

External Reremerge and Parasitic Gap Constructions in English*

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Jong Un Park and Myung-Kwan Park. 2018. External Reremerge and Parasitic Gap Constructions in English. *Korean Journal of English Language and Linguistics* 18–2, 194–218. The goal of this paper is two-folded. First, it aims to provide an argument for the so-called 'non-separate chain approach' to Parasitic Gap constructions (PGCs) in English, by examining the patterns of anaphor reconstruction. Bruening and Khalaf (2017) show that an anaphor can reconstruct to both a parasitic gap (PG) and real gap (RG) position, and we take this finding as compelling evidence in favor of the 'non-separate chain' view. Secondly, this paper presents a derivational analysis of anaphor reconstruction. We argue that the 'symmetric' pattern of anaphor reconstruction can be derived by an External Reremerge (ER)-based analysis of the kind suggested in Park et al. (2017). In so doing, we demonstrate that deep island effects, which are originally shown by Chung (2017) to be problematic for de Vries's (2013) ER analysis, can be successfully handled by Park et al.

Keywords: External Reremerge, parasitic gap constructions, anaphor reconstruction, deep island effects, improper movement

1. Introduction

Sentences like (1) where there is only one overt *wh*-phrase despite the existence of two gaps, a real gap (RG) in the matrix clause and a parasitic gap (PG) inside the adjunct clause, are called Parasitic Gap constructions (PGCs).

* We'd like to thank the three anonymous reviewers for their helpful comments on our paper. Of course, all remaining errors are ours.

- (1) *Which document* did John file ___ without reading ___?

In the literature of generative syntax, there have been two competing views on how the PG in the adjunct can be licensed by an operator. The first view, which we will refer to as the 'separate chain view,' is that there is an independent null operator at the left periphery of the adjunct, and it enables the PG not to violate the ban on vacuous quantification for A'-traces (Chomsky 1986, Contreras 1984, Haïk 1985, Nissenbaum 2000).

Another view, called the 'non-separate chain view,' advocates an idea that not only the RG but also the PG is licensed by the same operator that ends up at the leftmost position (e.g., *which document* in (1)). The debate on which of these two works is more tenable is still going on, but where an anaphor inside the fronted operator reconstructs appears to be a non-trivial diagnostic that helps us to evaluate the existing two views. For example, based on the contrast between (2a) and (2b), Chomsky (1986), in line with Kearney (1983), asserts that the anaphor *himself* cannot reconstruct to the PG position while it can be placed back to the RG position. As such, this 'anti-reconstruction' (into the PG position) seems to lend support to the separate chain view.

- (2) a. Which books about himself_i did John_i file *t* [before Mary_j read *e*]
 b. *Which books about herself_j did John_i file *t* [before Mary_j read *e*]
 Chomsky (1986: 60)

By contrast, Munn (1994) makes a directly opposite observation that when a PG is inside the subject, the displaced *wh*-phrase containing an anaphor should reconstruct into the PG position, as in (3), and this fact appears to undermine the separate chain view.

- (3) a. *[Which picture of herself₂]₁ did [every boy₃ who saw pg₁] say Mary₂ liked t₁?
 b. [Which picture of himself₂]₁ did [every boy₂ who saw pg₁] say Mary₂ liked t₁?
 Munn (1994: 407)

Against this backdrop, this paper provides empirical data from Bruening and Khalaf (2017), which points toward the conclusion that data of the sort in both (2) and (3) are not appropriate enough to diagnose the reconstruction site as both involve an exempt anaphor as part of a picture-NP. They instead claim that a bare anaphor can (and sometimes need to) reconstruct to both positions.

Then, the immediate question is how to theoretically account for this new generalization that anaphor reconstruction in the PGC can take place into both the PG and RG position. In answering this question, we will argue that the non-separate chain view fares better than the separate chain view, and that Park et al. (2017) which adapt de Vries's External Reemerge (ER) for a comprehensive analysis of A'-dependency in PGCs, as well as Across-the-Board movement (ATB) and Right Node Raising (RNR) constructions, is a tenable one among the previous approaches adopting the non-separate chain view. In so doing, it will also be demonstrated that de Vries's original version of ER has difficulty explaining deep island effects (Kayne 1983), as pointed out by Chung (2017), and how such a problem can be evaded in Park et al., a descendent of Park (2006) (and references therein).

The organization of this paper is as follows. Section 2 briefly reviews the two contrasting views on the reconstruction site of an anaphor fronted along with the operator in the PGC. Then, the new generalization by Bruening and Khalaf (2017) regarding the range of anaphor reconstruction sites in the PGC will be presented, and the issue of which of the two competing views is more viable in explaining that generalization will also be addressed.

