

Title: Preposition Stranding, Passivisation, and Extraction from Adjuncts in Germanic

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Preposition Stranding, Passivisation, and Extraction from Adjuncts in Germanic¹

Abstract

The crosslinguistic distribution of preposition stranding by A movement in pseudopassive constructions matches that of a marked A' phenomenon, namely extraction from Bare Present Participial Adjuncts. Moreover, both constructions show sensitivity to external factors of a sort that reanalysis-based theories of P-stranding are designed to capture, but which is not immediately predicted by P-stranding theories based on parametrisation of PP's status as a bounding node or phase. However, an expanded version of Abels' (2003) phase-based account of P-stranding, according to which the sensitivity of P-stranding under A- and A'-movement to PP-external factors is due to general constraints on movement and passivisation, captures the relevant data without resorting to a reanalysis operation.

Keywords: Preposition stranding, passive, extraction from adjuncts, Germanic, reanalysis, phases, antilocality

1. Introduction

Stranding of a preposition by movement is a crosslinguistically rare operation, attested in only a dozen or so (primarily Germanic) languages. Among those languages, some allow P-stranding only under A'-movement, while others allow it in both A- and A'-environments. However, no language allows P-stranding only under A-movement.

This generalisation is not new, and there are several accounts of it already in the literature. In general, these theories tie the rarity of A' P-stranding to a piece of marked and only exceptionally available syntactic structure. The further availability of P-stranding under A-movement (known as 'pseudopassivisation') is then dependent on the existence of a secondary syntactic factor, which only becomes relevant if the unusual structure behind the availability of A' P-stranding is also available. This dependence of the secondary syntactic factor on the first derives the implicational relation between A and A' P-stranding. We may schematise this logic as follows, where the arrows are meant to be read as signifying necessary but perhaps not sufficient conditions.

- (1) a. **FACTOR X** → A' P-stranding;
 b. **FACTOR X + FACTOR Y** → Pseudopassivisation.

Different theories are distinguished by their choices of factor X and factor Y. In what follows, I will go over two complementary classes of theory in some depth. The major difference between the two approaches is that the first of them (the *reanalysis* theory) says that there is something special about the syntactic category V (or VP) in P-stranding languages, while the other (the *escape hatch* theory) says that there is something special about P (or PP). The choices of a prominent exponent of each type of theory are as follows:

- (2) a. **Reanalysis theory** (as in Hornstein & Weinberg 1981):
 (i) **FACTOR X** = reanalysis: in languages with factor X, V and any contiguous VP-internal material to its right may form a complex verb V*.
 (ii) **FACTOR Y** = semantic verbs: in languages with factor Y, V* may behave like a natural predicate semantically.
 b. **Escape hatch theory** (as in Abels 2003):
 (i) **FACTOR X** = nonphasal P: P is generally a phase head, but fails to be in lan-

guages with factor X.

- (ii) **FACTOR Y** = Case suppression: P normally assigns Case to its complement, but optionally does not do so in languages with factor Y.

Without going into the details of these choices, it is clear that in the escape hatch theory, all the action happens within PP. Whenever we find a property of P-stranding that cannot be described in purely PP-internal terms, we have an argument the escape hatch theory cannot be the whole story. I discuss two such arguments in this paper. These concern a second class of marked A'-extractions, from constituents which I will call Bare Present Participial Adjuncts (BPPAs). Extraction from BPPAs shows a very similar crosslinguistic distribution to P-stranding, but does not involve actual stranding of a preposition. Moreover, these extractions pattern crosslinguistically, not with A' P-stranding, as might be expected, but with pseudopassivisation. The first argument that this construction suggests is the following: because no preposition is stranded in extraction from BPPAs, the fact that the escape hatch theory describes the distribution of P-stranding in terms of properties of P(P) leaves no obvious way to cover this second construction in the same terms. Secondly, we will see that the distribution of extraction from BPPAs and of P-stranding within a given language is determined partly by semantic factors pertaining to the matrix VP to which the BPPA is attached, rather than being purely determined by factors internal to the BPPA or PP itself. This means, again, that these factors are beyond the reach of the escape hatch theory. Given that it is extremely unlikely that two unrelated and highly marked syntactic phenomena should be found in only the same handful of languages, we derive two potential reasons why our theory of P-stranding should look beyond edges and bounding nodes.

