

# Remarks and Replies

## Rightward DP-Movement Licenses Parasitic Gaps: A Reply to Postal 1994

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This article argues against the conclusion in Postal 1994 that there are no instances of parasitic gap licensing by the rightward displacement of a DP. The evidence presented in Postal 1994 allows us to conclude only that right node raising is able to target adjunction structures when a parasitic gap derivation is otherwise blocked. Three cases are then provided to support the argument that, in principle, both parasitic gap licensing and right node raising can target adjunction structures.

*Keywords:* rightward movement, heavy-NP shift, parasitic gaps, right node raising

### 1 Introduction

There is a class of displacement constructions in English that we can refer to as *dependent gap structures*, whose defining property is that the presence of at least one of the gap sites is dependent on the presence of another gap site. Among the members of this class are the rightward displacement constructions shown in (1) and (2), which are modeled on examples in Engdahl 1983: 12. I will distinguish these structures respectively as *coordinate gap* structures and *adjunct gap* structures.<sup>1</sup>

#### (1) *Coordinate gap structure*

- a. You saw  $e_1$  and immediately recognized  $e_1$  — [my favorite uncle from Cleveland]<sub>1</sub>.
- b. [[<sub>Conjunct</sub> . . .  $e_1$  . . . ] and [<sub>Conjunct</sub> . . .  $e_1$  . . . ]] — XP<sub>1</sub>

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<sup>1</sup> Also among the class of dependent gap structures are leftward-displacement phenomena such as so-called across-the-board (ATB) extractions (i) and parasitic gap constructions (ii), both of which were originally discussed by Ross (1967).

- (i) [Whose uncle]<sub>1</sub> did you see  $e_1$  and not immediately recognize  $e_1$ ?
- (ii) [Whose uncle]<sub>1</sub> did you offend  $e_1$  by not immediately recognizing  $pg_1$ ?

I will return to these structures briefly in section 4. See Postal 1993 for a comparative examination of these particular dependent gap structures and Hornstein and Nunes 2002 for a proposed account of their differences.

(2) *Adjunct gap structure*

- a. You offended  $e_1$  by not immediately recognizing  $e_1$  — [my favorite uncle from Cleveland]<sub>1</sub>.
- b. [<sub>Matrix</sub> . . .  $e_1$  . . . [<sub>Adjunct</sub> . . .  $e_1$  . . . ]] — XP<sub>1</sub>

The mechanism standardly taken to be responsible for the derivation of coordinate gap structures was originally discussed by Ross (1967) and has gone by the name *right node raising* (RNR) since Postal 1974.<sup>2</sup> Adjunct gap structures, Postal (1993:751n12, 1994:80) notes, had largely been assumed since Engdahl 1983 to be derived via the same mechanism responsible for parasitic gap licensing (PG-licensing) in the context of leftward displacement (3).<sup>3</sup>

(3) [Whose uncle]<sub>1</sub> did you offend  $e_1$  by not immediately recognizing  $pg_1$ ?

Importantly, what had implicitly been taken to be true was that unique mechanisms were responsible for each of (1) and (2).<sup>4</sup> Postal (1994) challenges this idea directly by suggesting that adjunct gap structures cannot be derived by PG-licensing. They must instead be the product of the RNR operation that derives coordinate gap structures.

With a focus on data involving rightward DP-movement past clausal adjuncts, I argue against Postal's (1994) conclusion. In section 2, I review the evidence and argumentation in Postal 1994. I will show that the strongest conclusion that can be reached from the available evidence is that RNR *can* be employed to derive adjunct gap structures—not that it *must* derive adjunct gap structures. In section 3, I provide evidence to support this contention. I will show that there are instances where adjunct gap and coordinate gap structures display distinct behavior with respect to properties of RNR. The results of these two sections together reveal that there are (at least) two mechanisms that can potentially derive adjunct gap structures. Specifically, I will suggest that, in addition to RNR, PG-licensing by heavy-NP shift (HNPS) can also be employed to derive adjunct gap structures (Engdahl 1983, Nissenbaum 2000, Overfelt 2015). Furthermore, given the results of the diagnostics examined in this article, I speculate that these two mechanisms may be in a state of competition and that the grammar appears to prefer PG-licensing to RNR. In section 4, I conclude with a brief summary and some interesting questions for future research.

<sup>2</sup> Various mechanisms have been proposed for the derivation of RNR including backward deletion/ellipsis (Ross 1970, Wexler and Culicover 1980, Hartmann 2000, Abels 2004, Bošković 2004, Ha 2008), ATB extraction (Maling 1972, Bresnan 1974, Postal 1974, 1998, Sabbagh 2007), and multidomination (McCawley 1982, Blevins 1990, Phillips 1996, Wilder 1999, Johnson 2007, Bachrach and Katzir 2009). For the purposes of this article, I will mostly set aside the issue of which mechanism (or mechanisms; see Barros and Vicente 2011, but cf. Larson 2012) is or is not behind RNR.

<sup>3</sup> Typical analyses for PG-licensing include ATB extraction (Ross 1967, Williams 1990, Munn 1992), treating the parasitic gap as a bound null pronominal (Kayne 1983, Cinque 1990, Frampton 1990, Postal 1993), and null operator analyses (Contreras 1984, Chomsky 1986, Browning 1987, Nissenbaum 2000). Other analyses have been proposed as well, including multidomination (Kasai 2010) and sideward movement (Nunes 2001, 2004). See Culicover 2001 for an overview of the properties and history of parasitic gaps.

<sup>4</sup> Notable exceptions include attempts to provide both adjunct gap and coordinate gap structures with a pure ATB extraction analysis (Pesetsky 1982, Haik 1985, Huybregts and Van Riemsdijk 1985, Williams 1990) or a null operator analysis (Munn 1992). However, see Postal 1993 for extensive argumentation against such unified analyses.