In section 3, it will be shown that although de Vries's ER analysis makes a correct prediction for the symmetric pattern of anaphor reconstruction in the PGC, it has its own theoretical shortcoming regarding the way to associate a

PG chain with an RG chain when there is an island boundary inside the adjunct clause. In section 4, then, we will delineate Park et al.'s (2017) ER-based approach as an alternative, demonstrating how it accommodates the symmetric pattern of reconstruction at issue without facing the problems which de Vries's ER approach or Chung's (2017) hybrid ER approach encounters. A summary and conclusion will be given in section 5.

2. Anaphor Reconstruction in the PGC: Symmetric or Asymmetric?

2.1. Anti-reconstruction Effects and the Separate Chain View

Since the observation by Kearney (1983), it has been assumed in the literature that reconstruction into a RG is permitted, but not into a PG site, in the PGC (Haik 1985; Nissenbaum 2000). The contrast between (4a) and (4b) (repeated from (2a) and (2b), respectively), from Chomsky (1986), seems to support the observation on the limited range of reconstruction sites in the PG construction. Note that the ungrammaticality of (4b), as opposed to (4a), appears to fall out naturally from the assumption that the anaphor *herself* cannot be bound by *Mary* within the adjunct as *which books about herself* fails to be reconstructed into the PG position.

- (4) a. Which books about himself_i did John_i file *t* [before Mary_j read *e*]
 b. *Which books about herself_j did John_i file *t* [before Mary_j read *e*]
 Chomsky (1986: 60)

The fact that a fronted *wh*-phrase cannot be reconstructed into a PG inside an adjunct (or a subject) has been taken as a strong argument for the so-called 'separate chain' or 'null operator' view on the PG construction, which takes a PG chain to be separated from a RG chain (Chomsky 1986, Contreras 1984, Haik 1985, Nissenbaum 2000, among others). According to the separate

chain view, an RG is headed by an overt *wh*-phrase while a PG is a copy left by movement of a null operator within the adjunct clause. As such, there is no chance for the overt *wh*-phrase, the head of the RG chain, to be reconstructed into the parasitic gap position.

Notice, though, that the impossibility of reconstruction into the PG, often called an 'anti-reconstruction effect,' seems to be a challenge to the non-separate chain view as well, including the ER approach (de Vries 2013) and the so-called sideward movement approach (Hornstein and Nunes 2002, Nunes 2004). However, a number of recent works have reported cases where the fronted *wh*-operator *can* (and sometimes even *should*) be placed back to the PG position (e.g., Levin and Hukari 2006, Munn 1994), the fact which cannot be easily accommodated by the separate chain view based on the anti-reconstruction effect. Consider the data below. First, according to Munn (1994), the displaced *wh*-phrase containing an anaphor 'asymmetrically' reconstructs into the PG position when the adjunct clause with the PG precedes the RG, as shown in (5a,b), repeated from (3a,b). This kind of PGC is often referred to as the subject PGC since a PG is contained inside the subject island.

- (5) a. *[Which picture of herself₂]₁ did [every boy₃ who saw pg₁] say Mary₂ liked t₁?
 b. [Which picture of himself₂]₁ did [every boy₂ who saw pg₁] say Mary₂ liked t₁?
 Munn (1994: 407)

Munn argues that the contrast between (5a) and (5b) can be readily accommodated if we assume that the fronted *wh*-phrase is reconstructed to the PG position, rendering Principle A satisfied in (5b), not in (5a). If the *wh*-operator had to be reconstructed only to the RG position, as claimed by the separate chain view, (5a) would be incorrectly predicted to be grammatical. This kind of preference on the closer copy as a reconstruction site will be referred to as a 'pivot effect.'

Likewise, Levin and Hukari (2006) observe that the operator with an anaphor can be reconstructed to the PG position, accounting for the

acceptability of (6a) and (6b).

- (6) a. There were pictures of herself₁ which [once Mary₁ finally decided she liked/approved of *pg*], John put ___ into circulation.
 b. There are pictures of herself₁ which [after getting Mary₁ to approve of *pg*], John wants to put ___ into circulation.

Levin and Hukari (2006: 49)

To take stock, the data presented in this section lead us to conclude that an anaphor fronted along with the *wh*-operator is supposed to asymmetrically reconstruct only to a RG or PG position in the PGC. This asymmetric pattern of anaphor reconstruction in the PGC seems to lend support to the separate chain view, rather than the non-separate chain view.

