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On the Reparability of Preposition Stranding*

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Kim, Sun-Woong. 2010. On the Reparability of Preposition Stranding. *Language Research* 27(1), 137-164. The reason for the ban on P-stranding in the two languages types, e.g., German and Korean, has been considered to come from different sources: German by D to P movement (Law 2006) and Korean from the affixal nature of postpositions as bound morphemes. This paper argues that they actually come from the same source: the violation of derivational constraints, the PIC in particular, under the phase extension perspectives of den Dikken (2006, 2007, 2008). This paper also argues that postposition/Case-marker stranding (P-stranding, CM-stranding) is not repaired since it is the violation of the PIC. It will also be argued that if P-stranding is not due to the PIC violation, it can be repaired only under strict recoverability condition. **(Kwangwoon University)**

Key Words preposition stranding, repair, phase extension, PIC, derivation, representation, constraint

1. Introduction

The pattern of P-stranding (pre- or post-position stranding) and its reparability vary across languages. Korean in (1) and German in (2) do not have P-stranding, while it is an option in English (3). Sometimes, English does not allow P-stranding either as in (4).

(1) a. [Mary-etayhay]$_i$, John-i t_i iyakihayssta.
Mary -about John-nom talked
'About Mary, John talked.'
b. *Mary$_i$, John-i t_i-etayhay iyakihayssta.

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John-nom -about talked
'Mary, John talked about.' (Intended reading)

(2) a. [Von was]$_i$ redest du t_i?
from what talk you
'About what are you talking?'
b. *Was$_i$ redest du [von t_i]?
what talk you from
'What are you talking about?'

(3) a. [About what]$_i$ have they talked t_i?
b. What$_i$ have they talked [about t_i]?

(4) a. [Under what circumstances]$_i$ will the moon implode t_i?
b. *What circumstances$_i$ will the moon implode [under t_i]?

This variation has been argued to come from different sources. German has D to P movement, which bans P-stranding while it is an option in English (Law 2006). Korean (1b) is argued to be bad simply because of the affixal nature of postpositions as bound morphemes. More than bound morpheme properties, however, must be considered in order to explain the reparability of postposition stranding in Korean. While P-stranding cannot be repaired in German (5), it can be repaired in Korean (6) like in English (7).

(5) a. Anna hat mit jemanden gesprochen, aber ich weiβ nicht [mit
Anna has with someone spoken but I know not w i t h
wem]$_i$ <Anna hat mit t_i gesprochen>.
who Anna has with spoken(German) (< > means elided part.)
'Anna has spoken with someone, but I don't know with who.'
b. *Anna hat mit jemanden gesprochen, aber ich weiβ nicht
[wem]i <Anna hit mit ti gesprochen>.
'Anna has spoken with someone, but I don't know who.'

(6) John-i Mary-wa mwuenka-ey tayhay iyaki-lul hasstako hatentay,
John-nom Mary-with something-about talk-acc did-C say
ne-nun [mwuess] < John-i Mary-wa <mwuess>-ey tayhay
you-top what John-nom Mary-with something-about
iyaki-lul hass-nunci ani?
talk-acc did-whether know-Q

'They say that John talked with Mary and do you know about who?'

(7) The moon will implode under certain circumstances, but I'm not sure exactly what$_i$ <the moon will implode under t_i>.

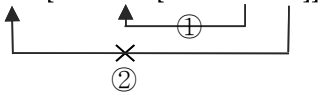
This paper argues that the parametric difference across languages come from the nature of violations in P-stranding. In particular, P-stranding may result in violation of either derivational or representational constraints. If it is violation of derivational constraints, the PIC (Phase Impenetrability Condition) in particular, P-stranding cannot be repaired (Merchant 2001, Lasnik 2005). If it is representational or at least non-PIC-derivational, however, P-stranding can be repaired.[1] It will also be argued that repair of P-stranding by deletion is done only under strict recoverability condition.

2. P-stranding and D to P Movement

2.1 D to P Incorporation and Phase Extension

This paper basically adopts Law's (2006) D to P incorporation analysis of P-stranding. According to him, D can incorporate with P inside PP. If D is raised up into P as shown in ①, then the extraction of NP is not possible, as shown in ②.[2]

(8) … [$_{PP}$ P+D$_i$ [$_{DP}$ … t_i NP]]



This derivation leads to the failure of P-stranding. He does not, however, explain why D to P incorporation bleeds NP movement out of PP. This is the starting question of this paper.

To explain this, the present paper crucially assumes the phase extension

1) Island violations are argue to be repaired by deletion Fox and Lasnik 200). This is understood in this paper as suggesting either that island violations are not violations of the PIC or that only the PIC violations cannot be repaired (Lasnik pc 2009).

2) Ince (pc 2008) raises a question regarding D-less languages. If a language lacks D, then D to P based analysis would predict that P-stranding will always be allowed since there would be no D to P movement at all. The present study, however, assumes that D is universal across languages though it may be covert in some languages. Also ee 1) for D to Pmovemen in Korean

proposal of den Dikken (2006, 2007). The phase extension is defined as follows (den Dikken 2006, 2007):

(9) Syntactic movement of the head H of a phase α up to the head X of the node β dominating α extends the phase up from α to β: α loses its phasehood in the process, and any constituent on the edge of α ends up in the domain phase β as a result of phase extension.

To see how this works, consider the following well-known Icelandic examples:

(10) a. jag kysste henne inte
I kissed her not
b. at jag *henne inte kysste <henne>
that I her not kissed her

As is well-known, (10b) is bad due to the violation of Holmberg's Generalization, which requires the verb shift before its object moves out of VP. This is represented as follows under phase extension.

