Non-D-linked *Wh*-NPs
in Korean and Japanese

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Gwangrak Son. 2004. Non-D-linked *Wh*-NPs in Korean and Japanese. *Language and Information 8.2*, 93–110. This paper discloses a striking similarity between Korean/Japanese *wh*-NPs and Italian QPs: both categories are disallowed from LD-movement out of weak islands. This leads us to a substantial claim that *wh*-phrases in the former languages possibly belong to a non-D-linked category, parallel to the Italian QPs. This claim is also supported by semantic evidence: that is, *in-situ wh*-NPs in these languages lack covert partitivity **(Kyungnam University)**

Key words: weak islands, D-linking, argument-adjunct asymmetry, MNSC, Relativized Minimality, referentiality

1. *Wh*-NPs with the Negative Island

As observed by Son (2001), argument *wh*-phrases in Korean and Japanese exhibit the negative island effects, unlike those in English or Chinese. Let us consider English paradigm first.

(1) a. To whom didn't you speak?

    b. ??To whom didn't they know where to give the present?

(2) a. Who doesn't eat what?

    b. Who remembers where we bought what?

(3) a. *Why don't you think we can help him?

    b. *How did you ask who behaved?

(4) *Who wonders whether Peter left why?

Argument extraction is possible from the inner (negative) island ((a)s of (1 2)) and the *wh*-island ((b)s of (1–2)) both at S-structure (1) and at LF (2). Adjuncts, by contrast, cannot be extracted from the islands, the inner island (3a) (with the lower construal of *why*) and the *wh*-island ((3b) and (4)), either overtly (3) or covertly (4). An argument-adjunct asymmetry of this kind is also found in Chinese. See (5) and (6), taken from Cheng 1991:196, who attributes the observation to Huang 1982.

(5) judou xiang-zhidao shei mai-le   sheme
    Judou want-know   who buy-ASP what

    a. 'Judou wonders who bought what.'
    b. 'for which y, y a thing such that Judou wonders who bought y.'
    c. 'for which x, x a person such that Judou wonders what x bought.'

(6) hufei xiang-zhidao shei weisheme shengqi
    Hufei want-know   who why   get-angry

    a. 'Hufei wonders who gets angry why.'
    b. 'for which x, x a person such that Hufei wonder why x gets angry.'
    c. '*what is the reason x such that Hufei wonders who gets angry for x.'

While argument *wh*-phrases *sheme* 'what' can be interpreted outside a *wh*-island (5b), the adjunct *wh*-phrases like *weisheme* 'why' cannot (see (6c)).

An argument-adjunct asymmetry of this sort is indeed a well-known phenomenon since Chomsky's (1981) classical work of LGB, reported in various languages by many researchers (Huang 1982, Ross 1983, Rizzi 1990, Heycock 1993, and Bokovic 1998). Within the barrier framework of Chomsky 1986, the asymmetry is captured by the Empty Category Principle (ECP), which is formulated as in (7).

(7) An empty category must be

    (i) theta-governed, or
    (ii) antecedent-governed.

Arguments are theta-governed by the verb, satisfying the ECP defined in (7) by the first clause. This enables arguments to long move across islands without causing a violation of the ECP, although Subjacency might be triggered (as in (1b)). Adjuncts, on the other hand, are non-theta-governed by the verb; antecedent-government, thus, is forced on adjuncts to meet the ECP. If an island intervenes along the way of a movement, an adjunct fails to provide the needed antecedent-government for its trace, resulting in ungrammaticality.

In light of the argument-adjunct asymmetry reviewed above, argument *wh*-phrases (*wh*-NPs, in other word) in Korean reveal some peculiarity. That is, as will be shown shortly, Korean *wh*-NPs pattern like adjunct *wh*-phrases in that

they are barred from extraction out of the inner-island. Before presenting relevant examples of the peculiarity, I need to mention the lexical ambiguity of Korean *wh*-phrases, a fact first noted by Chang (1973), and developed in Kim (1991) and Choe (1994) with some interesting theoretical possibilities. Consider (8):[1]

(8) a. Mary-ka nwukwu-rul   cohaha-ni?
      M.-Nom who/someone-Acc like-Q
      (i) 'Who does Mary like?'
      (ii) 'Does Mary like someone?'

    b. Mary-ka mues-ul   sass-ni?
      M.-Nom what/something-Acc bought-Q
      (i) 'What did Mary buy?'
      (ii) 'Did Mary buy something?'

Both the sentences in (8) are ambiguous in two ways, and each reading has a corresponding intonation pattern. If the sentences are pronounced with a sentence-final falling intonation, they are construed as a *wh*-question, with the *wh*-words being interpreted as interrogatives ((8a i) and (8b i)). If the sentences instead have a rising intonation sentence-finally, they will be understood as a yes/no question, as glossed in (8a ii) and (8b ii). In the latter case, the *wh*-words have the meaning of an existential quantifier 'someone' or 'something.' Now let us consider sentences such as (9), which will bear significant weight throughout the discussion in this paper.

(9) a. Mary-ka nwukwu-rul   coahhaci-anh-ni?
      M.-Nom who/someone-Acc like-not-Q
      (i) *'Who doesn't Mary like?'
      (ii) 'I suppose Mary likes someone. Doesn't she?'

    b. Mary-ka mues-ul   saci-ahn-ass-ni?
      M.-Nom what/something buy-not-Pst-Q
      (i) *'What didn't Mary buy?'
      (ii) 'I suppose Mary bought something. Doesn't she?'

