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Questions with Wh Phrases in Islands

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1. Introduction

Observe the following question-answer pair:

(1) Speaker A: Mary wa John ni nani o ageta hito ni atta no?
topic dat. what acc. gave person dat. met

"Mary met the person who gave what to John."

Speaker B: a. ??/*Konpyuutaa desu.

computer is

"It is a computer."

b. Konpyuutaa o ageta hito desu.

computer acc. gave person is

"It is the person who gave (him) a
computer."

On the basis of the fact that the short-form answering pattern (1Ba) does not constitute an adequate answer to question (1A), Nishigauchi (1984), Choe (1984), and Pesetsky (1984) have hypothesized that a wh-expression in an island necessitates the raising of the whole island in LF.¹ Therefore, the whole island needs to be repeated in the answer, yielding the long-form answering pattern of (1Bb). We will henceforth refer to this analysis as "the Pied Piping Analysis". Pesetsky further hypothesized that this situation holds only when a

wh-expression in an island ranges over the set of objects that are not discourse-linked, and proposes that discourse-linked wh-expressions (and therefore, the islands that contain them) can remain in situ in LF. We will show in this paper that the phenomenon under discussion does not give evidence either to the hypothesis that a wh-expression in an island necessitates the raising of the whole island, nor to the hypothesis that short-form answers are possible if and only if the wh-expression is discourse-linked. We will propose that a pragmatic factor that has nothing to do with the discourse-linking of the wh-expression in islands controls which answering pattern is appropriate.

But before showing that there are numerous counterexamples to Choe's, Nishigauchi's and Pesetsky's hypotheses, we want to point out that it is risky to attempt to determine the syntax of questions solely on the basis of the syntax of the answers to them. Observe the following question-answer pair:

- (2) Speaker A: Who remembers where we bought which books?
Speaker B: a. John and Mary remember where we bought
which books.
b. John remembers where we bought the physics
book, and Martha and Ted remember where we
bought The Wizard of Oz.

On the basis of the fact that (2A) can be answered either with (Ba) or (Bb), Baker (1970) has proposed that (2A) is ambiguous between (3a) and (3b):

- (3) a. [Q_i who_i remembers [$Q_{j,k}$ we bought which_j books where_k]]
b. [$Q_{i,j}$ who_i remembers [Q_k we bought which_j books where_k]]

In (3a), which_j books is bound by the embedded-clause Q , while in (3b), it is bound by the main-clause Q . From a purely syntactic point of view, the problem with this analysis is that (2A) derived from (3b) violates Subjacency (or the Q -clause Island Constraint) and should be unacceptable.² Furthermore, from a pragmatic point of view, even if (3b) were a legitimate underlying structure, there is no way for Speaker B to determine whether Speaker A meant (3a) or (3b). And even if he could, that would not determine his answering pattern. Whether he answers with Pattern (a) or with Pattern (b) is determined by pragmatic considerations. If Speaker B assumes that John and Mary each have the full answer -- that is, if Speaker B assumes that each of them remembers where the physics book and

The Wizard of Oz were bought -- he will use Pattern (a). He will also use Pattern (a) if he assumes that John and Mary, not individually, but together, have the full answer, but that Speaker A is not interested in finding out which part of the answer he can obtain from which person. On the other hand, if Speaker B assumes that Speaker A is interested in finding out which person to ask about which book, he will use Pattern (b).³ The fact that the latter answering pattern has little to do with the question of whether or not which books is bound by the main clause Q can be seen from the fact that Pattern (b) obtains even when which books is replaced with these books.

- (4) Speaker A: Who remembers where we bought these books?
Speaker B: a. John and Mary remember where we bought these books. (John and Mary do.)
b. John remembers where we bought the physics book, and Martha and Ted remember where we bought The Wizard of Oz.

Here again, Speaker B will use Pattern (b) if he assumes that Speaker A would be interested in finding out from whom he can get the information about the purchase place for each book. On the other hand, he will use Pattern (a) if he assumes that A is not interested in the details, or if the factual situation is such that John and Mary each have the full answer.⁴

The above pragmatic explanation for the possibility of answering the question (2A) either with (2Ba) or (2Bb) receives strong support from the fact that the most natural use of the latter pattern is as a continuation or expansions of the former pattern:⁵

- (5) Speaker A: Who remembers where we bought which/these books?
Speaker B: John and Mary do. John remembers where we bought the physics book, and Mary remembers where we bought The Wizard of Oz.

