

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

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Abstract: This paper 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

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1 Introduction

There is a class of displacement constructions in English that we can refer to as *dependent gap structures*, the defining property of which 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 off of examples in Engdahl 1983:12. We will distinguish these structures respectively as *coordinate-gap* structures and *adjunct-gap* structures.¹

(1) *Coordinate-Gap Structure*

You saw e_1 and immediately recognized e_1 – [my favorite uncle from Cleveland]₁.

(2) *Adjunct-Gap Structure*

You offended e_1 by not immediately recognizing e_1 – [my favorite uncle from Cleveland]₁.

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 1974.² Adjunct-gap structures, Postal (1993:fn. 12, 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).³

(3) [Whose uncle]₁ 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).⁴ Postal (1994) challenges this idea directly by suggesting that adjunct-

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

(i) [Whose uncle]₁ did you see e_1 and not immediately recognize e_1 ?

(ii) [Whose uncle]₁ did you offend e_1 by not immediately recognizing pg_1 ?

I will return to these structures briefly in the conclusion of this article. See Postal (1993) for a comparative examination of these particular dependent gap structures and Hornstein & Nunes (2002) for a proposed account of their differences.

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

³Typical analyses for PG-licensing include Across-the-Board 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 discussion of the properties and history of parasitic gaps.

⁴Notable exceptions include attempts to provide a pure Across-the-Board extraction analysis to both adjunct-gap and coordinate-gap structures by Pesetsky (1982), Huybregts & van Riemsdijk (1985), Haik (1985) and Williams (1990) or

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. Section 2 reviews the evidence and argumentation in Postal 1994. We will see that the strongest conclusion that can be reached from the available evidence is that RNR *can* be employed to derive adjunct-gap structures, but not that it *must* derive adjunct-gap structures. Section 3 provides evidence to support this contention. We will see 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. Based on the discussion to follow, 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 particular 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. Section 4 concludes with a brief summary and some interesting questions for future research.

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 1994:72.

Table 1: Properties of Dependent Gap Structures

	PGs	RNR
Subject to categorial restrictions (§ 2.1)	yes	no
Subject to the Island Condition (§ 2.2)	yes	no
Subject to the Pronominal Condition (§ 2.3)	yes	no
Subject to the Passivizability Condition (§ 2.4)	yes	no
Subject to the Predicate Nominal Condition (§ 2.5)	yes	no
Allows preposition stranding (§ 2.6)	yes	no

Postal (1994:sec. 4.2) then investigates whether adjunct-gap structures pattern with RNR induced gaps in coordinate-gap structures or PGs. Observing that they pattern with RNR 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).

a null-operator analysis to both adjunct-gap and coordinate-gap structures Munn (1992). However, see Postal 1993 for extensive argumentation against such unified analyses.

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:fn. 32) 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. The following subsections will briefly examine the properties in Table 1 before summarizing the results.

2.1 *Categorial Restrictions*

Based on parasitic gap research by Cinque (1990), Koster (1987), Emonds (1985), É. Kiss (1985), Frampton (1990), and Postal (1993), the following conditions on parasitic gaps and their antecedents are established in Postal 1994.

- (4) *PG=NP* (adapted from Postal 1994:82)
 A [parasitic gap] is an NP.
- (5) *PG-licensing Restriction (PLR)* (adapted from 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) each 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.⁵

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

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

⁵Postal 1994:64 notes that similar facts have been observed in Pesetsky (1982), Chomsky (1982), and Emonds (1985).

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

Consider now the following examples, which are also adapted from Postal 1994:101. These show that adjunct-gap structures, like coordinate-gap structures, are compatible with categories other than NP/DP. Based on the parallelism between the examples in (8) and (9), Postal 1994 concludes that the examples in (9) are not derived 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 – [PP to the professor who taught her Greek]₁.
- b. Helga didn't know he could e_1 before realizing he should e_1 – [VP help elderly tuberculosis victims]₁.
- c. Helga was determined to become e_1 even after being told she could never be e_1 – [AP extremely muscular]₁.
- d. Helga learned when e_1 before learning where e_1 – [IP the accident had occurred]₁.