In (9), *wh*-NPs occur in the negative questions. These sentences are minimally different from those in (8) by the presence of negation in the verb, but the result is substantial. That is, in each of (9), a *wh*-question reading, which was available for the positive sentences of (8), no longer survives.[2] Accordingly, the sentences in (9) can be read only with a rising intonation, a pattern corresponding to a yes/no

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[1] In (8), Q represents a Question morpheme, which is essential in interrogative sentences in Korean (and Japanese).

[2] As the sentences in (9) are crucial for the current discussion, we need to examine their acceptability a bit more seriously. An anonymous reviewer observes that a *wh*-question with a short form negation, as in (i), improves the acceptability.

question. Since the only difference that sets (9) apart from (8) lies in the presence of negation, we may reasonably attribute the unavailability of a *wh*-question reading of (9) to the inner-island effect, as depicted in (10):[3]

(10) [$_{CP}$ wh$_i$ [$_{NegP}$ t$_i$ not] Q]

Japanese *wh*-phrases are not different from the pattern in Korean in this regard. Example (11) below shows the Japanese counterpart of Korean (9), in which the intervening negation displays an intervention effect for an otherwise possible *wh*-

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(i) Mary-ka nwukwu-rul anh-coahha-ni?

I agree with the reviewer's observation. Note, however, that the available reading in (i) is not a normal *wh*-question as is present in (8). The possible reading in this case is the 'specific (or focus) reading,' which roughly conveys the information of 'who among them.' The same is true in (9). For the negative sentences such as these to make any sense, there must be a presupposed set of people and an answer to this question must pick out an individual from the set of people specified in the previous discourse. Concerning the specific reading available in the negative questions, see Son (2001, 2002) and Choi (2004).

Another reviewer observes that English negative questions such as (1 2) also require a restriction in the discourse to convey an appropriate meaning, which is precisely the proposal that I would like to offer in this paper. To anticipate my conclusion, *in-situ wh*-NPs in Korean could be best characterized as non-specific (or non-D-linked), while those in English as specific (or D-linked) by default. The lexical bifurcation between the two languages then would lead to the differing behaviors in syntax with respect to weak islands. Kiss (1993) and Comorovsky (1996), based on the scope interpretation, independently proposed that *in-situ wh*-words in multiple English interrogations are D-linked, and accordingly do not LF move. Interested readers are referred to Aoun and Li (1990), Reinhart (1994), and Tsai (1995) for English, and to Choe (1994), Son (2001, 2003), Choi (2003) for Korean and Japanese.

[3] Intervention effect of this sort is apparent in such examples as below.

(i) a. *[$_{NegP}$ amuto mwuess-ul saci anh] ass-ni
         NPI   what-Acc buy not Pst-Q

     b. *?Chulsoo-ka amu-eykyeto mues-ul   cwuci anh-ass-ni
          -Nom NPI-Dat   what-Acc give not-Pst-Q

     c. *eoce   amuto mues-ul   meokci anh-ass-ni
         yesterday NPI   what-Acc eat   not-Pst-Q

                                                    ((ib-c) from a reviewer)

As will be argued in this paper, *in-situ wh*-words in Korean, being non-D-linked, must LF move for the familiar reason of *wh*-Q constraint. The requisite *wh*-movement invokes island violation, resulting in ungrammaticality.

On the other hand, as correctly pointed out by a reviewer, the sentences are upgraded to almost a perfect degree after *wh*-scrambling.

(ii) a. *mwuess-ul* [$_{NegP}$ amuto t saci anh] ass-ni

      b. Chulsoo-ka *mwuess-ul* amu-eykyeto t cwuci anh-ass-ni

      c. eoce *mwuess-ul* amuto t meokci anh-ass-ni

The improvement can be nicely accounted for with Int(erpretative)-effects (Chomsky (2000, 2001)) or by using discourse features such as [prominence] or [specificity] (Choi (1999, 2004), Son (2001, 2002)). These authors, on independent grounds, argue that object shift or scrambling is an operation assigning discourse features, whatever terms they might call. Once *wh*-words have undergone scrambling over negation, intervention effects disappear simply because intervening barriers no longer exists. Thanks to an anonymous reviewer for the interesting discussion in this note.

question reading (compare (11) with (12)).[4]

(11[5]) a. ?*Mary-ga dare-o   sukidewa-nai-ka
             M.-Nom   who-Acc. like-not Q
             [Intended reading: 'Who doesn't Mary like?']

        b. ?*Mary-ga nani-o kawa-nak-atta-ka
            M.-Nom what-Acc. buy-not-Pst-Q
            [Intended reading: 'What didn't Mary buy?']

(12) a. Mary-ga dare-o   suki-ka
          M.-Nom who-Acc. likeQ
          'Who does Mary like?'

      b. Mary-ga nani-o   ka-tta-ka
          M.-Nom what-Acc. buy-Pst-Q
          'What did Mary buy?'

The inner-island effect found just above with respect to *wh*-phrases is surprising in that it is an argument that is blocked by the intervening negation. In English and Chinese, as seen in (1) through (6), argument *wh*-phrases can be freely extracted from the negative island both at S-structure and at LF. The non-extractability found here from Korean and Japanese data, on the other hand, shows a resemblance to that of *wh*-adjuncts in English and Chinese (see (3a) and (6c)). The crux of the peculiarity for the examples in Korean (9), Japanese (11), as well as their representation in (10) is that argument *wh*-phrases pattern with adjunct *wh*-phrases with respect to extraction from the inner-island.

2. Bošković (1996, 1998) and Beck (1996)

Bošković (1996, 1998) observes a pattern similar to Korean/Japanese *wh*-NPs in French (with respect to negative islands). In French, a *wh*-phrase can remain *in-situ* in matrix clauses of grammatical sentences, as shown in (13) (data from Bošković 1998: 44):

(13) a. Tu as   vu   qui?
          you have seen whom
          'who did you see?'

      b. Qui as-tu vu?