It would be absurd to claim that the first part of (5B) answers one interpretation of (5A), and the second part, another interpretation of the question.⁶

Although Baker might indeed still be correct in hypothesizing the mechanism for Q-indexing for multiple wh-questions, the fact that there are two ways to answer (2A) -- which is the only evidence that he presents for the hypothesis -- does not support his

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hypothesis.⁷ A functional explanation for the dual answers to (2A), details of which are given in Kuno and Robinson (1972), is necessary.

Now that we have shown that it is necessary to resort to pragmatic factors to account for the possibility of having dual answers to (2A), let us move on to question-answer pairs in Japanese and see what kind of factors interact with the answering patterns. First, observe the following exchanges:

- (6) A: Kimi wa, dare ga rakusen sita koto o sonna ni nageite
 you top. who nom. lost-election that so deploring
 iru n dai?

are

"(Lit.) Who are you so sad was defeated in the election?"

- B: a.??Tanaka-daigisi desu.

M.P. is

"It is Congressman Tanaka."

- b. Tanaka-daigisi ga rakusen sita koto desu.

M.P. lost-election that is

"It is that Congressman Tanaka was defeated."

- (7) A: Kimi wa, Hanako ga dare kara tegami o moratta koto o
 you nom. who from letter received that
 okotte iru n dai?

angry are

"Who are you angry that Hanako received a letter from?"

- B: a.??Taroo desu.

"It is Taroo."

- b. ?Taroo kara desu.

"It is from Taroo."

- c. Taroo kara moratta koto desu.

from received that is

"It is that she received a letter from Taroo."

- (8) A: Kimi wa, Hanako ga dare to deito sita koto o okotte iru
 you nom. who with dated that angry are
 n dai?

"Who are you angry that Hanako dated?"

- B: a.??Taroo desu.

"It is Taroo."

- b. ?Taroo to desu.

"It is with Taroo."

- c. Taroo to deito sita koto desu.

with dated that is

"It is that Hanako went out with Taroo."

The marginality of (6Ba), (7Ba) and (8Ba) is quite comparable to that of (1Ba). However, it is generally assumed that koto-clauses in Japanese do not constitute islands, as the acceptability of the following sentences demonstrates:

- (9) [[Hanako ga e, tegami o moratta] koto o kimi ni kakusite ita]
 nom. letter received that you dat. concealed
 otoko, to iu no wa, ittai dare da?
 man in-the-world who is
 "Who in the world is the man who (lit.) Hanako didn't reveal
 to you that she had received a letter from?"
- (10) Dare to, kimi wa, [Hanako ga e deito sita] koto o okotte
 who with you nom. dated that angry
 iru n dai?
 are
 "Who are you angry that Hanako dated?"

(9) involves relativization of an element in a koto-clause, and (10) scrambling of an element in a koto-clause out of that clause. Both (9) and (10) are acceptable. Therefore, no one would seriously propose that the whole koto-clauses in (6A) – (8A) undergo raising in LF. Such a syntactic solution is clearly not available. Explanation of the marginality of these answers must be sought elsewhere.

It seems that the acceptability status of the short-form answer and the long-form answer above has something to do with how transparent the main clause verb is semantically. Consider the following exchanges:

- (11) A: Kimi wa, doko no daigaku o deta to itte ita?
 you where 's university graduated that saying was
 "What university did you say you graduated from?"
 B: a. Kyoodai desu.
 "It is Kyoto University."
 b. Kyoodai o demasita.
 graduated
 "I graduated from Kyoto University."
- (12) A: Kimi wa dare ga okurete kuru koto o sonna ni sinpaisite
 you who nom. late come that so worried
 iru n dai?
 "Who are you so worried would come late."
 B: a. Tanaka-kun desu. (Aitu wa asaneboo da kara...)
 is he late-ciser is since

correlation between extractability and the answering patterns under discussion. Therefore, there is no reason to expect that there will be one just for the complex NP island, as Nishigauchi, Choe and Pesetsky have proposed.

3. Discourse Link

Pesetsky (1984) has divided wh-phrases into two types: Discourse-linked (D-linked) wh-phrases and nonDiscourse-linked (nonD-linked) wh-phrases. The dichotomy is based on the difference between multiple wh-questions that contain which and those that contain other wh-words such as what or who. Observe the example sentences below:

- (17) a. wh_i did you persuade e_i to read what?
 b.??What $_j$ did you persuade who(m) to read e_j ?