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 of the parasitic domain. This is illustrated by the examples in (10), which show that a parasitic gap cannot be embedded inside of a relative clause island (10a), a *wh*-island (10b), or an adjunct island (10c).

- (10) a. * [Which sandwich]₁ won't Sam eat e_1 [after meeting the man [who makes pg_1]]?
- b. * This is the sandwich [which]₁ Kim won't eat e_1 [because she knows [who makes pg_1]]?
- c. * It was Tim [who]₁ 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* (adapted from Postal 1994:82)
 A [parasitic gap] “licensed” by a gap G cannot occur internal to an island Σ not containing G unless Σ is coextensive with the entire parasitic domain.

Coordinate-gap structures on the other hand were noted by Wexler & Culicover (1980:299–303) to not display the full range of island constraints that are found with familiar instances of leftward movement.⁶ The following example is adapted from Wexler & Culicover 1980:301 and shows that the gap in the second conjunct can be embedded inside of a relative clause island.

- (12) Mary buys e_1 and Bill knows [a man [who sells e_1]] – [pictures of Fred]₁.

The additional examples below show that coordinate-gap structures also allow for 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]₁.
 b. Kim still eats e_1 but Sam left [immediately after trying e_1] – [the potato salad at this deli]₁.

Postal 1994:88 provides the example 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 embedded inside of a relative clause island. The additional 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 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]₁.
 (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].
 b. Kim still ate e_1 [even though Sam left after trying e_1] – [the potato salad at this deli].

Based on 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 seems to indeed be true.

⁶This 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 & de Vries 2013). The derivation of (14), for example, is assumed to involve rightward displacement of the type shown to be possible in (i) below.

(i) They were supporting e_1 at that time – [his favorite uncle from Cleveland].

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

2.3 The Pronominal Condition

Postal (1993), expanding on a suggestion by Cinque (1990), motivates the following constraint on the distribution of parasitic gaps.⁷

- (16) *Pronominal Condition* (adapted from 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 so-called “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]₁ did he name his dog e_1 after naming his camel pg_1 ?
- (18) a. There are [guns/*them] in the cabinet.
b. * [What]₁ 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]₁ did they have to immobilize e_1 after accidentally touching him on pg_1 .⁸

Falling in line with the pattern being established are the following coordinate-gap structures in (20). These examples, adapted 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]₁.
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]₁.

The examples in (21) and (22) are adapted from Postal 1994:88, 102. These examples 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.

⁷Postal (1993:744–745, 1994:fn. 22) notes that this constraint should be weakened to reference only overt pronouns.

⁸An anonymous reviewer reports that they do not judge example (19b) to be ungrammatical. As they note, this could mean that (21c) and (22c) are not relevant data for evaluating the behavior of adjunct-gap structures. An informal judgement study including 5 linguists showed responses that covered the range of “pretty good” to “double question mark” to “rule[d] out”. This appears, then, to potentially be an area of variation and a more systematic investigation will be necessary to understand the facts.

- (21) a. She named her youngest dog e_1 after naming her oldest camel e_1 – [exactly what she was told to name them]₁.
 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]₁.
 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]₁.
- (22) a. Albert might have cruelly nicknamed one student e_1 without nicknaming the other e_1 – [either Birdbrain or Airhead]₁.
 b. There can exist e_1 in one department without existing e_1 in another – [the sort of hostile atmosphere that prevents serious work]₁.
 c. They might have had to bandage e_1 after touching him on e_1 quite accidentally – [the only arm he could still use]₁.

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* (adapted from 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 adapted from Postal 1994:84 are meant to illustrate.

- (24) a. Jerome spoke (in) Serbian to the Turks.
 b. Serbian should not be spoken (*in) to Turks.
 c. [Which language]₁ 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]₁ 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]₁ did they want to operate on e_1 after watching pg_1 faint?

Turning to the examples in (27), which have been adapted 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 showing 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]₁.
 b. Large trolls may die under e_1 and small trolls certainly do die under e_1 – [the bridge which they built last year]₁.
 (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]₁.
 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]₁.