2.2. New Generalization Supporting the Non-separate Chain View

It is worth mentioning at this moment that as pointed out by Bruening and Khalaf (2017), all the data we have seen above as evidence for the possibility of reconstruction to the PG position has a couple of common properties: (i) they involve an 'exempt anaphor,' which refers to an anaphor contained in the so-called picture-NP; and (ii) the picture NP with an exempt anaphor *asymmetrically* reconstructs into the PG position. Bruening and Khalaf (2017) argue that the pivot effect can be just a reflection of speakers's tendency to find the antecedent of the anaphor in the closest position, and that we need to consider PG sentences of the kind where it is not an exempt anaphor but a bare anaphor that is fronted via A'-movement.

Taking a closer look at this issue, according to Bruening and Khalaf (2017), given that anaphors inside picture-NPs are exempt from Principle A as they may take a perspective holder as their antecedent (Pollard and Sag 1992, Reinhart and Reuland 1993), if such a perspective holder is established, the exempt anaphors are predicted to be licensed. Indeed, this prediction is borne out by examples like (7) (cf. Bruening and Khalaf 2017: 7, (13)). That is, in

example (7), *Mary*, a perspective holder, saves the ungrammatical sentence in (5a). Notice that (7) is almost identical to (5a), except that *everyone* is replaced with *the man* for the purpose of argumentation.

- (7) Mary₁ is upset. [Which picture of herself₁]₂ did [the man who saw ___] say she₁ liked t₂?

This being said, consider sentences like (8) as evidence in support of Bruening and Khalaf's position.

- (8) a. It's herself that [her thinking critically about *pg*] will lead her to understand ___ better.
 b. It's herself that she should take a hard look at ___ [before she shamelessly promotes *pg*]. Bruening and Khalaf (2017: 2–3)
 c. It was himself₁ that John₁ nominated ___ [before he₁ voted for *pg*].
 Barss (1986: 377)

The set of data in (8a–c) above suggests that a displaced anaphor should be reconstructed into both the RG and the PG position. As pointed out by Bruening and Khalaf (2017), according to the separate chain view, (8a–c) are predicted to be ruled out due to a violation of Principle B. This is because (i) reconstruction of the *wh*-operator into a PG position is preempted as the PG is independently headed by a null operator within the adjunct clause and (ii) the PG can be generally spelled-out as a pronoun. The problem for the separate chain view becomes more evident if we replace the PG, a copy left by the null operator which is thus pronominal by nature, with its overt counterpart, as in (9a–c). That is, as seen in these data, the overt pronoun in the place of the PG is doomed to violate Principle B.

- (9) a. *It's herself that [her₁ thinking critically about *her*₁] will lead her to understand ___ better.
 b. *It's herself that she should take a hard look at ___ [before she₁

shamelessly promotes *her*₁].

c. *It was himself₁ that John₁ nominated ___ [before he₁ voted for *him*₁].

In a similar vein, the contrast between (10a) and (10b) makes the same point (the data from Bruening and Khalaf (2017: 3), originally due to Levin et al. (2001: 211)). In other words, the displaced anaphor *himself* must be reconstructed into both the real and PG in (10a), and the obligatorily reconstructed anaphor inevitably violates Principle A, which explains the ungrammaticality of the sentence. By contrast, in (10b), there is no chance for the anaphor to be placed back into the adjunct clause as the *without*-clause does not have a PG but the overt pronoun *him*, so Principle A will not be violated.

(10) a. *Himself₁, John₁ admires ___ [without Mary liking *pg* in the least].

b. Himself₁, John₁ admires ___ [without Mary liking *him*₁ in the least].

To sum up, the anti-reconstruction effect, widely assumed to hold true of the PG construction in the literature since Kearney (1983), has been challenged by not a small amount of empirical data where the displaced element can and/or need to reconstruct into the adjunct clause. One important lesson we have learned from those examples against the anti-reconstruction effect is that the separate chain view has difficulty accounting for the reconstruction effect in the PGC, as argued by Bruening and Khalaf (2017). As such, we can draw the following new generalization about a possible range of the reconstruction sites of a bare anaphor in the PGC:

(11) A bare anaphor can *symmetrically* reconstruct into both an RG and PG position in the PGC.

We tentatively assume that if the speakers' preference over a closer position as a reconstruction site in the PGC were properly controlled, this generalization about symmetric reconstruction of a bare anaphor could also be

valid for the PGC with an exempt anaphor displaced along with the *wh*-operator. But we should admit that executing any behavioral experiment for testifying this hypothesis is far afield of this paper's goal, and as such, we will leave this issue open for future research.

We argue that among the previous approaches endorsing the non-separate chain view, de Vries's (2013) External Rermerge (ER) approach is a tenable analysis that can explain the symmetric reconstruction pattern in the PGC. His approach assumes that a PG is simultaneously shared by a matrix predicate via ER, so it is predicted that an anaphor can reconstruct into the PG position. The so-called sideward movement approach (Hornstein and Nunes 2002, Nunes 2001, 2004), which also maintains the non-separate chain view, may be another candidate that can do the same job, but for some reasons to become clear later in section 4, we will not buy this option. The upcoming section will critically review Vries's (2013) ER analysis of the PGC, pointing out some problems for it.