The LF representation of (17) is

- (18) a. [_Swhat $_j$ [_Swho $_i$ [_S you persuade e_i to read e_j]]]
 |-----|-----|
 |-----|
 b.??[_Swho $_i$ [_Swhat $_j$ [_S you persuade e_i to read e_j]]]
 |-----|-----|
 |-----|

To explain these contrasts, Pesetsky claims "if two WH-trace dependencies overlap, one must contain the other". He calls this the Nested Dependency Condition. This condition is a condition on movement.

However, multiple which questions do not observe the Nested Dependency Condition, as shown below:

- (19) which book $_j$ did you persuade which man to read e_j ?

Were it parallel to (18b), the LF representation of (19) would be

- (20) [_Swhich man $_i$ [_Swhich book $_j$ [_S you persuade e_i to read e_j]]]
 |-----|-----|
 |-----|

This LF representation involves a crisscrossing dependency, and should be as unacceptable as (18b). From these facts, Pesetsky assumes "which-phrases in situ, unlike who or what, do not undergo LF movement." Therefore, the LF representation of (19) is taken not as (20), but as (21):

(21) [_SWhich book_j [_S you persuade which man to read e_j]]

Pesetsky attempts to correlate the difference between those two types of wh-phrases with a discourse factor. He assumes that when which is used in a question, both the speaker and the hearer share the same set in their mind and the speaker asks the hearer to choose the answer from the set. Thus (19) implies a particular set of books and a particular set of men, whereas when what or who, for example, is used in a question under normal circumstances, the speaker and the hearer do not share a set. Pesetsky calls which-phrases D-linked and what and who nonD-linked. He then concludes from the facts mentioned above, giving only the Nested Dependency Condition for justification, that "WH must move at LF only if it is nonD-linked. D-linked WH do not have to move." The important thing here is that discourse factors are said to determine whether wh-phrases have to move at LF or not.

According to Pesetsky, in English, what and who in normal usages are nonD-linked but they can be used as D-linked if an appropriate context is provided. To give some evidence for the correlation of discourse and LF movement, Pesetsky refers to Bolinger's and his own examples where questions of the (17b) type are judged grammatical when a context is provided.

- (22) a. I know what just everybody was asked to do, but what did who (actually) do? (Bolinger)
b. I know that we need to install transistor A, transistor B, and transistor C, and I know that these three holes are for transistors, but I'll be damned if I can figure out from the instructions where what goes! (Pesetsky)

The judgments on these sentences are far from obvious. Our informants, while accepting (22a), in fact consider (22b) still marginal. Likewise, observe the following sentences:

(23) a.??/*I know that John gave five books to five people, but

"It is a computer."

However, when a wh-phrase is embedded in an island, the felicitous answer for the question is not a short-form answer which corresponds to the wh-phrase in the question; the answer has to recapitulate the entire island, as shown in (1), repeated in (26) below:

- (26) A: Mary wa John ni nani o ageta hito ni atta no?
 "Mary met the person who gave what to John?"
 B: a.??/*Konpyuutaa desu.
 "It is a computer."
 b. Konpyuutaa o ageta hito desu.
 "It is the person who gave (him) a computer."

Pesetsky hypothesizes for Japanese, as he does for English, that islands that contain D(iscourse)-linked wh-phrases do not have to be raised in LF. Thus, he predicts that a short-form answer to a question of the pattern of (26) would become acceptable if the wh-phrases in islands are D-linked. He uses the following example to show that his prediction is borne out:

- (27) A: (Context: IBM to, Apple to, Fuzituu to, Matusita no naka de...)
 "Among IBM, Apple, Fujitsu and Panasonic (National)..."
 Mary wa, [_{NP} [_S John ni dono konpyuutaa o ageta] hito]
 dat. which computer acc. gave person
 ni atta no?
 dat. met
 "Which computer did Mary meet the man who gave e to John?"
 B: a. IBM no konpyuutaa desu.
 "It is the IBM computer."
 b. [_{NP} [_S IBM no konpyuutaa o ageta] hito] desu.
 "It's the man who gave the IBM computer (to him)."

Pesetsky observes that (27Ba) is an acceptable answer to the question. (Incidentally, we find this short-form answer less than perfect.¹⁰) He uses this as crucial evidence for D-linked wh-phrases in islands being exempt from raising in LF in Japanese.

