Against the Aoun & Li (1993)'s Analysis of Wh/QP Interaction in Japanese

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Aoun and Li (1993, chapter 7) explore the Wh/QP interaction in Japanese, concentrating on the interaction of the universal quantifier "daremo (everyone)" and the wh-quantifier "dare (who)" and "nani (what)". The relevant facts in Japanese which they explain are summarized as follows: (i) a wh-word must always have wide scope with respect to a QP, even when the QP c-commands the wh-word at S-Structure; (ii) the structure [QP-ga ... wh-wo ...] is unacceptable.[1]

My aim is to show their argument concerning (ii) is not correct. They explain these "facts" by Quantifier Raising based on May (1977) and the following principles.

(1) a. The Antecedent Requirement (The Minimal Binding Requirement)
A variable must be bound by the most local potential antecedent.

b. The Locality Requirement
A variable, if it is subject to the Locality Requirement, must be bound by an A'-binder α within the minimal maximal category containing α and the variable.

A contains B iff B is dominated by all segments of A.

(2) The Scope Principle
An operator A may have scope over an operator B iff A c-commands B or A'-element coindexed with B.

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[1] This argument of Aoun and Li (1993), namely, the structure [QP-ga ... wh-wo ...] is unacceptable, is based on Hoji (1985).

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QR is such that quantificational phrases move to A'-positions at LF. The MBR (1a) specifies the antecedent as the first available appropriate antecedent. The Locality Requirement specifies the domain of the binding of variables.

Let us take an example.

(3) Darekaga daremo-wo semeta. (unambiguous)
someone-Nom everyone-Acc criticized
'Someone criticized everyone.' (Aoun & Li (1993))

(4) a. $[_{IP}\,[_{VP1}$ QP-ga ... $[_{VP2}$ QP-wo ... V]
b. $[_{IP}\,[_{VP1}$ QP-ga_i ... $[_{VP1}\,X_i$ ... $[_{VP2}$ QP-wo_j ... $[_{VP2}\,X_j$ V]
c. *$[_{IP}$ QP-$wo_j\,[_{VP1}$ QP-ga_i ... $[_{VP1}\,X_i$ ... $[_{VP2}\,X_j$ V] (Aoun & Li (1993))

The S-structure representation of (3) is (4a) and the LF representations of it are (4b, c). (4c) is impossible because of the MBR. That is, the first potential A'-binder for X_j is QP-ga_i. (3) has only one LF-representation (4b) and QP-ga_i has scope over QP-wo_j. Therefore its unambiguity follows.

The ungrammaticality of the structure [QP-ga ... wh-wo ...] is explained by Aoun and Li (1993) as follows. An example of the structure is (5).

(5) ??Daremo-ga nani-wo kaimashita ka?
everyone-Nom what-Acc bought Q
'What did everyone buy?' (Aoun & Li (1993))

Its LF representation can be (6a, b), both should be illegitimate.

(6) a. $[_{CP}$ ka $[_{IP}$ wh-$wo_j\,[_{IP}\,[_{VP1}$ OP-$ga_i\,[_{VP1}\,X_i\,[_{VP2}\,X_j$ V]]]]]]
b. $[_{CP}$ ka $[_{IP}\,[_{VP1}$ OP-$ga_i\,[_{VP1}\,X_i\,[_{VP2}$ wh-$wo_j\,[_{VP2}\,X_j$ V]]]]]]
(Aoun & Li (1993))

(6a) is the violation of the MBR. In contrast, (6b) does not violate the MBR, 'wh-wo_j' is too far away from the question marker 'ka' and fails to be governed by it.[2] Therefore (5) does not have a well-formed LF structure.

Now consider my argument against the explanation above. Consider the following examples.

[2] Aoun and Li (1993) assume that wh-words will undergo raising at LF to a position governed by the question marker, following Kim (1991).

(7) a. ?Dare-ga daremo-wo koroshitaka?
who-Nom everyone-Acc kill-past-Q
'Who killed everyone?'
b. ??Daremo-ga dare-wo koroshitaka?
everyone-Nom who-Acc kill-past-Q
'Who did everyone kill?'

(7) corresponds to (5). They are almost same. Japanese has another universal quantifier "minna (everyone)" whose pattern is different from "daremo (everyone). If we replace "daremo" in (7) with "minna", the sentences become better as seen in (8).

