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ABSTRACT

The interactions among demonstrative adjectives in certain genitive phrases and WH-words in Japanese are investigated in this report on a work in progress. It is argued that certain demonstrative adjectives in Japanese, such as "ano" ("that"), occupy the highest Spec position in DP and that they block A-bar movement out of DP; genitive phrases, such as "John-no" ("John's"), occupy the lower Spec position in DP. It is demonstrated by examples that demonstrative adjectives, irrespective of whether they are in the WH form or not, do not co-occur with other WH-words in DP, while genitive phrases can co-occur with WH-words. Findings suggested that the DP structure is similar to the clausal (or CP) structure in that the A-bar position appears higher than the A position, thus more articulated DP structures could be proposed. (Contains 10 references.) (NAV)

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SYNTAX OF DEMONSTRATIVE ADJECTIVES IN JAPANESE: A Preliminary Study

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Abstract: It is argued that demonstrative adjectives like *ano* ("that"), *kono* ("this"), and *sono* ("the or that") occupy the highest Spec position in DP in Japanese, and that they block A-bar movement out of DP. The interactions among demonstrative adjectives, genitive phrases like *John-no* ("John's"), and WH-words like *dare-no* ("whose") are explainable under our proposal.*

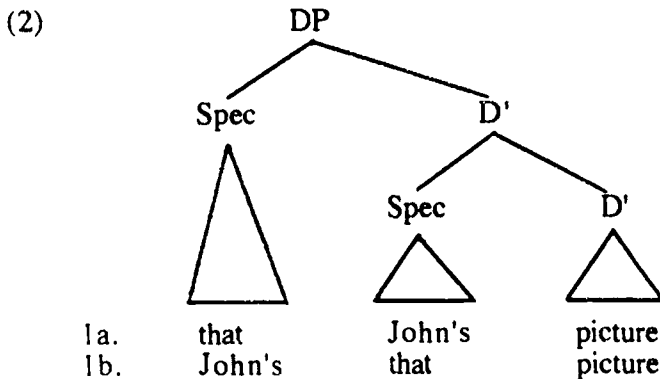
1. Introduction

It has been observed that demonstrative adjectives like *this* and *that* (or determiners like *the*) and genitive 's do not co-occur in English, as shown in (1).

- (1) a. **that* John's picture
- b. *John's *that* picture

(Cf. *that* picture of John's)

This fact supports the view that there is only one Spec position in DP in English. Thus, the structure illustrated in (2) is not allowed in English (see Kimura 1994).



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In contrast to the English cases shown above, their Japanese counterparts are well-formed. This suggests that the structure demonstrated in (2) is permissible in Japanese.

- (3) a. John-no ano syasin
John-Gen that picture
- b. ano John-no syasin
that John-Gen picture

It will be argued in this paper that the construction shown in (3a) is derived from that in (3b). More specifically, it will be argued that demonstrative adjectives such as *ano* ("that") occupy the highest Spec position in DP, which serves as an A-bar position.

The following section focuses on a difference in DP structure between English and Japanese. Section 3 presents data which show interactions among demonstrative adjectives, genitive phrases like *John-no* ("John's"), and WH-words like *dare-no* ("whose") in DP. Section 4 tries to account for these interactions. Section 5 summarizes the proposal presented in this paper.

2. DP Structure in English and Japanese

As already pointed out above, one of the differences in DP structure between English and Japanese is whether multiple Specs in DP are allowed or not. Another significant difference can be observed in the following examples.

- (4) a. You saw John's picture.
b. *Whose* picture did you see *t*?
c. **Whose* did you see *t* picture?

The contrast between (4b) and (4c) indicates that in English it is impossible to overtly extract *whose* out of DP, but that the whole DP must be moved. Chomsky (1995: 263; MIT Lecture, Fall 1995) provides an explanation for this. Chomsky argues that the WH-phrase *whose* is not a single syntactic phrase, but that *whose* consists of two elements, *who* and 's, as shown below.¹

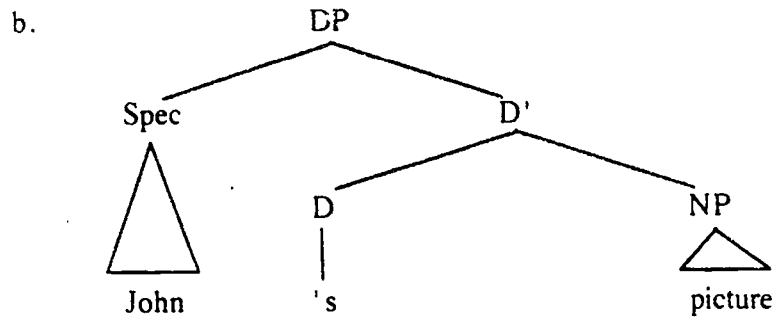
(5) whose = who + 's

Similarly, other WH-words like *what* and demonstrative adjectives like *that* are analyzed as in (6) (Chomsky MIT Lecture, Fall 1995).