We have summarized above Pesetsky's account of the marginality of the short-form answer to (26A) and the acceptability of the short-form answer to (27A). We will now show that it is fraught with problems, and that when the full range of Japanese data are
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considered, there does not seem to be any way to make it work. First, there are many examples with nonD-linked wh-phrases like (26) which allow short-form answers:

- (28) A: Nani o tukutte iru kaisya de hataraitte iru n desu ka?
 what acc. making is company at working are
 "You are working in a company that produces what?"
 B: a. Konpyuutaa desu.
 "It is computers."
 b. Konpyuutaa o tukutte iru kaisya desu.
 computer acc. making is company is
 "It is a company that produces computers."

Example (28) does not seem to require various kinds of products to have been discussed in the preceding discourse. However, the short-form answer is perfectly acceptable. In this case, one might argue that the set of possible products that companies produce is always shared between the speaker and the hearer, and that, therefore, (28) is an instance of D-linked wh-phrase. That this explanation is difficult to maintain can be seen from the following exchange:

- (29) A: Kimi wa nani o tukutte iru kaisya kara okane o
 you what acc. making is company from money acc.
 karita n desu ka?
 borrowed
 "You borrowed money from a company that produces what?"
 B: a.??Konpyuutaa desu.
 "It's computers."
 b. Konpyuutaa o tukutte iru kaisya desu.
 computer acc. making is company is
 "It's a company that produces computers."

Note that the short-form answer is marginal in (29). If it is claimed that the wh-phrase is D-linked in (28), but not in (29), we would have to say that D-linking is a concept that is so vague that we would be able to tell whether D-linking has taken place or not only by examining the answering patterns.

Moreover, contrary to Pesetsky's prediction, there are many questions with D-linked wh-phrases which, unlike (27), definitely do not allow short-form answers:

- (30) A: Koko ni kinoo nomi-no-iti de katta rampu to,
 here in yesterday flea-market at bought lamp and
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razio to, tikuonki ga arimasu. Kono naka de, nani o
 radio and phonograph there—are these among what
 utte ita hito ga kimono o kite imasita ka?

selling was person wearing was

"We have here a lamp, a radio and a phonograph which we
 bought at a flea market yesterday. Among them, the
 person who sold (us) what was wearing Japanese kimono?"

B: a.??/*Tikuonki desu.

phonograph is

"It's a phonograph."

b. Tikuonki o utte ita hito desu.

phonograph selling was person is

"It's a person who sold (us) the phonograph."

The *wh*-phrase is D-linked in (30). Therefore, Pesetsky's hypothesis predicts that the short-form answer would be acceptable. However, (30Ba) is not to be an appropriate answer to the question.

Pesetsky also claims that the word *ittai* "(what) the hell" forces the *wh*-phrase to be nonD-linked. Based on the sentences below, he claims that since the *ittai wh*-phrase is forced to have nonD-linked reading, the *wh*-phrase moves at LF and Subjacency effects appear in those sentences. Hence the ungrammaticality of (31a) and (31b):

(31) a. *Mary wa [_{NP} [_S John ni *ittai nani* o ageta] hito] ni
 in-the-world what gave person
 atta no?
 met

"Mary met the person who gave what (in the world) to
 John?"

b. *Mary wa [John ga *ittai nani* o yomu mae ni] dekaketa no?
 in-the-world what read before went-out
 "Mary went out before John read what (in the world)?"

These sentences are supposed to provide evidence for Subjacency at LF and for the relation between LF movement and discourse factors. Pesetsky assumes that just in case *ittai* is added to a *wh*-phrase, the *wh*-phrase, and not the island that contains it, gets raised in LF. He does not give any explanation for this ad-hoc stipulation. He then attributes the ungrammaticality of (31a, b) to the ensuing violation of Subjacency.

Besides the stipulatory nature of the above explanation for the unacceptability of (31a, b), there are examples where *ittai* is embedded

cannot be answered with short-form answers.

In other words, we have shown that there is not any strong correlation between short-form answers and D-linking, or between long-form answers and nonD-linking. This conclusion, coupled with the observation that even *koto*- and *no*-clauses sometimes require long-form answers, shows that what we have here is not a phenomenon that can be captured with an apparently deep syntactic generalization, but one that cries out for discourse-based explanation.

At the beginning of this paper, we observed that pragmatics determines how to answer questions such as

- (35) Who remembers where we bought which books?

Now, let us compare our crucial Japanese examples to see whether there is a clue for explaining the contrast between short-form and long-form answers:

- (36) Speaker A: Mary wa John ni nani o ageta hito ni atta no?
 "Mary met the person who gave what to John?"
 Speaker B: a. ??/*Konpyuutaa desu.
 "It is a computer."
 b. Konpyuutaa o ageta hito desu.
 "It is the person who gave (him) a computer."
- (37) Speaker A: Nani o tukutte iru kaisya de hataraitte iru n desu ka?
 "You work in a company that produces what?"
 Speaker B: a. Konpyuutaa desu.
 "It is computers."
 b. Konpyuutaa o tukutte iru kaisya desu.
 "It is a company that produces computers."