(11) a. $[_{XP}$ X+$[v$+$V_i]_j$ $[_{vP}$ $[_{DP}$ SUBJECT] $[t_j$ $[_{VP}$ t_i $[_{DP}$ OBJECT]]]]] (Φ=phase)
Φ ◀——— (Φ)
b. $[_{XP}$ $[_{DP}$ OBJECT$]_k$ X+$[v$+$V_i]_j$ $[_{vP}$ $[_{DP}$ SUBJECT] $[t_j$ $[_{VP}$ t_i $t_k]]]]$
Φ

Under the phase extension proposal, every XP is a phase if it is predicational. If its head moves up to a higher functional head, then the higher maximal projection becomes a phase via phase extension. In (11), the phasehood of *v*P is extended to the higher XP by way of [*v*+V] movement to X. If the movement is made within XP, it is allowed since it does not violate the PIC, which is defined below in (12). If the movement moves across the XP, then the violation of the PIC takes place. This is why (11b) is ungrammatical.

(12) Phase Impenetrability Condition (PIC, Chomsky 2001)
In phase α with head H, the domain is not accessible to operations

outside α, only H and its edge are accessible to such operations.

This can be applied to the explanation of why P-stranding is or is not allowed across languages. Suppose DP is predicational (Chomsky 2006). The phasehood of D will be extended to PP if D incorporates with P (Law 2006).[3] This is shown in (13) below:

(13) a. $[_{PP}$ P $[_{DP}$ D NP]]
Φ
b. $[_{PP}$ P+D_i $[_{DP}$ t_i NP]]
Φ ⟵ (Φ)

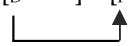
If this is true, then DP is predicted to be in extractable out of PP without violating the PIC. One may argue that if DP moves first to Spec-PP after incorporation, extraction out of PP is would be allowed without violating the PIC. This option, however, is not available since the movement would be too local. The movement of a complement to its Spec is judged to be too local to be allowed (Abels 2003). If D does not incorporate into P, DP is free to move since PP is not an inherent phase. According to Law (2006), D to P incorporation is obligatory in German while it is an option in English. This is supported by P+D suppletive forms that are found in European languages including German but not in English:

(14) P+D suppletive forms:
a. German: *am* = *an dem* 'at/by the-mas/neu-dat', *ans* = *an das* 'at/by the-neu-acc', etc.
b. French: *au* = *a le* 'to the', *aux* = *a les* 'to the', etc.
c. Italian: *al* = *a il* 'to the', *alla* = *a la* 'to the', etc.
d. English: **to-the,* at-the,* by-the* ⋯

This paper assumes that D to P incorporation is also operative in Korean based on the following examples in (15a). The derivation would be something like (15b):

3) For this readers are referred to Cable (20xx) for the assumption that P is a functional category

(15) a. Korean: *-lul wuyhay* 'for', *-ey tayhay* 'about'
b. [$_{PP}$ [$_{DP}$ NP [$_{D}$ -lul] [$_{P}$ wuyhay]]



In sum, this paper views P-stranding violations as the PIC problem under phase extension. PP becomes an extended phase due to D to P movement. Then extraction of DP out of the PP violates the PIC. The extraction through Spec-P is not allowed due to Anti-locality (Abels 2003). When applied to Korean, the same explanation seems to hold. Consider the following:

(16) a. *Umak, John-i ___-eytayhay iyaki hayssta.
music John-nom -about talk did.
'Music, John talked about.'
b. *Mary, John-i ___-lul wuyhay chwum-ul chwuessta.
Mary, John-nom -for dance-acc danced
'Mary, John danced for.'

Here, too, PP becomes an extended phase due to D to P movement. Extraction of DP out of the phase PP violates the PIC. The extraction through Spec-P is not allowed due to Anti-locality (Abels 2003).

(17) … [$_{PP}$ [$_{DP}$ NP [$_{D}$ -lul] [$_{P}$ wuyhay]]

2.2 Why is P-stranding (not) repaired?

2.2.1 P-stranding violation

It is widely known that P-stranding violations cannot be repaired (Merchant 2001). Look at the following German examples, reproduced from (5):

(18) a. Anna hat mit jemanden gesprochen, aber ich weiβ nicht [mit
Anna has with someone spoken but I know not with
wem]$_i$ <Anna hat mit t_i gesprochen>.
who Anna has with spoken(German) (< > means elided part.)

'Anna has spoken with someone, but I don't know with who.'

b. *Anna hat mit jemanden gesprochen, aber ich weiβ nicht
[wem]i <Anna hit mit ti gesprochen>.
'Anna has spoken with someone, but I don't know who.'

(18b) is bad since the *wh* has moved leaving the preposition behind. Why is this bad? Lasnik's (2005, 2006) conjecture is that, assuming derivational constraints are not repaired (Merchant 2001), P-stranding constraint is derivational. He assumes that the A over A condition is in effect. For this he assumes that the *wh*-feature can or must percolate from DP to PP depending on languages. If it must, P-stranding violates the A over A, which cannot be repaired. His conjecture, however, encounters at least three empirical problems. Fist, some English sluicing data imposes the problem (Lasnik 2005):

(19) a. *What circumstances$_i$ will the moon implode [under t_i]?
b. The moon will implode under certain circumstances, but I'm not sure exactly what circumstances$_i$ <the moon implode [under t_i]>.
c. *The moon will implode under certain circumstances, but I'm not sure exactly under what circumstances$_i$ <the moon implode t_i>.