(8) a. Dare-ga minna-wo koroshitaka?
who-Nom everyone-Acc kill-Past-Q
'Who killed everyone?'
b. Minna-ga dare-wo koroshitaka?
everyone-Nom who-Acc kill-Past-Q
'Who did everyone kill?'

(8b) should be ungrammatical, since it has the structure [QP-ga ... wh-wo ...]. However the fact is the contrary. Therefore the explanation of Aoun and Li (1993) is incorrect.

Now, consider the following sentences.

(9) a. Dare-ga dare-wo aishiteiruka?
who-Nom who-Acc love-Prog-Q
'Who loves who?'
b. ?Dareka-ga dareka-wo aishiteiruka?
someone-Nom someone-Acc love-Prog-Q
'Does someone love someone?'
c. *Dare-ga dareka-wo aishiteiruka?
who-Nom someone-Acc love-Prog-Q
'Who loves someone?'
d. *Dareka-ga dare-wo aishiteiruka?
someone-Nom who-Acc love-Prog-Q
'Who does someone love?'

These sentences show that "dare (who)" can co-occur with "dare (who)", and "dareka (someone)" can co-occur with "dareka (someone)", but "dareka (someone)" and "dare (who)" cannot co-occur in the same clause. In other words, the co-occurrence of "dare

(who)" and "dareka (someone)" in a non-embedded sentence seems to be prohibited in Japanese. Especially, the case (4c) cannot be explained by Aoun & Li (1993), since their analysis predicts that it has a well-formed LF representation as follows.

(10) $[_{CP}$ ka $[_{IP}$ wh-ga$_i$ $[_{IP}$ $[_{VP1}$ X_i $[_{VP2}$ QP-wo$_j$ [VP2 X_j V]]]]]]

Their prediction is wrong.

Now consider the following sentences.

(11) a. *?Dare-ga dareka-no kuruma-wo nusunndanoka?
who-Nom someone's car-Acc steal-Past-Q
'Who stole someone's car?'
b. *?Dareka-ga dare-no kuruma-wo nusunndanoka?
someone-Nom who's car-Acc steal-Past-Q
'Whose car did someone steal?'

What happens if we embed "dareka" deeper? Look at (12).

(12) a. ??Dare-ga dareka-no kuruma-no kagi-wo nusunndanoka?
who-Nom someone's car's key-Acc steal-Past-Q
'Who stole someone's car's key?'
b. ??Dareka-ga dare-no kuruma-no kagi-wo nusunndanoka?
someone-Nom who's car's key-Acc steal-Past-Q
'Whose car's key did someone steal?'

These sentences sound better than (11). If there are two NP boundaries between "dare" and "dareka", the sentences seem to become more acceptable. In (12a), there are two NP boundaries, as follows.

(13) [Dare-ga [[dareka-no kuruma $_{NP}$]-no kagi $_{NP}$]-wo nusundano-ka]?

How about CP- and NP-boundaries?

(14) ??[[dareka-wo koroshita $_{CP}$]hito $_{NP}$]-ha dare-ka?
someone-Acc kill-Past-C person-Top who-Q
'Who is the person who killed someone?'

As for (14), though this sentence is somewhat odd, it is not impossible. This sentence has a complex NP. That is, there are NP and CP boundaries between "dare" and "dareka". These results suggest that the more boundaries there are between "dare" and "dareka", the more acceptable the sentence becomes.

(15) ?[[[Darekaga koroshita $_{CP}$] otoko $_{NP}$] no koibito $_{NP}$]-ha dareka?
someone-Nom killed C man 's lover Top who-Q
'Who is the lover of the man whom someone killed?'

This sentence has 3 boundaries and is better than (14).

These results are not recognized by Aoun & Li (1993) and might indicate that there is some Subjacency-like effect. However, there is a problem for Subjacency to explain these sentences. The weaker the "dareka(someone)" becomes, the better the sentence becomes. If we put a stress on "dareka(someone)" in (15), the sentence is no longer acceptable. So, if Subjacency is not affected by stresses generally, there must be another way to explain these sentences.

In sum, the argument presented by Aoun & Li (1993, chapter 7) has counter examples. The restriction on the co-occurrence of 'dare (who)' with 'dareka (someone)' exists, where the co-occurrence of 'dare (who)' with 'dare (who)' or 'dareka (someone)' with 'dareka (someone)' is possible. 'Minna (everyone)' shows different patterns from 'daremo (everyone)'. The deeper embedding of 'dareka (someone)' seems to improve the acceptability. Stresses change the situations. How can you solve this mystery?

References

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