We hypothesize that the short-form answer and the long-form answer are different in that the former assumes that the questioner's primary interest lies in the identification of the object that the *wh*-phrase asks about, while the long-form answer assumes that the questioner's interest lies primarily in the identification of the object that the complex NP refers to. In other words, in (36), it can be assumed, under normal circumstances, that Speaker A's primary interest lies in finding out the identification of the person that Mary met. There does not seem to be any compelling reason why Speaker A should be interested in the computer that John got from the person that Mary

met. In contrast, in (37), there is every reason for Speaker A to be interested primarily in the product of the company that Speaker B is working in. The nature of the product might tell what B specializes in, or A might be interested in finding out from B whether he can get his company's product at a discount price. Speaker B, in answering the question with a short-form answer, must have assumed that Speaker A's primary interest lies in the product line, and not in the identification of the company.¹² *

Similarly, in

- (38) A: Kimi wa nani o tukutte iru kaisya kara okane o karita n desu ka?
"You borrowed money from a company that produces what?"
B: a.??Konpyuutaa desu.
"It's computers."
b. Konpyuutaa o tukutte iru kaisya desu.
"It's a company that produces computers."

The short-form answer is not appropriate under normal circumstances because the product line of a company has little to do with whether one can borrow money from them. Thus, Speaker B must conclude that A's primary interest lies in company identification, and not in the product name, and thus chooses the long-form answer. On the other hand, if Speaker B assumes that Speaker A is interested in finding out in what field it is easy to borrow money, he might legitimately use the short-form answer.

Likewise, in

- (39) A: Koko ni kinoo nomi-no-iti de katta rampu to, radio to, tikuonki ga arimasu. Kono naka de, nani o utte ita hito ga kimono o kite imasita ka? (= 30)
"We have here a lamp, a radio and a phonograph which we bought at a flea market yesterday. Among them, the person who sold (us) what was wearing a Japanese kimono?"
B: a.??/*Tikuonki desu.
"It is the phonograph."
b. Tikuonki o utte ita hito desu.
"It's the person who sold (us) the phonograph."

Speaker B can legitimately assume that Speaker A has little interest in the identification of the object whose seller was wearing a kimono, but

is interested in the identification of the kimono-clad seller. This explains why the short-form answer is inappropriate for (39).

There are in fact many questions in which the questioner is not interested in the identification of the head noun, but in the identification of the objects that correspond to the wh-phrases. For example, observe the following sentences:

- (40) A: Saikoo nanben rikonsita hito ga Guinness Book ni
highest how-often divorced person in
notte imasu ka?
recorded is
"A person who has had how many divorces maximally is
recorded in the Guinness Book?"
- B: a. 50-kai desu.
"It is 50 times."
b. ?50-kai rikonsita hito desu.
times divorced person is
"It is a person who has had 50 divorces."
- (41) A: Nannin atumeta hito ga, tada de ryokoo dekiru no desu
how many gathered person free travel can
ka?
"A person who has recruited how many members can travel
free of charge?"
- B: a. 20-nin desu.
people is
"It is 20 members."
b. ?20-nin atumeta hito desu.
people recruited person is
"It is those who have recruited 20 members."

The short-form answer is felicitous in (40) because the answerer can guess fairly safely that the questioner is not interested in identifying the person who has the world record of divorce, but that he is interested in finding out only the record figure. Similarly, in (41), the answerer can determine that A's interest lies only in finding out how many people one has to recruit in order to qualify for a free trip. The questioner couldn't have been interested in identifying the referent of the complex NP because, since it is an indefinite NP used generically, it does not have a referent.

Here again, just in case it might be argued that numbers are shared inherently between the speaker and the hearer, we give the following example:

- (42) A: Hanako-san wa, nikai rikonsita hito to, sankai
twice divorced person and thrice
rikonsita hito to, yonkai rikonsita hito to deito site
divorced person and 4-times divorced person with dating
ita kedo, kekkyoku, nankai rikonsita hito to
was but finally how-often divorced person with
kekksita no ka ne?

married

"Hanako was dating a person who was twice divorced, a person who was thrice divorced, and a person who was four-times divorced. She ended up marrying the person who was divorced how many times?"