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) and (26c) are acceptable. The *in* variant of the example in (24c) I judge to be ungrammatical, but (29) shows that this sentence is covered by the Pronominal Condition, as Postal (1993:fn. 10) also points out.⁹

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

Moreover, it is true of the anti-pronominal contexts in (17) and (19) that they are also unpassivizable.¹⁰ This is shown in the following examples.

- (30) * [Ernie]₁ was named his camel e_1 .
 (31) * [The arm]₁ was touched him on e_1 .

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

An informal judgment study including 4 linguists did little to clarify the situation. One participant accepted each of (24c), (25c), and (26c) while another rejected each of them. The remaining

⁹The example in (24c) could also potentially be ruled out as an inability to extract from the complement position of *in* in this construction.

(i) * [Which languages]₁ does Jerome speak in e_1 ?

¹⁰Without a verb there is no passive correlate for the example in (18).

two participants rejected (25c) while at least marginally accepting (24c) and (26c). It would seem, then, that further and more systematic experimental work will be required here. Regardless of the results, granting here that this condition exists and that the judgements 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* (adapted from 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]₁ did they turn into e_1 ?
c. * [What kind of derelicts]₁ did they analyze e_1 after their children turned into pg_1 ?
d. * [What kind of derelicts]₁ 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]₁ did those slaves make e_1 ?
c. * [What kind of cannibal snacks]₁ did the cannibal look for e after hearing that young slaves made pg_1 ?
d. * [What kind of cannibal snacks]₁ were all those slaves who discussed e_1 expected to make pg_1 ?¹¹

Providing the examples in (35), Postal (1994:103) shows that the displacement operation in coordinate-gap structures is not subject to the Predicate Nominal Condition.

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

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

¹¹This example is ruled out independently as a violation of the subject island constraint and relative clause island constraint in the case that extraction is from the first gap. In the case that extraction is from the second gap, the parasitic gap inside the subject should still incur a violation of 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]₁.
 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]₁.
 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]₁.
 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]₁.

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 coordinate-gap structures in (35), suggest that RNR is able to target adjunct-gap structures.

2.6 Preposition Stranding

In Postal 1994:sec. 4.4, some additional facts related to observations made by Williams (1990) are discussed.¹² Most relevant to this paper is the contrast in (37), which originally appeared in Williams 1990:267, but is adapted here from Postal 1994:104.

- (37) a. *I talked to e_1 yesterday – [all the members who voted against Hinkly]₁.
 b. I talked to e_1 without actually meeting pg_1 – [all the members who voted against Hinkly]₁.

This contrast is interesting for the observation in Ross 1967 that Heavy-NP Shift 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 noted that coordinate-gap structures involving RNR do not show this same resistance to preposition stranding (38).

¹²The second half of this section is an argument against an Across-the-Board extraction analysis of parasitic gaps. Because it is not immediately relevant to the points being made in this paper and 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), which has been adapted here from Postal 1994:105.

- (i) a. I met e_1 yesterday without really having the chance to talk to pg_1 – [all your friends]₁.
 b. I met e_1 yesterday – [all your friends]₁ without really having the chance to talk to them₁/* pg_1 .

Williams (1990) takes these examples to show that ATB-extraction and not Heavy-NP Shift 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 & Culicover 1997 would be expected to derive examples like (ib.). Regardless, as Postal 1994:105 argues, (i) 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 exact same thing can be said. It is simply a fact of PG-licensing that the displaced element must appear to either the left or right of both gaps. See Nissenbaum 2000:ch. 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]₁.

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

At the beginning of this article, we posed the question of whether any two linear strings schematized as below are always derived via RNR or if 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 ...]] – XP₁

(40) *Adjunct-Gap Structure*
[*Matrix* ... e_1 ... [*Adjunct* ... e_1 ...]] – XP₁

The data included in Postal 1994, which was reviewed in the preceding subsections, does 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 make the conclusion 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 in the derivation of adjunct structures. In the absence of this (or some other equally sufficient) evidence, then the intended conclusion is not entailed. The following section will validate this contention by providing evidence that the configuration in (40) can be derived by a strategy other than RNR in those instances when it is a DP that has been displaced rightward.