**Table 1**  
Properties of dependent gap structures

	PGs	RNR
Subject to categorial restrictions (section 2.1)	yes	no
Subject to the Island Condition (section 2.2)	yes	no
Subject to the Pronominal Condition (section 2.3)	yes	no
Subject to the Passivizability Condition (section 2.4)	yes	no
Subject to the Predicate Nominal Condition (section 2.5)	yes	no

## 2 On Pseudoparasitic Gaps: Postal 1994

Postal (1994:sec. 2) observes that there are a number of restrictions on the distribution of PGs in leftward-movement configurations that fail to constrain the known RNR-induced gaps in coordinate gap structures. These properties are summarized in table 1, which is adapted from Postal 1994:92. Postal (1994:sec. 4.2) then investigates whether adjunct gap structures pattern with RNR-induced gaps in coordinate gap structures or whether they pattern with PGs induced by leftward movement. Observing that they pattern with RNR-induced gaps with respect to each of the properties in table 1, Postal concludes that the adjunct gap structures under investigation involve RNR and concludes further that all adjunct gap structures are derived via RNR (Postal 1994:80, 96, 111).

The arguments are consistent with the local conclusions Postal reaches that the dependent gap constructions under consideration do not represent parasitic gap constructions. However, as Postal (1994:112n32) notes, the larger conclusion that all dependent gap constructions involve RNR is not entailed by the evidence presented. It can only be concluded that it is possible for RNR to generate adjunct gap structures. In the rest of this section, I will briefly examine the properties in table 1 and then summarize the results.

### 2.1 *Categorial Restrictions*

On the basis of the parasitic gap research by Emonds (1985), É. Kiss (1985), Koster (1987), Cinque (1990), Frampton (1990), and Postal (1993), the following conditions on parasitic gaps and their antecedents are established in Postal 1994.<sup>5</sup>

- (4)  $PG = NP$  (Postal 1994:82)  
A [parasitic gap] is an NP.

<sup>5</sup> Unless otherwise indicated, I have faithfully reproduced Postal's (1994) examples with the exception that I have altered the numbers used for coindexing and I have provided category labels where they are relevant. In addition to this, I have chosen to represent all dependent gaps induced by rightward displacement in this section as empty categories in order to remain temporarily neutral with regard to their status.

- (5) *PG-Licensing Restriction (PLR)* (Postal 1994:82)  
 The ‘licensing’ category (the extractee from the position of the true gap) of a [parasitic gap] is an NP.

These conditions amount to the statement that both the parasitic gap and the element it is coindexed with are necessarily of the category NP (or DP, following Abney (1987), among others). This is illustrated in (6), while the examples in (7) show respectively that, in the case of leftward movements known to license parasitic gaps, the displacement of a PP, AP, and VP fails to permit an additional gap.<sup>6</sup>

- (6) [<sub>DP</sub> Whose uncle]<sub>1</sub> did you offend  $e_1$  by not recognizing  $pg_1$ ?  
 (7) a. \*That is the woman [<sub>PP</sub> to whom]<sub>1</sub> I gave my number  $e_1$  without talking  $pg_1$ .  
 b. \* [<sub>AP</sub> How tired]<sub>1</sub> did Kim become  $e_1$  because the hike made her  $pg_1$ ?  
 c. \*It was [<sub>VP</sub> riding a bike]<sub>1</sub> that Sam hated  $e_1$  after he tried  $pg_1$ .

The examples in (8), from Postal 1994:101, demonstrate that coordinate gap structures, unlike parasitic gap constructions, are compatible with categories other than NP/DP.

- (8) a. It appeared to the first officer  $e_1$  but did not appear to the second officer  $e_1$  — [<sub>CP</sub> that the suspect was intoxicated]<sub>1</sub>.  
 b. They tried to speak  $e_1$  in person but ended up only writing  $e_1$  (letters) — [<sub>PP</sub> to the official in charge of frankfurters]<sub>1</sub>.  
 c. No one asserted that Bob  $e_1$  or denied that Fred  $e_1$  — [<sub>VP</sub> had consumed more beer than was wise]<sub>1</sub>.  
 d. Marsha claimed she had long been  $e_1$  but certainly did not appear to me to be  $e_1$  — [<sub>AP</sub> over 5 feet tall]<sub>1</sub>.  
 e. He might learn when  $e_1$  and she might learn where  $e_1$  — [<sub>IP</sub> the victims will be buried]<sub>1</sub>.

Now consider the examples in (9), which are also from Postal 1994:101. These show that adjunct gap structures, like coordinate gap structures, are compatible with categories other than NP/DP. From the parallelism between the examples in (8) and (9), Postal (1994) concludes that the examples in (9) are derived, not via the mechanism responsible for PG-licensing, but by RNR.

- (9) a. Helga mentioned the first problem  $e_1$  without mentioning the second problem  $e_1$  — [<sub>PP</sub> to the professor who taught Greek]<sub>1</sub>.  
 b. Helga didn't know he could  $e_1$  before realizing he should  $e_1$  — [<sub>VP</sub> help elderly tuberculosis victims]<sub>1</sub>.  
 c. Helga was determined to become  $e_1$  even after being told she could never be  $e_1$  — [<sub>AP</sub> extremely muscular]<sub>1</sub>.  
 d. Helga learned when  $e_1$  before learning where  $e_1$  — [<sub>IP</sub> the accident had occurred]<sub>1</sub>.

<sup>6</sup> Postal (1994:64) notes that similar facts have been observed in Chomsky 1982, Pesetsky 1982, and Emonds 1985.

## 2.2 *The Island Condition*

It was first noted by Kayne (1983) that a parasitic gap cannot be contained inside an island that is contained inside the parasitic domain. This is illustrated by the following examples, which show that a parasitic gap cannot be embedded inside a relative clause island (10a), a *wh*-island (10b), or an adjunct island (10c):

- (10) a. \*[Which sandwich]<sub>1</sub> won't Sam eat  $e_1$  [after meeting the man [who makes  $pg_1$ ]]?  
 b. \*This is the sandwich [which]<sub>1</sub> Kim won't eat  $e_1$  [because she knows [who makes  $pg_1$ ]].  
 c. \*It was Tim [who]<sub>1</sub> Pam hired  $e_1$  [because the committee couldn't make a decision [after interviewing  $pg_1$ ]].

These facts can be captured by the following statement:

- (11) *The Island Condition* (Postal 1994:82)  
 A [parasitic gap] 'licensed' by a gap G cannot occur internal to an island  $\Sigma$  not containing G unless  $\Sigma$  is coextensive with the entire parasitic domain.