- B: a. Sankai desu.

"It is three times."

- b. Sankai rikonsita hito desu.

thrice divorced person is

"It is the person who was thrice divorced."

In the above, Speaker B can fairly safely assume that Speaker A's interest is not in divorce record, but in identifying the person that Hanako has married. Hence the marginality of the short-form answer, and the acceptability of the long-form answer.¹³

Many wh-questions with wh-phrases in islands that can be answered with short-form answers have nonspecific head nouns, as in (41). This is because these questions are least likely to have the identification of the complex NP as their objectives. The following examples, as well as (40) and (42), however, show that the nonspecificity of the head noun is not a prerequisite for the short-form answering pattern.

- (43) A: Kono mae no ootoreesu de, doo iu kuruma o untensite ita
last auto-race at what car driving was
hito ga gasu-tanku no bakuhatu de, ooyakedo o sita no
person gas-tank 's explosion by severely-burned
desu ka?

was

"At the last auto-race, the person who was driving what car was severely burned by a gas-tank explosion?"

- B: a. Ferrari desu.

"It is the Ferrari."

- b. Ferrari o untensite ita hito desu.

driving was person is

"It is the person who was driving the Ferrari."

- (44) A: Kono tanpensyuu wa dono sakuhin mo amari patto sinai
 this short-story-anthology every piece too great is-not
 ga, dono sakuhin o kaita sakka ga noti ni Nobel-syoo o
 but which story wrote writer later prize
 moratta no desu ka?

received

"This anthology of short stories -- none of its stories is exciting, but the author who wrote which story later received a Nobel Prize?"

- B: a. Kore desu.

this is

"It is this."

- b. Kore o kaita sakka desu.

this wrote writer is

"It is the writer who wrote this."

The short form answer is possible in (44) because Speaker B can assume that Speaker A is interested, for example, in reevaluating the short story whose author later received a Nobel Prize. He would answer with the long-form answer, on the other hand, if he thinks that the questioner's interest lies in the identification of the Nobel Prize winner.

6. Conclusion

We have shown in this paper that the choice between short-form and long-form answers to wh-questions with wh-phrases in islands is a discourse phenomenon, and that it is not amenable to any syntactic conditioning. We have shown that Nishigauchi, Choe and Pesetsky's Pied Piping Analysis and Pesetsky's Discourse Link Analysis have not succeeded beyond the small number of examples they have looked into. In spite of the ingenuity of these analyses, the choice between short-form and long-form answers does not correlate with D-linked and nonD-linked wh-phrases or with the raising or nonraising of islands as a whole. We have seen here, as with many other phenomena, a pragmatic, functional control of what, at first glance, appears to be a syntactic phenomenon. The present paper is the first attempt to isolate a functional factor that interacts with the acceptability of short-form or long-form answers to the types of questions discussed herein. No doubt there are other such factors, but we will have to leave them for future research.

FOOTNOTES

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1 The paper that Pesetsky orally presented at the Annual Meeting of the Linguistic Society of America, Baltimore, Maryland, December 1984, seems to be based on a written, but unpublished paper, dated December 1984 (referred to as Pesetsky (1984) in this paper). Therefore, we will base our discussion of Pesetsky's hypothesis on the written version of the paper, assuming that its oral presentation at a national conference has placed it in public domain.

2 It might be argued that Subjacency is a constraint on movement between D-structure and S-structure, and that it does not apply to (2A) on the (3b) interpretation because which books has not moved. This approach would predict that the following sentences would all be acceptable:

- (i) a. *I want to know who you talked with about the grades that he gave to who.
- b. *This report doesn't say anything about who contacted the police about the suspicion that the spy ring had recruited which members of the family.
- c. *Tell me what you said to the man who told you what.

Alternatively, one might argue, as Pesetsky has, that Subjacency is a constraint on movement in LF, and that discourse-linked wh-expressions such as which books in (3b) do not get raised at all in LF. We will discuss the problem with this alternative approach in Section 3.

3 One might argue that the above line of explanation for the possibility of answering (2A) with (2Bb) leaves unexplained why there is not a third answer in which which books remains intact, but in which where is given constant values:

- (i) A: Who remembers where we bought which books?
- B: *John remembers which books we bought at the COOP, and Martha and Ted remember which books

we bought at Pangloss Bookstore.

We attribute the unacceptability of (iB) to the same reason that makes (iiB) below unacceptable:

- (ii) A: Who remembers where we bought which books?
B: *John and Mary remember which books we bought where.