3. de Vries's (2013) ER Analysis of the PGC

Movement across an island like Complex Noun Phrase (CNP) renders a sentence ungrammatical, as in (1a), while no such an island effect arises in Right Node Raising (RNR) cases like (12b).

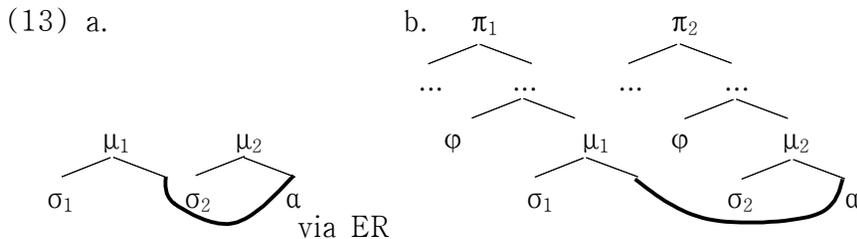
- (12) a. *What did Ann see the man that bought ___?
 b. Anne knows a girl that BOUGHT ___ and Mike (knows_ a boy that STOLE, a book about Plato.

de Vries (2013)

A (rightward ATB-fashion) movement view on RNR (Postal 1974, 1998, Ross 1967) has difficulty explaining why (12b) does not show an island effect even though the RNR-ed element is extracted out of a relative clause. de Vries

argues that the contrast between the *wh*-question sentence in (12a) and the RNR construction in (12b) in island effects can be attributed to the type of syntactic operation applied to the displaced constituent: Internal Rmerge (IR) applies to *what* in (12a), but External Rmerge (ER) to *a book about Plato* in (12b).

ER is a novel type of structure-building operation that enables one node to be merged with more than one *root* node at the same time. More important, ER, unlike IR, is argued to be immune to an island constraint such as CNPC and the adjunct island constraint, as schematized in (13). Notice that if a constituent α (say, *a book about Plato*) is merged with σ_1 and σ_2 simultaneously in both conjuncts before an island is created, as in (13a), the rest of the structure can be built up without crossing an island node (which is a relative clause in (12b) as well), obviating a violation of the CNPC, as in (13b). Due to a space reason, we omit a remaining structure to be added to the one completed in (13b).



What particularly interests us is that de Vries attempts to extend his ER-based derivational approach to Parasitic Gap constructions (PGCs). He contends that a PG is linked to a real gap (RG) via ER, and as such, no island effect arises in the PGC. As illustrated in (14), *which book* is merged with *buying* via External Merge (EM, step (i)), and at the same time, the *wh*-phrase is combined with the matrix verb *read* via ER before the adjunct island is completed (step (ii)). Finally, the *wh*-word is further displaced to the Spec, CP position via IR (step (iii)). This is why we do not observe an island effect even though there appears to be an island boundary (i.e., the

without-adjunct clause) in (14).

(14) *Which book* did Ann read ___ without buying ___?

iii) IR

ii) ER

i) EM

de Vries (2013: 166)

However, it has been pointed out in the literature, particularly by Chung (2017), that de Vries's ER approach is partly successful in explaining the absence of island effects in the PGC in a uniform way to the RNR construction. Chung argues that de Vries's ER analysis appears to face difficulty dealing with two potential *empirical* problems, namely 'anti-reconstruction' and 'deep island' effects. Notice, however, that the anti-reconstruction effect is just apparent since, as shown in section 2, anaphor reconstruction is possible even into a PG position in the PGC (see the generalization in (11)).

By contrast, the deep island effects is a real problem for de Vries's (2013) ER analysis. ER explains why an island effect is not detected though a PG within the adjunct clause is linked to an RG across the island boundary. But as reviewed in Chung, there are cases of PGC that exhibit a locality effect. As shown in (15) and (16), if an adjunct or subject containing a PG is embedded by another adjunct island, the PG cannot be licensed. The illegitimacy of sentences like (15) and (16) can be ascribed to a violation of the adjunct island constraint. This account for the ungrammaticality of (15) and (16) becomes clearer if we compare them with the legitimate case in (14) above, where there is only one island boundary between a PG and an RG. The locality effect of this kind is called a 'deep island' effect, which is originally due to Kayne (1983).

(15) *Which book₁ did you borrow t_1 [after leaving the bookstore [without finding pg_1]]? Nunes (2001: 327)

(16) a. *Which book did you finally read ___ [after leaving the bookstore

[**without finding *pg***]?

- b. *Which politician did you criticize ___ [before [**pictures of *pg***] upset the voters]?