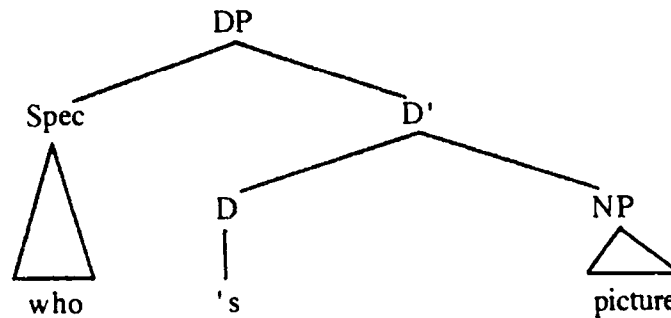
- (6) a. what = wh + at
b. that = th + at

Under the DP analysis then (see (7)), *whose picture* is assumed to have the structure shown in (8) (see Chomsky 1995: 263, example 27), according to which [*who + 's*], being neither a minimal projection or a maximal projection, does not qualify as a syntactic object that is subject to movement operations (see Chomsky 1986: 4).

(7) a. John's picture



(8)



If *who* is moved overtly, as in (9b), the derivation crashes at PF, since the two disconnected elements are not pronounceable (Chomsky 1995: 263).

(9) a. You saw [DP who [D' [D 's] [NP picture]]]

b. * *Who* did you see [DP t [D' [D 's] [NP picture,]]?

The above argument seems to hold for languages such as English. However, things are different in Japanese. Let us consider the following examples.^{2, 3}

(10) a. Kimi-wa *John-no* syasin-o mi-ta no?
 you-Top John-Gen picture-Acc see-Past Q
 "Did you see John's picture?"

b. *??/?John-no* kimi-wa syasin-o mi-ta no?

(11) a. Anta *John-no* syasin-o mi-ta no? (Colloquial speech)
 you John-Gen picture-Acc see-Past Q
 "Did you see John's picture?"

b. *(?)John-no* anta syasin-o mi-ta no?

(12) a. Kimi-wa *dare-no* syasin-o mi-ta no?
 you-Top whose picture-Acc see-Past Q
 "Whose picture did you see?"

b. *(?)Dare-no* kimi-wa syasin-o mi-ta no?

(13) a. Anta *dare-no* syasin-o mi-ta no? (Colloquial speech)
 you whose picture-Acc see-Past Q
 "Whose picture did you see?"

b. *Dare-no* anta syasin-o mi-ta no?

(10) and (11) show that the genitive phrase *John-no* ("John's") can be moved out of DP, though there is some difficulty in (10b). (12) and (13) show that its WH counterpart *dare-no* ("whose") can be moved out of DP without any serious difficulty. Let us continue to consider the examples shown below.

(14) a. Kimi-wa *ano* syasin-o mi-ta no?
 you-Top that picture-Acc see-Past Q
 "Did you see that picture?"

b. *? Ano* kimi-wa syasin-o mi-ta no?

(15) a. Anta *ano* syasin-o mi-ta no? (Colloquial speech)
 you that picture-Acc see-Past Q
 "Did you see that picture?"

b. (?)*Ano* anta syasin-o mi-ta no?

(16) a. Kimi-wa *dono* syasin-o mi-ta no?
 you-Top which picture-Acc see-Past Q
 "Which picture did you see?"

b. ? *Dono* kimi-wa syasin-o mi-ta no?

