

# “Reanalysis” is Raising to Object

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*Abstract.* We propose a Case-driven account of the “reanalysis” operation assumed by some researchers to underlie pseudo-passivization. Contra previous analyses we argue that reanalyzed prepositions do not form a unit with the verb at any level of representation. Rather, reanalyzed prepositions raise to a v/V-medial Agr head, and the complement of the preposition raises to the specifier of this complex head to receive Case. This places the erstwhile complement in essentially the same structural configuration as an ordinary direct object, so that passivization proceeds normally. Preposition stranding, though it does not require reanalysis as such, is tied to one of the prerequisites for reanalysis: the presence of independent Agr projections. This explains why all languages with pseudopassives also permit preposition stranding. Reanalysis also accounts for certain instances of anaphoric binding in the apparent absence of c-command.

## 1. Introduction

Two central components of GB theory, the Binding Theory and the Case-theoretic account of A-movement, crucially depend on reanalysis. If binding in (1a) is to respect c-command, *to* must somehow “reanalyze” with the verb. Similarly, in the derivation of pseudopassives such as (1b), the Case-assigning powers of the preposition must transfer to the verb for subsequent removal by the passive morpheme:

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- (1) a. John talked to Mary<sub>1</sub> about herself<sub>1</sub>.  
b. John<sub>1</sub> was talked to *t*<sub>1</sub>.

This paper has two primary aims. The first is to develop an account of reanalysis adequate to the phenomena in (1). Previous attempts to do so have run into serious empirical and conceptual problems (Baltin & Postal 1996). Our account is designed to address these problems, and can be summarized as follows. Reanalysis occurs when a preposition raises covertly to a v/V-medial Agr projection to form a complex [P-Agr] head. This head plays essentially the same role as the [V-Agr] head in Lasnik's (1999a) theory of objective Case assignment. After the preposition has raised, its erstwhile complement raises covertly to check Case in the specifier of [P-Agr]. For (1a), the resulting LF is given in (2):

- (2) LF: John<sub>1</sub> ... [<sub>V-vP</sub> *t*<sub>John</sub> [<sub>v-V</sub> talked] [<sub>P-AgrP</sub> Mary<sub>2</sub> [<sub>P-Agr</sub> *to*] [<sub>VP</sub> *t*<sub>V</sub> [<sub>PP</sub> *t*<sub>P</sub> *t*<sub>Mary</sub>]]]]

Raising of the the complement of the preposition is “raising to object” of the kind undergone by ECM subjects under Lasnik's analysis.

The second aim of the paper is to explain why pseudopassivization is typologically linked to preposition stranding under *wh*-movement:

- (3) Who<sub>1</sub> did you talk to *t*<sub>1</sub>?

As is well known, most languages do not allow preposition stranding, and pseudopassivization is rarer still (both constructions being limited to the Germanic languages). Thus German and Spanish — (4)-(5) — permit neither preposition stranding nor pseudopassivization; Icelandic — (6) — permits preposition stranding but not pseudopassivization; and Norwegian — (7) — is one of few languages apart from English with both pseudopassivization and preposition stranding:

(4) **German** (Abels 2003, 193)

- a. \*Wem hast du mit geredet?  
Who have you with spoken?
- b. \*Frank wurde vom Präsidenten mit geredet.  
Frank was by-the President with talked.

(5) **Spanish**

- a. \*Quien hablaste con?  
Who speak.2S-PAST with?
- b. \*Frank fue hablado con por el presidente.  
Frank was spoken with by the President.

(6) **Icelandic** (Maling & Zaenen 1990, 156)

- a. Hvern hefur Pétur talað við?  
Who has peter talked with?
- b. \*Ég tel Vigdís vera oftast talað vel um.  
I believe Vigdis be.INF most-often spoken well of.

(7) **Norwegian** (Merchant 2001, 93)

- a. Hvem har Per snakket med?  
Who has Peter talked with?
- b. Han ble ledd av.  
He was laughed at.

Building on a proposal of Abels (2003), we propose that there is one prerequisite that reanalysis and preposition stranding have in common: the presence of independent Agr projections. In most languages,  $\phi$ -features (if present) are bundled onto lexical heads such as V, T and P. Other languages project separate Agr heads above PP; these associate with the P head via head movement. We argue that the presence of this separate Agr projection within PP suffices to permit *wh*-extraction. Reanalysis occurs when P’s Agr projection is merged above VP, as in (2).

The paper is structured as follows. Section 2 explains the derivation in (2) in greater detail and provides evidence to support it. Section 3 outlines the implications for existential constructions, pseudopassives and Case. Sections 4-5 deal with the binding facts. Section 6 shows that our

analysis fares better than the reanalysis hypotheses criticized in Baltin & Postal 1996. Finally, section 7 contains some remarks on the typology of preposition stranding and pseudopassivization.

## 2. Reanalysis structures

### 2.1 Background assumptions: Agr and the structure of vP

In common with traditional reanalysis theories, our proposal takes the complements of reanalyzed prepositions to receive Case in the same manner as ordinary direct objects. Adopting the proposals of Koizumi (1993) and Lasnik (1999a), we take this to be raising to the specifier of an Agr projection located between *v* and *V*. An ordinary direct object receives Case from a *V*-Agr complex derived by movement of *V* to Agr:

- (8)  $[_{V-Agr-vP} \text{Subj } V\text{-Agr-}v [_{V-AgrP} \text{Obj } t_{V-Agr} [_{VP} t_V t_{Obj}]]]$   
*(Configuration for assignment of objective Case to a direct object.)*

We assume that Case is typically assigned by the combination of a lexical head (e.g. *V*, *T*) and an Agr head. Though we remain neutral on the question of whether this configuration is responsible for *all* Case assignment (in particular, all *inherent* Case assignment), we necessarily assume that it extends at least to those prepositions which may be reanalyzed. For example, the complement of *to* in (9b) — a structure in which reanalysis has *not* occurred — will be assigned Case in the configuration shown in (9b):

- (9) a. John talked to Bill.  
 b.  $[_{V-vP} \text{John } [_{V-v} \text{talked}] [_{VP} t_V [_{P-AgrP} \text{Bill } [_{P-Agr} \text{to}] [_{PP} t_P t_{\text{Bill}}]]]]]$ .

It seems that the “strong” or “weak” nature of the complex Case-assigning head is determined by its lexical component. Thus in English, *V*-Agr is optionally strong or weak, with the consequence that overt movement of the object to [Spec, *V*-AgrP] is optional (Lasnik 1999a). In contrast, English

P-Agr must be obligatorily weak if (9b) is not to surface as (10):

(10) SS: \*John talked [<sub>P-AgrP</sub> Bill<sub>1</sub> [<sub>PP</sub> to *t*<sub>1</sub>]].

For our purposes, it will not matter a great deal whether covert raising is treated as post-Spellout movement (Chomsky 1995), pronunciation of a lower copy (Bobaljik 1995), or Agree without subsequent remerger (Chomsky 2000). The subsequent exposition will assume post-Spellout movement.<sup>1</sup>

We will assume that the strength of the requirement for a lexical head to adjoin to an Agr head is always correlated with the strength of the requirement for the specifier of the resulting complex to be filled. Thus in English, movement of T to Agr is always overt, movement of P to Agr is always covert, and movement of V to Agr is optionally either overt or covert. These assumptions regarding the strength of Case-assigning heads are summarized in the following table:

<b>Complex head</b>	<b>Strength</b>
T-Agr	Always strong.
V-Agr	Optionally strong/weak.
P-Agr	Always weak.

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<sup>1</sup>It would not be difficult to recode the theory presented in this paper in terms of Agree. Covert head movement translates to Agreement between two heads; covert phrasal movement translates to Agreement between a head and a phrase. Our account of binding facts such as (1a) depends on the hypothesis that covert A-movement feeds binding. Thus, it may appear at first that replacing covert movement with Agree would scupper our analysis. However, within the Agree-based binding literature, it has been proposed that binding of an anaphor by an antecedent in [Spec,XP] is effected via Agree between X and the anaphor (Reuland 2005, Chomsky 2008). To a large extent, then, our adoption of “early Minimalist” assumptions regarding movement and feature checking is not a substantial commitment. Similar considerations apply to phases, which we make use of in section 7. Historically, the adoption of phases coincides with the abandonment of covert movement (Chomsky 2000). However, there is no logical incompatibility between phase theory and the “Y model”: the complement of a phase head is sent to PF, covert movement then applies, and the resulting structure (minus the phase head and its complement) goes to the LF interface.

It will be necessary to specify the precise featural motivation for raising of a lexical head to an Agr projection. Following Chomsky (1995:197), we take the relevant feature to be a category feature on the Agr head itself (“...Agr must in fact have two kinds of features: V-features that check V adjoined to Agr, and NP features that check NP in [Spec,AgrP].”). Movement of the lexical head to Agr therefore falls under Enlightened Self-interest (Lasnik 1999a, 78).

As indicated in (11), movement of V to Agr should in principle be covert when raising of the object to [Spec,V-AgrP] is covert. In practice, however, the need for v and V to associate forces overt movement of V through Agr and then to v, and this movement will occur whether or not Agr is strong. The assumption here is that “opportunistic” movement to check a weak feature is permitted if it is a step in a successive-cyclic movement which will eventually lead to the checking of a strong feature. This assumption is independently required in order to account for, e.g., the instance of *wh*-movement in (12):

(12) Who did you see *t*?

If, owing to a strong interpretation of Procrastinate, the *wh*-phrase in (12) were required to skip the weak Agr position, then it would never be able to check Case, and there would be no convergent derivation of (12) available.

## 2.2 Reanalysis

Given the preceding assumptions regarding the structure of ordinary PPs, we can now consider the “reanalysis” structure in more detail. Reanalysis occurs when a P head raises covertly to a v/V-medial Agr head (the latter bearing unchecked ‘P’ features):

- (13) a. John talked to Bill.  
b. LF: [<sub>V-vP</sub> John [<sub>V-v</sub> talked] [<sub>P-AgrP</sub> Bill [<sub>P-Agr</sub> to] [<sub>VP</sub> *t*<sub>V</sub> [<sub>PP</sub> *t*<sub>P</sub> *t*<sub>Bill</sub>]]]]

Since P-Agr complexes are obligatorily weak, raising of both *to* and *Bill* is necessarily covert. There are two “exceptional” features of the structure shown in (13b). First, the presence in an intransitive vP of a v/V-medial Agr head bearing ‘P’ features. Second, the absence of an Agr projection attached to the PP itself (compare (9b)). We take these exceptional features to be the preconditions for reanalysis. We will continue to refer to prepositions such as *to* in (13b) as “reanalyzed” prepositions, but it should now be clear that we postulate no special reanalysis operation. The reanalysis structure is derived via ordinary head and phrase movement.

The structure in (13b) makes apparent the motivation for taking it to be a feature of Agr which drives movement of V/P to Agr. If movement were driven by a requirement of P/V, then Minimality would presumably preclude movement of P over V in (13b). On the other hand, if the Agr merged in (13b) has a ‘P’ feature (i.e. an instruction to “attract” the closest P) then Minimality is satisfied.

