Absorption in Japanese Multiple Wh-Questions

Saito (1994) proposes that a wh-phrase is licensed when it is adjoined to another. He observes that an adjunct wh-phrase such as naze 'why' can be saved by another higher wh-argument when it appears in a typical ECP violation, as shown below:

   -Top that book-Acc why bought person-Acc be-looking-for Q
   'Q John is looking for the person [that bought that book why]?'

   b. ??John-wa [nani-o naze katta] hito -o sugasiteiru no.
   -Top what-Acc why bought person-Acc be-looking-for Q
   'Q John is looking for the person [that bought what why]?'

To account for this contrast, Saito claims that a wh-adjunct is licensed by means of either (i) moving to the Spec-CP of a [+WH] Comp or (ii) being adjoined to a higher wh-argument. According to this, naze in (1a) must move to the matrix Spec-CP, thereby inducing an ECP violation. In (1b), in contrast, naze can be licensed by way of adjoining to nani-o 'what' and it does not have to move out of the complex NP island, hence the acceptability of this sentence. In this paper, I would like to claim that the pair-list reading available to a Japanese multiple question is derived from the same configuration as that in which naze is licensed in (1b); that is, the configuration in which one wh-argument is adjoined to another.

Higginbotham and May (1981) observe that a question involving a singular wh-phrase such as (2) presupposes that a unique individual is involved in the event of going to the store.

(2) Which person went to the store?

On the other hand, when a question involves multiple singular wh-phrases such as (3):

(3) Which man saw which woman?

it ceases to presuppose that exactly one man saw exactly one woman, and the numbering of a pair-list such as the following is a perfectly appropriate answer to (3):

(4) John saw Mary, Bill saw Sally, Mike saw Susan, etc.

The same pattern of facts obtains in Japanese as well. Thus, (5) presupposes that only one person went to the store whereas such a presupposition disappears in (6).

(5) Dono hito ga sono misen ni itanodesu ka?
   which person-Nom that store-to went Q

(6) Dono otoko-ga dono onna-ni attanodesu ka?
   which man -Nom which woman-Dat saw Q

Just like (3), (6) allows the pair-list reading, so that (4) is an appropriate answer to it. In order to derive the pair-list reading in question, Higginbotham and May (1981) assume the covert movement of a wh-in-situ construction as the woman in (3) to a position next to which man, and then propose the operation absorption, which makes n-ary wh-operators (n ≥ 2) out of n occurrences of unary wh-operators. When absorption takes place, the unique condition that holds for singular wh-phrases works differently: that is, given a domain D of men and a domain $D'$ of women and $m \in D$ and $w \in D'$, the pair $(m, w)$ is unique in that no other member of $D$ makes the open sentence $(x \text{ saw } y)\text{ true with } w$ and no other member of $D'$ makes the open sentence $(x \text{ saw } y)\text{ true with } m$. Given this, the absorption operation correctly derives the pair-list reading of (3). I will argue that at least in such a language as Japanese in which no overt movement is involved in an interrogative sentence, the configuration in which the absorption operation takes place is produced by one wh-phrase being adjoined to another. Thus, I propose that the pair-list reading of sentence (6) is derived from the following LF representation:

(7) [CP[S [dono otoko-ga] [dono onna-ni] itanodesu]ka]

I will show several pieces of evidence for this proposal. An initial empirical support comes from the fact that the c-command requirement is operative among wh-arguments in order to obtain the pair-list reading, as shown below:

   which parent-Nom which woman-Dat teacher-Nom saw C said Q
   'Which parent said that the teacher saw which woman?'

   b. [dono onna-ni sensee-ga atta to] dono oya-ga itanodesu ka.
   which woman-Dat teacher -Nom saw C which parent-Nom said Q