Coordinate gap structures, on the other hand, were noted by Wexler and Culicover (1980: 299–303) to not display the full range of island constraints that are found with familiar instances of leftward movement.<sup>7</sup> Example (12), adapted from Wexler and Culicover 1980:301, shows that coordinate gap structures allow the gap in the second conjunct to be embedded inside a relative clause island.

- (12) Mary buys  $e_1$  and Bill knows [a man [who sells  $e_1$ ]] — [pictures of Fred]<sub>1</sub>.

The following examples show that coordinate gap structures also allow a gap to be embedded in a *wh*-island (13a) or an adjunct island (13b) in the second conjunct:

- (13) a. Tim wants to meet  $e_1$  and Pam knows [who invited  $e_1$ ] — [the guy that makes the potato salad at the local deli]<sub>1</sub>.  
 b. Kim still eats  $e_1$  but Sam left [immediately after trying  $e_1$ ] — [the potato salad at this deli]<sub>1</sub>.

Postal (1994:88) provides the example adapted here in (14) to illustrate the point that adjunct gap structures also do not display the full range of island constraints found with leftward movement. This example in particular shows that the second gap in an adjunct gap structure can be

<sup>7</sup> This assumes that the requirement for RNR material to be rightmost in each conjunct (the Right Edge Restriction; Postal 1974, Wilder 1997, 1999, Hartmann 2000) is satisfied. It has been argued that this requirement can be satisfied following an application of rightward movement (Wilder 1997, 1999, Sabbagh 2007, Kluck and De Vries 2013). The derivation of (14), for example, is assumed to involve rightward displacement of the type shown to be possible in (i).

(i) They were supporting  $e_1$  at that time — [his favorite uncle from Cleveland]<sub>1</sub>.

I will return to the role of this constraint for dependent gap structures in section 3.3.

embedded inside a relative clause island. The examples in (15) illustrate further that adjunct gap structures pattern with the coordinate gap structures in generally allowing what would otherwise be a violation of a *wh*-island (15a) or an adjunct island (15b).

- (14) John offended  $e_1$  by not recognizing the people [who were supporting  $e_1$  at that time] — [his favorite uncle from Cleveland]<sub>1</sub>.
- (15) a. Tim was able to meet  $e_1$  because Pam knows [who invited  $e_1$ ] — [the guy that makes the potato salad at the local deli]<sub>1</sub>.  
 b. Kim still ate  $e_1$  [even though Sam left after trying  $e_1$ ] — [the potato salad at this deli]<sub>1</sub>.

On the basis of these observations, Postal (1994) suggests that the adjunct gap structures here, like coordinate gap structures, must be the result of RNR. Given that the distribution of parasitic gaps is otherwise more restricted, this indeed seems to be true.

### 2.3 The Pronominal Condition

Postal (1993), expanding on a suggestion by Cinque (1990), motivates the following constraint on the distribution of parasitic gaps:<sup>8</sup>

- (16) *Pronominal Condition* (Postal 1994:82)  
 [Parasitic gaps] cannot occur in positions incompatible with definite pronouns.

Postal (1994:83) provides examples to show that both pronouns and parasitic gaps are blocked from ‘‘name’’ positions (17), from the associate position of existential-*there* constructions (18), and from the argument position of inalienable possession PPs (19), all of which also disallow pronouns.

- (17) a. He named his camel [Ernie/\*it].  
 b. \*[What]<sub>1</sub> did he name his dog  $e_1$  after naming his camel  $pg_1$ ?
- (18) a. There are [guns/\*them] in the cabinet.  
 b. \*[What]<sub>1</sub> did he look for  $e_1$  in the closet without knowing there were  $pg_1$  on the table?
- (19) a. They touched him on [the arm/\*it].  
 b. \*[Which arm]<sub>1</sub> did they have to immobilize  $e_1$  after accidentally touching him on  $pg_1$ ?<sup>9</sup>

<sup>8</sup> Postal (1993:744–745, 1994:82n22) notes that this constraint should be weakened to reference only overt pronouns.

<sup>9</sup> An anonymous reviewer reports not judging example (19b) to be ungrammatical. As the reviewer notes, this could mean that (21c) and (22c) are not relevant data for evaluating the behavior of adjunct gap structures. An informal judgment study including five linguists produced responses ranging from ‘‘pretty good’’ to ‘‘double question mark’’ to ‘‘rule[d] out.’’ This appears, then, to be an area of variation, and a more systematic investigation will be necessary to understand the facts.

Falling in line with the pattern being established are the coordinate gap structures in (20). These examples, from Postal 1994:102, suggest that RNR is not subject to the Pronominal Condition.

- (20) a. They might have named their dog  $e_1$  and certainly named their camel  $e_1$  — [something quite unusual]<sub>1</sub>.  
 b. There might be  $e_1$  in the first drawer and there certainly are  $e_1$  in the second drawer — [the sort of magazines you are looking for]<sub>1</sub>.

The examples in (21) and (22), from Postal 1994:88, 102, show that adjunct gap structures, like RNR constructions, are not subject to the Pronominal Condition. The conclusion, therefore, is that they must be derived via RNR and not PG-licensing.

- (21) a. She named her youngest dog  $e_1$  after naming her oldest camel  $e_1$  — [exactly what she was told to name them]<sub>1</sub>.  
 b. He looked for  $e_1$  in the closet without knowing there were  $e_1$  on the table — [the kind of magazines you were told to hide]<sub>1</sub>.  
 c. They had to immobilize  $e_1$  for several weeks after the nurse had unintentionally touched him on  $e_1$  — [the arm he hurt while skiing]<sub>1</sub>.  
 (22) a. Albert might have cruelly nicknamed one student  $e_1$  without nicknaming the other  $e_1$  — [either Birdbrain or Airhead]<sub>1</sub>.  
 b. There can exist  $e_1$  in one department without existing  $e_1$  in another — [the sort of hostile atmosphere which prevents serious work]<sub>1</sub>.  
 c. They might have had to bandage  $e_1$  after touching him on  $e_1$  quite accidentally — [the only arm he could still use]<sub>1</sub>.