If a *wh*-phrase occurs within the domain of negation, however, a sentence becomes ungrammatical, just as in Korean (9) and Japanese (11). See (14) below, where I reproduce Bošković (1998:46) (8):

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[4] Japanese data in this paper are from native speakers I have consulted with, unless otherwise specified. I owe thanks to Yasu Sasahira and Toru Inoue, among many others.

[5] The Japanese *wh*-word *dare* 'who' or *nani* 'what', unlike in Korean, can only be interpreted as an interrogative; it cannot mean an existential indefinite. Thus, sentences (11) and (12) do not have an indefinite reading available in Korean (9).

(14) a. ?*Jean ne   mange pas quoi?
          Jean   neg eats   neg what
          'what doesn't John eat?'

      b. Que ne mange-t-il pas?

Covert *wh*-movement (14a) is in contrast with overt *wh*-movement (14b) in that
negation has a blocking effect. Bošković's explanation for the contrast that LF
wh-movement is an operation of Move-F(eature) that proceeds via head movement.
The ungrammaticality of (14a) is then due to the intervening A′-head, negation,
eventually invoking a violation of Rizzi's (1990) Relativized Minimality. Overt
movement in (14b) differs from covert movement in that it moves a phrasal category,
which, Bošković argues, does not see the intervening head owing to its movement
property through Spec position.[6] The contrast in grammaticality is thus accounted
for.

    Bošković's analysis is basically a language-specific mechanism. As seen in (2a),
covert *wh*-movement in English is apparently not interfered with by the intervening
negation. Thus, for his analysis to be maintainable in English, Bošković has to
assume that negation in English is not an A′-head, while it is in French. If we
want to extend his analysis to Korean and Japanese, (9) and (11), (and their
representation in (10)), we have to assume that negation in Korean and Japanese
is an A′-head, on a par with French, but not with English. Language-specific
treatment of this sort is also observable in his analysis of the French example (15)
and the Japanese equivalent of the French in (16):

(15) *Jean et   Pierre croient [que Marie a   vu   qui]?
       Jean   and Pierre believe that Marie has seen whom
       'Whom do Jean and Pierre believe that Marie saw?'

(16) Taroo to   Hanako-ga [Mary-ga dare-o   mita to] shinjiteiru no
      T.   and H.-Nom   M.-Nom who-Acc saw that believe   Q
      'Whom do Taroo and Hanako believe that Mary saw?'

French allows *wh-in-situ* constructions only in matrix clauses (compare the well-
formed (13a) with the ill-formed (15)). Japanese, in contrast, allows *in-situ-wh*-
phrases not only in matrix clauses but in subordinate clauses as well. Korean
patterns with Japanese, but not with French, in this respect, as (17) demonstrates:

(17) Cheolsoo wa   Younghee-nun [Mary-ka nwukwu-rul poassta-ko]
      C.   and Y.-Nom   M.-Nom who-Acc   saw-that
      mitsscumni-ka?
      believe-Q
      'Whom do Cheolsoo and Younghee believe that Mary saw?'

In Bošković 1998, the clause-boundedness of French (15) is attributed to the pres-
ence of the offending C that will block LF-*wh*-feature movement to the matrix

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[6] Rizzi (1990) argues that *pas* occupies a Spec position, however.

Comp. As seen in (16–17), the corresponding *wh*-movement in Japanese and Korean is not clause-bounded. The presence of the embedded Comp, Japanese *to* and Korean *ko*, does not prevent the embedded *wh*-phrase having a matrix construal. Put differently, the intervening Comp in Japanese and Korean does not serve as an offending head, while it does in French. Bošković suggests that this contrast can be taken as a fact indicating that Japanese (and Korean) *wh*-movement involves overt operator movement (along the lines of Watanabe 1992 and Aoun and Li 1993), which, Bošković argues, proceeds via Spec position.

Although not implausible, Bošković's analysis still raises the question: why is it that raising of the *wh*-operator is ever overt in Japanese (and Korean), while covert in French? Such parametric variations aside, when we turn to Japanese and Korean, Bošković's analysis encounters another difficulty. That is, *wh*-operator movement in these languages has to be overt in order to pass through the intervening Comp, as in (16) and (17); yet at the same time, it has to be covert to account for the opacity of the intervening negation, as in (9) and (11).[7] In addition to these difficulties, we are still left with no answer for the original question of why argument-adjunct asymmetry disappears in Korean and Japanese with regard to extraction out of inner islands.

An important corollary of the current investigation is Beck (1996). Below is a brief summary of the data and the analysis presented by Beck (1996). The interesting data for us are (18) and (19), both in German.

(18) a. ??Was glaubt   niemand wen   Karl gesehen hat?
          what believes nobody whom Karl seen   has
          'Who does nobody believe that Karl saw?'

      b. Wer glaubt   niemand daß Karl gesehen hat?
          who believes nobody that Karl seen   has
          'Who does nobody believe that Karl saw?'

      c. Was glaubt   Luise wen   Karl gesehen hat?
          what believes Luise whom Karl seen   has
          'Who does Luise believe that Karl saw?'

(19) a. ??Wen hat niemand wo   gesehen?
          whom has nobody where seen
          'Where did nobody see whom?'