(8b) is derived from (8a) by scrambling the whole complement clause of itanodesu 'said' to the top of the sentence. Interestingly, the pair-list reading which is easily accessible for (8a) is not available for (8b). This fact follows straightforwardly from the present mechanism of
absorption, since if the c-command relation does not hold between the two wh-arguments, the adjunction of one wh-argument to the other will not be upward movement, and hence the trace will not be bound. A further empirical support for the present analysis comes from the Wh-quantifier scope interaction. When two wh-phrases are in the same scope domain as another distributed NP, then the latter NP can take scope over these wh-phrases, so that pair-lists for the answer can differ according to the distribution in question, as shown below:

(9) Sensee-ga [dono seeto-o dono ten-de John to Mary-ga kitarie-tu toj-ita no. teacher-Nom which student-Acc which respect-in and -Nom hate C said Q]

'Q The teacher said that John and Mary hate which student in which respect.'

In this sentence, different pair-list answers can be given with respect to John and Mary. On the other hand, if one of the two wh-arguments is located in a higher clause, then the distributed NP cannot take scope over either wh-argument under the pair-list reading, as shown below:

(10) Dono sensee-ga [dono seeto-o John to Mary-ga kitarie-tu toj-ita no. teacher-Nom which student-Acc and -Nom hate C think Q]

'Which teacher thinks that John and Mary hate which student.'

In this sentence, the same pair-list answer must be given with respect to John and Mary. This follows straightforwardly under the present assumption that the pair-list reading is produced in the configuration where a lower wh-phrase is moved up to a higher wh-phrase. Further, the present absorption mechanism is supported by the fact that when the two wh-arguments appear in a relative clause island such as in (1b), the pair-list reading still obtains, as shown below:

(11) John-wa [dono sinamono-o dono onna-ni katta] hito-o sagasite-tu no. -Top which goods-Acc which woman-Dat bought person-Acc be-looking-for Q

'Q John is looking for the person who bought which goods for which woman.'

Further, Saito (1984) shows that the saving effects of naze disappear when a saving wh-argument is located outside an island within which naze appears. This is expected, since if naze is adjointed to the wh-argument in this context, it will induce an island violation. The same facts obtain with respect to the availability of the pair-list reading, as shown below:

(12) Dono otoko-ga [kinoon dono sinamono-o katta] hito-o sagasite-tu no. which man-Nom yesterday which goods-Acc bought person-Acc be-looking-for Q

'Which man is looking for the person who bought which goods yesterday?'

This sentence does not have the pair-list reading.

I will finally show that the locality effects operative between two wh-arguments that undergo absorption are not the same as those operative in the licensing of naze. It will be shown that the locality effects in question are those of Condition A; compare the following sentence, which does not have the pair-list reading, with (8a):

(13) Dono oya-ga [sensee-ga dono onna-ni atta toj-ita no. teacher-Nom which woman-Dat saw C said Q]

'Which parent said that the teacher saw which woman?'

In this sentence, the embedded subject intervenes between the two wh-arguments, unlike (8a), thereby blocking the adjunction operation necessary for absorption. I will address the question why such Condition A effects are operative in the absorption mechanism assumed here by considering the trigger of the adjunction operation in question. I will argue that it is not a wh-feature itself that triggers the movement in question; in such a case, it would induce only standard island effects, as is the case with the licensing of naze. Rather, following Chomsky (1964) and Kuroda (1968), in assuming that interrogative phrases are composed of wh-features and existential features, I propose that it is the existential feature of a wh-argument that triggers adjunction operation necessary for absorption, and further that this feature seeks for a phrase that has what may be called a referential feature to undergo absorption. Given this, Condition A effects will follow from a minimality condition such as Minimize Chain Links (MLC), proposed by Chomsky and Lasnik (1993), which requires that a given movement cannot skip a possible landing site. Thus, in (13), dono onna-ni 'which woman' cannot cross the embedded subject to adjoin to the matrix wh-argument dono oya-ga 'which parent', since that subject could serve a target the lower wh-argument could adjoin to in order to undergo absorption. We can claim that when dono onna-ni is in fact adjoined to the embedded subject, it leads to a violation of Full Interpretation, since the resulting configuration is uninterpretable due to the mismatch of the referential features between the wh-argument and the embedded subject.