(19a) is bad since under *what circumstances* function is an adjunct. (19b), on the other hand, turns out good even if the preposition is stranded and repaired. In fact, as (19c) shows, P-stranding is forced in this particular example.[4)]

The same problem comes from Korean, which does not allow P-stranding either. The reason for the ban on P-stranding has been differently treated from German or English. This is allegedly due to the fact that Korean postpositions (or Case markers as well) are bound morphemes which cannot be stranded in any instances. This ban on P-stranding in Korean, however, does not seem to

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4) Similar examples are found in Brazilian Portuguese (BP)(Ameida and Yoshida 2007).
(i) a. A Maria daçou com algém, mas eu não lembro [com quem]$_i$ <a Maria daçou t_i>.
the Maria danced with someone but I not remember with whom
'Maria danced with someone, but I don't remember with who.'
b. A Maria dançou com alguém, mas eu não lembro quem$_i$ <a Maria dançou com t_i>
the Maria danced with someone but I not remember whom
'Maria danced with someone, but I don't remember who.'
As is well-known, BP does not allow P-stranding. (ib) shows, however, that P-stranding is allowed in sluicing context. This is a problem to Lasnik (2005)

be in effect when the string is put in sluicing context. Compare the following:

(20) a. *Chelswu-ka nwukwunka-eytayhay iyakihayssuntay, na-nun
-nom someone-about talked-but I-top
nwukwu$_i$ Chelswu-ka [t_i-eytayhay] iyakihayssn-unci molla.
who -nom about talked-whether do-not-know
'Chelswu talked about someone, but I don't know who Chelswu talked about.'

b. Chelswu-ka nwukwunka-eytayhay iyakihayssnuntay, na-nun
-nom someone-about talked-but I-top
nwukwu$_i$ <Chelswu-ka [t_i-eytayhay] iyakihayssn>-unci molla.
who -nom about talked-whether do-not-know

(20a) is known to be ungrammatical due to the stranded postposition. (20b) turns out to be good even though the postposition has been stranded before ellipsis takes place. This string is expected to be bad but in fact all right. This suggests that more than simple bound morpheme property must be considered to explain P-stranding and its reparability in Korean. Note incidentally that postpositions in Korean can sometimes used without being bound to a host:

(21) A: Mary-lul wuyhay chay-ul sassni?
Mary-accfor book-acc bought-Q?
'Did you bought the book for Mary?'
B: Um … lul wuyhay-nun aniko, lopwute sassci.
um for-top not-be-and from bought.
'Um … I bought it not for Mary but from Mary.'

In (21B), bound morphemes *-lul wuyhayse* and - *lopwute* can be used without being bound.

How can this be explained along with other counter examples to Lasnik (2005)? This paper keeps assuming that derivational constraints are not repaired (Merchant 2001). And P-stranding constraints are derivational; the relevant derivational constraint is the PIC under phase extension. In German, P-stranding is not repaired because it violates the PIC, an uncontroversial derivational constraint.

2.2.2 Motivating F

Now the data given in (20-21) must be carefully explored. To solve this problem, this paper proposes that there is a higher FP capped on PP in some English and Korean PP: [$_{FP}$ F [$_{PP}$ P [$_{DP}$ D NP]]]. Den Dikken and Naess 1993) suggests the "beheaded" locative inversion (remnant PP movement) analysis in Norwegian:

(22) a. frimerker ble klistret *på brevet* (Norwegian)
stamps be pasted on letter-the
'There were stamps pasted on the letter.'
b. *brevet* ble klistret frimerker *på*
letter-the be pasted stamps on

According to him, (22b) is derived by the beheaded PP movement to the front after P raising to F. A simplified version of its representation would be the following:

(23) [$_{PP}$ $t_{på}$ *brevet*] ble klistret frimerker [$_{FP}$ [$_{F}$F+*på*] t_{PP}][5)]

In (23) P raises up to F, and then, the remnant PP moves to the front (Spec-TP).

In the same vein, this paper proposes that FP is capped over PP in some English and Korean. To be concrete, F is required above PP when PP is semantically/pragmatically heavy (like focus). This hosts P(+D) via P(+D) to F raising, since it allegedly has strong [+P feature] to attract P(+D) to check P-feature. This paper further assumes that F is a functional head of articulated PP (Svenonius 2008) so that {FP, PP} is a PP as a whole. FP is a segment of PP. No phase extension to FP will take place in that {FP, PP} are segments of PP. With these assumptions let us consider the following contrast:

(24) a. What did you eat with t?
b. *What did you eat without t?

5) This violates the PBC: this problem, however, is not dealt with in den Dikken (2006). Anyways, violation of the PBC does not seem to invoke a serious problem in Norwegian.

*What circumstances does the moon implode under t?

The relevant part of each in (24) is given in (25).

(25) a. [$_{PP}$ with [$_{DP}$ D NP]]
b. [$_{FP}$ without [$_{PP}$ $t_{without}$ [$_{DP}$ D NP]]]
[$_{FP}$ under [$_{PP}$ t_{under} [$_{DP}$ D NP]]]

In (25a), no D to P incorporation takes place (Recall that D to P in English is an option). So, DP stays as a phase so that DP extraction out of non-phase PP brings about no problem. In (25b) examples, there is no D to P incorporation so that DP is a phase. Crucially, however, P raises to F without phase extension in that FP is nothing but a segments of the same PP. "Beheaded" PP extraction out of FP violates the PBC but not the PIC. This kind of violation can be repaired as was discussed. This explains (19b), reproduced below in (26):

(26) The moon will implode under certain circumstances, but I'm not sure exactly what circumstances <the moon implode under t>.