It is not entirely clear what is behind the Pronominal Condition in (16). Postal (1993:744) notes that it is not due to a general ban on extraction out of such positions. Instead, it seems to be a particular restriction on whatever it is that parasitic gaps are. In fact, Postal (1993) takes this as evidence that parasitic gaps are pronouns. Regardless, the facts above suggest that the examples in (21) and (22) are derived via RNR, just as Postal (1994) claims.

#### 2.4 *The Passivizability Condition*

Postal (1990, 1993) argues for the following condition on the distribution of parasitic gaps.

- (23) *The Passivizability Condition* (Postal 1994:83)  
 If an NP alternates with a [parasitic gap], then [that] NP must not be inherently unpassivizable.

This captures Postal's claim that environments that are incompatible with passivization of some NP also strongly resist the presence of a parasitic gap in the position of that NP. The following examples, from Postal 1994:84, illustrate this point:

- (24) a. Jerome spoke (in) Serbian to the Turks.  
 b. Serbian should not be spoken (\*in) to Turks.  
 c. [Which language]<sub>1</sub> did he sneer at  $e_1$  shortly after speaking (\*in)  $pg_1$  for two hours?
- (25) a. Trolls died/frolicked under that bridge.  
 b. That bridge has been \*died/frolicked under for years by trolls.  
 c. [Which bridge]<sub>1</sub> did they destroy  $e_1$  after trolls began to \*die/frolic under  $pg_1$ ?
- (26) a. I watched Barbara faint.  
 b. \*Barbara was watched faint.  
 c. \*[Which dancer]<sub>1</sub> did they want to operate on  $e_1$  after watching  $pg_1$  faint?

Turning to the examples in (27), from Postal 1994:102, we see that coordinate gap structures are not subject to the Passivizability Condition. However, the examples in (28), from Postal 1994:103, show again that adjunct gap structures pattern with coordinate gap structures in not exhibiting the same sensitivity to the distributional properties of parasitic gaps.

- (27) a. Engineers may speak (in)  $e_1$  and scientists certainly can speak (in)  $e_1$  — [a variety of Western languages]<sub>1</sub>.  
 b. Large trolls may die under  $e_1$  and small trolls certainly do die under  $e_1$  — [the bridge which they built last year]<sub>1</sub>.
- (28) a. Such a student may never be permitted to speak (in)  $e_1$  even after repeatedly asking to be permitted to speak (in)  $e_1$  — [that extremely demanding language]<sub>1</sub>.  
 b. One can prove that large trolls are likely to die under  $e_1$  without thereby proving that small trolls will die under  $e_1$  — [the sort of bridge you are talking about]<sub>1</sub>.

It is unclear to what extent the judgments that are presented to support the Passivizability Condition can be generalized. My intuitions and those of an anonymous reviewer are that the *die* variant of (25c) is acceptable. The *in* variant of (24c) I judge to be ungrammatical, but (29) shows that this sentence is covered by the Pronominal Condition, as Postal (1993:746n10) also points out.<sup>10</sup>

- (29) Jerome can speak (in) Serbian, although he doesn't like to speak (\*in) it.

Moreover, as the following examples show, it is true of the antipronominal contexts in (17) and (19) that they are also unpassivizable:<sup>11</sup>

- (30) \*[Ernie]<sub>1</sub> was named his camel  $e_1$ .  
 (31) \*[The arm]<sub>1</sub> was touched him on  $e_1$ .

<sup>10</sup> Example (24c) could also potentially be ruled out as an inability to extract from the complement position of *in* in this construction.

(i) \*[Which languages]<sub>1</sub> does Jerome speak in  $e_1$ ?

<sup>11</sup> Without a verb, there is no passive correlate for example (18).

Thus, it is not clear that the Passivizability Condition is a constraint that is separate from the Pronominal Condition.

An informal judgment study including four linguists did little to clarify the situation. One participant accepted each of (24c), (25c), and (26c) while another rejected each of them. The remaining two participants rejected (25c) while at least marginally accepting (24c) and (26c). It would seem, then, that further and more systematic experimental work is required here. Regardless of the results, granting here that this condition exists and that the judgments presented by Postal (1993, 1994) hold does not affect the argument being made. The examples in (27) and (28) would still suggest that RNR is a possible way of deriving adjunct gap structures.

### 2.5 *The Predicate Nominal Condition*

The last of Postal's (1994) conditions on the distribution of parasitic gaps and their licensing element is found in (32). Postal (1994:84–85) provides the examples in (33) and (34) as illustrations.

(32) *The Predicate Nominal Condition* (Postal 1994:84)

Neither a [parasitic gap] nor its “licensing” category can be a predicate nominal.

- (33) a. They turned into derelicts.  
 b. [What kind of derelicts]<sub>1</sub> did they turn into  $e_1$ ?  
 c. \*[What kind of derelicts]<sub>1</sub> did they analyze  $e_1$  after their children turned into  $pg_1$ ?  
 d. \*[What kind of derelicts]<sub>1</sub> did they turn into  $e_1$  after their children analyzed  $pg_1$ ?
- (34) a. Slaves make good cannibal snacks.  
 b. [What kind of cannibal snacks]<sub>1</sub> did those slaves make  $e_1$ ?  
 c. \*[What kind of cannibal snacks]<sub>1</sub> did the cannibal look for  $e_1$  after hearing that young slaves made  $pg_1$ ?  
 d. \*[What kind of cannibal snacks]<sub>1</sub> were all those slaves who discussed  $e_1$  expected to make  $pg_1$ ?<sup>12</sup>

Postal (1994:103) shows that the displacement operation in coordinate gap structures is not subject to the Predicate Nominal Condition; his examples are provided here.

- (35) a. Melvin may have become  $e_1$  and Jerome certainly did become  $e_1$  — [a highly competent linguist]<sub>1</sub>.  
 b. She wanted to turn into  $e_1$  and did turn into  $e_1$  — [a ruthless executive]<sub>1</sub>.

The examples in (36), from Postal 1994:88–89, show that adjunct gap structures, too, are not subject to the Predicate Nominal Condition.

<sup>12</sup> In the case that extraction is from the first gap, this example is ruled out independently as a violation of the Subject Island Constraint and the Relative Clause Island Constraint. In the case that extraction is from the second gap, the parasitic gap inside the subject should still violate the Relative Clause Island Constraint.