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[7] s manifested by the island effects, *in-situ wh*-phrases in Korean (and Japanese) clearly involve movement, whether it be overt operator movement or LF movement. My position in this paper is that they move via an edge position (i.e., Spec of CP), which explains the grammaticality of (16), (17), and the unavailable reading of (27ii). (In case of (27ii), the embedded Q that occupies a specifier position blocks the requisite movement, on a par with English (3b) and (4). Note that Korean Q morpheme *ci*, equivalent to English *whether*, occupies a specifier position). On the other hand, what Korean sets apart from French seems that in French *wh*-movement undergoes in a different fashion, presumably, via covert feature movement (stopping by every A′-head position) as Bošković himself claims (see also Pesetsky (2000) for LF feature movement).

b. Wo   hat niemand Karl gesehen?
where has nobody   Karl seen
'Where did nobody see Karl?'

c. Wen   hat Luise wo   gesehen?
whom has Luise where seen
'Where did Luise see whom?'

The oddity of (18a), as compared to the perfect grammaticality of (18b,c), shows that *wh*-NPs like *wen* 'whom' cannot LF-move in the presence of the intervening negation. *Wh*-adverbs are the same as *wh*-NPs in this respect, as observed in (19). Beck claims that LF constraints formulated in (20) account for the intervention effects found above in German.

(20) a. Negation-Induced Barrier (NIB)
      The first node that dominates a negative quantifier, its restriction, and its nuclear scope is a Negation-Induced Barrier (NIB).

    b. Minimal Negative Structure Constraint (MNSC)
      If an LF trace β is dominated by a NIB α, then the binder of β must also be dominated by α.

The LF representations of the ill-formed (18a) and (19a) are given in (21a) and (21b), respectively:

(21) a. $[_{CP}$ was wen$_k$ $[_{C'}$ C^0 I$_{IP}$ niemand glaubt $[t_k{}^{LF}$ Karl t_k gesehen hat$]]]$

    b. $[_{CP}$ wen$_j$ wo$_k$ $[_{C'}$ C^0 $[_{IP}$ niemand t_j $t_k{}^{LF}$ gesehen hat$]]]$

In each LF of (21), LF *wh*-trace $t_k{}^{LF}$ is dominated by a NIB, IP, but its binder *wen$_k$* or *wo$_k$* is not. The MNSC is violated, and hence the ungrammaticality.

The analysis presented by Beck for the intervention effect of negation differs from Ross's (1983) Inner Island or Rizzi's (1990) Relativized Minimality in that it applies to *wh*-arguments as well as *wh*-adjuncts. For instance, consider Ross's examples in (22), in which negation interferes with the extraction of an adverbial element, but not with the extraction of an argument:

(22) a. Bill is here, which they (don't) know t.

    b. *Bill is here, as they (* don't) know t.

Rizzi (1990) offers an account for Ross's observation above by the ECP together with his Relativized Minimality. The trace of the argument in (22a) is theta-governed by the verb, thereby satisfying the ECP, whereas in (22b) the trace of the adjunct is not theta-governed. The adjunct trace thus should be antecedent-governed, but it is not under the Relativized Minimality due to the offending intervener, negation. The grammaticality contrast between (22a) and (22b) thus follows. Since Rizzi's account is based on argument-adjunct asymmetry with respect to the ECP, his account cannot extend to Korean (9), Japanese (11), French (14),

and German (18), simply because in these languages the island effect manifests not only for adjunct *wh*-phrases but for argument *wh*-phrases as well, which are apparently theta-marked and satisfy the ECP. In contrast with Rizzi's Relativized Minimality, Beck's MNSC in (20) does not make a reference to the ECP, and hence it applies irrespective of argument-adjunct status of the trace; consequently, the non-extractability of *wh*-NPs from inner islands is captured. We note, however, that Beck's MNSC, as it stands, is at best a descriptive generalization; it does not explain why negation serves as a barrier for *wh*-movement, or why a *wh*-trace and its binder should be in a certain minimal domain containing the negation and its associates. It also does not offer an adequate answer to the question of why in German, but not in English, *wh*-NPs behave like adjuncts so that they cannot be extracted out of the NIB (compare English (2a) and German (18a)). The questions we still wish to answer are the following: (a) why the MNSC should hold-i.e., it falls short of an explanatory adequacy; (b) why the MNSC holds for *wh*-NPs and *wh*-adjuncts in an indiscriminate way; (c) why the MNSC holds for some languages such as German, Korean and Japanese, but not for other languages like English.

3. D(iscourse)-Linking as a Relevant Factor

A series of Cinque's work (1984, 1989, and 1990) is instructive for the current discussion. Cinque notes that Quantifier Phrases (QPs) in Italian cannot be extracted from weak islands despite their argument status. QPs in (23) are lexically selected and theta-marked by the verb, as is the case for the *wh*-phrases in (24). Despite this, they are non-extractable from the inner island (23a) and the *wh*-island (23b), in sharp contrast with the acceptable *wh*-extraction in (24).[8] ((23a) from Cinque 1990:10, (23b) from Rizzi 1990:94, and (24) from Rizzi 1990:73):

(23) a. *ogni museo,   non vuolo   visitare *t*
          every museum he does not want to visit.

      b. *Qualcosa, mi domando se   fara *t*
          something I   wonder   whether he will do.

(24) ?Che problema non sai   [come [potremo risolvere *t t*]]
       which problem don't you know how   we could solve?