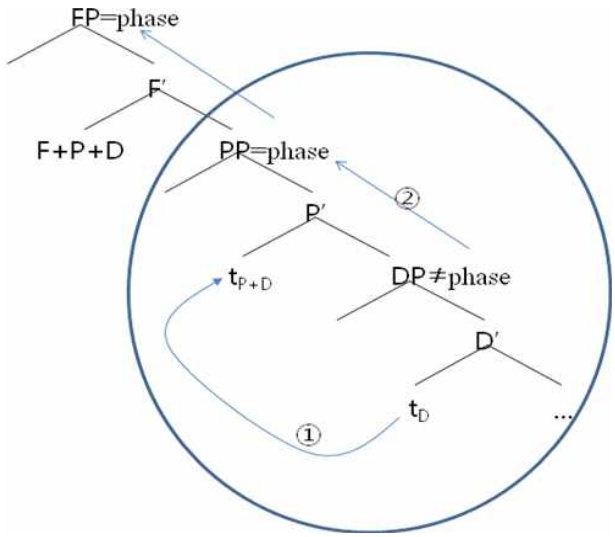
The same but parameterized analysis can be possible for Korean data (20) reproduced below as (27).

(27) a. *Chelswu-ka nwukwunka-eytayhay iyakihayssuntay, na-nun
-nom someone-about talked-but I-top
nwukwu$_i$ Chelswu-ka [t_i-eytayhay] iyakihayssn-unci molla.
who -nom about talked-whether do-not-know
'Chelswu talked about someone, but I don't know who Chelswu talked about.'
b. Chelswu-ka nwukwunka-eytayhay iyakihayssnuntay, na-nun
-nom someone-about talked-but I-top
nwukwu$_i$ < Chelswu-ka [t_i-eytayhay] iyakihayssn>-unci molla.
who -nom about talked-whether do-not-know

The relevant part of the proposed analysis is schematically given in (28) below.

First, D raises to P in Korean and F can host further P+D raising. Via D to P raising and subsequent raising to F, phase is extended to FP. Crucially, however, PP does not lose its phasehood. This is because FP is nothing but an articulation of PP (Svenonius 2008). Then, movement of "beheaded PP" out of FP violates the PBC due to t_{P+D}, but importantly, does not violate the PIC since it is the movement of a segment of a phase. This explains the contrast in (27). P-stranding violation can be repaired via deletion if not due to the PIC, again.

(28)



Actually, there are two (or three) candidate extractees; DP and (beheaded) PP:

(29) … [$_{FP}$ F+P+D [$_{PP}$ t_{P+D} [$_{DP}$ [$_{D'}$ t_D NP]]]]

If DP is extracted, it would violate the PBC (due to *t* of D) but not the PIC if it moves through Spec-PP. However, DP cannot stop by Spec-PP without violating Anti-locality Condition (Abels 2003), which bans movement from complement to spec. If PP is extracted, it violates the PBC, but again not the PIC since it is movement of a segment of a phase {FP, PP}.[6] The discussion is

6) If NP is extracted, it will violate the ban against NP extraction, whatever it may be: i.e., *… book$_i$

summarized in the table below:

(30) Summary table

Extractee	**PBC (Representational)**	**PIC (Derivational)**	Examples
DP	*	*	German
(Beheaded) PP	*	√	(19, 20)
NP	√	√	N/A
Reparability	Yes	No	

2.3 Ban on P-stranding in English

The discussion so far provides a novel answer to why there is a ban in some P-stranding cases of English. At least the following cases of P-stranding is banned in English:

(31) a. *What circumstances$_i$ does the moon implode under t_i?
b. *John talked to t_i about the news Mary$_i$.
c. What$_i$ did you eat spaghetti with/*without t_i?

P-stranding due to extraction out of adjunct PP is banned as in (31a). P-stranding due to rightward movement is also banned as in (31b). (31c) is a contrast that is frequently raised against syntactic analysis of P-stranding in functional grammar (Takami 2001). No satisfactory unified explanation of the phenomenon, but a novel approach in terms of beheaded PP movement becomes possible under the present proposal. Prepositions' of ungrammatical examples in (31) have something in common in that they are heavy. That is, P of adjunct PPs is generally known to be heavy. Rightward movement is generally to known to bear focus, which is informationally heavy. If this is the case, by the assumption of this paper, F is capped over PP to host P. Then the representation of (31a and 31b) will be something like in (32):

(32) a. [$_{FP}$ F+under [$_{PP}$ <under> what circumstances]]
b. [$_{FP}$ F+to [$_{PP}$ <to> Mary]]

… [$_{DP}$ the/a t_i] (Abe pc. UMD, Fall 2008).

c. [$_{FP}$ F+without [$_{PP}$ <without> what]]

Since both involve extraction of beheaded PP, they would violate the PBC. This is why they are ungrammatical. A prediction is that violation of the PBC would be repaired. This prediction is really borne out by the following sluicing examples:

(33) a. The moon will implode under certain circumstances, but I'm not sure exactly what circumstances <the moon implode under t>.
a'.*What circumstances$_i$ does the moon explode under t_i?
b. John talked yesterday to someone, but I don't know who$_i$ <John talked yesterday [to t_i]'>.[7]
b'.*Who$_i$ did John talk yesterday to t_i?

(33a') is bad since it is the extraction from an adjunct PP; (33b') is bad since rightward moved phrase is an island (Ross 1974). In contrast to (33a' and 33b'), (33a and 33b) are all grammatical. This improvement is done by deleting the stranded P.