- (36) a. They only determined to analyze  $e_1$  right after their children turned into  $e_1$  — [the sort of derelicts who cause such problems in our cities]<sub>1</sub>.  
 b. They ended up turning into  $e_1$  not long after their children analyzed  $e_1$  — [the sort of derelicts who cause such problems in our cities]<sub>1</sub>.  
 c. The cannibal only decided to consume  $e_1$  after hearing from you that certain slaves made  $e_1$  — [just that sort of high protein cannibal snack]<sub>1</sub>.  
 d. Those slaves [ended] up making  $e_1$  even though it had been denied that they ever would make  $e_1$  — [just that sort of high protein cannibal snack]<sub>1</sub>.

Again, the nature of the Predicate Nominal Condition is not entirely clear at this time. Examples (33b) and (34b) show that it is not a ban on extraction. Whatever the source of this condition might be, the acceptability of the examples in (36), in conjunction with the behavior of the coordinate gap structures in (35), suggests that RNR is able to target adjunct gap structures.

## 2.6 Preposition Stranding

In his section 4.4, Postal (1994) discusses some additional facts related to observations made by Williams (1990).<sup>13</sup> Most relevant to this article is the contrast in (37), which originally appeared in Williams 1990:267, but is provided here from Postal 1994:104.

- (37) a. \*I talked to  $e_1$  yesterday — [all the members who voted against Hinkly]<sub>1</sub>.  
 b. I talked to  $e_1$  without actually meeting  $e_1$  — [all the members who voted against Hinkly]<sub>1</sub>.

This contrast is interesting for the observation in Ross 1967 that HNPS in (37a) resists preposition stranding. However, as (37b) illustrates, the adjunct gap structures of interest do not show the same resistance to preposition stranding.

Ross (1967) also notes that coordinate gap structures involving RNR do not show this same resistance to preposition stranding, as in (38).

<sup>13</sup> The second half of this section is an argument against an ATB extraction analysis of parasitic gaps. Because it is not immediately relevant to the points being made in this article, I will not include it in the discussion here. An argument presented there that is worth mentioning, however, is based on the following contrast from Williams 1990:267, presented here from Postal 1994:105:

- (i) a. I met  $e_1$  yesterday without really having the chance to talk to  $e_1$  — [all your friends]<sub>1</sub>.  
 b. I met  $e_1$  yesterday — [all your friends]<sub>1</sub> without really having the chance to talk to them<sub>1</sub>/ $*e_1$ .

Williams (1990) takes these examples to show that ATB extraction and not HNPS licenses parasitic gaps. It is not made clear in Williams 1990 which theory of PG-licensing or RNR would be expected to permit such examples. Potentially, a series of leftward movements as in Larson 1988, 1989, Kayne 1994, or Rochemont and Culicover 1997 would be expected to derive examples like (ib). Regardless, as Postal (1994:105) argues, (ib) violates the ‘invariant property’ of RNR that the displaced constituent must appear to the right of both gaps. For proponents of a PG-licensing analysis, the same thing can be said. It is simply a fact of PG-licensing that the displaced element must appear to either the left or the right of both gaps. See Nissenbaum 2000:chap. 2 for a discussion and an account of such facts.

(38) I talked to  $e_1$  but Kim dined with  $e_1$  — [all the members who voted for Hinkly]<sub>1</sub>.

For Williams (1990, 1995:156) and Postal (1994), this observation suggests that adjunct gap structures, too, are derived via RNR. This is as opposed particularly to a mechanism that employs HNPS.

### 2.7 Section Summary

In section 1, I posed the question of whether any two linear strings schematized as follows are always derived via RNR or whether some other derivational mechanism, like PG-licensing, could be available for the adjunct gap structures:

- (39) *Coordinate gap structure*  
 [[Conjunct ...  $e_1$  ...] and [Conjunct ...  $e_1$  ...]] — XP<sub>1</sub>
- (40) *Adjunct gap structure*  
 [Matrix ...  $e_1$  ... [Adjunct ...  $e_1$  ...]] — XP<sub>1</sub>

The data included in Postal 1994, which were reviewed above, do not provide the type of evidence necessary to confidently make any claims in this regard.

From the discussion of the properties included in table 1, what has been demonstrated is that RNR can apparently be employed to derive adjunct gap structures like (40), particularly when a PG-licensing derivation is somehow precluded. The evidence necessary to conclude that adjunct gap structures must be derived via RNR would be either that parasitic gaps never appear in adjunct gap structures or that RNR is the only available mechanism for deriving adjunct structures. In the absence of this (or some other equally sufficient) evidence, the intended conclusion is not entailed. In the following section, I will validate this contention by providing evidence that the configuration in (40) can be derived by a strategy other than RNR when the element that has been displaced rightward is a DP.

### 3 Parasitic Gaps Licensed by Rightward DP-Movement

In this section, I provide three arguments demonstrating the distinct behavior of coordinate gap structures and adjunct gap structures. The first (section 3.1) is a syntactic argument based on derived-island effects discussed by Wexler and Culicover (1980). The second (section 3.2) is a semantic argument regarding the possible readings of the relational adjectives *different* and *again*, based on observations by Jackendoff (1977) about RNR. Finally, the third (section 3.3) is a phonological argument showing differing requirements on order preservation (e.g., Wilder 1995).

Assuming that the facts and the interpretation of them presented here are correct, they require us to reject the hypothesis that adjunct gap structures and coordinate gap structures are categorically derived via a single mechanism. It must be concluded that, given a rightward-displaced DP, it is in principle possible for adjunct gap structures to be derived via a mechanism other than RNR.

### 3.1 *Derived-Island Effects*

Wexler and Culicover (1980:278) observe that a DP that has undergone HNPS becomes a derived island. They attribute this to the claim that the DP has undergone movement and, as a result, is subject to their Freezing Principle, which makes it inaccessible for subextraction. This is illustrated by the contrast in (41). While subextraction is acceptable out of the direct object when it is in situ as in (41a), it becomes unacceptable once the direct object is displaced rightward as in (41b).

- (41) a. Who<sub>1</sub> did Sam steal an autographed picture of  $e_1$  yesterday?  
 b. \*Who<sub>2</sub> did Sam steal  $e_1$  yesterday — [an autographed picture of  $e_2$ ]<sub>1</sub>?