What makes (iB) and (iiB) unacceptable as answers to (iA) and (iiA), respectively, is lack of structural parallelism between the question and the answer. The unacceptability of (iB) and (iiB) in the given contexts, therefore, resembles that of (iiiB) below as an answer to (iiiA):

- (iii) A: Who did John hit?
B: *Bill was hit by John.

In addition, multiple wh-questions in which different wh-words are fronted are not exactly synonymous. For example, compare the following two questions:

- (iv) a. Do you remember where we bought what?
b. Do you remember what we bought where?

As discussed in Kuno (1982), (iva) normally requires the sorting of information using place names as sorting keys, as in (v), while (ivb) requires the sorting of relevant information using purchased items as sorting keys, as in (vi):

- (v) a. Yes, I do. We bought pencils, pens and notebooks at the COOP, and pens, notebooks, scotch tapes and address labels at Bob Slate's.
b. Yes, I do. At the COOP, we bought pencils, pens and notebooks, and at Bob Slate's, we bought pens, notebooks, scotch tapes and address labels.
(vi) a. Yes, I do. We bought pencils at the COOP, pens and notebooks at the COOP and at Bob Slate's, and scotch tapes and address labels at Bob Slate's.
b. Yes, I do. Pencils, we bought at the COOP, pens and notebooks, we bought at the COOP and at Bob Slate's, and scotch tapes and address labels, at Bob Slate's.

(iva). The unacceptability of (iiB) as an answer to (iiA) is in part due to the difference in the understood information organization of the embedded interrogative clause between the question and the answer.

4 It might be argued that these in (4A), just like which in (2A), can be bound by the matrix Q. It is difficult to evaluate such a claim in the absence of explicit theory of Q-binding of elements that are not wh-expressions. For example, what would such a claim say about

- (i) A: Did you buy these books?
B: I bought the physics book, but I didn't buy The Wizard of Oz.

What would it mean to say that these in (iA) is bound by Q? The focus of the question is on buy, and not on these; that is, the question, in its normal interpretation, is not synonymous with

- (ii) Which books did you buy?

In any case, in the absence of any explicit theory on Q-bound nonwh-expressions, we have to assume that Pattern (4Bb) obtains even when the expression corresponding to the physics book and The Wizard of Oz in the question is not bound at all by the matrix Q.

5 We are indebted to Eileen Nam (personal communication 1985) for this observation.

6 It might be argued that Speaker B answers (5A) with John and Mary do assuming that A intended the question as having the structure shown in (3a), but that B has a second thought that A really intended (3b), and answers with the second sentence of (5B). The following exchange shows that this kind of explanation does not go far:

- (i) A: Do John and Mary remember where we bought which books?
B: a. Yes, they do. John remembers where we bought the physics book, and Mary remembers where we bought The Wizard of Oz.
b. Yes, John remembers where we bought the physics book, and Mary remembers where we bought The Wizard of Oz.

Note that there is no way to claim that which books in (iA) is bound by the matrix Q because, if so, it would have been fronted to sentence-initial position.

7 Hankamer (1974), in arguing against Kuno and Robinson's (1972) claim that multiple wh-words bound by the same Q must be clause mates (not necessarily at surface structure), gives examples such as the following:

- (i) Tell me who predicted that something terrible would happen to who.
- (ii) (Context: It is known that certain enemy agents have concocted a fiendish scheme to knock off some of our senators. The plot is that each agent has acquired trained bats that will attack and kill a specific senator, and none other. Now...)
In order to foil this plot, we must find out which agent has bats that are trained to kill which senator.

Hankamer considers these sentences acceptable. However, there are many speakers who consider them marginal. What is noteworthy is the fact that while the acceptability status of sentences such as (i) and (ii) is subject to wide idiolectal variations, all speakers accept (2Bb) as an answer to (2A). This fact also casts doubt on the hypothesis that (2A), as the question that has solicited the answer (2Bb), has the underlying structure shown in (3b).

8 John Lumsden (personal communication 1985) points out that the more acceptable (22), especially (22a), have many properties in common with echo questions. In each case, the second clause reiterates the content of a former clause with added emphasis on the question words. For example, observe the following exchange:

- (i) A: ... (garbled with noise) actually did ...
(garbled)
- B: What did who actually do?

(iB), which is identical with the last sentence of (22a), is acceptable as an echo question.

9 Pesetsky's claim that discourse-linked wh-expressions do not have to be raised in LF predicts that the following sentences would be acceptable.