To recap so far, the discussion centers around the following representations:

(34) a. [$_{FP}$ under [$_{PP}$ t_{under} [$_{DP}$ D NP]]]
b. [$_{FP}$ to [$_{PP}$ t_{to} [$_{DP}$ D Mary]]] ($FP_{[+focus]}$ for rightward movement)
c. [$_{PP}$ with [$_{DP}$ D NP]]
d. [$_{FP}$ without [$_{PP}$ $t_{without}$ [$_{DP}$ D NP]]]

In (34b), (34c), and (35d), no D to P incorporation is applied; therefore, DP is a phase. Differently from (34a), P to F raising further takes place without phase extension. This beheaded PP extraction out of FP violates the PBC, but this can be repaired. In (34a), no D to P incorporation is applied; therefore, DP is a phase and DP extraction out of non-phase PP is ok.

3. More on Reparability: Recoverability

So far, the cases where P-stranding is not repaired due to the PIC have

7) I thank Howard Lasnik for pointing this particular example to me (Lasnik pc 2009).

been discussed. It is also discussed that P-stranding is repaired if it violates non-PIC derivational constraints like the PBC. This section discusses reparability in more detail, centered on Korean data under two different settings: non-elliptical and elliptical.

3.1 Non Elliptical Setting: Clefts

The first thing that must be clarified is that nom/acc CM must be deleted in Korean cleft:

(35) a. Ecey John-ekey chayk-ul cwun-kes-un Mary(*-ka) ita.
yesterday John-dat book-acc gave-kes-top Mary(-nom) be-dec
'It is Mary that John gave a book to yesterday.'
b. John-i ecey Mary-ekey cwun-kes-un chayk(*-ul) ita.
John-nom yesterday Mary-dat gave-kes-top book(-acc) be-dec
'It is a book that John gave to Mary yesterday.'

Dative can be retained in Korean cleft; postpositions must be retained (Sohn 2000):

(36) John-i ecey chay-ul cwun-kes-un Mary(-eky) ita.
John-nom yesterday book-acc gave-kes-top Mary-dat be-dec
'It is to Mary that John gave a book yesterday.'
(37) a. John-i yenghwa-lul ponkes-un chinkwu*(-wa hamkkey) ita.
John-nom movie-acc saw-kes-top friend-with be-dec
'It is with a friend that John saw a movie.'
b. John-i cha-lul pillin-kes-un Mary*(-lul wuyhayse) ita.
John-nom car-acc rent-kes-top Mary-for be-dec
'It is for Mary that John rent a car.'
c. Mary-ka John-ul kkocipun-kes-un sonkarak*(-ulo) ita.
Mary-nom John-acc pinch-kes-top finger-with be-dec
'It is with the finger that Mary pinched John.'

The presence of CM does not seem to play a decisive role in clefts in Korean. In fact, Korean is indifferent to CM retention with respect to island sensitivity.[8)]

8) This is contrasting difference with Japanese. One is that Japanese allows nom/acc CM to

(38) a. *John-i pyenci-lul ssun salam-ul chingchanhan-kes-un
John-nom letter-acc wrote person-acc praise-kes-top
Mary(-ka) ita.
Mary(-nom) be-dec
'*It is Mary that John praised the person who wrote the letter.'
b. *John-i Mary-ekey ssun salam-ul
John-nom Mary-dat wrote person-acc
chingchanhan-kes-un penci(-lul) ita.
praise-kes-top letter(-acc) be-dec
'It is a letter that John praised the person who wrote.'.

As is shown above and below, all are island sensitive, regardless whether the pivot is with a Case marker or a postposition.

(39) a. *Sensayngnim-i John-i ecey chayk-ul cwun salam-ul
Teacher-nom John-nom yesterday book-acc gave person-acc
chingchanhan-kes-un Mary(-ekey) ita.
praise-kes-top Mary(-dat) be-dec
'It is to Mary that the teacher praised the person who gave a book yesterday.'
b.*John-i Mary-ka yenghwa-lul poasstanun cwucang-ul
John-nom Mary-nom movie-acc saw claim-acc
mitnun-kes-un friend(-with) be-dec
believe-kes-yop chinkwu(-wa hamkkey) ita.
c.*John-i Mary-ka hamkkey nonuyhaysstanun somwun-ul
John-nom Mary-nom together discussed rumor-acc
tulen-kes-un sosel(-ey tayhaysey) ita.
hear-kes-top novel(-about) be-dec

The discussion so far can be summarized in (40):

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accompany the pivot in clefts:
(i) a. Mary-nitegami-o kat-ta-no-wa **John-ga** da.
Mary-to letter-acc write-past-C-top Jon-nom be
'It is to Mary that John praised the person who wrote a letter to.'
b. John-ga Mary-ni kat-ta-no-wa **tegami-o** da.
John-nom Mary-to write-past-C-top letter-acc be

(40) Summary: Non-elliptical Setting

Plain				Island			
CM		Postposition		CM		Postposition	
+	-[9]	+	-	+	-	+	-
*	√	√	*[10]	*	*	*	*

It is noteworthy that clefts in English are island sensitive (Chung et al. 1995).

(41) a. *It is one of the student groups that the administration has issued a statement that it is willing to meet with ___.
b. *It is a Balkan language that they want to hire someone who speaks ___.