The term DCRP (“DP Complement of a Reanalyzed Preposition”) will be a useful shorthand. For example, *Bill* in (13b) is a DCRP. Although direct objects and DCRPs are similar in that they both receive Case in essentially the same position, there are nonetheless some important differences between DCRPs and direct objects:

- (i) DCRPs cannot raise to their Case position overtly, whereas direct objects may optionally raise overtly.
- (ii) A DCRP is initially merged as the complement of a preposition, whereas a direct object is initially merged as a complement of V.
- (iii) The vP containing a DCRP is still in some sense marked as intransitive (The V head does not have a DP complement.)

The ability to distinguish between direct objects and DCRPs in these respects makes it possible to account for those cases where the two do not behave alike.

Baltin & Postal (1996) note that reanalysis must be optional, since reanalysis of a PP would stop it undergoing A’ movement of the type illustrated in (14):

- (14) a. [To John], I talk *t* frequently.  
b. [To whom] did you talk *t*?

In our terms, the optionality of reanalysis derives not from the optional application of a rule, but simply from the availability of two distinct structures — (9b) vs. (13b). We will argue in section 6.7 that certain binding facts indicate that the reanalysis structure is preferred by the parser. That is, when a sentence is ambiguous between the reanalysis structure in (13b) and the ordinary structure in (9b), it is parsed with the reanalysis structure.

### 3. Reanalysis and passivization

Our account of pseudopassivization can be summed up as follows. The complement of a reanalyzed preposition raises to the same position as an ordinary direct object: the specifier of a *v/V*-medial Agr projection. The addition of the passive morpheme renders this a Case' position for whatever reason it does so in ordinary passives. Subsequently, the complement of the reanalyzed preposition moves to [Spec,TP] to receive Case.

In section 3.1, we show how our analysis accounts for the adjacency requirement on pseudopassivization. This first subsection is largely independent of any specific technical implementation of passivization. To place the subsequent discussion in a more concrete theoretical context, we outline a specific analysis of passivization in section 3.2. This subsection is not intended as an original contribution to the study of passivization, but rather as an indication of the type of analysis which jibes best with our account of pseudopassives. We conclude in section 3.3 by addressing the implications of idiomatic passives such as *take advantage of*, arguing that certain restrictions on these follow from the theory of “partitive” Case.

### 3.1 Existentials, locality and adjacency

Movement of P to Agr is, as would be expected, subject to locality conditions. This is why the presence of a closer PP in (15c) blocks pseudopassivization:

- (15) a. John<sub>1</sub> was spoken to *t*<sub>1</sub> about Mary.  
 b. John<sub>1</sub> was spoken about *t*<sub>1</sub>.  
 c. \*John<sub>1</sub> was spoken to Mary about *t*<sub>1</sub>.

Consider the partial derivation for (15c) shown in (16). Here, the *to* PP is the complement of an Agr projection, while the head of the *about* PP raises to a v/V-medial Agr head. Following movement of *to* to the local Agr head, the P-AgrP headed by *to* c-commands the *about* PP.

- (16) ... [<sub>VP</sub> spoke<sub>v</sub> [<sub>AgrP</sub> Agr [<sub>VP</sub> [<sub>PP-AgrP</sub> [<sub>P-Agr</sub> *to* [<sub>PP</sub> *t*<sub>P</sub> Mary ] ] ] V [<sub>PP</sub> about John]]]]]

We assume that Minimality, Minimal Search or a similar economy condition blocks movement of the *about* P head over the c-commanding P-AgrP.<sup>2</sup> Under theories of reanalysis such as that of Bresnan (1982), (15c) is ruled out not by a structural condition such as Minimality, but by a linear adjacency constraint: V and P must be adjacent in order for V+P to reanalyze as a complex verb. If it is reanalysis that permits binding in (17), however, there can be no adjacency constraint on reanalysis as such:

- (17) a. John spoke (frequently) to Bill<sub>1</sub> (frequently) about himself<sub>1</sub>.  
 b. LF: [<sub>V-VP</sub> spoke<sub>v-v</sub> [<sub>P-AgrP</sub> Bill<sub>1</sub> P-Agr [<sub>VP</sub> *t*<sub>V</sub> [<sub>PP</sub> *t*<sub>1</sub> ]]]]

Something must therefore be said to explain the deviance of (18):

- (18) \*John was spoken frequently to.

<sup>2</sup>This requires the assumption that if XP c-commands YP, then the head X is closer than the head Y from the point of view of positions which c-command XP.

If the constraint which blocks (18) does not follow from a condition on reanalysis itself, it must derive from some property of English passives. We suggest that the relevant property is the position of V. Caponigro & Schütze (2003) propose that V does not raise overtly to v in English passives. They point out that this accounts for the DP-V order in sentences such as (19):

(19) There were (three fish) caught (\*three fish).

Conjoining C&S's analysis with the present theory yields two possible structures for active sentences — (20a)/(20b) — and one for passives — (21):

(20) a. SS: [<sub>V-Agr-vP</sub> Subj V-Agr-v [<sub>V-AgrP</sub> **Obj** *t*<sub>V-Agr</sub> [<sub>VP</sub> *t*<sub>V</sub> *t*<sub>Obj</sub>]]]  
*(Active with overt raising to [Spec,AgrP])*

b. SS: [<sub>V-Agr-vP</sub> Subj V-Agr-v [<sub>V-AgrP</sub> *t*<sub>V-Agr</sub> [<sub>VP</sub> *t*<sub>V</sub> **Obj**]]]  
*(Active with covert raising to [Spec,AgrP])*

(21) SS: [<sub>v°P</sub> v° [<sub>Agr°P</sub> Agr° [<sub>VP</sub> V Obj]]]  
*(Passive; raising to Agr is always covert; [Spec,AgrP] is not a Case position)*

Given the structure in (21), the adjacency requirement on pseudopassivization in (18) now follows. If the VP has the structure in (22), then there is no “room” for an adverbial expression to be infixd between V and its PP sister:

(22) [<sub>VP</sub> talked [<sub>PP</sub> to Bill]]

In contrast, V raises to v in (17) (repeated here as (23a)). Thus, an adverb left-adjoined to P-AgrP in (17b) can appear between V and P, as shown in (23b):

(23) a. John spoke (frequently) to Bill<sub>1</sub> (frequently) about himself<sub>1</sub>.

b. LF: [<sub>V-vP</sub> spoke<sub>v-v</sub> [<sub>P-AgrP</sub> **Adverb** [<sub>P-AgrP</sub> Bill<sub>1</sub> P-Agr [<sub>VP</sub> *t*<sub>V</sub> [<sub>tP</sub> *t*<sub>1</sub> ]]]]]]

This explains why pseudopassivization in (18) is subject to adjacency, and why binding in (17) is not. Truswell (2009) notes that there are some exceptions to the adjacency requirement. For example, (24a) is much better than (24b):

- (24) a. ?John was spoken sternly to.  
b. \*John was spoken yesterday to.

This might suggest that there is “room” for a certain restricted class of adverbials to adjoin between V and its PP complement. If adjuncts must adjoin to maximal projections, this implies that the structure of the lower VP is somewhat more articulated than we have been assuming. An alternative analysis, to be presented in section 6.3.2, is that the order in (24a) is derived via extraposition.

### **3.2 An outline analysis of the English passive**

Following Jaeggli (1986), Baker, Johnson & Roberts (1989), we will assume that the passive morpheme is responsible for absorbing the external  $\theta$ -role of  $v$  and blocking assignment of accusative Case. We will assume that the passive  $vP$  is headed by a special “defective”  $v$  head, written  $v^\circ$ , which does not assign a  $\theta$ -role to its specifier (Chomsky 2000, 2001).<sup>3</sup> This  $v^\circ$  head is spelled out as the passive morpheme, and, like other instances of  $v$ , selects an AgrP as its sister. The Agr phrase selected by  $v^\circ$  is, however, headed by a correspondingly defective Agr $^\circ$ . Agr $^\circ$  may attract a lexical head such as P, T or V, but the resulting P/T/V-Agr complex is not capable of assigning structural accusative Case.

The primary difference between our analysis of the passive and BJ&R’s is in the extent to which there is a syntactically-present nominal bearing the external argument  $\theta$ -role. For BJ&R, the passive morpheme is precisely such a nominal, and this is taken to explain instances where the suppressed external argument appears to enter into syntactic relations such as control:

- (25) The ship was sunk (by John<sub>1</sub>) [PRO<sub>1</sub> to collect the insurance].

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<sup>3</sup>We remain neutral on the question of whether or not  $v^\circ P$  is a “strong” phase (and hence a Spellout domain).

(*PRO can be controlled by agent of the matrix event whether or not 'by' phrase is present.*)

On our account, the suppressed external argument has a more spectral presence. It may in some sense be expressed by  $v^\circ$ , but since  $v^\circ$  is not a nominal, it cannot enter into ordinary DP-DP relations. This may well be an advantage over BJ&R's analysis, since there is little hard evidence that the suppressed external argument may do so. Examples such as (26) show that it cannot bind:

(26) John was arrested \*(by the police officers<sub>1</sub>) using each other<sub>1</sub>'s handcuffs.

There is also evidence that the apparent cases of control — such as (25) above — are really a separate phenomenon (see e.g. Lasnik 1988, Landau 1999:195-211).

To exemplify our analysis of the passive, (27) gives the structures for two active sentences, and (28) the structures for their corresponding passives. To facilitate a minimal comparison between the active and passive structures, the active sentence in (27b) is shown with reanalysis:

(27) a. John saw Bill.

LF: [<sub>V-Agr-vP</sub> John [<sub>V-Agr-v</sub> saw] [<sub>V-AgrP</sub> Bill *t*<sub>V-Agr</sub> [<sub>VP</sub> *t*<sub>V</sub> *t*<sub>Bill</sub>]]]

b. John talked to Bill.

LF: [<sub>V-vP</sub> John [<sub>V-v</sub> talked] [<sub>P-AgrP</sub> Bill [<sub>P-Agr</sub> to] [<sub>VP</sub> *t*<sub>V</sub> [<sub>PP</sub> *t*<sub>P</sub> *t*<sub>Bill</sub>]]]]]

(28) a. Bill was seen.

LF: [TP Bill ... [<sub>V-Agr<sup>o</sup>-v<sup>o</sup>P</sub> [<sub>V-Agr<sup>o</sup>-v<sup>o</sup></sub> seen] [<sub>V-Agr<sup>o</sup>P</sub> *t*<sub>Bill</sub> *t*<sub>V-Agr<sup>o</sup></sub> [<sub>VP</sub> *t*<sub>V</sub> *t*<sub>Bill</sub>]]]]]

b. Bill was talked to.

LF: [TP Bill ... [<sub>V-v<sup>o</sup>P</sub> [<sub>V-v<sup>o</sup></sub> talked] [<sub>P-Agr<sup>o</sup>P</sub> *t*<sub>Bill</sub> [<sub>P-Agr<sup>o</sup></sub> to] [<sub>VP</sub> *t*<sub>V</sub> [<sub>PP</sub> *t*<sub>P</sub> *t*<sub>Bill</sub>]]]]]]]

With regard to the assignment of partitive Case, we follow Lasnik (1995) in assuming that this Case can be assigned by [<sub>V-Agr<sup>o</sup></sub> be]. Thus, *two men* in (29) receives partitive Case in the same configuration in which an ordinary direct object receives accusative Case.

(29) There are two men.

In the next subsection, we will see evidence that P-Agr<sup>o</sup> can also assign partitive Case.

