees of Demonstrativity of Sono hito, Kare and Ano hito*

Consider again (22b) and (23b), which are repeated below.

(22b) ??dono hito_i-ga [Mary-ga kare_i-o butta to] itta-no
which person-NOM Mary-NOM he-ACC hit that said-Q
'Which person_i said that Mary had hit him_i?'

(23b) ??[dono hito_i-ga kare_i-no saifu-o nakusita ka]-ga
which person-NOM he-GEN wallet-ACC lost Q-NOM
mondai-ni natta
issue-DAT became
'which person_i lost his_i wallet became an issue'

While these are not completely impossible, as indicated above, they become completely impossible if the bindee is ano hito 'that person' instead of kare.

(33)

- a. *dono hito_i-ga [Mary-ga ano hito_i-o butta to] itta-no
 which person-NOM Mary-NOM that person-ACC hit that said-Q
 'Which person_i said that Mary had hit that man_i?'
 b. *[dono hito_i-ga ano hito_i-no saifu-o nakusita ka]-ga
 which person-NOM that person-GEN wallet-ACC lost Q-NOM
 mondai-ni natta
 issue-DAT became
 'which person_i lost that person_i's wallet became an issue'

By contrast, they improve significantly if the bindee is sono hito 'that person'.

(34)

- a. dono hito_i-ga [Mary-ga sono hito_i-o butta to] itta-no
 which person-NOM Mary-NOM that person-ACC hit that said-Q
 'Which person_i said that Mary had hit that man_i?'
 b. [dono hito_i-ga sono hito_i-no saifu-o nakusita ka]-ga
 which person-NOM that person-GEN wallet-ACC lost Q-NOM
 mondai-ni natta
 issue-DAT became
 'which person_i lost that person_i's wallet became an issue'

When dare 'who' replaces dono hito 'which person' in (31)-(34),' the relevant three-way contrast still persists although the resulting sentences, given in (35)-(37) below, are all worse than (31)-(34).

- (35) a. *dare_i-ga [Mary-ga kare_i-o butta to] itta-no
 who-NOM Mary-NOM he-ACC hit that said-Q
 'Who_i said that Mary had hit him_i?'
 b. *[dare_i-ga kare_i no saifu-o nakusita ka]-ga mondai-ni natta
 who-NOM he-GEN wallet-ACC lost Q-NOM issue-DAT became
 'which person_i lost his_i wallet became an issue'

(36)

- a. **dare_i-ga [Mary-ga ano hito_i-o butta to] itta-no
 who-NOM Mary-NOM that person-ACC hit that said-Q
 'who_i said that Mary had hit that man_i?'
 b. **[dare_i-ga ano hito_i no saifu-o nakusita ka]-ga mondai-ni natta
 who-NOM that person-GEN wallet-ACC lost Q-NOM issue became
 'who_i lost that person_i's wallet became an issue'

(37)

- a. ^(?)dare_i-ga [Mary-ga sono hito_i-o butta to] itta-no
'who_i said that Mary had hit that man_i?'
b. ^(?)[dare_i-ga sono hito_i-no saifu-o nakusita ka]-ga mondai-ni natta
who-NOM that person-GEN wallet-ACC lost Q-NOM issue became
'who_i lost that person_i's wallet became an issue'

The schematic summary of (31)-(34) as well as that of (35)-(37) are provided in (38) and (39), respectively.