Recall from section 2.2 that RNR constructions have been observed to not display the full range of island constraints that are found with familiar instances of leftward movement (Wexler and Culicover 1980). The derived-island effect illustrated in (41) is another one of the island constraints that RNR is able to violate (Wexler and Culicover 1980:299–300). In (42), even though the direct object is displaced rightward, subextraction out of it is still possible.

- (42) Who<sub>2</sub> did Kim steal  $e_1$  and Pam buy  $e_1$  — [an autographed picture of  $e_2$ ]<sub>1</sub>?

In opposition to the pattern that we saw in section 2, adjunct gap structures pattern with HNPS and not RNR with respect to the derived-island constraint. The relevant contrast is between (42) and (43).<sup>14</sup>

- (43) \*Who<sub>2</sub> did Kim steal  $e_1$  because she couldn't afford  $e_1$  — [an autographed picture of  $e_2$ ]<sub>1</sub>?

Examples (44) and (45) show that this is a general pattern.

- (44) \*Who<sub>2</sub> did Pam develop  $e_1$  in order to display  $e_1$  — [an embarrassing picture of  $e_2$ ]<sub>1</sub>?  
 (45) \*Who<sub>2</sub> did Tim burn  $e_1$  after finding  $e_1$  — [an incriminating picture of  $e_2$ ]<sub>1</sub>?

Because (43)–(45) display the properties associated with HNPS and not with RNR, we can conclude at least that they are not derived via RNR. Because they show properties consistent with HNPS, there is reason to think this could be the responsible mechanism.

### 3.2 *Relational Adjectives*

Carlson (1987) describes a relational adjective like *same* or *different* as providing an implicit comparison between two things. Always available is the reading of these adjectives sketched in (46a) in which they establish a *sentence-external* point of comparison. When a relational adject-

<sup>14</sup> Note that the source example for (43) is grammatical, with the exception of the decrease in acceptability that results from the repeated-name penalty associated with having two instances of the same DP. This effect can be ameliorated by placing contrastive focus on the verb in each conjunct, indicated here with capital letters.

(i) Who<sub>1</sub> did Kim STEAL an autographed picture of  $e_1$  because she couldn't AFFORD an autographed picture of  $e_1$ ?

tive can take some distributively interpreted NP or VP in its semantic scope, a *sentence-internal* point of comparison becomes available, as in (46b) (cf. *Sam read the same book*).<sup>15</sup>

- (46) Sam and Kim read the same book.  
 a. *Sentence-external*  
 [Sam read [the same book  $x$ ] and Kim read [the same book  $x$ ]]  
 ‘Sam and Kim read the same book that someone else read.’  
 b. *Sentence-internal*  
 [the same book  $x$ ] [Sam read  $x$  and Kim read  $x$ ]  
 ‘Sam and Kim each read the same book that the other one read.’

As Jackendoff (1977:192–194) observes, a sentence-internal reading is available for a relational adjective in the displaced DP of a coordinate gap structure; see (47).<sup>16</sup> This is independent of the shape of the modified NP and, as Sabbagh (2007:370) notes, it holds even though this reading is absent from the source structure in (48).

- (47) Sam bought  $e_1$  and Kim bought  $e_1$  — [a different book about Bengal tigers]<sub>1</sub>.  
 ‘Sam and Kim each bought a different book about Bengal tigers than the other.’  
 (48) Sam bought a different book about Bengal tigers and Kim bought a different book about Bengal tigers.  
 ≠ ‘Sam and Kim each bought a different book about Bengal tigers than the other.’

Turning now to adjunct gap structures, we find that they pattern differently from coordinate gap structures with respect to relational adjectives. Examples (49)–(51) permit only the sentence-external readings of the relational adjective in the displaced DP.

- (49) Sam bought  $e_1$  after Kim bought  $e_1$  — [a different book about Bengal tigers]<sub>1</sub>.  
 a. *Sentence-external*  
 ‘a book different from the book someone else bought’  
 b. \**Sentence-internal*  
 ‘a book different from the book the other bought’  
 (50) Pam didn’t make  $e_1$  so that Tim could make  $e_1$  — [the same dessert for the party]<sub>1</sub>.  
 a. *Sentence-external*  
 ‘a dessert the same as the one someone else made’  
 b. \**Sentence-internal*  
 ‘the same dessert that the other one made’

<sup>15</sup> See Beck 2000 and Barker 2007 and the references therein for further discussion of the general phenomenon.

<sup>16</sup> These facts have also been discussed by Hartmann (2000), Abels (2004), Sabbagh (2007), and Ha (2008), among others. See Hartmann 2000 in particular for discrepancies with the judgments reported here for coordinate gap structures and for different conclusions.

- (51) Al wore  $e_1$  because Pat wore  $e_1$  — [a different giant safari hat]<sub>1</sub>.
- a. *Sentence-external*  
'a hat different from the hat someone else wore'
  - b. \**Sentence-internal*  
'a hat different from the hat the other one wore'

Because examples (49)–(51) behave differently from coordinate gap structures, we can conclude that adjunct gap structures and coordinate gap structures are not categorically derived via the same mechanism.

### 3.3 Dative Extraction Asymmetry

Finally, it has often been claimed that RNR is subject to a constraint that requires the displaced element to be the rightmost element in each conjunct before RNR can apply (Postal 1974, Wilder 1995, 1997, 1999, Hartmann 2000). This constraint has come to be formalized as the Right Edge Restriction, shown in (52).

- (52) *Right Edge Restriction* (adapted from Sabbagh 2007:355)
- In the configuration  
 $[[A \dots X \dots] \text{Conj } [B \dots X \dots]]$   
 $X$  must be rightmost within  $A$  and  $B$  before  $X$  can undergo RNR.

Wilder (1995:288–289) argues that this constraint accounts for the contrast in (53). These examples pivot on the argument structure of the ditransitive verb in the second conjunct. With the PP frame in (53a) the gap position in each conjunct is rightmost, meaning that the Right Edge Restriction is satisfied and RNR is licensed. Given the double object frame in (53b), however, the Right Edge Restriction is not satisfied and RNR results in ungrammaticality.<sup>17</sup>

<sup>17</sup> An anonymous reviewer points out that a few of the examples provided by Postal (1994) are potentially problematic for the claim that RNR is constrained by the Right Edge Restriction in (52). The most promising counterexample is (125c) in Postal 1994:102, provided here in (i). (A similar example is (99c) in Postal 1994:91, and the same point can be made for examples (21c) and (22c) in section 2.3 above.) I have chosen to suppress this example until now so that it could be discussed in the appropriate theoretical context. Important for present purposes is that this example is presented as grammatical in Postal 1994 but it does not satisfy the Right Edge Restriction.