All of this might sound like reason to favour the reanalysis theory: as we saw in (2a), reanalysis makes no mention of prepositions or PPs, and so it is less surprising if other extraction phenomena

pattern with P-stranding. Moreover, reanalysis theories are custom-built to explain the sort of PP-external influence on extraction that pose a challenge to the escape hatch theory. However, serious, and so far unanswered, criticisms of reanalysis as a specifically syntactic operation, reproduced in section 2.2, drastically reduce the attractiveness of this type of reanalysis theory. Moreover, the escape hatch-based account of P-stranding in Abels (2003) is the only current theory to give us a way to approach the ‘antilocality’ property of extraction from PPs, to be described in section 2.3. We therefore aim to formulate a version of the escape hatch theory which dodges the challenges from the previous paragraph.

This task is undertaken in two steps. Firstly, the Case suppression factor described in (2) is generalised to apply cross-categorially, and to suppress a wider class of properties than just Case assignment. This generalised suppression mechanism (call it ‘feature suppression’) is sufficient to allow P-stranding by both A- and A'-movement, and lies behind the correlation between pseudopassivisation and extraction from BPPAs. For languages which allow P-stranding under only A'-movement, on the other hand, the story is unchanged from that in Abels (2003). This means that the theory proposed here has a different shape from earlier P-stranding theories. Those have tended to capture the implicational relation between A' and A P-stranding by making the factor that allows the latter dependent on the factor that allows the former, as in (1). In contrast, I postulate two independent factors, one of which allows only P-stranding under A'-movement, while the other has more far-reaching effects, independently allowing P-stranding under A- and A'-movement, as well as A'-extraction from BPPAs.

- (3) a. **NONPHASAL P** \rightarrow A' P-stranding;
 b. **FEATURE SUPPRESSION** \rightarrow A or A' P-stranding, A' extraction from BPPAs.

Next, I show that the external influence on the distribution of P-stranding and extraction from

BPPAs is due to general, and independently motivated, conditions on movement, and so does not need to be built into our specific theory of P-stranding. This leaves an empirically adequate variant of the escape hatch theory, with no need for a reanalysis operation.

The paper is structured as follows. In section 2, I go over the two theories of P-stranding in more detail, and show why the escape hatch theory has a clear empirical advantage. Section 3 presents the second marked class of extraction, from BPPAs, and demonstrates their distributional similarities to P-stranding and sensitivity to factors external to the adjunct. Section 4 develops a version of the escape hatch theory that can capture the influence of these external factors. Finally, I conclude in section 5.

2. *Two Theories of Preposition Stranding*

2.1 *The Problem*

A naïve theory of P-stranding might predict four types of language: those in which P-stranding is (i) universally impossible; (ii) possible under A- or A'-movement; (iii) possible under A'-movement only; or (iv) possible under A-movement only. However, there are no languages of type (iv). Moreover, the vast majority of languages are of type (i), with only a handful allowing any stranding at all. I illustrate the general case with data from Russian and French, in (4) and (5) respectively, while the type (ii) P-stranding pattern is demonstrated in (6) for English and (7) for Norwegian. The intermediate pattern (iii) is represented by Danish (8) and Icelandic (9), where P-stranding is possible under A'-movement, but not under A-movement. However, there is no language like Danish, but with the judgements reversed.

- (4) a. [Ot čego] sleduet otkazat'sja ___?
of what follows give.up.self
“What should one give up?”