3 Parasitic Gaps Licensed by Rightward DP-Movement

Three different arguments are provided in this section that demonstrate the distinct behavior of coordinate-gap structures and adjunct-gap structures. The first in section 3.1 is a syntactic argument based on derived-island effects discussed in Wexler & Culicover 1980. Section 3.2 provides a semantic argument regarding the possible readings of the relational adjectives *different* and *again* based on observations by Jackendoff (1977) about RNR. And, finally, the third argument in section 3.3 is phonological in nature 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 & Culicover (1980:278) observed 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 below. While subextraction is acceptable out of the direct object when it is in-situ (41a), subextraction becomes unacceptable once it is displaced rightward as in (41b).

- (41) a. Who₁ did Sam steal an autographed picture of e_1 yesterday?
 b. * Who₂ did Sam steal e_1 yesterday – [an autographed picture of e_2]₁?

Recall from the discussion in 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 & Culicover 1980). The derived-island effect illustrated above is another one of the island constraints that RNR is able to violate (Wexler & Culicover 1980:299–300). In (42), even with the rightward displacement of the direct object, subextraction out of it is still possible.

- (42) Who₂ did Kim steal e_1 and Pam buy e_1 – [an autographed picture of e_2]₁?

In opposition to the pattern that we became accustomed to 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) below.¹³ The examples in (44) and (45) serve to show that this is a general pattern.

- (43) * Who₂ did Kim steal e_1 because she couldn't afford e_1 – [an autographed picture of e_2]₁?
 (44) * Who₂ did Pam develop e_1 in order to display e_1 – [an embarrassing picture of e_2]₁?
 (45) * Who₂ did Tim burn e_1 after finding e_1 – [an incriminating picture of e_2]₁?

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.

¹³Note 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, which I have indicated with capital lettering.

- (i) Who₁ did Kim STEAL an autographed picture of e_1 because she couldn't AFFORD an autographed picture of e_1 ?

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 a reading of these adjectives sketched in (46a) in which they establish a so-called *sentence-external* point of comparison. When a relational adjective can take some distributively interpreted NP or VP in its semantic scope, a “sentence-internal” point of comparison becomes available (46b) (cf. *Sam read the same book*).¹⁴

- (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 read the same book that the other one read.”

An observation made by Jackendoff (1977:192–194) is that a sentence-internal reading is available for a relational adjective in the displaced DP of a coordinate-gap structure (47).¹⁵ This is independent of the shape of the modified NP and, as Sabbagh (2007:370) notes, despite the fact that 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]₁.
“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. The examples below 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]₁.
- a. *sentence-external*
“a book different than the book someone else bought.”
 - b. **sentence-internal*
“a book different than the book the other bought.”

¹⁴See Beck (2000) and Barker (2007) and the references therein for further discussion of the general phenomenon.

¹⁵These 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 judgements reported here for coordinate-gap structures and different conclusions.

- (50) Pam didn't make e_1 so that Tim could make e_1 – [the same desert for the party]₁.
- a. *sentence-external*
“a desert the same as the one someone else made
 - b. **sentence-internal*
“the same desert that the other one made
- (51) Al wore e_1 because Pat wore e_1 – [a different giant safari hat]₁.
- a. *sentence-external*
“a hat different than the hat someone else wore”
 - b. **sentence-internal*
“a hat different than the hat the other one wore”

Because the examples in (49)–(51) display behavior different than 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, which is provided in (52).

- (52) *Right Edge Restriction* (adapted from Sabbagh 2007:355)
- In the configuration:
 [[A ... X ...] Conj. [B ... X ...]]
 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 we find 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 can be satisfied and RNR is licensed. Given the double-object frame (53b), however, the Right Edge Restriction is not satisfied and RNR results in ungrammaticality.¹⁶

¹⁶An 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 counter-example can be found in example (125c) of Postal 1994:102. (A similar example is also found in example (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 this point so that it could be discussed in the appropriate theoretical context, but it is provided now in (i). Important for us 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]₁.