### 3.3 Paying attention to taking advantage

A classic puzzle in the study of passivization is illustrated in (30)-(32):

- (30) a. John took advantage of Bill.  
       b. John made fun of Bill.
- (31) a. John was taken advantage of.  
       b. Advantage was taken of John.
- (32) a. John was made fun of.  
       b. (Much) fun was made of John.

If we take passivization to be driven by the Case requirements of the surface subject, the possibility of the (a) structures in (31) and (32) is surprising. The addition of the passive morpheme ought to absorb the Case of whichever DP receives Case from the verb in (30) (presumably *advantage*). It ought therefore to be *advantage* that raises to subject position, not the complement of *of*. An informal notion of reanalysis offers the sketch of a solution to this problem: i.e., the (a) passives result if reanalysis applies, and the (b) passives result if it does not (Bach 1980, 323-324). The problem of refining this analysis further is essentially a technical one: just how is it that *of* can reanalyze with the verb (or any neighboring projection) when a DP intervenes? And how is the postverbal DP Case-licensed? An advantage of the present theory is that the first question receives a straightforward answer in terms of head movement, since movement of the preposition is not subject to an adjacency requirement.

The second question has previously been addressed by the hypothesis that *take advantage of* forms a syntactic complex predicate, thus exempting *advantage* from the Case filter (Chomsky 1973, Hornstein & Weinberg 1981). Rather than taking this approach, we follow Mills (2008) in assuming that *advantage* is licensed by partitive Case. This is the Case which, according to the

analyses of Belletti (1988), Lasnik (1995), is assigned by the copula and licenses the associate of *there* in existential constructions such as (33a)/(33b):

- (33) a. There were three men on the boat.  
b. There were three men arrested.

Partitive Case is compatible only with certain classes of DP. These can be roughly characterized as the “small” DPs on an analysis such as that of Zamparelli 2000. As expected, the restrictions imposed by partitive Case apply to the postverbal DPs in the pseudopassive constructions under consideration:

- (34) a. John was paid attention to.  
b. John was paid a great deal of attention to.  
c. John was paid every possible attention to.

Though judgments are difficult in this area owing to the idiosyncrasies of the various idioms involved, the restriction to small DPs tends to be relaxed in passives where the idiomatic DP is the subject. The passive in (35), for example, is detectably better than the one in (34c):<sup>4</sup>

- (35) ?Every possible attention was paid to John.

This contrast crucially shows that the restriction to small DPs is not imposed by the requirements of the *pay attention* idiom.

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<sup>4</sup>Judgments are quite variable for (34), (35), and other such cases. We do not think this variation should be taken too seriously as a grammatical phenomenon. For example, while some English speakers find (35) distinctly odd, the construction appears to have been unexceptionable in 19th century English, as shown by a Google search for “every attention was paid to” (quotes included), which returns many matches from 19th century texts, together with a few contemporary examples. In contrast, a search for “was paid every attention to” returns only two relevant matches as of Jan 3 2011. It seems unlikely that any deep grammatical distinction could be responsible for the differing judgments of modern English speakers. The important point here is that virtually everyone finds (35) noticeably better than (34c).

The derivation for (34a) is along the lines shown in (36):

(36) LF: [<sub>TP</sub> John<sub>1</sub> ... [<sub>v°P</sub> v° [<sub>P-Agr°P</sub> [<sub>DP</sub> fun]<sub>2</sub> P-Agr° [<sub>XP</sub> [<sub>V</sub> made] ... t<sub>2</sub> ... [<sub>PP</sub> of t<sub>1</sub>]]]]]

Here Agr° has ‘P’ features. Thus, P raises covertly to Agr° to create a complex P-Agr° head. This head assigns partitive Case to *fun* following covert raising to [Spec,P-Agr°P]. In sum, the postverbal DP in a passive such as (34a)/(34b) is subject to two sets of constraints: (i) those imposed by partitive Case; and (ii) those imposed by the idiom itself (e.g., that the DP must contain an NP headed by *fun*).<sup>5</sup> This amounts to the following claim:

(37) If a DP  $\alpha$  ...

- (i) Meets the requirements imposed by partitive Case; and
- (ii) can occur in a ...V  $\alpha$  PP... type idiom

...then  $\alpha$  will also be permissible in a passive such as “...V  $\alpha$  P t...”

To illustrate the need for stating the claim in this somewhat complex form, note that it is not counterexemplified by the contrast in (38):

- (38) a. There was a significant advantage (in arriving early).  
 b. \*John was taken a significant advantage of.

It might be suggested that since *a significant advantage* is compatible with the requirements imposed by partitive Case — as shown by (38a) — we ought therefore to expect the postverbal DP in (38b) to be licensed. However, this argument fails to impugn the claim in (37) because *a significant advantage* is never able to participate in the *take advantage* idiom:

(39) \*John took a significant advantage of Mary.

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<sup>5</sup>A similar observation is made in Taraldsen 1979.

Thus, condition (ii) of (37) is not met.

We have not yet explained why non-idiomatic pseudopassives such as (40b) are impossible:

- (40) a. John was taken advantage of.  
b. \*John was given a book to.

As far as we know, the only explanation for the impossibility of (40b) that has been offered to date is the aforementioned hypothesis that passives of this sort are conditioned on complex predicate formation. This in turn is conditioned on the idiomaticity, or “naturalness”, of the complex predicate (Hornstein & Weinberg 1981). It may be, then, that although no complex predicate is formed in the syntax, there is nonetheless some semantic process of complex predicate formation that is subject to a naturalness constraint. However, there seems to be some cross-linguistic variation in the productivity of pseudopassives of the type in (40). According to Taraldsen (1979) and Lødrup (1991), Norwegian is more permissive than English with respect to postverbal DPs in pseudopassives. These are sometimes available in the absence of any supporting idiomatic interpretation:

- (41) Brevet ble klistret frimerker på.  
The letter was pasted stamps on.  
(Lødrup 1991)

At present we have no explanation for this variation, and we leave the issue open.

Returning to English, Mills (2008) has claimed that there are dialects in which non-idiomatic pseudopassives such as (40b) are systematically possible. It is not clear what is responsible for the various cross-linguistic and cross-dialectal differences in passivization, but the existence of such variation does hint that (40b) may not be ruled out in the narrow syntax. The constraint which blocks (40b) in virtually all dialects of English appears to be one of a number of rather mysterious extrasyntactic constraints on pseudopassivization. We will discuss some of these in section 6.4.

### 3.4 Complex PPs

Pseudopassivization is possible out of complex PPs:

(42) John<sub>1</sub> was stood on top of *t*<sub>1</sub>.

We suggest that PPs of this sort have the following structure:

(43) [<sub>AgrP</sub> Agr ... [<sub>PP</sub> P ... [<sub>NP</sub> N ... [<sub>PP</sub> P ... ]]]] (where *N*=‘top’ in (42))

There is only one Agr head, to which the highest lexical P head raises. The resulting P-Agr complex assigns Case in the normal way. As usual, reanalysis occurs if the Agr head merges within vP, rather than immediately above the highest P head.

## 4. Reanalysis and binding

We assume that covert movement of a DCRP to [Spec,P-AgrP] is sufficient to license binding from that position.<sup>6</sup> Thus in a sentence such as (1a), with the derivation shown in (44), the antecedent

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<sup>6</sup>Lasnik (1999a) argues that covert raising to [Spec,V-AgrP] (i.e. v/V-medial Agr) is not sufficient to establish new binding relations. This implies that binding should not in fact be possible in (70a). Lasnik’s primary arguments are based on evidence from English verb-particle constructions and English existential constructions. These arguments were strong given the prevailing theoretical assumptions at the time but are no longer very persuasive.

The relevant fact about verb-particle constructions is illustrated by the following pair:

- (i) The boys made themselves/each other out to be idiots.
- (ii) The boys made out themselves/each other to be idiots.

Lasnik takes these data to show that an ECM subject cannot be bound by an antecedent in the matrix clause unless it raises overtly to matrix [Spec,V-AgrP]. This suggests that only overt A-movement is sufficient to license new binding configurations. However, this conclusion has been challenged by van Craenenbroeck & den Dikken (2006), who point to Lasnik’s (2001) observation that covert raising in (iii) can be analyzed not as the presence of a weak Agr, but rather as the complete absence of a separate Agr projection.

c-commands the anaphor at LF and binding is possible:

(44) LF: [<sub>V-VP</sub> John [<sub>V-v</sub> talked] [<sub>P-AgrP</sub> Mary<sub>1</sub> [<sub>P-Agr</sub> to] [<sub>VP</sub> [<sub>VP</sub> t<sub>V</sub> [<sub>PP</sub> t<sub>P</sub> t<sub>1</sub>]] [<sub>PP</sub> about herself<sub>1</sub>]]]]]

Baltin & Postal (1996) object to reanalysis accounts of these binding phenomena on the grounds that the set of PPs which permit pseudopassivization is not identical to the set of PPs which are transparent for binding. Rather, the former are a proper subset of the latter. For example, whereas *talk to* permits both pseudopassivization and binding — (45) — pseudopassivization is degraded for *talk with* despite binding being perfect — (46):<sup>7</sup>

- (45) a. John was talked to.  
 b. John talked to Mary<sub>1</sub> about herself<sub>1</sub>.

Lasnik (1999a, 2001) points out that the associates of *there* expletives cannot bind from [Spec,TP], as might be expected if associates move covertly to replace or adjoin to the expletive (Chomsky 1986, 1995). This argument depends on an analysis of existential constructions in which the associate of *there* raises to subject position at LF. Though there have long been alternatives to this kind of analysis (see e.g. Williams 1994, Hankamer & Sag 1976:424), these alternatives were not straightforwardly compatible with early Minimalist assumptions. More recent work has provided Minimalist alternatives. For example, Hornstein & Wiktos (2003) and Hornstein (2009:139) propose a doubling analysis, according to which the expletive is initially merged as part of a doubling constituent with the associate. The doubling relation allows  $\phi$ -features on *there* to be valued by those of [a man]. When *there* subsequently raises to T, the  $\phi$ -features of *there* value those on T. Since no direct relation is established between T and the associate, the associate is not expected to behave as if it c-commands the region of the tree c-commanded by T.

It appears that there is currently little empirical evidence either for or against the hypothesis that covert A-movement is able to license new binding configurations. Absent evidence to the contrary, we assume that covert movement has the same properties as overt movement in this respect.

<sup>7</sup>Baltin & Postal's other examples are somewhat difficult to assess. In their (5c-f), they present a number of examples based on (iii):

- (iii) ?The detective worked from Mary<sub>1</sub> back to herself<sub>1</sub>. (*B&P's judgment.*)

However, all English speakers we have consulted find binding to be highly degraded in (iii). Impossible pseudopassives such as B&P's (5e) (*\*Mary was worked back from to Sally*) have on our account the same analysis as (61a).

- (46) a. ?John was talked with.  
b. John talked with Mary<sub>1</sub> about herself<sub>1</sub>.

We agree with B&P that (46a) is degraded as compared to (45a). However, we suggest that the relevant comparison cases for judging the acceptability of pseudopassives are examples such as (47b), where the complement of a preposition which is not the closest to the verb is passivized:

- (47) a. John was talked about.  
b. \*John was talked to Bill about.

For all the speakers we have consulted, (47b) is considerably worse than (46a). This is perhaps the level of unacceptability to be expected if reanalysis is truly impossible. With regard to (46a), we note that while reanalysis is a precondition for pseudopassivization, it is surely not the *only* precondition. It may well be that reanalysis does successfully apply in (46a), and that passivization is degraded for some other reason.