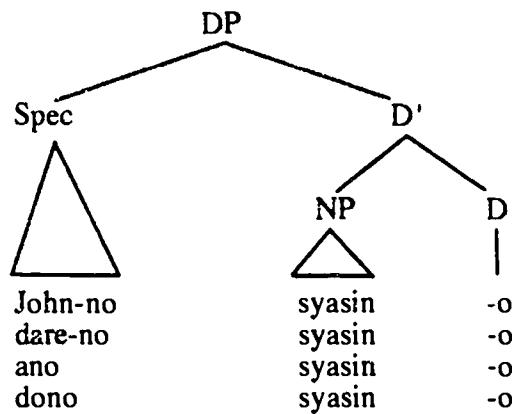
(17) a. Anta *dono* syasin-o mi-ta no? (Colloquial speech)
 you which picture-Acc see-Past Q
 "Which picture did you see?"

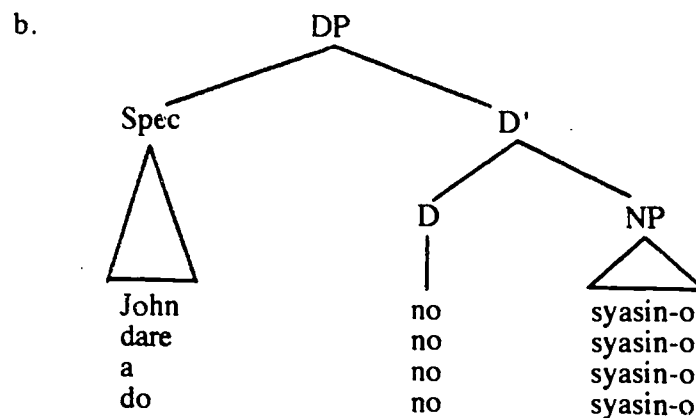
b. (?)*Dono* anta syasin-o mi-ta no?

The examples in (14) through (17) show that it is generally possible to extract the demonstrative adjective *ano* ("that") as well as its WH counterpart *dono* ("which") out of DP.

The facts just observed indicate that genitive phrases and demonstrative adjectives as well as their WH counterparts are syntactic objects that are subject to movement operations. Therefore, it is plausible to assume the structure shown in (18a) rather than the one shown in (18b). We should note that if we ignore the Head-Complement order, (18b) is similar to (7b) and (8) in that genitive phrases, demonstrative adjectives, and their WH counterparts, being neither phrasal categories or constituents, do not qualify as syntactic objects that are subject to movement operations. Then, if (18b) is adopted, it will be predicted that they cannot be extracted out of DP (see (4)).⁴

(18) a.





3. Interactions among Demonstrative Adjectives, Genitive Phrases, and WH-Words

Given this minimum background for the structural analysis of DP in Japanese, we are in a position to take a look at how demonstrative adjectives like *ano* ("that"), genitive phrases like *John-no* ("John's"), and WH-words like *dono* ("which") interact with one another. The basic examples we will deal with are shown in (19) and (20).

- (19) a. [DP Demonstrative adjective + Noun + CM (= case marker)]:

| | | | | | |
|-----------------------------|---|------|-------------|----------|-----|
| Kimi-wa | [| ano | syasin-o] | mi-ta | no? |
| you-Top | | that | picture-Acc | see-Past | Q |
| "Did you see that picture?" | | | | | |

- b. [DP Genitive phrase + Noun + CM]:

| | | | | | |
|-------------------------------|---|----------|-------------|----------|-----|
| Kimi-wa | [| John-no | syasin-o] | mi-ta | no? |
| you-Top | | John-Gen | picture-Acc | see-Past | Q |
| "Did you see John's picture?" | | | | | |

- (20) a. [DP Demonstrative adjective + Genitive phrase + Noun + CM]:

| | | | | | | |
|------------------------------------|---|------|---------|-------------|----------|-----|
| Kimi-wa | [| ano | John-no | syasin-o] | mi-ta | no? |
| you-Top | | that | John's | picture-Acc | see-Past | Q |
| "Did you see that John's picture?" | | | | | | |

- b. [DP Genitive phrase + Demonstrative adjective + Noun + CM]:

| | | | | | | |
|------------------------------------|---|---------|------|-------------|----------|-----|
| Kimi-wa | [| John-no | ano | syasin-o] | mi-ta | no? |
| you-Top | | John's | that | picture-Acc | see-Past | Q |
| "Did you see John's that picture?" | | | | | | |

Let us first consider (19). If we replace *ano* ("that") and *John-no* ("John's") with their WH-counterparts *dono* ("which") and *dare-no* ("whose"), the sentences are still fine.

- (21) a. Kimi-wa [dono syasin-o] mi-ta no?
 you-Top which picture-Acc see-Past Q
 "Which picture did you see?"
- b. Kimi-wa [dare-no syasin-o] mi-ta no?
 you-Top whose picture-Acc see-Past Q
 "Whose picture did you see?"