- (38) a. WHICH PERSON_i ... [... sono hito_i ...] ...((34))
b. ??WHICH PERSON_i ... [... kare_i ...] ... ((31))
c. *WHICH PERSON_i ... [... ano hito_i ...] ...((33))

- (39) a. ^(?)WHO_i ... [... sono hito_i ...] ... ((37))
b. *WHO_i ... [... kare_i ...] ... ((35))
c. **WHO_i ... [... ano hito_i ...] ... ((36))

Recall that the contrast between (38b) and (39b) has been attributed in section 5 to the difference between dare 'who' and dono hito 'which person' in terms of their 'referentiality.' That is, I have proposed that (38b) is better than (39b) since dono hito 'which person' is more 'referential' than dare 'who' and hence can be in coreference relation with kare more easily than dare 'who.' But if the dependency in (38b) is indeed that of coreference, why is it that dono hito 'which person' and ano hito 'that person' cannot be in coreference relation in (38c), just as dono hito and kare can in (38b)? The answer to this question again seems to lie in how demonstrative and hence how referential kare and ano hito are. Leaving aside the exact content of the 'referentiality' of dono hito 'which person,' it seems to be the case that the less referential its bindee is, the more available the relevant dependency becomes. Thus we find the contrasts in (40).

- (40) a. dono hito_i-ga [Mary-ga ec_i butta to] itta no
which person-NOM -NOM hit that said
'which person_i said that Mary hit ec_i?'
b. dono hito_i-ga [Mary-ga sono hito_i-o butta to] itta no
which person-NOM -NOM that person-ACC hit that said
'which person_i said that Mary hit that person_i?'
c. ??dono hito_i-ga [Mary-ga kare_i-o butta to] itta no
which person-NOM -NOM he-ACC hit that said
'which person_i said that Mary hit him_i?'
d. *dono hito_i-ga [Mary-ga ano hito_i-o butta to] itta no
which person-NOM -NOM that person-ACC hit that said

'which person_i said that Mary hit that person_i?'

- e. ***dono hito_i-ga* [Mary-ga John_i-o butta to] itta no
which person-NOM -NOM -ACC hit that said
'which person_i said that Mary hit John_i?'

If ano hito is used purely deictically, that is, if the speaker points at someone while uttering (40d), the sentence is as bad as (40e).

I thus want to suggest that the relevant lexical difference among kare, ano hito and sono hito is different degrees of demonstrativity among them. If we assume that the so series can be used as completely non-deictic, that kare can be so used only to a lesser extent and that the a series is used essentially as a deictic, then the three-way contrast among the so system, kare and the a system can be reduced to the function of the degree of their demonstrativity.

It must be noted here that the three-way contrast among kare, ano hito and sono hito noted above cannot be accounted for by the prohibition against the A'-binding of kare, coupled with Pesetsky's conclusion that dono-phrases 'which-phrases' need not be raised to an A'-position at LF. In particular, the contrast in (38) cannot be accounted for by such an approach. Notice that the antecedent for kare in (38a), (38b) and (38c) is a dono-phrase and hence need not be raised at LF. Thus kare can be A'-free in all of (38). Yet the three-way contrast is observed. On the other hand, if our initial puzzle, i.e., kare's inability to be construed as a bound variable, is considered to be due to kare's demonstrative property, as has been argued above, we can derive the three-way contrast in (38) (and that in (39) as well) from the different degrees of demonstrativity, and hence referentiality among sono hito 'that person,' kare and ano hito 'that person.'

7. Conclusion

The main claim of the paper is that kare's inability to be construed as a bound variable is because of its deictic nature. The deictic nature of kare has been argued for based on (i) the close relationship between kare and the a paradigm, e.g., ano hito 'that person,' of the Japanese ko/so/a/do paradigms and (ii) the highly deictic nature of the a system, as compared to the so system.

While kare can be referentially dependent on dono-phrases 'which-phrases' such as dono hito 'which person' to some extent, it has been argued that the relevant dependency in such cases is that of coreference rather than that of bound variable construal. Thus we can still maintain the generalization that kare cannot be construed as a bound variable.

It has also been pointed out that the prohibition against the A'-binding of kare does not account for (i) the fact that some dono-phrases can bind kare more easily than others and (ii) the three-way contrast among the so series (e.g., sono hito), kare and the a series (e.g., ano hito) in terms of how readily they can be bound by dono-phrases 'which-phrase.'

8. References

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