Ko (2015)

Notice also that examples like (17) below exhibit the same kind of deep island effects. That is, in sentences like (17a,b), a subject with a PG does not involve any type of island within it, thereby getting the PG licensed; on the other hand, in examples like (17c), a subject PG embeds a relative clause, which is a syntactic island, giving rise to an island effect.

- (17) a. He's a man that [anyone who talks to *pg*] usually likes ___.
 b. He's a man that [anyone who tells people to talk to *pg*] usually likes ___.
 c. *He's a man that [anyone who meets people who talk to *pg*] usually likes ___.

Chung (2017: 15), originally from Chomsky (1986)

However, the ungrammaticality of (15), (16), and (17c) fails to be captured by de Vries's (2013) ER approach to the PGC. This is because ER should be able to evade an island effect, just as in cases like (14) and (17a,b), and thus, all the three sentences in (15), (16) and (17c) are incorrectly predicted to be legitimate under the ER analysis.

We have critically reviewed de Vries's (2013) ER analysis, which we believe is a tenable analysis among the previous works holding the non-separate chain view that can derive the symmetric pattern of anaphor reconstruction in the PGC. However, as originally observed by Chung (2017), de Vries's ER analysis turns out to be partly successful in that it makes an incorrect prediction for the so-called deep island effect (though the anti-reconstruction effect readily falls out from it). In the upcoming section, Park et al.'s (2017) derivational analysis, which appeals to the version of ER that dates back to Park (2006), will be presented, while Chung's (2017) ER analysis, which is advanced independently of Park et al., will be compared.

4. Resolving the Problem of de Vries (2013)

In this section, we will demonstrate that Park et al.'s (2017) analysis, a descendent of Park's (2006) ER approach, is superior to de Vries's (2013), in that the former enables us to derive the symmetric reconstruction effect, as well as the deep island effect in the PGC. But before getting into the details of Park et al., it is worth while to go over Chung's (2017) ER-based analysis of the PGC since his analysis has been independently put forth with an aim to resolve the problem for de Vries regarding the deep island effect. It will be shown, however, that although Chung's alternative is successful in evading the same problem as de Vries confronts, the former appears to cause another theoretical problem, namely 'Improper Movement.'

4.1. Chung (2017)

Recall that the anti-reconstruction effect turns out to be not a real problem for de Vries (2013) since there are examples where the displaced operator accompanying an anaphor can reconstruct into a PG position inside the adjunct clause in the PCG, as summarized in the generalization in (11).¹ As shown in section 3, on the other hand, de Vries's non-separate chain approach appears to be untenable as it makes an orthogonal prediction to the separate chain view (e.g., Chomsky 1986; Nissenbaum 2000) with respect to the deep island effect in the PGC. In order to accommodate the deep island (as well as anti-reconstruction) effects under the non-separate chain view, Chung (2017) proposes a 'hybrid' approach, where IR is claimed to apply *within* the adjunct clause before ER is applied for associating a PG chain with an RG chain across the adjunct island boundary.

¹ To our best understanding, Chung (2017) does not provide an explicit discussion about the 'symmetric' pattern of anaphoric reconstruction in the PGC, which is dealt with in section 2 of this paper. Instead, he simply directs the readers' attention to the fact that what has been referred to as the anti-reconstruction effect can be illusory as there are cases where an anaphor can reconstruct into the PG position.

an A-position, when merged with the matrix verb *read* via ER in Step ④. As a consequence, the derivation ends up threatening the ban on Improper Movement.

One might argue that Improper Movement is no longer a problem in the minimalist program. Nonetheless, we argue that Park et al.'s analysis would be a more viable option since, on top of the deep island and symmetric anaphor reconstruction issues, it can also handle (im)possible and impossible types of movement in three constructions involving coordination or subordination, which include the PGC, Across-the-board Movement (ATB) and Right Node Raising (RNR) constructions.

4.2. Park et al. (2017)

4.2.1. Similarities and Differences among ATB, RNR and PG in Interwoven Dependency and Additive Coordination

It has been observed in the literature that three constructions, such as the Across-the-board (ATB), Right Node Raising (RNR), and Parasitic Gap (PG) constructions, appear to pattern together in that all of them involve gaps across multiple clauses, as shown in (19) through (21).

(19) ATB (Sharing type)

Who₁ will the police arrest e₁ and the prosecutor indict e₁ for this crime?

(20) RNR (Sharing type)

John loves e₁, but Mary hates e₁, oysters₁.

(21) PGC

Who₁ will the police arrest e₁ after interrogating e₁?

Postal (1998)

For this reason, in the literature, a number of attempts have been made in order to capture the three constructions in a unified way. A few of those attempts are summarized below, but we will not go into details of pros and

cons of each analysis since it is beyond the scope of the current paper.