Wh-extraction out of the *wh*-island in (24) creates some degradation in grammaticality, but the sentence is apparently far better than the sentences of (23) that involve QP-extraction. Note that a theta-government approach to the ECP cannot appropriately handle the contrast, for both the categories are referentially theta-governed by the verb, satisfying the ECP alike. Sentences such as (23) are far worse than the standard Subjacency violation (the effect of which can be observable in (24)); thus, the ungrammaticality cannot be attributable to Subjacency,

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[8] An anonymous reviewer points out that the contrast in referentiality would become more apparent if which-NP in (24) is replaced by a normal *wh*-NP. That is true. However, note that all Cinque wants to show in this context is that quantifiers are non-D-linked, in contrast with the D-linked which-NP phrases. Whether normal *wh*-NPs are referential is a trivial matter.

either. On this observation, Cinque (1990) seeks the answer for the contrast in
a referential property of a moved item. According to Cinque, "quantifiers [unlike
wh-phrases] do not receive a referential index at D-structure as a consequence of
their non-referential nature" (p. 11).

Cinque defines the notion of referentiality with reference to the domain of
discourse, and in this sense his concept of referentiality should be differentiated
from that of Rizzi (1990), who uses it in a strictly syntactic way. To avoid confusion
of terminology, I will briefly review Rizzi 1990. Rizzi presents some cases where
apparently theta-marked items (thus being freely extractable from islands under
the barrier version of the ECP) behave on a par with lexically non-theta-marked
items. See (25):

(25) a. John weighed apples/200 pounds.

   b. ?What did John wonder how to weigh *t*?

As demonstrated by the grammaticality of (25a), the measure object *200 pounds* is
lexically selected and theta-marked by the verb, as is the theme object *apples*. The
extracted *wh*-phrase in (25b), nonetheless, cannot include a measure object in the
answer; it must be answered with a theme object. Extraction of a measure object
is impossible across the intervening *wh*-island, even if it receives theta-assignment
by the verb and satisfies the ECP. Noting this as a substantial problem of the theta-
government approach to the ECP, Rizzi develops the notion of referentiality. In
Rizzi, referentiality is a matter of a theta-role involved in the event described by the
predicate. Thus, agent, theme, goal, etc., are referential, while measure, manner,
or idiom chunks are non-referential. The former group, being referentially indexed,
can be connected with the traces left by the movement via binding. Antecedent-
government is thus unnecessary for this group; they can freely move long distance.
The latter group, on the other hand, lacks referential indices; hence movement
via binding is unavailable. To satisfy the ECP, the latter group must move via
antecedent-government. Extraction of a theme argument thus is possible from a
wh-island, but that of a measure argument is not, as in (25b). Rizzi's refinement of
the ECP based on the property of referentiality is invaluable, but unfortunately, it
does not extend to the cases of Korean (9), Japanese (11), French (14) and German
(18a), because of the referential nature of the *wh*-NPs involved in the examples.
Note that the *wh*-NPs in the examples are all lexically selected, receiving a theta-
role, so they are 'referential' in Rizzi's terms. We would then expect them to be
able to LD-move across the negation, which they do not.

Cinque's use of referentiality parallels Rizzi's use in that a referential element
can be connected with its trace via binding after movement. But the notion in
Cinque's use digresses sharply from the theta-based approach of the ECP or Rizzi's
in that it does not concern a syntactic relation that a given syntactic element holds
in structure. That is, Cinque's concern does not lie in whether a syntactic element
is lexically selected (as in the ECP approach), or what kind of theta-role it receives
from the head (as in Rizzi 1990). For him, referentiality, rather, represents the
ability of a word to refer to "specific members of the preestablished set," a term

"equivalent to Pesetsky's (1987) characterization of D(iscourse)-linking" (p. 8).[9] With this characterization, Cinque claims that only a referential phrase (a D-linked phrase in terms of Pesetsky (1987)) can undergo long distance movement, while a non-referential phrase and therefore a non-D-linked phrase cannot. The reason is that the former, bearing referential indices as its intrinsic feature, can be connected to its trace via binding - a formal licensing condition of the ECP under Rizzi's (1990) version, while the latter is barred from utilizing the binding option due to the lack of referential indices. Successive cyclic movement is the only way for a non-referential phrase to satisfy the ECP; hence, it is subject to the intervening islands.

Data from Italian QPs in (23) show a striking similarity with those of Korean, Japanese, French, and German *wh*-NPs in (9), (11), (14a), and (18a), respectively. Italian QPs and the *wh*-NPs in these languages are all thematically selected by the verb; nevertheless, extraction is barred from the negative islands. Given this, one compelling hypothesis emerges to treat the *wh*-NPs under consideration as non-referential/non-D-linked elements on a par with the Italian QPs. Subsequent section elaborates this possibility further.

4. Non-D-Linked Nature of Korean/Japanese *Wh*-NPs

A supporting piece of evidence indeed exists for the present approach, viz., non-referential (or non-D-linked) nature of Korean/Japanese *wh*-NPs. (From now on, I will use 'D-linking' representatively for the two terms, D-linking and referentiality.) If Korean/Japanese *wh*-NPs are inherently (or by default) non-D-linked and that is why they are blocked from the inner island, as in (9) and (11), we would expect that they are non-extractable from other types of islands as well.[10] This expectation

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[9] With the following contrast in superiority, a reviewer points out that Cinque's use of referentiality might still need to be differentiated from Pesetsky's notion of D-linking.

    (i)   a. ?*What did who read?

          b. Which book did which man read?

A reviewer claims that *what* in (1a) is referential in Cinque's terms, but not D-linked from the viewpoint of Pesetsky. However, I am not quite sure if *what* in (1a) can be typed as 'referential' even with Cinque, since he clearly identifies his notion of referentiality with Pesetsky's D-linking (see Cinque (1990:8)). For Cinque, referentiality is rather context-dependent. See, as Kiss (1993) discusses, that a sentence like (i) becomes acceptable if a proper context helps the D-liked interpretation.

    (ii) ?I know what just about everybody was asked to read, but what did who (actually) read?