If however the head noun *syasin* ("picture") in (19) is replaced with its WH counterpart *nani* ("what"), there arises a difference in grammaticality between the two sentences, as in (22).

- (22) a. *Kimi-wa [ano nani-o] mi-ta no?
 you-Top that what-Acc see-Past Q
 "That what did you see?"
- b. Kimi-wa [John-no nani-o] mi-ta no?
 you-Top John-Gen what-Acc see-Past Q
 "John's what did you see?"

Finally, if the head noun *syasin* ("picture") in (21) is replaced with its WH counterpart *nani* ("what"), the following contrast arises.

- (23) a. *Kimi-wa [dono nani-o] mi-ta no?
 you-Top which what-Acc see-Past Q
 "Which what did you see?"
- b. Kimi-wa [dare-no nani-o] mi-ta no?
 you-Top whose what-Acc see-Past Q
 "Whose what did you see?"

Let us next examine the examples shown in (20). Again, there are three points to be noted. First, if the demonstrative adjective *ano* ("that") is replaced with

its WH counterpart *dono* ("which"), the sentences are still fine.

- (24) a. Kimi-wa [dono John-no syasin-o] mi-ta no?
 you-Top which John-Gen picture-Acc see-Past Q
 "Which John's picture did you see?"
- b. Kimi-wa [John-no dono syasin-o] mi-ta no?
 you-Top John-Gen which picture-Acc see-Past Q
 "John's which picture did you see?"

Secondly, and contrary to the above instance, if the genitive phrase *John-no* ("John's") in (20) is replaced with its WH counterpart *dare-no* ("whose"), both of the sentences are ungrammatical.

- (25) a. *Kimi-wa [ano dare-no syasin-o] mi-ta no?
 you-Top that whose picture-Acc see-Past Q
 "That whose picture did you see?"
- b. *Kimi-wa [dare-no ano syasin-o] mi-ta no?
 you-Top whose that picture-Acc see-Past Q
 "Whose that picture did you see?"

Thirdly, if both *ano* ("that") and *John-no* ("John's") in (20) are replaced with their respective WH counterparts, a contrast between (26a) and (26b) emerges.

- (26) a. *Kimi-wa [dono dare-no syasin-o] mi-ta no?
 you-Top which whose picture-Acc see-Past Q
 "Which whose picture did you see?"
- b. Kimi-wa [dare-no dono syasin-o] mi-ta no?
 you-Top whose which picture-Acc see-Past Q
 "Whose which picture did you see?"

Let us summarize the findings here. The examples in (21), (22), and (23) indicate that demonstrative adjectives, irrespective of whether they are in the WH form or not, do not co-occur with other WH-words in DP, while genitive phases can co-occur with WH-words. The examples in (24) and (25) again indicate the same point. However, this descriptive generalization does not seem to account for the contrast in (26).

4. Operator Movement and the Position of Demonstrative Adjectives

Before accounting for the data presented in Section 3, let us turn our attention to the recent analysis of WH-words in Japanese. It is argued by Watanabe (1992) that there is an invisible overt movement of an empty operator which is associated with WH-words in Japanese. Under Watanabe's model, it is crucial that the movement takes place in overt syntax rather than in LF. This is illustrated by the following example.

- (27) Kimi-wa nani-o katta no?
 you-Top what-Acc bought Q
 "What did you buy?"

Watanabe argues that although no overt movement operation appears to take place in (27), an empty operator that is associated with *nani-o* ("what-Acc") moves from the inside of IP to the specifier position of CP.⁵

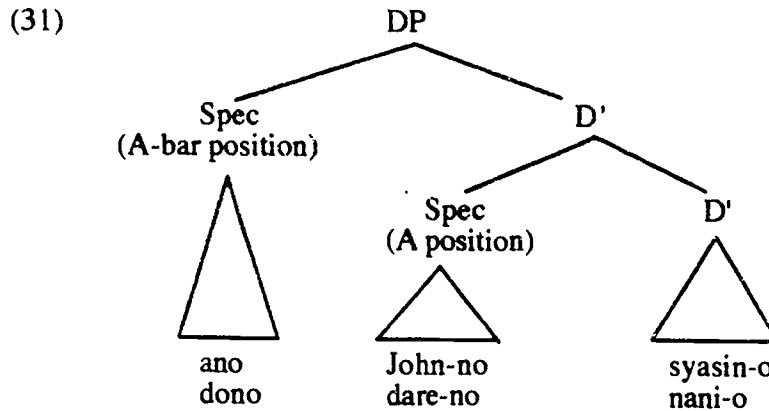
- (28) [CP [IP Kimi-wa *nani-o*_i katta] [C no] *Op*_i]