One possible source of the degradation of (46a) is a constraint blocking the passivization of symmetric predicates (Bach 1980:332-333, Dowty 1991, Hallman 2000:58). As an illustration of this constraint, note that the verb *marry* has two possible meanings in the active sentence (48), but in the passive sentence (49) has only the reading where the surface subject stands in an asymmetric relation to the logical subject:

- (48) John married Mary.  
*(Ambiguous: either "John and Mary (got) married," or "John presided over Mary's marriage ceremony.")*
- (49) Mary was married by John.  
*(Has only the reading "John presided over Mary's marriage ceremony.")*

Regarding the contrast between (45a) and (46a), we suggest that *talk with* is “more symmetric” than *talk to*. The former strongly suggests (without perhaps implying) a two-way conversation. This is illustrated by (50a), which has the interpretation glossed in (50b):

- (50) a. I talked TO John but not WITH him.  
b. I said things to John, but John didn’t reciprocate.

The mild degradation of (45a) may therefore follow from the fact that *talk with* is a quasi-symmetric predicate. More generally, it appears that *with* pseudopassives are fully acceptable only with robustly asymmetric predicates. Thus, symmetric or quasi-symmetric predicates such as *dance with* and *bargain with* resist pseudopassivization, whereas clearly asymmetric predicates such as *dispense with* and *do away with* do not:

(51) **Symmetric or quasi-symmetric**

- a. ?John was bargained with.  
b. ?John was argued with.

(52) **Asymmetric**

- a. John was dispensed with.  
b. John was done away with.

#### 4.1 Non-c-command-based theories of binding

An appealing feature of the reanalysis account of binding from within PPs is the explanation it offers for the contrast in (53) (van Riemsdijk & Williams 1986, 203):

- (53) a. Who<sub>1</sub> did Mary talk to *t*<sub>1</sub> about himself<sub>1</sub>?  
b. \*[To whom<sub>1</sub>]<sub>2</sub> did Mary talk *t*<sub>2</sub> about himself<sub>1</sub>?  
c. \*[To Mary<sub>1</sub>]<sub>2</sub>, John talked *t*<sub>2</sub> about herself<sub>1</sub>.

The traditional explanation is that reanalysis destroys the constituency of the PP, barring it from undergoing subsequent *wh*-movement in (53b)/(53c). On our account, P-AgrP is a constituent following reanalysis, but the intervention of VP between P-Agr and the *wh*-phrase nonetheless blocks pied-piping of P-AgrP:<sup>8</sup>

- (54) a. [P-AgrP:**+wh** P-Agr [PP:**+wh** P Wh]]  
 b. [P-AgrP:~~**+wh**~~ P-Agr [VP:~~**+wh**~~ V [PP:**+wh** P Wh]]]

To our knowledge, no means of accounting for the data in (53) has yet been proposed which does not appeal to reanalysis in one form or another. Thus, (53a)/(53b) poses a significant empirical challenge to theories of binding which attempt to accommodate (53a)/(1a) by abandoning the c-command condition on binding altogether.

A representative example of such a theory is that presented in Pollard & Sag 1992. P&S argue that Conditions A and B are stated over ARG-ST lists, which are essentially ordered lists containing the arguments of a given predicate. Argumenthood here is to be understood in a syntactic rather than semantic sense, such that *John* in (55) is taken to be an argument of *believe*:

- (55) John believes Bill to like Mary.

The ARG-ST list for *believe* in (55) is approximately as follows:

- (56) ⟨ *John, Bill*, [VP to like Mary] ⟩

Since ARG-ST lists are ordered, it is straightforward to define an asymmetric precedence relation over them; in P&S’s terminology, *John* in (55) “o-commands” *Bill*. Condition A is stated as the requirement that an anaphor have an o-commanding antecedent in the same ARG-ST list (and conversely for Condition B). P&S’s crucial further assumption is that the complement of a preposition

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<sup>8</sup>Note that pied-piping of PP alone would cause the derivation to crash, since it would block subsequent covert movement of P’s complement to [Spec,P-AgrP], and of P to Agr.

can appear on the ARG-ST list of the verb which takes the relevant PP as a complement. So for example, the ARG-ST list for *talk* in (57a) is approximately as shown in (57b):

- (57) a. John<sub>1</sub> talked to Bill<sub>1</sub> about himself<sub>1/2</sub>.  
b. ⟨ *John, Bill, himself* ⟩

The anaphor *herself* therefore has two potential o-commanding antecedents on the same ARG-ST list, and the attested binding possibilities are correctly predicted.

We have already seen that the data in (53) are problematic for argument structure theories of binding. A further difficulty for P&S's analysis is posed by the contrast in (58):

- (58) a. John talked to Mary<sub>1</sub> about herself<sub>1</sub>.  
b. \*John talked *t*<sub>2</sub> about herself<sub>1</sub> [to Mary<sub>1</sub>]<sub>2</sub>.

For P&S, the ARG-ST list is identical for (58a) and (58b) (⟨ *John, Mary, herself* ⟩), so their Condition A is not able to make any cut between the two. P&S recognize this difficulty, and postulate a linear precedence constraint on anaphoric binding to rule out (58b) (p. 266). However, as Baltin (2006) notes, English does not impose any such requirement on anaphoric binding in the general case. This is shown for example by the acceptability of (59b) and (59d):<sup>9</sup>

- (59) a. John<sub>1</sub> talks to himself<sub>1</sub> frequently.  
b. To himself<sub>1</sub>, John<sub>1</sub> talks frequently.  
c. John<sub>1</sub> would like himself<sub>1</sub>.  
d. Himself<sub>1</sub>, John<sub>1</sub> would like.

The reanalysis account of the contrast in (58) is relatively unproblematic. Following P&S, we assume that *to...about* is the base order, and that (58b) is derived via extraposition of the *to* PP. Movement of P to Agr is obligatorily covert, and thus must follow overt extraposition of the PP.

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<sup>9</sup>For important early discussions of binding facts of this type, see Lakoff 1968 and Reinhart 1983.

Assuming that extraposition targets an adjoined position in (58b),<sup>10</sup> head movement of P to Agr, and phrasal movement of P’s complement to [Spec,P-Agr], violate the adjunct island condition.

With regard to examples such as (60), which are correctly ruled out by P&S’s o-command condition, we note that binding is also predicted to be impossible under our account, for two reasons. First, *about* is not structurally the closest preposition to the verb and hence cannot reanalyze with it. Second, on the assumption that the *about...to* order results from extraposition of the *to* PP, the *to* PP in (60) has moved to a higher position, so that nothing within the *about* PP could possibly c-command it:

(60) \*Mary talked  $t_1$  about John<sub>1</sub> [to himself<sub>1</sub>].

As expected, pseudopassivization from within an *about* PP is also degraded whenever a *to* PP is present, whatever the surface word order:

- (61) a. ??Mary was talked about  $t$  to John.  
 b. \*Mary was talked to John about  $t$ .

In addition to the empirical problems just mentioned, there are some conceptual problems with the use of argument structure to obviate the problem posed by binding from within PPs. Often when argument structure theories of binding are presented, the details of the mapping from constituent structure to argument structure are left tacit. This is of course understandable, given the range of complex issues that arise in this connection. Nonetheless, once one begins to spell out in detail a mapping procedure (or set of mapping constraints), it becomes necessary to make an exception for PPs very much like the exceptions typically made in c-command-based theories of binding. Clearly, it is not the case that for any verb V, any DP that is contained within a sister of V can be one of its arguments. For example, the subject of an embedded finite clause which is the sister of V cannot under any circumstances be one of V’s arguments. Quite possibly, the only non-sister of

<sup>10</sup>On “freezing” effects of this type, see Rochemont & Culicover 1990.

V which can be an argument of V is the complement of V's PP complement. Unless this exception can be given some principled explanation, it is necessary to make a special stipulation for PPs in the theory of the syntax/argument-structure mapping. For example, in their revision of P&S's theory, Sag, Wasow & Bender (2003:211-13) stipulate a mechanism which causes the MODE and INDEX values of a DP to percolate up to its containing PP.

## 5. The status of strict c-command

### 5.1 Variable binding and NPI licensing

Variable binding is not constrained by strict c-command at surface structure.<sup>11</sup> For this reason, the fact that the pronoun can be bound by the quantifier in a German example such as (62) (in spite of the unavailability of pseudopassivization or preposition stranding in German) does not pose a problem for our analysis:

- (62) Hans hat mit jeder Frau über ihre Zukunft gesprochen.  
Hans has with every woman about her future spoken.  
'Hans has spoken with every woman about her future.'

What might potentially pose a problem is anaphoric binding out of PP in a language lacking both pseudopassivization and preposition stranding. We will discuss such cases in section 7.2.

Similar remarks apply to NPI licensing. Licensing is possible when the licensor is contained in a PP, as shown in (63):

- (63) I talked to no student about any of his grades.

However, strict c-command at surface structure may not be the relevant relation for NPI licensing. Following Ladusaw 1979, it is generally recognized that NPI licensing is conditioned on some interaction of downwards entailment and a suitable scope configuration. Scope tends to be de-

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<sup>11</sup>What seems to be relevant here is the structural relation dubbed "almost c-command" by Hornstein (1995).

terminated by “almost c-command” rather than strict c-command. NPI licensing is possible in the absence of strict c-command in a similar range of configurations to variable binding:

(64) No-one’s mother ate any cookies.

## 5.2 Possessive reciprocals

Examples with possessive reciprocals such as (65) have often been cited in support of the claim that English PPs do not block binding (see e.g. Pesetsky 1995):

(65) John talked to the boys<sub>1</sub> on each other<sub>1</sub>’s birthdays.

In a certain sense (65) clearly does support this claim: the antecedent is contained in a PP and the indicated interpretation is not blocked. However, there is reason to think that the reciprocal in (65) is a logophor rather than an anaphor bound under Condition A. Logophors are plausibly taken to behave as bound pronouns with regard to structural conditions on antecedence, implying that strict c-command should not be necessary to license binding in (65). Pollard & Sag (1992) present a number of persuasive arguments that reciprocals of the type in (65) are logophors. We will now present two additional arguments.

(i) Though *each other* generally permits both animate and inanimate antecedents, possessive *each other* is compatible only with animate antecedents:

(66) a. I placed the boys<sub>1</sub> next to each other<sub>1</sub>.

b. I placed the pens<sub>1</sub> next to each other<sub>1</sub>.

(67) a. I placed the boys<sub>1</sub> next to each other<sub>1</sub>’s mothers.

b. #I placed the pens<sub>1</sub> next to each other<sub>1</sub>’s cases.

This is expected if possessive *each other* is a logophor, since logophors typically seek prominent animate antecedents.

(ii) Possessive *each other* does not require a strictly c-commanding antecedent:

(68) [Pictures of [the boys]<sub>1</sub>] were taken at each other<sub>1</sub>'s birthday parties.

If possessive reciprocals are indeed logophors, this has the important consequence that examples such as (69) are not as problematic as they may first appear:

(69) John talked to Mary in front of the boys<sub>1</sub> on each other<sub>1</sub>'s birthdays.

Reanalysis cannot derive an LF for (69) where *the boys* c-commands *each other*. However, binding is nonetheless licit because possessive *each other* does not require a strictly c-commanding antecedent.