Note also that superiority contrast appears only within the construction of *wh*-subject and *wh*-object; the contrast goes away with the *wh*-island (see (1b)) and within the multiple *wh*-question, as in (iii).

    (iii) What did who say when?

What differentiates (ii) and (iii) from (i) is that *what* are D-linked and accordingly referential. In this paper, I continue to follow Cinque's position in which referentiality is characterized in terms of Pesetsky's D-linking.

[10] An anonymous reviewer claims that the following sentence does not exhibit an island effect: that is, the *wh*-word *nwukwu* freely associates with the matrix Q over the intervening factive

is borne out. Prior to presenting relevant data, we need to see another aspect of Korean interrogative sentences, which might be unfamiliar to English speakers. In Korean, a Q(uestion)-morpheme is necessary to make asentence interrogative (Kim (1991), Choe (1994), Sohn (1995). See also Nishigauchi (1990) and Cheng (1991) for data and discussions on the role of Question particles in languages such as Japanese and Chinese). Not only does a Q-morpheme play an essential part of an interrogative but it also functions to mark scope of the *wh*-phrase in a sentence, a well-known fact for this language (Kim (1991), Choe (1994), among others). See (26) below, which I adapt from Choe (1994):

(26) a. na-nun [Mary-ka nwukwu-rul coahhanun-ci] amni-ta
          I-Nom M.-Nom who-Acc   like-Q   know-Dec
          'I know who Mary likes.'

       b. tangsin-un [Mary-ka nwukwu-rul coahhan-ta-ko] assip-nika?
           You-Nom M.-Nom who-Acc   like-Dec-Comp know-Q
           (i) *'Do you know who Mary likes?'
           (ii) 'Who do you know Mary likes?'

In (26a), a Q-morpheme *ci* appears in the embedded clause and the scope of the *wh*-phrase is accordingly identified as the embedded clause. If a Q-morpheme occurs in the matrix clause, on the other hand, as in (26b), the scope of the *wh*-phrase extends over the entire clause. Of importance for the present discussion is an example like (27), which contains a Q-morpheme both in the embedded and the matrix clause. I cite (27) from Choe (1994: 278) with some lexical change for reasons of clarity.

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island.

(i) Chulsoo-nun [eoce   nwukwu-rul man-ass-tun   keos-ul]   hwuhwocha-ni
     -Nom yesterday who-Acc   meet-Pst-Lnkr Nmlzr-Acc regret-Q
     (Lit.) 'Who does Chulsoo regret he met yesterday?'

Although I agree with the reviewer, I do not think that the example (i) weakens my claim, viz., non-D-linked nature of *in-situ-wh*, Note that in (1) the *wh*-word has become specific with the help of past tense and past adverb, relating the event, that actually took place. The example (i) rather supports the view that D-linked *wh*-words need not LF move. A similar fact is also noticeable from such examples as (9) and (27) involving negative island and *wh*-island, respectively. As reported by many authors, these examples possibly serve as a *wh*-question provided a heavy focal stress on the *wh*-words, termed as 'stress effect'(Son 2002). By reducing stress assignment into a syntactic form of movement, Son (2002) claims that these examples indeed involve 'invisible' scrambling, (9) being illustrated in (ii).

(ii) Mary-ka NWUKWU-rul coahaci-anh-ni?
      ?'Who is it (among them) that Mary does not like?'
      [$_{CP}$[$_{IP}$ Mary-ka NWUKUW-rul$_i$ [$_{VP}$ t_i V] Q]]

In (ii), the *wh*-word acquires specificity via scrambling (Int-effects in terms of Chomsky (2001)), hence nullifying island effects. As observed by a reviewer, the example (ii) is still marginal, as compared to the construction of overt *wh*-scrambling, say, *NWUKWU-rul Mary-ka coahaci-anh-ni*. For the marginality induced by string vacuous operation, I would like to refer to Takano (1992), Abe (1993), and Son (1998) for additional discussion.

(27) tangsin-un [Mary-ka nwukwu-rul coahhannun-ci] assip-nika?
     You-Nom M.-Nom who-Acc   like-Q   know-Q
     (i) 'Do you know who Mary likes?'
     (ii) *'Who do you know whether Mary likes?'

In (27), the *wh*-phrase in the complement cannot take scope over the matrix clause: the scope of the *wh*-phrase is entirely confined within the complement clause headed by the Q-morpheme -*ci*, as the only possible reading (27i) indicates. Choe, attributing this finding to A. Kim (1982), took this as a phenomenon indicating that *wh*-islands are operative in Korean (see Nishigauchi (1990) illustrating the same fact and a similar argument in Japanese). But note importantly that in (27) the second reading, viz. a matrix construal of the *wh*-phrase, is unavailable, as Choe and Nishigauchi themselves note.[11] While admitting that the *wh*-island effect is at work in these languages, as they argue, it still has to be explained why the second reading of the matrix *wh*-construal, which would result from *wh*-extraction out of the intervening island, is completely excluded. Note that in English (1b) and (2b), argument extraction from *wh*-islands never renders a sentence completely out. Overt extraction (1b) gives rise only to a mild Subjacency violation. Covert extraction (2b), of course, does not invoke ungrammaticality, a well-known phenomenon characterized as 'No LF Subjacency' since Huang (1982).

The point here about example (27) is that the *wh*-island effect is insufficient to account for the total unacceptability of the matrix reading with regard to the embedded *wh*-phrase. This unacceptability, on the other hand, is precisely what we get if the *wh*-phrases are non-D-linked. Being non-D-linked, on a par with Italian QPs in (23b), they are predicted non-extractable from the *wh*-island, which indeed they are. The non-extractability is also parallel to that of adjunct extraction in English (3b) and (4). Adjuncts do not quantify over a range of a select set, a property typical to non-D-linked categories (see Rizzi (1990), Kiss (1993), and Cheng (1991) for the non-D-linked nature of adjuncts across languages), which eventually explains why adjunct extraction across the islands is barred.