In (29), *ka dooka* ("whether") creates a WH-island, and therefore the oddness of (29) is ascribable to the violation of WH-Island Condition, a case of the Subjacency Condition.⁶ The relevant structure of (29) (equal to Watanabe's example (14)) is shown in (30).

- (29) ?? John-wa [Mary-ga nani-o katta ka dooka]
 John-Top Mary-Nom what-Acc bought whether
 siritagatte iru no?
 know-want Q
 "What does John want to know whether Mary bought?"

- (30) [CP [IP ... [CP ... *nani-o*_i ... ka dooka] ...] [C no] *Op*_i]

We would like to propose that demonstrative adjectives like *ano* ("that"), *kono* ("this"), and *sono* ("the or that") occupy the highest Spec position in DP. In addition to this, we would like to suggest that the position occupied by them is an A-bar position. On the other hand, as argued by Kimura (1994), genitive phrases like *John-no* ("John's") occupy an A position in DP. The same analysis applies to their WH counterparts. This amounts to slightly revising (18a) and proposing the following structure, which is parallel to (2).



In English, as we discussed earlier, both demonstrative adjectives like *that* and genitive phrases like *John's* occupy the same positions (see (7b)). In addition, as Chomsky (1986: 81) observes, they create an "Island" in DP and block movement out of DP. This is known as the Specificity Condition effects.

(32) a. *Who* did you see [three pictures of *t*] ?

b. * *Who* did you see [that picture of *t*] ?

(33) a. *Who* did you see [more pictures of *t*] ?

b. * *Who* did you see [John's picture of *t*] ?

The Specificity Condition effects arise only when the highest DP Spec position is occupied by elements like *th* and *John* (see (6b) and (7b)). Then, it is predicted that Japanese demonstrative adjectives should behave just like their English counterparts in that they create an Island in DP and block movement out of DP. By contrast, if there exists no demonstrative adjective in DP, the highest Spec position is empty and serves as an escape hatch for movement out of DP. Therefore, it is predicted that movement out of DP should be allowed in such a case.⁷ It will shortly be shown below that these predictions are borne out.

Let us first examine the examples presented in (21) to (23). In (21), the DP in question is selected by the verb, and hence it is not a barrier. Therefore, an invisible movement of an empty operator out of DP is permissible.

(34) a. [[Kimi-wa [*dono*_i syasin-o] mi-ta] [no] *Op*_i]

b. [[Kimi-wa [*dare-no*_i syasin-o] mi-ta] [no] *Op*_i]

Secondly, in (22a), whose relevant structure is illustrated in (35a), although the DP is not a barrier, the invisible movement is blocked by the presence of the demonstrative adjective *ano* ("that"), as we predicted. However, the movement is allowed in (22b), since the highest empty Spec position provides an escape hatch for the operator movement out of DP.

- (35) a. *[[Kimi-wa [ano *nani*-o_i] mi-ta] [no] Op_i]
 b. [[Kimi-wa [t'_i John-no *nani*-o_i] mi-ta] [no] Op_i]

The above account also holds for (23), though multiple WH-phrases appear in (23). In (23a), the WH phrase *dono* ("which") has the same status as demonstrative adjectives, in that it is in the highest Spec position (see (31)). Thus, it blocks the invisible movement of the empty operator. In (23b), on the other hand, the movement is allowed, since there is no demonstrative adjective and *dare-no* ("whose") occupies the lower position, and therefore nothing prevents movement out of DP.

Let us now turn our attention to the examples shown in (24) to (26). We assume to start with that (20b) derives from (20a) in terms of Scrambling, which takes place in DP, as illustrated in (36). Let us call it DP Internal Scrambling.

- (36) a. Kimi-wa [ano [John-no syasin-o]] mi-ta no?
 b. Kimi-wa [*John-no* [ano t syasin-o]] mi-ta no?

This assumption is based on the premise we established earlier, that demonstrative adjectives like *ano* ("that") occupy the highest Spec position in DP.