### 5.3 Binding within nominals

The binding pattern in examples such as (70a) appears to be paralleled in the nominal domain:

- (70) a. John talked to Mary<sub>1</sub> about herself<sub>1</sub>.  
b. A letter to Mary<sub>1</sub> about herself<sub>1</sub>.

Since reanalysis is clearly not involved in (70b), examples of this sort appear to argue that reanalysis is not a precondition on binding out of PP. The argument is, however, weakened by the observation that reflexives in this configuration behave as logophors (Pollard & Sag 1992, Reinhart & Reuland 1993). As shown in (71), they do not require c-commanding antecedents:

- (71) a. I showed letters about herself<sub>1</sub> to Mary<sub>1</sub>.  
b. The boys<sub>1</sub> were worried. Private letter about themselves<sub>1</sub> were circulating.

Since logophors need not be structurally bound at all, the lack of c-command in (70b) will not prevent the reflexive receiving the indicated interpretation. Moreover, with many nominals, binding of reflexives is not possible:

- (72) a. I spoke to John<sub>1</sub> about himself<sub>1</sub>.  
b. ??I gave a speech to John<sub>1</sub> about himself<sub>1</sub>.

## 5.4 Condition C

If Condition C effects are conditioned on strict c-command, our analysis predicts that there should be a contrast between (73a) and (73b)/(73c). In (73a), reanalysis of *to* is possible (and hence preferred; see section 2.2). In contrast, reanalysis is blocked in (73b) by extraposition of the *to* PP; and in (73c), there are no v/Agr projections within the nominal:

- (73) a. \*I talked to him<sub>1</sub> about John<sub>1</sub>'s friends.  
b. ??I talked *t*<sub>PP</sub> about him<sub>1</sub> [to John<sub>1</sub>'s friends].  
c. ??A message to him<sub>1</sub> about John<sub>1</sub>'s friends.

As indicated in the judgments, some speakers do find (73b)/(73c) detectably better than (73a). Nonetheless, a violation of Condition C seems to be incurred in all of (73a)-(73c). We will now argue that this is an instance of a more general phenomenon. Condition C effects can be triggered either under strict c-command, or under a weaker structural relation which is sensitive to linear precedence.<sup>12</sup>

Condition C is usually taken to be sensitive to strict c-command in a way that variable binding is not. No Condition C effect obtains in (74d), for example, despite the availability of a bound variable reading in (74b):

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<sup>12</sup>An anonymous reviewer argues that accounting for Condition C effects without appeal to strict c-command undermines the general program of this paper, which seeks to uphold strict c-command as the determinant of Condition A and B effects. However, there is no particular reason to expect that Condition C should be stated in terms of the same structural relation as Conditions A and B. Indeed, given the influential hypothesis of Reinhart (1983) that Condition C effects in a given configuration are tied to the availability of bound variable readings, the sensitivity of Condition C to strict c-command is unexpected. One would rather expect Condition C effects to be sensitive to whatever structural constraints govern variable binding. See Safir 2011:§3 for recent discussion of this point.

- (74) a. Everyone<sub>1</sub> loves his<sub>1</sub> mother.  
b. Everyone<sub>1</sub>'s mother loves him<sub>1</sub>.  
c. \*He<sub>1</sub> loves John<sub>1</sub>'s friends.  
d. His<sub>1</sub> friends love John<sub>1</sub>.

There is, however, conflicting evidence from examples in which the pronoun is not in subject position, or contained within a subject. The Condition C effect in (75b) appears to be conditioned not on strict c-command, but on some other structural relation sensitive to linear precedence:

- (75) a. I gave a picture of John<sub>1</sub> to him<sub>1</sub>.  
b. ??I gave [a picture *t*<sub>1</sub>] to him<sub>1</sub> of John<sub>1</sub>.

It would require a highly abstract syntactic analysis to ensure that *him* c-commands *John* in (75b) following extraposition, even if the structure introduced by the prepositions were ignored. Condition C effects which are not triggered under strict c-command appear to be somewhat weaker than those which are:

- (76) a. ??I talked *t*<sub>PP</sub> about him<sub>1</sub> [<sub>PP</sub> to John<sub>1</sub>'s parents].  
b. \*I gave him<sub>1</sub> John<sub>1</sub>'s presents.  
c. \*He<sub>1</sub> loves John<sub>1</sub>'s mother.

Returning now to (73), it seems that (73b)-(73c) show the weaker kind of Condition C violation. In (73a), reanalysis establishes strict c-command, triggering a strong Condition C violation.

Another potentially problematic case is (77), where the present theory predicts that *about* should not be able to reanalyze:

- (77) \*John spoke to Bill about her<sub>1</sub> on Mary<sub>1</sub>'s birthday.

If ditransitive *talk* has an articulated structure containing several verbal projections, it is possible that there are also multiple Agr projections, so that both *to* and *about* can reanalyze with separate Agr heads. The LF in (78) shows both *to* and *about* undergoing reanalysis in the vP *spoke to John about Bill*. The two Agr projections sit above two verbal projections labeled  $V_\alpha$  and  $V_\beta$ :

(78)  $[v' v [P\text{-AgrP John } [P\text{-Agr } to] [V_\alpha P [PP t_{to} t_{John} ] V_\alpha [P\text{-AgrP } [P\text{-Agr } about] Bill [V_\beta P V_\beta [PP t_{about} t_{Bill}]]]]]]]$

In this structure, the erstwhile complement of *about* will c-command into adjuncts on its right, if these adjoin at or below the lower P-AgrP.<sup>13</sup> We can verify that the availability of multiple reanalysis does not lead to overgeneration. The first case to consider is that of impossible pseudopassives such as (15c) (*\*John was spoken to Mary about*). These are still blocked, since although *about* can reanalyze with an Agr head in the verbal spine, it cannot reanalyze with the defective Agr<sup>o</sup> head selected by passive v<sup>o</sup>. In the case of the illicit binding relation in (60) above (*\*Mary talked about John to himself*), the availability of multiple reanalysis neutralizes only the first of the two reasons given for the absence of a licit derivation.

If multiple reanalysis is possible, we predict a contrast between (73a)/(77) and (79):

(79) ?Mary stood near him<sub>1</sub> during John<sub>1</sub>'s first performance.

In (79) there is no possibility of the adjunct *near* PP undergoing reanalysis. Most speakers find (79) appreciably better than (77). Such degradation as there is in (79) is not accounted for by our analysis, which predicts that (79) should not violate Condition C.

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<sup>13</sup>See Lechner 2003 for an analysis of the position of right adjuncts in a Lasnik-style vP.

## 6. Baltin & Postal's phenomena

We have already discussed some of the objections to reanalysis presented in Baltin & Postal 1996.<sup>14</sup> Our analysis shares two key intuitions behind traditional reanalysis hypotheses: (i) that some operation associating the verb and the preposition feeds pseudopassivization, and (ii) that the complement of the preposition is in some sense promoted to direct objecthood. One might therefore expect some of B&P's objections to count against our analysis also. B&P's arguments are primarily based on a single kind of observation: that in various respects, DP complements of reanalyzed prepositions (DCRPs) do not behave like ordinary direct objects. Traditional reanalysis hypotheses cannot explain these differences in behavior because they hold that DCRPs just *are* ordinary direct objects. On our account, DCRPs are syntactically distinct from ordinary direct objects insofar as they have a different base position. (They originate as complements of P rather than V.) In sections 6.1-6.7 we argue that this distinction is sufficient to explain the differences in behavior noted by B&P.

### 6.1 Syntactic independence of stranded prepositions

B&P note that given examples such as (80), it is implausible to maintain that reanalyzed prepositions are in any way attached to the associated verb:

(80) The bridge was flown both under and over.

Under our analysis, cases such as (80) can be derived simply by coordination of the two P heads<sup>15</sup>

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<sup>14</sup>We unfortunately do not have space to give a proper reaction to Postal 2011. Postal (2011:200) presents a new analysis of pseudopassivization which does not involve promotion to direct object (or "2-object" in Postal's terms). Our "raising to object" analysis has more in common with earlier relational grammar accounts of passivization (e.g. Perlmutter & Postal 1983), which likewise assumed that only direct objects can passivize.

<sup>15</sup>An anonymous reviewer points out that there is independent evidence that coordinated heads can undergo head movement. Coordinated modals can undergo T-to-C movement, as in questions such as *Could and should she do that?*

(81) LF: ... [<sub>v°P</sub> v° [<sub>P-Agr°P</sub> [<sub>DP</sub> the bridge] [<sub>P</sub> under and over]-Agr° [<sub>VP</sub> [<sub>V</sub> flown] [<sub>PP</sub> *t<sub>P</sub>* *t<sub>DP</sub>*]]]]

## 6.2 Floating quantifiers

B&P note that whereas direct objects sometimes allow floating quantifiers, DCRPs do not:

(82) The airforce struck (\*at) those targets both in the morning.

This is expected under an extension of the analysis of floating quantifiers first proposed in Sportiche 1988. According to Sportiche, subject-oriented floating quantifiers originate together with the subject in a quantificational phrase (QP). This QP receives a thematic role in [Spec,VP] (which we will anachronistically take to be [Spec,vP]). The subject then raises out of the QP to the matrix subject position:

(83) [The boys]<sub>1</sub> [<sub>vP</sub> [<sub>QP</sub> all *t<sub>1</sub>*] saw the girls].

For floating quantifiers associated with objects, it is easy enough to extend Sportiche’s analysis to make use of the v/V-medial Agr projection. The QP begins as the complement of V, and the DP then extracts from the QP to raise to [Spec,V-AgrP]. In the case of V-AgrP, this raising may be overt, whereas in the case of P-AgrP (the reanalysis case), raising is obligatorily covert. Thus, reanalysis will be incompatible with quantifier float:<sup>16</sup>

(84) [The airforce]<sub>1</sub> ... [<sub>V-Agr-vP</sub> *t<sub>1</sub>* [<sub>V-Agr-v</sub> struck] [<sub>V-AgrP</sub> [<sub>DP</sub> those targets] [<sub>V-AgrP'</sub> *t<sub>V-AgrP</sub>* [<sub>VP</sub> *t<sub>V</sub>* [<sub>QP</sub> both [<sub>DP</sub> ~~those targets~~]]]]]]].

(85) [The airforce]<sub>1</sub> ... [<sub>V-vP</sub> *t<sub>1</sub>* [<sub>V-v</sub> struck] [<sub>P-AgrP</sub> [<sub>DP</sub> ~~those targets~~] [<sub>P-Agr</sub> at] [<sub>VP</sub> *t<sub>V</sub>* [<sub>PP</sub> [<sub>P</sub> at] [<sub>QP</sub> both [<sub>DP</sub> ~~those targets~~]]]]]]].

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<sup>16</sup>To highlight the relevant contrasts between the two derivations, (84)-(85) use a mix of trace/copy notation. This is not intended to imply a theoretical commitment to any particular analysis of movement. Traces (*t*) in these examples are always traces of overt movement. A striken-through copy is, if it is the higher copy, the landing site of a covert movement, and if it is the lower copy, the initial position of an overtly moved phrase.

### 6.3 Ellipsis phenomena

B&P note a number of respects in which DCRPs do not behave like direct objects with respect to ellipsis/deletion. Most significantly, DCRPs do not permit gapping — (86) — or pseudogapping — (87):<sup>17</sup>

- (86) a. Frank called Sandra and Arthur \_ Louise.  
 b. \*Frank talked to Sandra and Arthur \_ Sally.
- (87) a. Frank called Sandra and Arthur did Louise.  
 b. \*Frank talked to Sandra and Arthur did Louise.