Thus far discussion leads us to a substantial claim that the Korean/Japanese *wh*-NPs can be treated as non-D-linked, parallel to the Italian QPs. Note, however, that this finding is solely based on external observations, by juxtaposing Korean/Japanese *wh*-NPs with Italian QPs. From now on, I will present internal evidence in support of this line of analysis.

Enç (1991) subsumes Pesetsky's (1987) D-linking and Cinque's (1990) referentiality under the notion of specificity, by characterizing it as a function of partitivity. *Which*-NPs, for example, expressions known as D-linked (Bolinger (1978), Pesetsky (1987), Comorovski (1996)) due to their property of conveying the pre-existing domain, do not refer to any arbitrary things or individuals. The referents of *which*-NPs instead must be restricted in the answer to a member of a select set constructed in conversation. This property of *which*-NPs is captured in Enç (1991)

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[11] Some authors observe that in a sentence like (27), the object *wh*-phrase could be interpretable as having a matrix construal, provided an extremely heavy pitch accent on the *wh*-word (Nishigauchi (1990) and Takahashi (1993) on Japanese, and Lee (1982) on Korean). Son (2001) relates such effect to semantics of specificity. See Choe (2004) also, who counts it as a focus effect.

by the notion of specificity, which states that specific NPs convey a covert parti-
tivity. A clear case showing this comes from Turkish. In Turkish, specific NPs
correlate with accusative morphology in that the NPs with the case morphology
must be a subset of entities previously introduced. I cite Enç's (16–18) below as
(28–30) for illustrative purposes, omitting detailed diacritics on the data.

>   (28) Odam-a   birkac cocuk girdi
>   my-room-Dat several child entered
>   'Several children entered my room.'

>   (29) Iki kiz-i   taniyordum
>   two girl-Acc I-knew
>   'I knew two girls.'

>   (30) Iki kiz taniyordum
>   two girl I-knew
>   'I knew two girls.'

According to Enç, given the first utterance (28), only (29) but not (30) can be
considered an adequate response. The reason is that 'two girls' in (29), being
marked with case and associated with specific property, must be among the children
who entered the room mentioned in (28), which is not the case in (30). Let us
summarize Enç's semantics of specificity as (31).

>   (31) Specific NPs bear a covert partitivity, whereas non-specific NPs do not.

The semantics of specificity defined in (31) is significant in that it can provide
a criterion for determining whether a certain phrase is D-linked or not without
reference to its behavior in syntax. As such, we can make this notion of specificity
a diagnosis for testing if Korean *wh*-NPs indeed belong to a non-D-linked category,
as they turned out to on the basis of syntax.

For this purpose, let us repeat (8a) here as (32).

>   (32) Mary-ka nwukwu-rul   coaha-ni?
>   M.-Nom who/someone-Acc like-Q
>   'Who does Mary like?' or 'Does Mary like someone?'

When a speaker asks a question like (32), he/she does not have in mind a particular
set over which the choice of *nuwkwu* 'who' ranges. Accordingly, any human being in
the world can be given in the answer as a referent of the *wh*-phrase. This amounts
to saying that the *wh*-word in (32) is non-specific, in Enç's spirit, assuring that
the *wh*-NP *nwukwu* is non-D-linked. This fact lends substantial support, from a
semantic point of view, to the previous conclusion that the Korean *wh*-NPs are
non-D-linked. The same point can also be teased out from a discourse context
constructed similarly to Turkish (28–30). Suppose that (33) is a first utterance in
the conversation.

>   (33) yoceum   aytul-un   movie startul-ul coahhanta
>   these days children-Nom movie stars-Acc like
>   'Children of these days like movie stars.'

If the question (32) follows (33) with a normal intonation, the sentence sounds a little bit awkward.[12] Many speakers, including me, find that the *wh*-word *nwukwu* 'who' in the question (32) barely limits its choice to the set of movie stars mentioned in the previous context of (33). *Nwukwu* in the question can be freely associated with a person outside the set of movie stars. The anomaly of (33) follows from the fact that it ignores the previous domain of discourse by providing an unnatural and uncooperative response in the situation. The absence of covert partitivity seen here reassures us that the *wh*-NPs in a sentence like (32) is non-D-linked.

5. Closing Remarks

Till now I have shown that Korean *wh*-NPs (Japanese *wh*-NPs as well) possibly belong to a non-specific/non-D-linked category. An initial hypothesis toward this conclusion was drawn from the syntax of the *wh*-phrases, viz. their non-extractability from the weak islands, and the initial hypothesis was independently justified by the semantics of specificity in the previous section.[13] This conclusion eventually clears the original problem raised at the outset of the paper, namely, why Korean/Japanese *wh*-NPs behave differently from English/Chinese *wh*-NPs, and why they pattern with adjuncts for the (im)possibility of the extraction. The answer roughly would be that Korean/Japanese *wh*-phrases, either be they arguments or adjuncts, are non-referential/non-D-linked (by default) at the stage of lexical insertion, while English/Chinese *wh*-NPs, unlike *wh*-adjuncts, might in some way bear a referential/D-linked property.[14] German and French *wh*-phrases might be characterized similarly to Korean/Japanese ones.[15] Korean, Japanese, German, and French (*in-situ*) *wh*-NPs, being non-specific (by default), are prevented from moving out of weak islands, patterning with adjunct *wh*-words. English and Chi-

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[12] An anonymous reviewer observes that the utterance (32) becomes natural in the given context of (33) by replacing the nominative marker *ka* on *Mary* with the topic marker *nun*. In Son (2002), I claimed that *wh*-phrases undergo overt movement to obtain an interpretation of semantics of specificity. If then, with the topic marker *nun*, the sentence (32) will have the representation in (i) below.