We are now in a position to account for the grammaticality of (24). The empty operator associated with the WH-word *dono* ("which") is moved to Spec of CP in (24a) (see (37a)), and then the genitive phrase *John-no* ("John's") is fronted in terms of DP Internal Scrambling (see (37b)).

- (37) a. [CP [IP Kimi-wa [DP *dono*_i John-no syasin-o] mi-ta] [C no] Op_i]
 b. [CP [IP Kimi-wa [DP *John-no*_j [DP *dono*_i t_j syasin-o]] mi-ta] [C no] Op_i]

Let us further account for the ungrammaticality of (25). The relevant structures are shown in (38).

- (38) a. [CP [IP Kimi-wa [DP ano *dare-no*_i syasin-o] mi-ta] [C no] *Op*_i]
 b. [CP [IP Kimi-wa [DP *dare-no*_i [DP ano *t*_i syasin-o] mi-ta] [C no] *Op*_i]

Here the movement of the empty operator is blocked by the demonstrative adjective *ano* ("that") occupying the highest Spec position in DP. DP Internal Scrambling does not save the situation, and the structure shown in (38b) is also ruled out.⁸

The difference in grammaticality shown in (26) reminds us of the cases illustrated in (39) (see Watanabe 1992).

- (39) a. ?Kimi-wa nani-o naze katta no?
 you-Top what-Acc why bought Q
 "Why did you buy what?"
 b. *Kimi-wa naze nani-o katta no?
 you-Top why what-Acc bought Q
 "What did you buy why?"

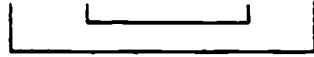
In (39a), the argument *nani-o* ("what-Acc") precedes the adjunct *naze* ("why"), but the order is reversed in (39b). In (39a), *nani-o* ("what-Acc") is assumed to be fronted in terms of (Clause Internal) Scrambling. Let us illustrate their structures in terms of simplified representations. (39a) is assumed to have the structure shown in (40), where the empty operator associated with *naze* ("why") moves first to Spec of CP, after which the empty operator associated with *nani-o* ("what-Acc") also moves there.⁹

- (40) [CP [IP ... *nani-o*_j *naze*_i *t*_j ...] [[*Op*_i] *Op*_j]_i]
-

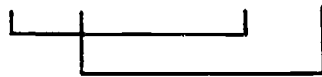
Naze ("why") is bound from Spec of CP. Although *nani-o* ("what-Acc") is not bound by its antecedent, i.e. *Op*_j, it is directly selected by the verb and hence the Empty Category Principle (ECP) is satisfied. As the lines indicate, the Path Containment Condition (PCC) is also observed.¹⁰

Things are different in (39b). Two possible structures could be assigned to (39b), but neither fails to satisfy well-formedness conditions like the ECP and the PCC.

(41) a. [CP [IP ... *naze*_j *nani-o*_i ...] [[Op_i] Op_j]_i]



b. [CP [IP ... *naze*_j *nani-o*_i ...] [[Op_j] Op_i]_j]



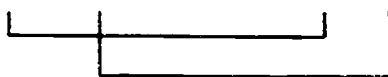
(41a) shows a case in which the empty operator of *nani-o* ("what-Acc") moves first into Spec of CP, after which the empty operator of *naze* ("why") moves there. Since *naze* ("why") is an adjunct, it must be antecedent-governed by Op_j. However, it fails to satisfy the antecedent government requirement since it is not bound by Op_j. Therefore, (41a) is out. (41b) is a case in which the PCC is violated, since, as the lines show, there is a crossing. (39b) is out, since it has no well-formed structure.

We would like to account for the contrast in (26) by recourse to the same mechanism just discussed. Note here that, as we have been assuming, the demonstrative adjective *dono* ("which") occupies an A-bar position, just like the adjunct *naze* ("why") does.¹¹ (26a) is assumed to have the following two possible structures, which are similar to (41).

(42) a. [CP [IP ... [DP *dono*_j *dare-no*_i ...] ...] [[Op_i] Op_j]_i]

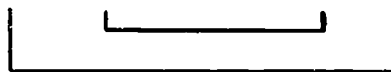


b. [CP [IP ... [DP *dono*_j *dare-no*_i ...] ...] [[Op_j] Op_i]_j]



By contrast, (26b) is well-formed, since it has the following legitimate structure.