3.2 Elliptical Setting: Pseudo-sluicing

3.2.1 Antecedented Setting

Let us start examining the elliptical setting, in which the antecedent is present. The same grammatical difference is found as those in non elliptical setting with respect to Case marker. Consider (42):

(42) a. Nwukwunka-ka Mary-eykey chayk-ul cwuesstako hatentey,
Someone-nom Mary-dat book-acc gave say
ne-nun nwukwu(*-ka) inci ani?
you-top who(-nom) be-Q you-know
'They say that someone gave Mary a book, do you know who?'
b. John-i Mary-ekey mwueska-lul cwuesstako hatentey,
John-nom Mary-dat something-acc gave say
ne-nun mwuess(*-ul) inci ani?
you-top what(-acc) be-Q you-know
'They say that John gave something to Mary, do you know what?'

With respect to postpositions, the following contrast is found:

---

9) "-" here is to be understood as P-stranding.
10) for datives. See (36).

(43) a. John-i nwukwuka-ekey chayk-ul cwuesstakohatentey,
John-nom someone-dat book-acc gave say
ne-nun nwukwu(-ekey) inci ani?
you-top who(-dat) be-Q you-know
'They say that John gave a book to someone, do you know (to) who?'

b. John-i nwukwuka-wa hamkkey yenghwa-ul poasstako
John-nom someone-with movie-acc saw
hatentey, ne-nun nwukwu(-wa hamkkey) inci ani?
say you-top (with) who be-Q you-know
(*inci* = be-Q)
'They say that John saw a movie with someone, do you know (with) who?'

c. John-i mwuess-ay tayhay si-lul ssesstako hatentey, ne-nun
John-nom something-about poem wrote say you-top
mwues(-ey tayhay) inci ani?
what(-about) be-Q you-know?
'They say that John wrote a poem about something, do you know (about) what?'

Differently from clefts in non elliptical setting, P is optional. That is, P retention is not required in elliptical setting.

3.2.2 Non Antecedented Setting (Sprouting)

One caveat is to distinguish antecedented from antecedent-less cases (Park MK 2001).

(44) a. *___ Mary-ekey chayk-ul cwuesstako hatentey, ne-nun
Mary-dat book-acc gave say you-top
nuwkwu/nwuka inci you-know
who/who-nom be-Q ani?
'They say that ___ gave a book to Mary, do you know who?'

b. John-i Mary-ekey ___ cwuesstakohatentay ne-nun
John-nom Mary-dat gave say you-top

mwuess(*-ul) inci ani?
what(-acc) be-Q you-know
'They say that John gave ___ to Mary, you know what?'

As (44a) shows, when there is no overt antecedent present, the pseudo-sluicing is not allowed regardless whether the *wh* is accompanied by a CM or not. When the missing argument can be contextually recovered as in (44b), the pseudo-sluicing is allowed when the *wh* is not accompanied by the accusative marker. There is a robust difference in this regard between CMs and postpositions. Differently from CMs, the *wh* is allowed in pseudo-sluicing when it is accompanied by the postposition even when the overt antecedent is not present in the first conjunct. This is shown below:

(45) a. John-i chayk-ul cwuesstako hatentey, ne-nun
John-nom book-acc gave say you-top
nwukwu??(-ekey) inci ani?
who(-dat) be-Q you-know
'They say that John gave a book ___, you know (to) who?'
b. John-i ___ cemshim-ul mekesstak hatentey, ne-nun
John-nom lunch-acc ate hear you-top
nwukwu*(-wa hamkkey) inci ani?
who(-with) be-Q you-know?
'They say that John ate lunch, you know (with) who?'
c. John-i Mary-wa ___ iyaki-lul haysstako hatentey,
John-nom Mary-with talk-acc did hear
ne-nun mwues*(-ey tayhayse) inci ani?
you-top what*(about) be-Q you-know?
'I hear that John talked with Mary, you know (about) what?'

3.2.3 Island Setting

When put in island contexts, in antecedented contexts, pseudo-sluicing is not island sensitive with respect to CM-stranding:

(46) a. John-i nwukwunka-ka Mary-ekey cha-lulsacwun

John-nom someone-nom Mary-dat car-accbought-gave
salam-ul silhehantako hatentey, ne-nun nwukwu(*nwuka)
person-acc dislike hear you-top who
inci ani?
be-Q you-know?
'They say that John dislikes someone who bought a car for Mary, you know who?

b. John-i Mary-ka mwuenka-lul sacwun salam-ul
John-nom Mary-nom something-acc bought-gave person-acc
silehantako hatentey ne-nun mwues(*-acc) inci ani?
dislike hear you-top what be-Q you-know
'I hear that John dislikes a person Mary bought something to, do you know what?

Also, antecedented "sluicing" are not island sensitive with respect to postpositions.

(47) a. Sensaynim-i swuepcwung-ey nwukwunka-ekey pyenci-lul
Teacher-nom during class someone-to letter-acc
ssukoissnun haksayng-acc kkwucicesstako hatentay,
writing student-acc scold hear
ne-nun nwuku(-ekey) inci ani?
you-top to who be-Q you-know
'I hear that the teacher scolded a student who is writing a letter to someone, do you know to who?

b. John-i cemsim-ul mekunhwu-ey nwukwunka-wa hamkkey
John-nom lunch-acc ate-after-at someone-with together
ttenasstako hatenteyne-nun nwukwu-wa hamkkey inci ani?
left hear you-top who-with together be-Q you-know
'I hear that John left with someone after lunch, do you know with who?'

c. John-i Mary-wa mwueska-ey tayhay iyaki-lul
John-nom Mary-with something-about talk-acc
nanwunhwu-ey ttenasstako hatentey
share-after-at left hear

ne-nu mwuess(-ey tayhay) inci ani?
you-top what(-about) be-Q you-know
'I hear that Mary left after talking about something, do you know (about) what?'