    (i) [$_{Top}$ Mary-nun [$_{IP}$ nwukwu-rul$_i$ [$_{VP}$ t_i coahha]]]-ni

In (i), the *wh*-word is shown in a displaced position, which I suppose sets the example apart from (32), explaining the improvement.

[13] As is well-known, Korean and Japanese freely allow *wh*-extraction out of strong islands (e.g., adjunct island). Under the current claim, an intriguing question arises: that is, how come these languages have more restriction on weak islands than strong islands? At this moment, I have no clear answer to this important question, leaving this issue for further work. I owe thanks to an anonymous reviewer for bringing out this potential problem.

[14] Although the present analysis leans toward the possibility that *in-situ* *wh*-words in English are D-linked (see footnote 2), a precise characterization of this issue goes beyond the scope of the current work. I would rather refer to Rizzi (1990), Kiss (1993), Comorovsky (1996), and Pesetsky (1999) for further discussion.

[15] Due to the lack of sufficient data and convincing evidence, it is hard to draw any conclusive cut on these languages, however. In this work, I will confine my investigation to Korean and Japanese, leaving the cross-linguistic implications of the current analysis for further research. For French and South Slavic languages, see Rudin (1988), Bošković (1998), and references cited there. For German, see Beck (1996) and Williams (1997). For the related issues and implications in English, see Pesetsky (1999).

nese *wh*-NPs, on the other hand, freely move across the islands thanks to their specificity nature.

The arising picture is: the traditional argument-adjunct asymmetry is part of a more general pattern of contrast between specific/D-linked phrases on the one hand, and non-specific/non-D-linked phrases on the other. The idea that an argument-adjunct asymmetry needs to be reshaped in light of specificity (or referentiality/D-linking) is not a novel one. Heycock (1993), for example, noticed that fronted arguments do not always behave alike; rather, *some arguments pattern together* with predicates in behaving as though obligatorily reconstructed to their original position. Consider (34) (= (Heycock's (6))

(34) a. [Which stories about Diana$_i$]$_j$ did she$_i$ most object to t_j?

b. *[How many stories about Diana$_i$] is she$_i$ likely to invent t_j?

Of the two examples above involving fronted arguments, only (34a) permits coreference. The impossible coreference of (34b) is understandable if we assume that the fronted argument moves back to its theta-position in violation of Condition C. The obligatory reconstruction is normally the pattern expected from predicates (see (35), which is Heycock's (2b)).

(35) *[How proud of John$_i$]$_j$ do you think he$_i$ is t_j?

The fronted argument in (34a) crucially differs from that of (34b) in that it presupposes the existence of a set of entities, viz., a set of stories about Diana, and *the listener is asked to pick out from this set, a typical property of D-linking.* The argument in (34b) lacks this property, precisely like predicates, non-D-linked category.

Before concluding, I would like to briefly mention how Korean, a language with unmarked *wh*-words, expresses specificity. Besides employing lexical expressions such as *ku-cung-eyseo* 'among them',[16] there are two ways of marking specificity: one overt *wh*-scrambling, and the other stress assignment. Consider the two options one by one.

(36) Nwukwu-rul Mary-ka t coaha-ni?
      who-Acc   M.-Nom   like-Q

The utterance (36) involves a *wh*-word in scrambling position, and an answer to this question must pick out an individual from the set of entities specified in the previous discourse. In the discourse portion of (33), the question (36) can be paraphrased as 'who is it (among the movie stars) that Mary likes?' This shows that the scrambled *wh*-word carries a covert partitivity, which in turn indicates that the *wh*-word is specific and D-linked. A bit awkward but still viable way of marking specificity is by using stress assignment.

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[16] The following sentence makes a perfectly natural and adequate question in the discourse context of (33) (as a reviewer pointed out).

(i) Ku-cwung-eyseo Mary-ka nwukwu-rul coaha-ni?
     'Among them, who does Mary like?'

(37) a. Mary-ka NWUKWU-rul coahha-ni?

b. Mary-ka NWUKWU-rul coahaci-anh-ni?

Previously I said that a sentence containing *in-situ wh*-words (as in (32)) cannot make a relevant question in the discourse of (33) and that a negative question such as (9) cannot function as a *wh*-question (although it can be understood as a yes/no question). Quite paradoxically, however, these sentences emerge as a possible question, if a heavy stress is placed on the *wh*-word in the fashion indicated in (37). In this case, only a specific reading is available: the *wh*-words refer only to an individual among the members of a select set. (However, It should be noticed that a specific interpretation available here represents still a deviant reading.)

One might be interested in how *wh*-words unmarked for specificity become specific in (36) and (37). I would suggest that the specific reading comes as a consequence of either overt or covert scrambling manifested in (36) and (37), respectively. Because of the space limit and the coverage of the current research, I would rather leave this important issue untouched in this paper, by simply referring interested readers to Son (2002). In closing, I have shown in this paper that Korean (and Japanese) *wh*-NPs are unmarked for specificity. They receive a non-specific/non-D-linked reading in their lexical insertion position, which eventually explains why *wh*-NPs in these languages exhibit a property of adjuncts with regard to island effects. This study also lends support for the view that a traditional argument-adjunct asymmetry may need to be reshaped in light of specificity.

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