(43) [CP [IP ... [DP *dare-no*_j *dono*_i *t*_j ...] ...] [[Op_i] Op_j]_i]



To recapitulate, if we assume Watanabe's (1992) operator movement approach, the incompatibility of demonstrative adjectives with WH-words is naturally attributable to the Island effects created by demonstrative adjectives. The contrast in (26) is accounted for in terms of well-formedness conditions like the

ECP and the PCC. Without the hypothesis that demonstrative adjectives like *ano* ("that") occupy the highest A-bar Spec position in DP, the incompatibility of demonstrative adjectives with WH-words observed in the examples will remain unaccounted for.

5. Summary

We have argued here that demonstrative adjectives like *ano* ("that") occupy the highest Spec position in DP, while genitive phrases like *John-no* ("John's") occupy the lower Spec position in DP. The interactions among demonstrative adjectives, genitive phrases, and WH-words are accounted for under our proposal.

It is argued by Kimura (1994) that there is an A position in DP in Japanese. Adopting Kimura's proposal, we may further suggest that the DP structure is similar to the clausal (or CP) structure, in that the A-bar position appears higher than the A position. In line with this suggestion, more articulated DP structures could be proposed. The present paper presents the first step towards such a proposal.

NOTES

* This paper tries to provide a general picture of work still in progress. Comments and suggestions are welcome. I would like to thank Hitoshi Akahane, Jeffrey Gross, Giuseppe Longobardi, and Kentaro Nakatani for discussion and comments. I would also like to thank an anonymous reviewer for helpful comments. All remaining errors are mine.

¹ Clearly *who* and genitive 's in (5) cannot be separated. However, there are surprisingly enough speakers who marginally allow (9b). I report this fact in a paper currently in preparation.

² Kuno (Harvard Lecture, Fall 1995) reports that extraction out of DP is not allowed in Japanese. However, my informants, including myself, find the examples given in (10) to (15) are not completely unacceptable. What is important here is the fact that no English speaker accepts (4c), but some Japanese speakers

marginally accept its Japanese counterpart.

³ The purpose of the English translations in double quotes is to help readers understand the structures of the Japanese examples presented in this paper. It should be noted that they are not intended to be the correct translations.

⁴ The structure shown in (18b) is incompatible with the head final character of Japanese. However, it does accord with the universal Head-Complement order hypothesis proposed by Kayne (1994). I will not pursue the possibility of (18b), maintaining the general view about the phrase structure of Japanese. In Fukuda 1993, I propose a structure similar to (18a) to account for case marker drop phenomena in Japanese. In the next section, we will slightly revise the structure shown in (18a).

⁵ It can be assumed that the empty operator originates inside of WH-words. Since the WH-word is an object of the verb, DP is not a barrier for the operator movement. We basically follow Chomsky 1986 in assuming that if a maximal projection is selected by a lexical category, it is not a barrier.

⁶ Lasnik and Saito (1992: 8) suggest that *ka dooka* ("whether") is in the COMP position of S'. If we assume that *ka* and *dooka* occupy the head C and Spec of CP, respectively, the unacceptability of (29) could be accounted for in terms of Relativized Minimality (Rizzi 1990) or Minimal Link Condition (Chomsky 1994).

⁷ Kimura (1994: 172-173) observes that demonstrative adjectives do not interfere with A movement out of DP. It may be possible to explain the difference in the Specificity Condition effects between demonstrative adjectives and genitive phrases in terms of Relativized Minimality (Rizzi 1990) or Minimal Link Condition (Chomsky 1994). We could elaborate the argument presented here in line with Longobardi 1991.

⁸ One might argue that if the operator movement takes place after DP Internal Scrambling of *dare-no* ("whose"), the construction is incorrectly predicted to be acceptable. However, after DP Internal Scrambling of *dare-no* ("whose"), the genitive phrase serves as an adjunct phrase. If the operator movement takes place from inside of the DP, it moves out of an adjunct phrase. Generally, extraction out of an adjunct phrase is prohibited. Therefore, we can still correctly account for the ungrammaticality of (25b).

⁹ We omit a discussion of COMP Indexing Rule to save space. Readers should refer to Watanabe 1992.

¹⁰ For expository purposes, we assume a bi-clausal definition of the ECP. Simply put, the PCC prohibits crossing lines.

¹¹ If *do* ("which") is an adjunct phrase, the association between it and the empty operator should be prohibited, as we implied in footnote 7. We tentatively assume here that *do* ("which") is not an adjunct phrase, though it is in an A-bar position.

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