As we will now explain, these differences between DCRPs and direct objects are not unexpected under our analysis.

#### 6.3.1 Gapping and pseudogapping

We assume pseudogapping of direct objects is derived via movement of the object to [Spec,AgrP] prior to VP ellipsis (Lasnik 1999b). Thus, pseudogapping is correctly predicted to be degraded in (87b). The structures for (87a)/(87b) are shown respectively in (88a)/(88b):<sup>18</sup>

- (88) a. Frank called Sandra and Arthur did Louise.  
 SS: ... [<sub>v'</sub> v [<sub>AgrP</sub> Louise<sub>I</sub> [<sub>VP</sub> [<sub>V</sub> called] *t*<sub>I</sub>]]]  
 ('Louise' raises overtly and escapes the ellipsis site.)

<sup>17</sup>The judgment on (87b) is somewhat controversial. E.g., Lasnik (1999b) has suggested that such examples are relatively acceptable. Most speakers we have asked find (87b) distinctly worse than (87a). B&P also discuss comparative subdeletion. We will have little to say about this phenomenon, since the analysis of comparative subdeletion remains controversial, and it is difficult to make any general comments.

<sup>18</sup>Note that — atypically — V does not raise overtly to v in (88a), even though *Sandra* does raise overtly to [Spec,AgrP]. Lasnik's analysis of pseudogapping relies on the hypothesis that V's strong features are permitted to remain unchecked at Spellout so long as V is eventually elided.

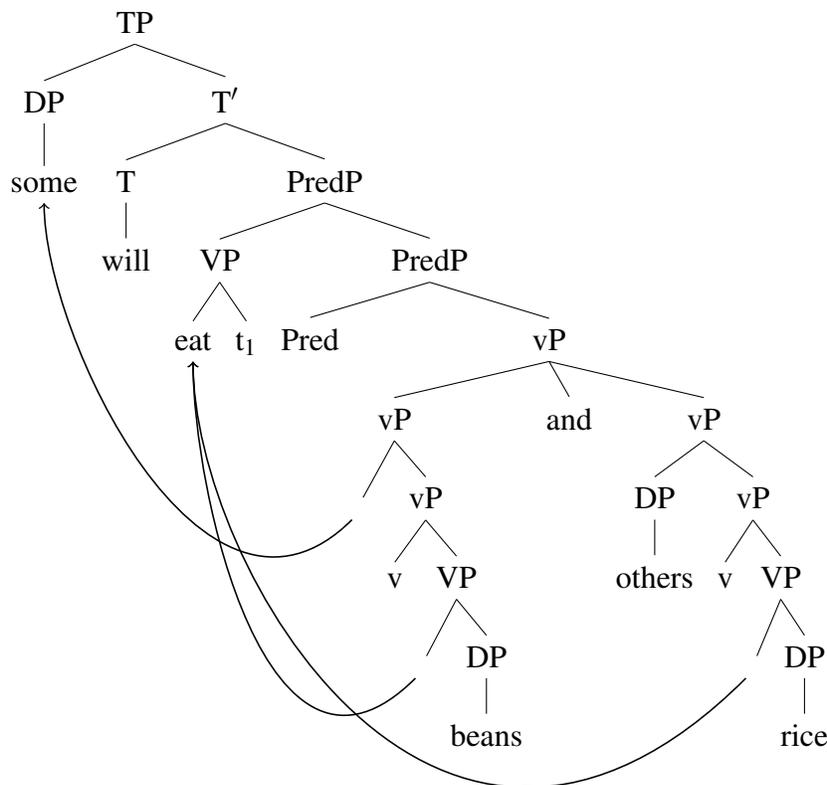
b. Frank talked to Sandra and Arthur did Louise.

SS: ... [<sub>v'</sub> v [<sub>AgrP</sub> [<sub>VP</sub> [<sub>V</sub> talked] [<sub>PP</sub> to Louise]]]]

(‘Louise’ remains as the complement of V at SS and can’t escape the ellipsis site.)

If gapping has a broadly similar derivation to pseudogapping (i.e. one involving extraction of the object from VP; see e.g. Sag 1976, Coppock 2001), then the same logic applies. If, on the other hand, gapping has the derivation proposed in Johnson 2009, a different explanation for the ill-formedness of (86b) will be required. According to Johnson, gapping is derived by across-the-board raising of the VP to the spec of a higher Pred head. In some cases, raising of the VP is preceded by extraposition out of the VP, as in (88), where *beans* extraposes:

(88)



To derive (86b), it would be necessary to create a VP constituent with the string yield *talked to* (i.e. a VP excluding the complement of the preposition). This would only be possible if DCRPs could extrapose. We will see in section 6.6 that the ban on extraposition of P’s complement must be stated in such a way that DCRPs cannot extrapose.

**6.3.2 A problem raised by the interaction of pseudogapping and binding**

It is possible to bind out of PPs which are remnants of pseudogapping:

(89) John talked to Mary<sub>1</sub> about herself<sub>1</sub> and Jane did to Bill<sub>2</sub> about himself<sub>2</sub>.

On the assumption that pseudogapping is a form of VP ellipsis, the *to* and *about* PPs in the second conjunct must somehow have extracted from VP (we will assume via movement of some kind; Jayaseelan 1990). The problem to be discussed in this subsection is raised by the contrast between (89) and examples such as (53b)/(58b), repeated here in (90):

- (90) a. \*[To whom<sub>1</sub>]<sub>2</sub> did you talk *t*<sub>2</sub> about himself<sub>1</sub>.  
 b. \*I talked *t*<sub>2</sub> about himself<sub>1</sub> [to Bill<sub>1</sub>]<sub>2</sub>.

We have argued on the basis of such examples that movement of a PP blocks reanalysis, and hence binding. On the face of it, the PPs in (90) appear to have extraposed out of the ellipsis site, so it is surprising that binding is not blocked.

A clue to the correct analysis of (89) is that the relative order of the *to* and *about* PPs affects binding precisely as it does in the absence of ellipsis. For example, the contrast in (58) is mirrored in (91):

- (91) a. John talked to Mary<sub>1</sub> about herself<sub>1</sub> and Jane did to Bill<sub>2</sub> about himself<sub>2</sub>.  
 b. \*John talked to Mary<sub>1</sub> about herself<sub>1</sub> and Jane did about himself<sub>1</sub> to Bill<sub>2</sub>.

This suggests that the *to* and *about* PPs in (91) have not extraposed independently. We suggest that AgrP is in fact the extraposed constituent in these cases, and V-vP the elided constituent:

- (92) PF: [[...did [<sub>V-vP</sub> talk<sub>V-v</sub> *t*<sub>AgrP</sub>]] [<sub>AgrP</sub> Agr [<sub>VP</sub> [<sub>VP</sub> *t*<sub>V</sub> [<sub>PP</sub> *to*<sub>P</sub> Bill]] [<sub>PP</sub> about himself]]]]]  
 LF: [[...did [<sub>V-vP</sub> talk<sub>V-v</sub> *t*<sub>AgrP</sub>]] [<sub>P-AgrP</sub> Bill *to*<sub>P-Agr</sub> [<sub>VP</sub> [<sub>VP</sub> *t*<sub>V</sub> [<sub>PP</sub> *t*<sub>P</sub> *t*<sub>Bill</sub>]] [<sub>PP</sub> about himself]]]]]

In (92), AgrP extraposes overtly to a position above vP, and reanalysis applies subsequently. If such a derivation is available, we also gain some insight into the contrast between (93a) and (93b):

- (93) a. John spoke yesterday to Mary<sub>1</sub> about herself<sub>1</sub>.  
b. \*John was spoken yesterday to.

So far, we have assumed that *yesterday* can be base-generated between *talked* and *to Mary* in (93a), and that this is not possible in (93b) because the verb is in a lower position (section 3.1).<sup>19</sup> If AgrP is able to extrapose, a different account of this contrast becomes available: the order in (93a) is derived via extraposition of AgrP. Such a derivation is not possible for (93b), because in a pseudopassive the DCRP must eventually move to subject position. If AgrP has extraposed to an adjoined position, this movement will violate the adjunct island constraint.

#### 6.4 Passivization and object raising

B&P point out a striking parallel between passivization and *tough*-movement. The extent to which pseudopassivization is acceptable correlates with the acceptability of the corresponding *tough*-movement construction:<sup>20</sup>

- (94) a. \*The chair was stood next to.  
b. \*The chair is difficult to stand next to.
- (95) a. ??John was stood up to (by Bill).  
b. ??Bill is tough to stand up to.
- (96) a. John was spoken to (by Bill).  
b. John is tough to speak to.

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<sup>19</sup>See e.g. Johnson 1991, Pesetsky 1989 for analyses in which (93a) is derived without movement of the *to* PP.

<sup>20</sup>We have found that many of B&P's starred examples are in fact acceptable for most English speakers, so we give different examples here. As far as we can tell, B&P are nonetheless correct regarding the correlation between the acceptability of pseudopassivization and the acceptability of *tough* movement.

B&P use these data as the basis for an argument against reanalysis which would apply to the present theory. Though the data are very interesting, we find B&P's argument, summarized in the following quotation, to be somewhat unclear:

In all these cases [examples similar to our (94)-(96) above] the PP object is [able to undergo *wh*-movement]; thus, there is no general ban on extraction or P-stranding that can be used to block the [(b)] form. The constraints on the [(b)] cases seem linked to the pseudopassive restrictions in the [(a)] cases. **If pseudopassives involved “reanalysis,” the unacceptable [(b)] cases would presumably have to be attributed to failures of “reanalysis”.** But if it exists, “reanalysis” must be optional...Therefore, whatever “reanalysis” restrictions exist would leave a full PP analysis available, and full PPs are in general not incompatible with object raising. Thus, a “reanalysis” view of pseudopassives provides no way to link the pseudopassive and object-raising restrictions in a range of cases like [(94)-(96)]. (p. 132, our emphasis)

The bolded claim is questionable. Successful reanalysis is but one requirement for an acceptable pseudopassive. It therefore seems reasonable to assume that something other than failure of reanalysis is responsible for the deviance of (94a) and (95a). This is particularly so given the well-known fact that pseudopassives of this sort can be rescued by a pragmatic context in which the subject is “affected.” For example, (97) is much better than (94a):

(97) The chairs in this room are very fragile, and can be damaged if someone so much as stands next to one. Thus, you will easily be able to identify the chairs that have been **stood next to** by the fatigue cracks in the legs.

Unless the reanalysis operation itself is subject to pragmatic constraints (which seems unlikely), something else must be at work. In fact, what the illicit pseudopassive and *tough*-movement cases appear to have in common is that they are both violations of the “affectedness” constraint on

certain kinds of subject-predicate construction.<sup>21</sup> This constraint applies to pseudopassives and passive nominalizations, but not to ordinary passives.<sup>22</sup>

(98) **Pseudopassives**

- a. John shot at Mary  $\Rightarrow$  Mary was shot at (by John).
- b. John stood next to Mary  $\nRightarrow$  \*Mary was stood next to (by John).

(99) **Passive nominalizations**

- a. Bill’s arrest of John  $\Rightarrow$  John’s arrest (by Bill).
- b. Bill’s avoidance of John  $\nRightarrow$  \*John’s avoidance (by Bill).