- (22) a. Rightward ATB-movement for RNR: e.g., Ross (1967), Postal (1974, 1998), etc.
b. ATB-fashion movement for PG: Haik (1985), Williams (1979, 1990), etc.
c. ATB and PG as by-products of sideward movement: Hornstein & Nunes (2002), Nunes (2001, 2004), etc.

Notice, however, that as extensively discussed in Park (2006) (and references therein), the generalization that all those three constructions are parallel simply because they involve multiple gaps in common is too strong (M-K Park 2010), and despite the parallelism between the ATB and RNR constructions, the PGC turns out to diverge from those two constructions. According to Park, the so-called interwoven dependency (ID) and additive coordination (AC) lend support to the claim that the ATB and RNR constructions must be treated differently from the PGC. To begin with, ID can be licensed in ATB and RNR, as in (23) and (24), respectively, but not in the PG construction, as in (25).

(23) ID in ATB (OK)

- a. [[Which nurse]₁ and [which hostess]₂]₃ did Fred date e₁ and Bob marry e₂, respectively?
b. [[Which pilot]₁ and [which sailor]₂]₃ will (respectively) Joan invite e₁ and Greta entertain e₂, (respectively)?

Postal (1998: 134)

(24) ID in RNR (OK)

- a. John loves e₁ and Mary hates e₂ — [[oysters]₁ and [clams]₂]₃, respectively.
b. Marsha argued for e₁ on Tuesday and Louise argued against e₂ on Thursday [[communism]₁ and [fascism]₂]₃, respectively.

Postal (1998: 134)

(25) ID in PG (NO)

- a. *[[Which paper]₁ and [which book]₂]₃ did (respectively) John copy e_1 before Mary read e_{PG2} , (respectively)?
- b. *[[Which food]₁ and [which drink]₂]₃ did (respectively) John eat e_1 on Thursday after Mary had e_{PG2} , (respectively)?

Park (2006: 304)

Furthermore, ATB and RNR allow for AC, as in (26) and (27), respectively, while PG doesn't, as in (28).

(26) AC in ATB (OK)

[How many frogs] did Greg capture e and Lucille train e ?

- a. How many x , x frogs, is such that Greg captured x and Lucille trained x .
- b. How many x and y , x and y frogs, is such that Greg captured x and Lucille trained y .

Postal (1998: 136)

(27) AC IN RNR (OK)

Greg captured e_1 and Lucille trained e_2 — [312 frogs]₁₊₂ between them.

Postal (1998: 137)

(28) AC in PGC (NO)

*[How many frogs]₁₊₂ did Greg capture e_1 before Lucille trained e_2 ?

Park (2006: 308)

In brief, from the (in)availability of ID and AC, the generalization can be drawn that ATB and RNR pattern together while PG requires different treatment from the two constructions. As a first step to capture this generalization in a principled way, Park argues that the contrast between ATB and RNR, on the one hand, and PG, on the other, can be attributed to the availability of gaps with different reference—i.e., strict identity between gaps is forced in PG, but not in ATB and RNR.

4.2.2 Two Types of Cross-clausal Conjunction

In answering how to derive the difference between ATB-RNR and PG in the strict identity requirement for the copies, Park (2006) suggests that ATB, RNR and PG commonly involve 'cross-clausal conjunction' via External Reremerge (ER, *à la* de Vries 2009, 2013). That is, the ATB-ed element in the left edge and RNR-ed element in the right edge is linked via ER to both conjuncts in the post-ATB-ed and pre-RNR-ed part, respectively. There are, however, two different types of parallel coordinate structure—i.e., CoP whose head dominates *and*, and &P whose head dominates &, an invisible conjunction. Each type of parallel coordinate structure applies to a different type of identity, as summarized in (29a) and (29b).

- (29) a. CoP as a parallel coordinate structure for ID or sloppy identity
 b. &P as a parallel coordinate structure for AC or strict identity

Focusing on the construction our paper is most interested in, PG, as opposed to ATB and RNR, only allows for &P as a result of the application of ER to the head of a PG chain, the contrast being attributed to the fact that the former involves 'subordination' while the latter two 'coordination.' It should be emphasized at this point that this contrast in the type of identity between the ATB-RNR constructions and the PGC does not seem to be easily captured by the sideward movement approach, another dominant analysis under the non-separate chain view.

More crucially, departing from de Vries's (2009, 2013) approach to the PGC, Park argues that a *wh*-operator selected by the predicate in the adjunct clause is first displaced to the left periphery via Internal Reremerge (IR) within the adjunct. After that, the displaced *wh*-operator is further connected to the complement of the matrix predicate via ER which helps the operator to obviate a violation of the adjunct island. Finally, the same operator moves further up to the matrix Spec,CP. In this way, on a par with the non-separate chain view, both the PG inside the adjunct clause and the real gap (RG) can be

licensed.