- (53) a. Tim met e_1 and gave a present to e_1 – [his best friend from college]₁.
 b. * Tim met e_1 and gave e_1 a present – [his best friend from college]₁.

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

- (54) a. Tim met e_1 in order to give a present to e_1 – [his best friend from college]₁.
 b. Tim met e_1 in order to give e_1 a present – [his best friend from college]₁.

Most interesting is the contrast between (53b) and (54b). In neither example is it the case that both gap positions are 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.¹⁷

- (55) a. * Sam interviewed e_1 and showed e_1 his secret laboratory – [the members of the incoming class of graduate students]₁.
 b. Sam interviewed e_1 before showing e_1 his secret laboratory – the members of the incoming class of graduate students]₁.

Moreover, working under the hypothesis that movement can feed RNR (Sabbagh 2007, Kluck & de Vries 2013), the contrast in (ii) suggests that there isn't a 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 movements resists preposition stranding and does so in this example as well.

- (ii) a. The nurse touched e_1 deliberately – [his injured but still functional right arm]₁
 b. * The nurse touched him on e_1 deliberately – [his injured but still functional right arm]₁

In an informal judgement study including 6 linguists, every participant reported the contrast presented in (ii). Every participant also reported that (i) strongly contrasts with the structure in (iii) below 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]₁

These results suggest that (i) is not a counter-example 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 (iii). When such movement is unavailable (iib.), RNR is not possible (i).

¹⁷An anonymous reviewer reports that they do not find any 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 judgement studies that linguists and non-linguists 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, I would recommend the reader to Overfelt (2015:sec. 3).

- (56) a. * Kim surprised e_1 and offered e_1 a raise – [everyone who showed up early]₁.
 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.

Before ending this subsection it is worth addressing the observation by [Wilder \(1997, 1999\)](#), [Sabbagh \(2007\)](#), and [Kluck & 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 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 to at least [Ross \(1967:59\)](#) that HNPS is unable to target the first object of the double-object construction (57).

- (57) * Sam gave e_1 a present yesterday – [his best friend from college]₁.

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

Three cases were presented in the previous subsections 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.¹⁸ 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 in those instances when

¹⁸It remains a possibility given the evidence and argumentation presented in this paper 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.

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. Based on these observations, I would suggest, following Engdahl (1983) and Nissenbaum (2000) as well as recent work from 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 now 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 mechanisms is in some way preferred and the other applies only when the preferred mechanism is blocked.

The data that we have examined here in section 3 seem to be pointing to a competition based relationship. When the particular impediments to PG-licensing in Table 1 are removed, we were able to identify derivations that necessarily employed PG-licensing. Consider the example in (43) again, which is repeated below. 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) * Who₂ did Kim steal e_1 because she couldn't afford e_1 – [an autographed picture of e_2]₁?
 (58) Kim stole e_1 because she couldn't afford e_1 – [an autographed picture of Jonathan Frakes]₁.

The same point can be made with the examples from (49) repeated below. 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]₁.
 a. *sentence-external*
 “a book different than someone else’s book.”
 b. * *sentence-internal*
 “a book different than the book the other bought.”

If the two mechanisms were equally available (i.e., 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 & 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

This paper has argued against the conclusion made in Postal 1994 that there are no cases of PG-licensing by rightward displacement. The findings in section 3, which we summarized above, serve as counter-examples to the claim in Postal 1994 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 when 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.

To conclude this article, I would like end 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 Across-the-Board (ATB) extractions (59) and PG-licensing by leftward extractions (60).

- (59) *Across-the-Board Extraction*
 [Whose uncle]₁ did you see e_1 and immediately recognize e_1 ?
- (60) *Leftward PG-licensing*
 [Whose uncle]₁ did you offend e_1 by not immediately recognizing pg_1 ?

Postal argues contra Pesetsky (1982), Huybregts & van Riemsdijk (1985), Haik (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. ATB, therefore, is restricted to coordination structures while PG-licensing is restricted to adjunction structures. The question, which is already being asked, 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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