(100) **Ordinary passives**

- a. John arrested Bill  $\Rightarrow$  Bill was arrested (by John).
- b. John avoided Bill  $\Rightarrow$  Bill was avoided (by John).

Intriguingly, those forms of the passive constrained by affectedness are precisely those restricted to agentive *by* phrases:

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<sup>21</sup>The affectedness constraint was first formulated by Anderson (1979:43) in relation to passive nominalizations (though Anderson does not propose that passivization as such is restricted by this constraint). See also Ramchand & Svenonius 2004 for recent discussion.

<sup>22</sup>There are examples demonstrating an apparent affectedness constraint on verbal passivization, such as the well-known contrast between the following active/passive pair:

- (iv) John left Sweden.
- (v) \*Sweden was left by John.

However, the contrast between (99b) and (100b) appears to show that the affectedness constraint is (for reasons we do not understand) weaker for the verbal passive. Or perhaps there are two distinct constraints at work here.

(101) **Pseudopassives**

- a. John stood on the desk  $\Rightarrow$  The desk was stood on by John.
- b. A lamp stood on the desk  $\nRightarrow$  # The desk was stood on by a lamp.

(102) **Passive nominalizations**

- a. The surrounding of the city by the barbarians.
- b. #The surrounding of the city by trees.

(103) **Ordinary passives**

- a. John persuaded Bill  $\Rightarrow$  Bill was persuaded by John.
- b. John's argument persuaded Bill  $\Rightarrow$  Bill was persuaded by John's argument.

Similarly, the subject of the non-finite clause in a sentence with *tough*-movement must be an agent, whether it is null or overt.<sup>23</sup>

## (104) These candles are difficult to blow out.

*(Has only the reading "...are difficult for **people** [not the wind, etc.] to blow out.")*

- (105) a. These candles are difficult for children to blow out.
- b. #These candles are difficult for the wind to blow out.

## (106) This ledge is easy to fall off.

*(Has only the reading "...is easy for **people** [not plants, etc.] to fall off.")*

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<sup>23</sup>An anonymous reviewer suggests that in the case of *tough*-movement, the apparent "agency" requirement might actually derive from the assignment of an Experiencer role to the subject of the infinitive. The reviewer suggests that a revealing paraphrase of (107a) is "Careless people find it easy to fall off this ledge." A problem with this line of argument is the contrast between e.g. (105b) and (108b), which shows that in the absence of *tough*-movement the DP following *for* need not receive an Experiencer role. This is confirmed by the availability of expletives in this position: *It is difficult for there to be informed public debate on such controversial issues*. It is not clear that the mere absence of *tough*-movement should give rise to such a change in thematic requirements.

- (107) a. This ledge is easy for careless people to fall off.  
 b. #This ledge is easy for large potted plants to fall off.

This effect is seen only when the application of *tough*-movement derives a subject-predicate structure. The effect disappears in the absence of *tough*-movement, as shown in (108)-(109); and the affectedness constraint likewise fails to hold, as shown in (110):<sup>24</sup>

- (108) a. It is difficult for children to blow out these candles.  
 b. It is difficult for the wind to blow out these candles.  
 (109) a. It is easy for a careless person to fall off this ledge.  
 b. It is easy for large potted plants to fall off this ledge.  
 (110) It is difficult to stand next to this chair.

These facts may be a clue to the source of the correlation between pseudopassivization and *tough*-movement in (94)-(96). It seems that there is some link between the affectedness constraint and the agentivity requirement. Descriptively, this link can be stated as follows:

- (111) In a configuration [ $\gamma$   $\alpha_t$  [ $\phi$  ...  $t_t$  ... ]], where
- (i)  $\alpha$  is a subject
  - (ii)  $\phi$  is a predicate containing a trace co-indexed with  $\alpha$ , and
  - (iii)  $\phi$  has an external argument  $\eta$  which may or may not be syntactically expressed and which if expressed is distinct from  $\alpha$  and its trace,
- $\alpha$  must be affected and  $\eta$  must be agentive.

(Following Chomsky (1986), we assume that the subject of a *tough* predicate is co-indexed with the trace of the null operator. E.g.: [John<sub>1</sub> is tough [<sub>CP</sub> Op<sub>1</sub> to talk to  $t_1$ ]].)

<sup>24</sup>Some speakers find (108b)/(109b) a little odd, though still detectably better than (105b)/(107b). In any case, the contrast between (105b)/(108b) and (107b)/(109b) seems clear. For example, the Google search “is easy for the wind to” (quotes included) yields many results with an expletive matrix subject and virtually none with a thematic subject.

As we have seen, the one exception to this generalization is the ordinary verbal passive.

## 6.5 Some impossible pseudopassives

Unaccusative pseudopassives such as (112) are correctly predicted to be impossible, since no Agr projection can be present within an unaccusative vP:

(112) \*This bed was died in.

On the face of it, the present theory appears to permit ungrammatical pseudopassives such as (113).

(113) \*John was seemed to  $t_1$  that Mary won.

However, Hartman (2011) points out that the ungrammaticality of (113) falls under the broader generalization that verbs without an external argument do not passivize (Perlmutter & Postal 1984). If such verbs lack a  $v$  head altogether, or have a special defective form of  $v$ , then it may be impossible for the non-existent or defective  $v$  head to select an AgrP complement.

## 6.6 Pseudopassives, existentials, locative inversion

Citing contrasts such as (114) vs. (115a), B&P note that pseudopassives are incompatible with locative inversion (LI). Postal (2004:47) points examples such as (115b), which appear to show that pseudopassives are also incompatible with *there* existentials:<sup>25</sup>

(114) Many famous rebels were shot (**at**) in this very building.

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<sup>25</sup>Postal (2004) argues that pseudopassives are incompatible with LI just when they are incompatible with the corresponding *there* existential. However, it is clear from his example (127b), p. 47, that he takes sentences such as (115b) to be unacceptable (as do all native English speakers we have consulted). See also Bresnan 1994 on locative inversion and pseudopassivization.

- (115) a. In this very building were shot (**\*at**) many famous rebels.  
 b. In this very building there were shot (**\*at**) many famous rebels.

The unacceptability of pseudopassives in (115) is arguably unexpected under reanalysis accounts, which seem at first blush to imply that pseudopassives ought to have all the properties of ordinary passives. In this subsection, we will argue that on closer inspection, the data in (115) do not in fact pose a serious challenge to reanalysis theories.

Consider first (115b). We have already seen that pseudopassive existentials require the associate of *there* to appear preverbally. We therefore expect (115b) to become acceptable if the DP is placed in a preverbal position. This is indeed the case, so long as a “light” DP is used:<sup>26</sup>

- (116) In this building there were many rebels shot at.

The only remaining problem pertaining to (115b) is that of explaining why (116) is unacceptable with a heavy DP. This is so whether the associate is pre- or post-verbal:

- (117) a. ??In this building there were a number of rebels who’d fought for years shot at.  
 b. \*In this building there were shot at a number of rebels who’d fought for years.

The degradation in (117a) is likely due to prosodic awkwardness. As for (117b), we have already seen that the lack of V-to-v raising in English passives implies that the order in (117b) cannot be straightforwardly generated (section 3.1). The question, then, is why the word order in (117b) cannot be derived via Heavy DP Shift:

- (118) \*In this building there were  $t'_1$  shot at  $t_1$  [a number of rebels who’d fought for years]<sub>1</sub>.

There is no general ban on HDPS of the associate of *there* — as demonstrated by examples such as (119) — so some explanation is required for why HDPS is blocked in (118).

<sup>26</sup>See Bruening 2011, Chomsky 2001 for arguments that *shot at* in (116) cannot be a reduced relative.

- (119) There were ( $t_1$ ) arrested ( $t_1$ ) on Tuesday [a number of low-level drug dealers]<sub>1</sub>.  
(Bracketed traces indicate two possible base positions.)

We suspect that this restriction falls under a descriptive generalization noted in Drummond 2011:

- (120) Heavy DP Shift cannot apply to a DP which was ever — at any stage in the derivation — the complement of a preposition.

In (117b), the DP is initially the complement of a (reanalyzed) preposition. It therefore cannot, according to (120), undergo HDPS. Thus, given that there is no means of shifting the associate of *there* to the right in pseudopassive existentials, the only word order possible is one in which the associate is pre-verbal.

Turning now to (115a), we follow Bruening (2011) in assuming that LI is banned in pseudopassives because the derivation of LI involves rightward extraposition of the postverbal subject DP. Without going into the details of Bruening's analysis, the claim is essentially that the postverbal subject in an instance of LI such as (121) obligatorily undergoes Heavy DP Shift:

- (121) Into the room  $t_1$  walked [a man]<sub>1</sub>.

We have just seen that the complements of prepositions (whether reanalyzed or not) cannot undergo Heavy DP Shift, so Bruening's analysis correctly predicts that LI is incompatible with pseudopassivization. As would be expected, other DPs which resist Heavy DP Shift, such as the first object in the double object construction, likewise fail to appear postverbally in LI. For example, LI is barred in (122a) because Heavy DP Shift is barred in (122b).<sup>27</sup>

- (122) a. \*In this room were given books the best students in the class.  
b. \*I gave  $t_1$  books [the best students in the class]<sub>1</sub>.

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<sup>27</sup>The deviance of examples such as (122a) is noted in Postal 2004:47 and Bresnan 1994:79fn9.

## 6.7 Pronoun binding restrictions

B&P argue that reanalysis must, if it exists, be optional, and that this optionality leads to overgeneration. B&P present the following pair:

- (123) a. To whom did you talk about that issue?  
b. \*I talked to Thelma<sub>1</sub> about her<sub>1</sub>.

(*B&P's judgment.*)

The possibility of pied-piping in (123a) appears to show that reanalysis is not obligatory, but if reanalysis is optional, the Condition B violation in (123b) is unexpected (since if reanalysis does not apply, *Thelma* will not c-command *her*). As we noted in section 2.2, the unacceptability of (123b) can be accounted for by a parsing preference for the reanalysis structure.<sup>28</sup> A more serious problem is raised by the following example, which B&P take to be a Condition B violation:

- (124) \*The person to whom<sub>1</sub> I talked about him<sub>1</sub>.

There may also be a weak crossover effect in (124).<sup>29</sup> However, it is at least plausible on the face of it that Condition B is also at work, given that (124) is clearly far less acceptable than (125):

- (125) ?The person to whom<sub>1</sub> I talked about his<sub>1</sub> mother.

The same pattern is found in simple questions:

- (126) a. \*To whom<sub>1</sub> did you talk about him<sub>1</sub>.  
b. ?To whom<sub>1</sub> did you talk about his<sub>1</sub> mother?

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<sup>28</sup>Some authors (e.g. Reinhart & Reuland 1993, Büring 2005) have reported (123b) to be acceptable.

<sup>29</sup>Whether or not (124) instantiates a WCO configuration will depend on the extent to which WCO is linearly or structurally conditioned, and the left/right-branching structure of vP/VP.

These facts are puzzling and we have no explanation for them. However, we believe that B&P's argument against reanalysis based on these data ultimately fails because the phenomenon in question turns out to be much broader. For example, an apparent Condition B effect obtains in (127b), despite the complete absence of any Condition B effect in the underlying configuration (127a):

- (127) a. I talked about John<sub>1</sub> near him<sub>1</sub>.  
b. \*About whom<sub>1</sub> did you talk near him<sub>1</sub>?