- (i) a. *The teacher told me what grades he gave to the students who could solve which problems.
 b. *I want to know who the teacher talked with about the grades that which of us got in the finals.
 c. *Tell me who remembers the names of the stores where we bought which books.

The wh-expressions in situ in the above sentences are D-linked (because of the use of which), and, according to Pesetsky, do not have to be raised in LF. Therefore, his analysis predicts that these sentences would be acceptable. However, for most speakers, these sentences are clearly unacceptable.

10 It is not clear what Pesetsky really means by "D(iscourse)-linking". In (27B), IBM is D-linked (because it has been mentioned in the "Context" part of (27A), but it does not seem that konpyuutaa is D-linked. Therefore, (27Ba) should have read:

- (27) B. a'. ??IBM desu.
 "It is the IBM."

It seems that (27Ba') is even worse than (27Ba), which, as we have already mentioned, is less than perfect.

11 It has been pointed out to us that sentences such as (32A) and (33) get considerably worse when no (de aru) "(it) is that..." is replaced with the plain masu (hearer-honorific) form without nominalization:

- (i) ??Hanako wa [kanozoyo ni ittai nani o purezento sita]
 hito o erabimasita ka?
 (ii) ??... Taroo wa [kare kara ittai nani o katta] hito
 ni (yotte) korosaremasita ka?

and that the acceptability of (32A) and (33) might be attributable to the use of the nominalizing complementizer no. The fact that (31a) and (31b), both of which use the nominalizing complementizer no, are considerably worse than (32A) and (33) clearly shows that explanation for the acceptability of the latter sentences must be sought elsewhere. It seems that the fact that (i) and (ii) are marginal can be attributed, at least in part, to the fact that ittai does not go well in sentences that do not have the no (da/de aru) ending to start with:

- (iii) a. Ittai dare ga kita no desu ka?
 who came
 "Who in the world came?"
 b. ???Ittai dare ga kimasita ka?
 who came
 "Who in the world came?"
- (iv) a. Ittai doko ni itta no desu ka?
 where to went
 "Where in the world did you go?"
 b. ???Ittai doko ni ikimasita ka?
 where to went
 "Where in the world did you go?"

The fact that ittai requires a no da/desu "it is that..." pattern is attributable to the fact that it represents the questioner's surprise and interest in explanation, the factor that generally triggers the use of the no da/desu pattern under discussion.

Returning to (31a) and (31b), we assume that the marginality of these sentences can be attributed to the fact that they do not give the hearer any clues as to where the questioner's surprise is derived from.

12 Nishigauchi (1984) introduces a concept which appears to be similar to our concept of "identification". He observes that the short-form answer in (i) is much more acceptable than predicted by his analysis:

- (i) A: Nani-too o sizi site iru hito ga itiban ooi desu ka?
 what party supporting are people most numerous are
 "People who support which political party are the majority?"
 B: a. Zimin-too desu.
 LDP is
 "It is the Liberal-Democratic Party."
 b. Zimin-too o sizi site iru hito desu.
 LDP supporting are people is
 "It is those who support the Liberal-Democratic Party."

He states that while the long-form answer (Bb) in (i) supplies the identity of people making crucial use of the value of the wh-expression whose domain ranges over political parties, the short-form answer (Ba) is acceptable because it is relatively easy to construct the identity of the people who support it on the basis of the identity of the political party. He calls (Ba) a truncated version of

(Bb).

In the above explanation, Nishigauchi still maintains that the questioner's interest lies in the identification of the complex NP nani-too o sizi site iru hito "people who support which political party". He does not explain why "truncation" is sometimes possible, as in (iBa), but impossible elsewhere (as in (26B)). Our position is that (iBa) is an acceptable answer to (iA) because Speaker B can safely assume that Speaker A's interest lies not in the identification of the people who support the majority party, but in the identification of the party who has the majority. As a matter of fact, we consider (iBa) more acceptable than (iBb) as an answer to (iA).

It needs to be pointed out here that Nishigauchi's truncation analysis of (iBa), unless it is coupled with a precise formulation of the condition on truncation, faces the danger of turning his island-raising hypothesis contentless. Any counterexample to the hypothesis could be trivially explained away as resulting from truncation.

13 In (42), the wh-expression nankai rikonsita hito "the person who was divorced how many times" is D-linked. Therefore, according to Pesetsky, this expression does not have to be raised in LF. This analysis predicts that both (42Ba) and (42Bb) should be acceptable. In actuality, only the latter is acceptable.

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