- (i) The doctor might have touched him on  $e_1$  accidentally and the nurse certainly did touch him on  $e_1$  deliberately — [his injured but still functional right arm]<sub>1</sub>.

Moreover, working under the hypothesis that movement can feed RNR (Sabbagh 2007, Kluck and De Vries 2013), the contrast in (ii) suggests that there is no licit instance of rightward movement that would result in the satisfaction of the Right Edge Restriction. As we saw in section 2.6, rightward DP-movement resists preposition stranding, and it does so in this example as well.

- (ii) a. The nurse touched  $e_1$  deliberately — [his injured but still functional right arm]<sub>1</sub>.  
 b. \*The nurse touched him on  $e_1$  deliberately — [his injured but still functional right arm]<sub>1</sub>.

In an informal judgment study including six linguists, every participant reported the contrast presented in (ii). Every participant also reported that (i) strongly contrasts with the structure in (iii) and noted that (i) is in fact ungrammatical.

- (iii) The doctor might have touched  $e_1$  accidentally and the nurse certainly did touch  $e_1$  deliberately — [his injured but still functional right arm]<sub>1</sub>.

- (53) a. Tim met  $e_1$  and gave a present to  $e_1$  — [his best friend from college]<sub>1</sub>.  
 b. \*Tim met  $e_1$  and gave  $e_1$  a present — [his best friend from college]<sub>1</sub>.

Turning to adjunct gap structures again, we find that the contrast between the two ditransitive frames is significantly reduced if not entirely lost; compare (54) with (53).

- (54) a. Tim met  $e_1$  in order to give a present to  $e_1$  — [his best friend from college]<sub>1</sub>.  
 b. Tim met  $e_1$  in order to give  $e_1$  a present — [his best friend from college]<sub>1</sub>.

Most interesting is the contrast between (53b) and (54b). In neither example are both gap positions rightmost in their respective domains, as the Right Edge Restriction requires—yet the adjunct gap structure in (53b) is grammatical while the coordinate gap structure in (54b) is ungrammatical. The additional examples in (55) and (56) are intended to establish the generality of this pattern. They show the same contrast between adjunct gap structures and coordinate gap structures when the relevant gap is in a double object frame.<sup>18</sup>

- (55) a. \*Sam interviewed  $e_1$  and showed  $e_1$  his secret laboratory — [the members of the incoming class of graduate students]<sub>1</sub>.  
 b. Sam interviewed  $e_1$  before showing  $e_1$  his secret laboratory — [the members of the incoming class of graduate students]<sub>1</sub>.  
 (56) a. \*Kim surprised  $e_1$  and offered  $e_1$  a raise — [everyone who showed up early]<sub>1</sub>.  
 b. Kim surprised  $e_1$  by offering  $e_1$  a raise — [everyone who showed up early].

I interpret this contrast as evidence that coordinate gap structures are subject to the Right Edge Restriction but adjunct gap structures are not. This provides another case in which adjunct gap structures and coordinate gap structures display distinct behavior. This case is especially informative, as a constraint (*viz.*, the Right Edge Restriction) believed to limit the application of RNR is not operative in the generation of adjunct gap structures. This suggests that all coordinate gap structures are derived via RNR but that at least some adjunct gap structures are not derived via RNR.

Finally, it is worth addressing the observation by Wilder (1997, 1999), Sabbagh (2007), and Kluck and De Vries (2013) that rightward movement is able to feed the Right Edge Restriction. In light of this, one concern with the argument being presented might be that an application of

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These results suggest that (i) is not a counterexample to the Right Edge Restriction. Instead, the contrast that we observe between (i) and (iii) actually provides evidence for the Right Edge Restriction and the claim that it can be fed by rightward movement. When HNPS of the type observed in (iia) is available, RNR is licensed, as in (iii). When such movement is unavailable, as in (iib), RNR is not possible; witness (i).

<sup>18</sup> An anonymous reviewer reports finding none of the adjunct gap structures in (54b), (55b), or (56b) to be grammatical. I acknowledge that such examples are degraded in isolation. They are complex sentences with specific information-structural requirements that are difficult to accommodate in out-of-the-blue contexts. It is for this reason, however, that the argument must be evaluated on the basis of the minimal pair that each forms with its coordinate gap counterpart. I have found in informal judgment studies that both linguists and nonlinguists clearly perceive the contrast reported here. Furthermore, those who originally reject the adjunct gap structures invariably accept them after exposure to the coordinate gap structures. For formal experimental evidence supporting the intuitions reported here, see Overfelt 2015:sec. 3.

HNPS internal to the adjunct clause in the adjunct gap structures above is feeding an application of RNR. One reason to think that this is not the case lies in an observation that goes back at least to Ross 1967:59 that HNPS is unable to target the first object of the double object construction, as in (57).

(57) \*Sam gave  $e_1$  a present yesterday — [his best friend from college]<sub>1</sub>.

It is this fact that both blocks the application of RNR in coordinate gap structures and rules out its application in adjunct gap structures.

### 3.4 Section Summary

In this section, I have presented three cases that were intended to demonstrate the distinct behavior of adjunct gap structures and coordinate gap structures with respect to supposed properties of RNR. We saw that, while RNR structures permit derived-island violations (section 3.1) and internal readings of relational adjectives (section 3.2), adjunct gap structures do not. We also saw that the Right Edge Restriction, a constraint on RNR derivations, is not operative in the derivation of adjunct gap structures (section 3.3). That adjunct gap structures display this distinct behavior strongly suggests that adjunct gap structures do not necessarily involve the same mechanism responsible for the creation of RNR structures.