One interesting prediction is that when unantecedented, all examples will turn out bad. This prediction is really borne out by the following examples:

(48) a. *John-i ___ Mary-ekey cha-lul sacwun salam-ul silhehantako
John-nom Mary-dat car-acc bought-gave person-acc dislike
hatentey, ne-nun nwukwu/nwuka inci ani?
hear you-top who be-Q you-know?
'I hear that John dislikes (someone) who bought Mary a car, do you know who?'

b. *John-i Mary-ka sacwun salam-ul silehantako hatentey
John-nom Mary-nom bought-gave person-acc dislike hear
ne-nun mwues(-ul) inci ani?
you-top what-acc be-Q you-know
'I hear that John dislikes a person Mary bought (something) to, do you know what? [gloss]

(49) a. *Sensaynim-i swuepcwung-ey pyenci-lul ssukoissnun
Teacher-nom during class letter-acc writing
haksayng-acc kkwucicesstako hatentey, ne-nun nwuku(-ekey)
student-acc scold hear you-top who(-to)
inci ani?
be-Q you-know
'I hear that the teacher scolded a student who is writing a letter to (someone), do you know to who?

b. *John-i cemsim-ul mekunhwu-ey ttenasstako hatentey
John-nom lunch-acc ate-after-at left hear
ne-nun nwukwu-wa hamkkey inci ani?
you-top who-with together be-Q you-know
'I hear that John left (with someone) after lunch, do you know with who?'

c. *John-i Mary-wa iyaki-lul nanwuhwu-ey ttenasstako hatentey

John-nom Mary-with talk-acc share-after-at left hear
ne-nu mwuess(-ey tayhay) inci ani?
you-top what(-about) be-Q you-know
'I hear that Mary left after talking (about something), do you know (about) what?'

If there is no antecedent under island setting, pseudo-sluicing sentences all turn out to be bad, whether they are accompanied by the CM or the postposition. The discussion so far can be summarized below:

(50) Summary: Elliptical Setting

	Plain				Island			
	CM		Postposition		CM		Postposition	
	+	-	+	-	+	-	+	-
+Antecedent	*	√	√	√	*	√	√	√
-Antecedent	*	*	√	*	*	*	*	*

4. Recoverability Matters.

When the summaries of elliptical and non elliptical settings are combined, (51) is obtained:

(51) Summary: Elliptical + Non elliptical setting

		Plain				Island			
		CM		Postposition		CM		Postposition	
		+	-	+	-	+	-	+	-
Elliptical	+Ant	*	√	√	√	*	√	√	√
	-Ant	*	*	$\sqrt{}^{b}$	*	*	*	*	*
Non elliptical		*	$\sqrt{}^{a}$	$\sqrt{}^{c}$	*	*	*	*	*

The generalization that can be drawn from the findings summarized above would be stated as below:

(52) a. In the antecedented setting:
i. P-stranding is repaired.

ii. Only CM (nom/acc) is not allowed in the pivot position.

b. In the non antecedented elliptical setting and in the non elliptical setting:

i. P-stranding is not repaired.

ii. Three superscripted √s are to be explained.

In antecedented setting, P-stranding can be repaired, since it is due to the PBC violation, which can be repaired under recoverability. This explains (52ai) and (52bi). In unantecedented elliptical setting and non-elliptical setting, P(or CM)-stranding is not repaired due to recoverability requirement for deletion. In addition, (unlike Japanese,) Korean has a special constraint which bans NP+nom/acc from becoming a complement of the copula *i* 'be'+dec. This explains CM-stranding is not repaired at all. This explains (52aii):

(52) a. Nwuka pap-ul Sally-wa hamkkeymekessni?
who-nom meal-acc Sally-with together ate-Q
'Who ate meal with Sally?'

a'. Mary(*-ka) *(ita.)
Mary-nom (be-dec)
'It is Mary.'.

a''. Pap(*-ul) *(ita.)
meal(-acc) (be-dec)
'It is meal.'

b. Mary-ka pap-ul nwukwu-wa hamkkey mekessni?
Mary-nom meal-acc who-with together ate-Q?
'Who did Mary ate meal with?'

b'. Sally-wa hamkkeyita.
Sally-top together be-dec
'It is with Sally.'

(53bii) is explained as follows. As for $\sqrt{}^{a}$, no ellipsis is involved. After it is pied-piped, CMs are deleted in the pivot. Hence the ban on NP+nom/acc in pivot position is not applied. See (54) for confirmation.

(54) a. Ecey John-ekey chayk-ul cwun-kes-un Mary ita.

yesterday John-dat book-acc gave-kes-top Mary be-dec
'It is Mary that gave a book to John yesterday.'

b. John-i ecey Mary-ekey cwun-kes-un chayk ita.
John-nom yesterday Mary-dat gave-kes-top book be-dec
'It is a book that John gave to Mary yesterday.'

As for $\sqrt{}^{b}$ and $\sqrt{}^{c}$, they are apparent exceptions but recoverability matters here also. Even without antecedents, postpositions can be recovered from contexts. See (55) and (56).