Thus, it seems that obviation in cases such as (124), (126a) and (127b) is simply not predicated on the existence of a Condition B configuration in the underlying structure. For this reason, it is difficult to draw any firm conclusions from (124) and (126).

## 7. Typological remarks

### 7.1 Preposition stranding

Reanalysis has been claimed by some authors (e.g. Hornstein & Weinberg 1981) to account for preposition stranding under *wh*-movement:

- (128) Who did John talk to *t*?

We do not think that P-stranding is predicated on movement of P to a v/V-medial Agr head. However, it seems likely that both phenomena are linked to a language's ability to use P-Agr complexes to assign Case to prepositional complements. Abels (2003) presents an account of P-stranding based on the hypothesis that P is a phase head only in non-P-stranding languages.<sup>30</sup> If P is a phase, it follows that any *wh*-phrase extracted from a PP must move through [Spec,PP]. Abels argues that movement of the complement of P to [Spec,PP] is a violation of an anti-locality condition on movement. Thus, preposition stranding is possible only when P is not a phase (so that the *wh*-phrase is

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<sup>30</sup>Abels' theory builds on that of van Riemsdijk (1978), though it is crucially different in several respects.

not obliged to stop off in [Spec,PP]). We cannot make use of Abels’ analysis in precisely this form. However, Abels mentions a variant of it according to which P is a phase head in all languages (p. 227). In this version, the locus of variation is the presence or absence of an additional projection within PP.<sup>31</sup> projection above P to which P moves. If this projection is present, then movement of the complement of P to [Spec,PP] does not violate anti-locality, and P-stranding is permitted:

- (129) a. \* $[_{PP} \text{ wh } [_{P'} P t]]$   
*(Non-preposition-stranding language.)*
- b.  $[_{PP} \text{ wh } [_{P'} P [_{XP} \dots t]]]$   
*(Preposition stranding language.)*

We suggest that Agr may be this additional projection. The only caveat is that Agr is outside, rather than inside, the lexical PP. Thus, languages without preposition stranding have the structure shown in (130a), and languages with preposition stranding have the structure shown in (130b):

- (130) a.  $[_{PP} \text{ wh } [_{P'} P t]]$   
*(Non-preposition-stranding language.)*
- b.  $[_{AgrP} \text{ wh } [_{Agr'} Agr [_{PP} \dots t]]]$   
*(Preposition-stranding language.)*

It follows that both preposition stranding and reanalysis require Agr to project a head separate from P. The alternative is for the relevant  $\phi$ -features to be bundled onto the lexical P head, in which case the structure in (130b) is not available. If the presence of a full set of  $\phi$ -features plays a role in determining phasehood (as it does for C/T), then it is expected that Agr (or P-Agr) will be the

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<sup>31</sup>Further support for this analysis might derive from Leu’s (2003) analysis of the *was für* split in Germanic. Building on Abels (2003), Leu argues that two phenomena, preposition stranding and stranding of *für* within the complement of a preposition, are both conditioned on the presence of an additional projection within the PP. See Abels (2011,253) for a critical discussion of Leu’s proposal.

phase head in (130b), and P the phase head in (130a).<sup>32</sup>

For pseudopassives, the question arises whether P-Agr<sup>o</sup>P forms a strong phase (i.e. a phase which is impermeable for extraction except via the use of an “escape hatch”). If P-Agr<sup>o</sup> can form a strong phase, then pseudopassivization will, like *wh*-movement, proceed via [Spec,P-Agr<sup>o</sup>P]. This would be consistent with a number of recent arguments that A-movement proceeds via the left edge of vP (see e.g. Sauerland 2003, and Legate 2003 for a related argument based on A' movement). Alternatively, it may be that defective Agr<sup>o</sup> does not have sufficient  $\phi$ -specification to form a phase. We will remain neutral between these two alternatives.

As mentioned in the introduction, pseudopassivization is attested in a proper subset of those languages which permit preposition stranding. This is to be expected given that pseudopassivization requires a v/V-medial Agr head bearing P-features. The availability of independent Agr projections is necessary, but not sufficient, to ensure that v<sup>o</sup> is able to select an Agr<sup>o</sup> head.

Abels (2003) does not give a detailed analysis of pseudopassivization, but hypothesizes that languages with pseudopassives have P heads which assign Case only optionally. He notes that this analysis does not have “the virtue [of capturing] the fact that there needs to be a close relation between the verb and the preposition to allow pseudopassives...” (p. 246). It also fails to explain why there are no “pseudo-unaccusatives” — (131) — or “pseudo-middles” — (132b):<sup>33</sup>

(131) \*This bed was died in.

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<sup>32</sup>This raises a technical question regarding anti-locality. If P eventually raises to Agr in (130a), then one might expect movement from the complement of P to [Spec,P-AgrP] to count as movement from the complement of a head to the specifier of that very same head (hence violating anti-locality). We will assume that it does not count as such; i.e., we will assume that P-Agr is not the same head as P. Note that P-Agr must be distinct from Agr to at least some extent, since verbs can subcategorize for P-Agr to the exclusion of (e.g.) T-Agr.

<sup>33</sup>The absence of pseudo-middles is noted by Fagan (1988) and Postal (2011), amongst others. See Abels (2003:234fn141) for a very brief discussion of overgeneration with pseudopassives. This discussion does not, so far as we can see, consider the cases in (131)-(132).

- (132) a. Paper cuts easily.  
b. \*Paper cuts through easily.

On our analysis, (131) and (132b) are impossible because the passive morpheme is crucially implicated in removing the Case-assigning powers of a reanalyzed preposition. Given Abels’ assumptions, the only function of the passive morpheme in pseudopassives is to suppress the external argument. The Case-assigning powers of the preposition are removed by an independent (and optional) process. This predicts, all else being equal, that impersonal pseudopassives such as (133) should be possible in English:

- (133) \*It was spoken to John.

Abels points out that it is not clear how serious a problem this sort of overgeneration is for his theory, given that impersonal passives are attested in many other languages (p. 234fn141).

## 7.2 Binding out of PP

The present analysis sets up a link between pseudopassivization and the possibility of anaphoric binding out of PP. Both of these phenomena are conditioned on the possibility of reanalysis (i.e. movement of P’s complement to the specifier of a higher Agr head). We therefore predict (i) that languages which lack pseudopassivization should also not permit anaphoric binding out of PP, and conversely (ii) that languages which have pseudopassivization should permit anaphoric binding out of PP. Prediction (ii) appears to be correct for English and Norwegian:

- (134) Marie snakket med John om ham selv. (**Norwegian**)  
Marie talked with John about himself.

Prediction (i) is somewhat harder to test than it may first appear. In many languages local anaphors are subject-oriented and hence cannot be bound by a prepositional complement for independent reasons. There are also preposition-like elements which may be better analyzed as DP-internal

case markers. One example is the Hindi accusative case marker *ko*. A *ko*-marked DP can bind an anaphor only if it c-commands it, as shown by the contrast between (135a) and (135b). However, preposing of a *ko*-marked DP does not block binding, as shown in (135c). These data support a DP-internal analysis of *ko*:<sup>34</sup>

- (135) a. Mai-ne baccoN-ko ek-dusre ke-saamne DaaNTaa.  
I-ERG kids-ACC one-another in-front-of scolded.  
'I scolded the kids in front of each other.'
- b. \*[ Ek-dusre ke baccoN ] -ne [Sita aur Rama] -ko dekhaa.  
one-another GEN kids -ERG Sita and Ram -ACC saw.
- c. [ Sita aur Rama ] -ko [ ek-dusre ke baccoN ] -ne dekhaa.  
Sita and Ram -ACC one-another GEN kids -ERG saw.  
'Each other's kids saw Sita and Rama.'

There do appear to be cases where binding out of PP is blocked solely due to the absence of reanalysis. Spanish provides a particularly clear example. Indirect objects in Spanish are typically, but not obligatorily, doubles of an indirect object clitic.<sup>35</sup> When an indirect object PP appears alone, its complement cannot bind the reflexive *si misma* ('herself'). With the addition of the indirect object clitic *le*, binding becomes possible:

- (136) Juan<sub>1</sub> \*(le<sub>2</sub>) habló a María<sub>2</sub> de si misma<sub>2</sub>.  
John to-her.CL spoke to Mary of herself.  
'John spoke to Mary about herself.'

As indicated by the grammaticality of (136) when *le* is present, the reflexive *si mismo/a* is not obligatorily subject-oriented. The most plausible explanation for the contrast shown in (136) is that *le* c-commands the reflexive (and hence can bind it) whereas *María* does not due to the structure introduced by *a* ('to').

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<sup>34</sup>Example (135c) is taken from Bhatt & Dayal 2007.

<sup>35</sup>With specific animate indirect objects, doubling is preferred and generally felt to be more idiomatic, but most speakers also permit the clitic to be absent.

We conjecture that binding out of PP is impossible in all languages which lack reanalysis. Two caveats should be added here. First, DP-internal case markers are not expected to block binding. Second, since it is only local anaphoric binding which requires strict c-command, reflexives and reciprocals which can be interpreted logophorically are expected to allow binding by a PP-internal antecedent without reanalysis.

### 7.3 Typological implications

The overall typological picture is as follows. There are two points of variation. First, lexical P/V heads may or may not be  $\phi$ -deficient. Second, a language may or may not allow  $v^\circ$  to select as its complement a phrase headed by an  $Agr^\circ$  head bearing an unchecked ‘P’ feature. It is only possible for  $v^\circ$  to select such an  $Agr^\circ$  head in a language where lexical P/V heads are  $\phi$ -deficient (since movement of  $\phi$ -complete P/V to  $Agr$  would lead to a clash between two  $\phi$ -complete heads). Thus, there are three possible grammars:

(137)

$\phi$ -features project separate $Agr$ heads (rather than being bundled on P/V)	$v^\circ$ may select projection of $Agr^\circ$ with a ‘P’ feature	Pseudopassivization	P-stranding
X	X	X	X
✓	X	X	✓
X	✓	Impossible combination	
✓	✓	✓	✓

## 8. Conclusion

We have argued that the intuition behind reanalysis hypotheses is essentially correct: certain DPs which appear to be prepositional complements are really direct objects at some level of representation. The key to overcoming the problems with previous analyses is the hypothesis that there is also a stage in the derivation at which the DPs in question are not direct objects.

Preposition stranding and pseudopassivization each depend on a “split” PP where the lexical P head is separated from its associated  $\phi$ -features, which project a separate  $Agr$  head. Languages

lacking these constructions project a single P head with both the lexical content and the  $\phi$ -features.

We have assumed that covert raising to [Spec,AgrP] is sufficient to license new binding configurations. This provides a straightforward explanation for the possibility of anaphoric binding out of PP, and one which is compatible with a robust c-command constraint on anaphoric binding. The analysis predicts that binding out of PP should not be possible in languages which lack reanalysis.

A principal goal of this paper is to defend the Case-theoretic account of A-movement as applied to passivization. Pseudopassivization is a well-known *prima facie* counterexample to this theory. The typological rarity of pseudopassivization suggests that this is in some sense the right result. That is, it should not be too easy to derive pseudopassives, or it will be difficult to explain why pseudopassives are not attested in all languages with more-or-less-English-like passive constructions. The Case-theoretic account of A-movement has the virtue that it provides a principled account of why pseudo-passivization should be difficult. We have attempted to supplement it with an explanation for why pseudopassives are nonetheless possible in a small number of languages.

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