If those arguments hold, then given Postal's (1994) observations in section 2, we are left to conclude that adjunct gap structures with a displaced DP can be derived via either RNR or some alternative mechanism.<sup>19</sup> The question that immediately comes to mind concerns the identity of this alternative mechanism. Recalling the properties listed in table 1, the evidence reviewed showed that RNR is available for the derivation of adjunct gap structures precisely when PG-licensing is somehow precluded. This strongly implicates PG-licensing as the alternative mechanism. Furthermore, the derived-island effects in section 3.1 revealed that adjunct gap structures behave in a way consistent with a structure that employs HNPS: a rightward-displaced DP becomes opaque for subextraction. Given these observations, I would suggest, following Engdahl (1983), Nissenbaum (2000), and recent work reported in Overfelt 2015, that the alternative mechanism for generating adjunct gap structures involves HNPS and the licensing of a parasitic gap in the adjunct clause.

This leads to a new question regarding the nature of the relationship between RNR and PG-licensing in the context of adjunct gap structures. One of two things could be true at this point. It could be the case that RNR and PG-licensing are in free variation. In this scenario, any given adjunct gap structure would be inherently ambiguous. If, however, employing a particular mechanism would ensure convergence, one could assume that the appropriate mechanism was employed. Alternatively, the two mechanisms could be in a sort of competition. In this scenario, one of the

<sup>19</sup> Given the evidence and argumentation presented here, it remains a possibility that more than one alternative mechanism is available to derive adjunct gap structures. In the absence of evidence for this particular conclusion, I will assume that adjunct gap structures are derived via RNR and a single alternative mechanism.

mechanisms is in some way preferred and the other applies only when the preferred mechanism is blocked.

The data examined here in section 3 seem to point to a competition-based relationship. When the particular impediments to PG-licensing in table 1 were removed, we were able to identify derivations that necessarily employ PG-licensing. Consider again example (43), repeated here. Looking at the source structure for this example in (58), we would expect that the rightward displacement could be achieved via RNR. The fact that derived-island effects are still induced by extraction out of the rightward-displaced element, contrary to what we saw with coordinate gap structures in section 3.1, suggests that RNR in fact cannot be employed here.

- (43) \*Who<sub>2</sub> did Kim steal  $e_1$  because she couldn't afford  $e_1$  — [an autographed picture of  $e_2$ ]<sub>1</sub>?
- (58) Kim stole  $e_1$  because she couldn't afford  $e_1$  — [an autographed picture of Jonathan Frakes]<sub>1</sub>.

The same point can be made with example (49), repeated here. A sentence-internal reading of the relational adjective fails to surface even though nothing *prima facie* precludes the RNR derivation necessary to derive this interpretation.

- (49) Sam bought  $e_1$  after Kim bought  $e_1$  — [a different book about Bengal tigers]<sub>1</sub>.
- a. *Sentence-external*  
'a book different from the book someone else bought'
- b. \**Sentence-internal*  
'a book different from the book the other bought'

If the two mechanisms were equally available (i.e., if PG-licensing and RNR were in free variation), we would expect RNR to be employed to derive the intended meaning for this string. Because RNR is supposedly available but cannot save these examples, we could conclude that the grammar in some way prefers to employ PG-licensing and will do so even to its own detriment.

Any conclusion concerning the relationship between PG-licensing and RNR that we wish to base on the evidence made available here should be made tentatively, however. It is not at all clear what exactly it would mean for these two mechanisms to be in competition and for PG-licensing to be the preferred mechanism. The issue is complicated by the fact that there is no true consensus about what is involved in the derivation of RNR constructions (see footnote 2). The way in which one interprets the conclusions from this section will be influenced by one's preferred analysis of RNR as a syntactic or phonological phenomenon. Additionally, if RNR is a larger phenomenon including a collection of rightward-displacement operations (Barros and Vicente 2011; but cf. Larson 2012), it could be that only a subset of these operations can be employed to derive adjunct gap structures. In this case, PG-licensing would be preferred to one or more specific operations and not necessarily to RNR as a phenomenon. Accounting for these additional factors goes beyond the scope of this reply but provides a clear and interesting direction for future research.

#### 4 Conclusion

In this article, I have argued against Postal's (1994) conclusion that there are no cases of PG-licensing by rightward displacement. The findings in section 3 serve as counterexamples to Postal's (1994) claim that all adjunct gap structures are derived via RNR. This does not mean, however, that we must give up the empirical ground gained by Postal (1994). The observations in section 2 showed that RNR can indeed be employed to derive both coordinate gap and adjunct gap structures. Instead, in light of the discussion there, we need only weaken the conclusion to say that adjunct gap structures and coordinate gap structures are both possibly, but not necessarily, derived via the same mechanism. More specifically, the evidence reviewed shows that RNR is available exactly in those cases where a parasitic gap derivation is somehow precluded. And, again, as we saw in section 3, when any impediments to PG-licensing are removed, it is possible to identify derivations that employ this mechanism.

I would like to end this article on another puzzle. In addition to the question of exactly how to model the relationship between PG-licensing and RNR in adjunct gap structures, we are left with the larger issue of why dependent gap structures involving leftward extractions do not show a similar variability in the mechanisms available to derive them. Postal (1993, 1994:104–107) presents an interesting comparative examination of ATB extraction, as in (59), and PG-licensing by leftward extraction, as in (60).

(59) *Across-the-board extraction*

[Whose uncle]<sub>1</sub> did you see  $e_1$  and immediately recognize  $e_1$ ?

(60) *Leftward PG-licensing*

[Whose uncle]<sub>1</sub> did you offend  $e_1$  by not immediately recognizing  $pg_1$ ?

Postal argues, contra Pesetsky (1982), Haik (1985), Huybregts and Van Riemsdijk (1985), and in particular Williams (1990), that distinct mechanisms necessarily underlie these two structures. The argument, much like the one in section 3 of this article, is that known restrictions on PG-licensing, some of which are included in table 1, do not constrain the distribution of ATB gaps. The conclusion, then, is that the mechanism responsible for ATB extraction cannot be the same mechanism employed for parasitic gap constructions. Therefore, ATB extraction is restricted to coordination structures while PG-licensing is restricted to adjunction structures. The question is what is special about RNR that allows it to apply in a larger set of environments than the other dependent gap mechanisms. Given the results here and those in Postal 1994, the answer might be found by more closely examining the properties of RNR that emerge particularly in adjunct gap structures.

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