(55) a. John-i ___ chay-ul cwuesstako hatentey, ne-nun
John- nom book-acc gave hear you-top
nwukwu-eykey inci ani?
who-to be-Q you-know?
'I hear that John gave a book, do you know to who?'

b. John-i ___ cemsim-ul mekesstako hatentey, ne-nun
John-nom lunch-acc ate hear you-top
nwukwu-wa hamkkey inci ani?
who-top together be-Q you-know?
'I hear that John ate lunch with someone, do you know with who?'

c. John-i Mary-wa ___ iyaki-lul haysstako hatentey, ne-nun
John-nom Mary-with talk-acc did hear you-top
mwues-ey tayhayse inci ani?
what-about be-Q you-know?
'I hear that John talked with Mary, do you know about what?'

(56) a. John-i ___ yenghwa-lul pon-kes-un chinkwu-wa hamkkeyita.
John-nom movie-acc saw-kes-top friend-with togetherbe-dec
'It is with a friend that John saw a movie.'

b. John-i ___ cha-lul pilin-kes-un Mary-lul wuyhayae ita.
John-nom car-acc rent-kes-top Mary-acc be-dec
'It is for Mary that John rented a car.'

c. Mary-ka ___ John-ul kkocipun-kes-un sonkalak-ulo ita.
Mary-nom John-acc pinch-kes-top finger-with be-dec

Here comes a grand summary of the discussion so far:

(57) a. Pied piping is obligatory universally. (Similar conclusion with Cable 2007)
b. P-stranding violation cannot be repaired when it is due to the PIC.
c. If not, P-stranding can be repaired under recoverability.
d. Island violations can be overridden by recoverability.

In a nutshell, contrary to Merchant (2001), P-stranding can be repaired, but only under strict recoverability.[11)]

4. C-stranding

4.1 Data

The same analysis that has been proposed to deal with P-stranding can also hold for C-stranding in English. That is, T to C movement or incorporation does not allow the movement of TP leaving *that* behind, whether it is rightward or leftward.

(58) a. Everybody believes fervently [that John is a fool].
b. [That John is a fool] is believed fervently by everybody.
c. *[John is a fool] is believed fervently [that] by everybody.
(59) a. Mary told herself [that John is a fool] at least twice a day.
b. [That John is a fool], Mary told herself at least twice a day.
c. *[John is a fool], Mary told herself [that] at least twice a day.
(60) a. Frank saw a play yesterday [that was long and boring].
b. *Frank saw a play yesterday [was long and boring].[12)]
c. *Frank saw a play [that] yesterday [was long and boring].

T to C movement is an obligation as is argued by Roberts and Roussou (2001), Roussou (2002), and Pesetsky and Torrego (2004), among others. If this is true,

11) This paper is mute about how recoverability consideration is to be reformulated in syntax. This is left open

12) For the reason why (58b) is ungrammatical, readers are referred to Bošković and Lasnik (2003).

then exactly the same explanation holds also for the ban on C-stranding in Korean.

(61) a. Chelswu-nun [Yenghi-ka pap-ul mekessta-ko] sayngkakhanta.
-top -nom meal-acc ate-comp think
'Chelswu thinks that Yenghi ate meal.'
b. *[Yenghi-ka pap-ul mekessta] Chelswu-nun -ko sayngkakhanta.
[Left dislocation]
c. *Chelswu-nun –ko sayngkakhanta [Yenghi-ka pap-ul mekessta].
[Right dislocation]

Whether the dislocation is rightward or leftward, C-stranding is not allowed. T to C movement or incorporation blocks the movement of TP leaving *–ko* behind. By the definition of phase extension, phasehood is extended from TP to CP. Then the extraction of TP is not admissible, for the TP is the complement of the CP phase. Its extraction leads to a violation of the PIC[13)]

(62) … [$_{CP}$ C+T <$_{TP}$ …>] … (CP = (extended) phase)

4.2 Reparability

The complementizer *–ko* in Korean is optional in canonical sentences. If it is stranded by the movement of its complement clause, however, the whole string turns out to be bad due to the stranded complementizer *–ko*, whether the movement is leftward or rightward. Differently from P-stranding, C-stranding is not repaired even if the stranded complementizer is deleted. C-stranding cannot be repaired regardless of whether it is due to leftward or rightward movement (Ahn and Cho 2005):

(63) a. ?*[Yenghi-ka pap-ul mekessta] Chelswu-nun <-ko> sayngkakhanta. [Left dislocation]
b. *Chelswu-nun <–ko> sayngkakhanta [Yenghi-ka pap-ul mekessta]. [Right dislocation]

13) Note that this analysis is actually provides n answer to why "headless" TPs are immobile (Wurmbrand 2004).

The findings of P-stranding and C-stranding in Korean is summarized below:

(64) P-stranding and C-stranding (Korean)

	P-stranding	C-stranding
Canonically	No	No
Repaired by ellipsis?	Yes	No

[No=not allowed, leads to ungrammaticality; Yes=allowed, leads to grammaticality]

Why is C-stranding not repaired? The answer is evident. It is because it is the violation of the PIC, which is a derivational constraint.

5. Conclusion

This paper has been an attempt to answer why P-stranding is allowed in some languages but not in others, and why P-stranding violations are repaired in some instances but not in others. This paper argued the following:

(65) a. P-stranding may result in violation of either derivational or representational constraints.
b. P-stranding violation is not repaired if it is due to the PIC; if not due to the PIC, P-stranding can be repaired only under strict recoverability.
c. Island violations can be overridden by recoverability.
d. P-stranding and C-stranding can be dealt with on the same track.

Recently, Cable (2007) draws a very meaningful conclusion from his study of Tlingit that pied piping does not exist independently in grammar, since all movement is in a strict sense pied piping. The conclusions of this paper are partly supportive to his conclusion, on a different track though, in that in many examples of P-stranding what actually moves is a beheaded PP not a simple DP.

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