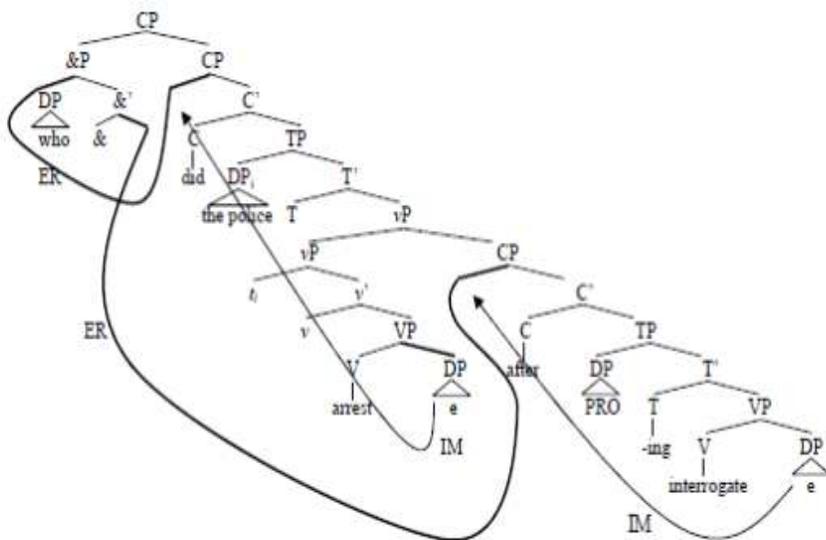
Notice, however, that Park et al. (2017), though by and large based on Park's (2006) ER analysis, is not exactly identical with the latter, and that the current paper adopts Park et al.'s analysis rather than Park's in technical details for deriving the chains in the PGC. The most salient difference is that Park et al., unlike Park, assume that the head of a PG chain and that of an RG chain start out in different clauses, ending up in the specifier and complement position of the &P, the type of coordination that is assumed to allow for strict identity between the two operators.²

For concreteness, consider the PGC in (30a) whose derivational steps are illustrated in (30b).

- (30) a. Who did the police arrest e_{RG} after interrogating e_{PG} ?
b. Abstracted structure for (30a)

² Two reviewers suspect that Park et al.'s (2017) analysis adopted in the current paper does not seem to make any contribution since it simply follows Park (2006) (and a couple of more works cited therein). Notice, however, that the two analyses are not exactly identical, as discussed in this paragraph. Another salient difference between the two analyses is that Park et al. address a wider range of ATB and RNR data—namely, cases like (i), where what looks like a 'subordinating conjunction' can be employed in ATB and RNR, the data incorrectly predicted to be prohibited by Park. With those data, Park et al. argue that not only a genuine type of coordinating conjunctions but also an ambivalent type of coordinating conjunctions like those (i) can also license the ATB and RNR constructions. Given that there isn't a genuine type of coordinating conjunctions in (i), additive coordination or interwoven dependency are predicted to be impossible, and the prediction is borne out, as in (ii). We will not go further into this second issue since it has little to do with how the PG chain is licensed. Thanks to the reviewers for asking us to clarify how Park et al. and Park are differentiated.

- (i) a. More women admire, than men detest paintings by Picasso.
b. We would be better off in a situation with, than in a situation
without trade regulations. Sag (2007: 2)
(ii) *More women admire, than men detest paintings and music by a
movie star, respectively. Park et al. (2017: 49)



According to Park et al., the *wh*-operator *who* starting out from a PG position first undergoes Internal Rermerge (IR) to the left edge of the adjunct clause, just as in Park. In the next step, unlike Park, Park et al. take ER to apply to the head of the PG chain, displacing the operator *who* to the complement of &P, not to the complement of the matrix verb *arrest*. Notice that the operator can obviate a violation of the island constraint in this step thanks to ER targeting two root nodes, and that the so-called Extension Condition would not be violated, either, since it is the head & that merges with the displaced operator *who* at the time ER applies, turning them into the &P (which will become &' when merged with the head of the RG chain).³

Meanwhile, another *wh*-operator in an RG position selected by the main verb undergoes IR to the specifier of the lower CP for checking the [+*wh*]-feature. Then, the *wh*-operator undergoes ER to be combined with the &P that consists of & and the head of the PG chain. This step is necessary

³ One anonymous reviewer asks us how the so-called Extension Condition can be satisfied when ER displaces the head of a PG chain and that of an RG chain, respectively. It is assumed in Park et al. (2017) that when ER applies to the head of the PG chain in (30b), for example, the operator *who* is merged with the head &, projecting into &P (later becoming &' when merged with another *who* from the RG position).

for turning the heads of the two chains into a non-distinct chain. Finally, the resulting &P is merged with the lower CP via Pair-Merge (a.k.a. adjunction), projecting into the higher CP. Because of this step of Pair-Merge, &P and the lower CP can form a single root.

4.2.3. Deep Island Effects Revisited

As alluded in several places, we can easily show that Park et al. (2017) make a correct prediction for the deep island effects. Before exploring how the effects are explained in Park et al.'s analysis, it should be underscored that their approach is favored over Chung's (2017) hybrid approach since the former does not face the issue of Improper Movement. Recall that Chung suggests that the head of a PG chain at the edge of an adjunct clause, which is an A'-position, is merged with the tail of an RG chain via ER, which is an A-position. As such, his hybrid analysis inevitably involves Improper Movement. On the other hand, under Park et al.'s ER approach, the head of a PG chain is merged into the complement position of &P by ER, *not* the one of the main verb, while the head of an RG chain is merged into the specifier of &P by ER. Therefore, unlike Chung's analysis, the problem of Improper Movement can be avoided.

This being said, consider (8) and (10), repeated below, where the fronted anaphor is placed back not only into a matrix clause but also into a subject island or an adjunct clause.

- (8) a. It's herself that [her thinking critically about *pg*] will lead her to understand ___ better.
 b. It's herself that she should take a hard look at ___ [before she shamelessly promotes *pg*].

Bruening and Khalaf (2017: 2–3)

- c. It was himself₁ that John₁ nominated ___ [before he₁ voted for *pg*].

Barss (1986: 377)

- (10) a. *Himself₁, John₁ admires __ [without Mary liking *pg* in the least].
 b. Himself₁, John₁ admires __ [without Mary liking him₁ in the least].

First, applying Park's et al.'s analysis to (8b) and (8c), the *wh*-operator (which is null in this case) co-indexed with the anaphor is first moved to the edge of an adjunct clause via IR, which is followed by the application of ER that merges the same operator into the complement of &P contained by the higher CP of the matrix clause. Meanwhile, the tail of an RG chain is merged with the matrix verb—*look at* in (8b) and *nominated* in (8c), respectively; and it further raises to the specifier of &P, by way of the specifier of the lower CP. Finally, the completed &P and the lower CP are combined via Pair-Merge, projecting the higher CP. Park et al.'s analysis can also apply to (8a), which is similar to (8b) and (8c), except that a PG is inside a subject island, not an adjunct island. In this case, the head of a PG chain is displaced to the initial position of the subject island via IR, then being further displaced via ER to the complement of &P. On the other hand, the head of an RG chain is merged into the matrix verb *understand* and is then fronted via IR to the specifier of &P. In the final stage, the completed &P and the lower CP are merged via Pair-Merge, projecting into the higher CP.

In (10a), after the fronted anaphor *himself* ends up at the edge of an adjunct clause via IR, it is merged via ER into the complement of &P. In the meantime, the tail of an RG chain is merged with the main verb *admires* before the operator is displaced by ER to the specifier of &P in the higher CP after stopping by the specifier of the lower CP via IR. Nonetheless, the fronted anaphor and its potential antecedent *Mary* in the adjunct clause do not match in features, so the sentence is ungrammatical due to a violation of Principle A. In (10b), by contrast, there is no gap that is parasitic to an RG left by the fronted *himself*, and Principle A is respected as the anaphor is bound by the matrix subject after reconstructed into the complement of *admire*.

5. Conclusion

In this paper, we have provided an empirical argument from Bruening and Khalaf (2017) in favor of the so-called 'non-separate chain view' for the Parasitic Gap constructions (PGCs)—namely, the symmetric pattern of anaphor reconstruction. Arguing that the non-separate chain view is more viable than the separate chain view in accounting for the symmetric pattern, we have presented a derivational analysis of the PGC by appealing to Park et al. (2017), a descendent of Park (2006), which adapts de Vries's (2009, 2013) External Rermerge (ER). As pointed out by Chung (2017), de Vries's ER fails to correctly predict the so-called deep island effects. Chung proposes what he calls a 'hybrid approach' by modifying de Vries's ER analysis, but the hybrid approach is not unproblematic as it inevitably involves Improper Movement. However, we have demonstrated that Park et al.'s ER analysis, which was originally developed for deriving the difference between RNR/ATB and PG, can avoid the problem de Vries faces, without involving the issue of Improper Movement, either. Finally, it has been shown how Park et al.'s ER analysis can derive the symmetric pattern of anaphor reconstruction, as well as the deep island effects.

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