- b. **Čego sleduet otkazat'sja* [ot __]?
 what follows give.up.self of (Abels 2003:160)
- c. **Stule sideli* [na __].
 Chair.LOC sat.3PL.IMPF on
 “The chair was sat on.”²
- (5) a. [*De qui*] *tu parles* __?
 Of who you speak
 “Who are you talking about?”
- b. **Qui tu parles* [*de* __]?
 Who you speak of
- c. **Jean a été parlé* [*de* __].
 “John has been spoken of.”
- (6) a. Who did you speak [to __]?
 b. John was talked [about __] at length.
- (7) a. *Hvem har Per snakket* [*med* __]?
 “Who has Peter talked with?” (Merchant 2001:93)
- b. *Han ble ledd* [*av* __].
 “He was laughed at.”
- (8) a. *Hvem har Peter snakket* [*med* __]?
 “Who has Peter talked with?” (Merchant 2001:93)
- b. **Han blev grinet* [*af* __].
 “He was laughed at.”
- (9) a. *Hvern hefur Pétur talað* [*við* __]?
 “Who has Peter talked with?” (Merchant 2001:93)
- b. **Ég tel Vigdís vera oftast talað vel* [*um* __].
 I believe Vigdis be.INF most.often spoken well of.
 “I believe Vigdis to be most often spoken well of.”³ (Maling & Zaenen 1990:156)

As Bouchard (1982) and Abels (2003) have emphasised, the diagnosis of genuine A' P-stranding is not completely straightforward, in that cases exist, such as Québec French (10), which look at first like P-stranding, but where the dependency fails to exhibit standard characteristics of movement such as subjacency, suggesting instead a base-generated dependency between an antecedent and a null resumptive pronoun.

- (10) *La fille [que je connais très bien [le gars qui sort avec ___]]*
 “The girl that I know very well the guy who goes out with”
 (Vinet 1984)

Once such factors are controlled for, the list of languages allowing A' P-stranding is very short, and the list of languages which also allow pseudopassivisation is even shorter. Danish, Icelandic, and Faroese allow A' P-stranding but no pseudopassive, while Norwegian, Swedish, English, Vata, Gbadi, Prince Edward Island French, and possibly Papiamentu (*cf.* Abels 2003) allow both A' P-stranding and pseudopassives.⁴ Frisian, and to some extent Dutch and German, have a construction that looks like A' P-stranding. However, the correct generalisation for these largely prepositional languages appears to be that only *postpositions* can be stranded.

This is least clear in Frisian, where the majority of adpositions can appear either before or after their complement. This means that most adpositions can apparently be stranded, at least by A'-movement (11a). However, a few prepositions lack a postpositional counterpart, and these prepositions alone cannot undergo this apparent stranding (11b).

- (11) a. *Wa hast [___ mei] praat?*
 Who have.2SG with talked
 “Who did you talk to?”
 b. **Hokker boek hat er [fanwegen ___] yn 'e finzenis sitten?*
 Which book has he because.of in the prison sat
 “Which book was he in prison because of?” (Hoekstra 1995:97–98)

In Dutch and many German dialects, regular cases of P-stranding like (6) and (7) are impossible, as illustrated below for Dutch. However, a limited form of dependency is possible, in which a fronted pro-locative occurs, while the complement of P is absent, as in (12b).⁵

- (12) a. **Wie heb je [op ___] gerekend?*
 Who have you on counted
 “Who did you count on”? (van Riemsdijk 1978:137)
 b. *Waar heb je [___ op] gerekend?*
 Where have you on counted

“What did you count on”? (van Riemsdijk 1978:135)

The adpositions in question appear after their complement only when that complement is a locative proform (a so-called ‘R-pronoun’, such as *erop* “there.on”). Once again, then, the generalisation holds that this apparent stranding is only possible if the adposition is able to follow its complement.

In German dialects allowing this pattern, this change from prepositional to postpositional (and apparent stranding) behaviour is accompanied by a morphological change in the form of the adposition, as illustrated in (13).

- (13) *Wo hast du { *in/ drin } geschlafen?*
Where have you in DR.in slept
“What did you sleep in?” (Abels 2003:195)

What is surprising about such examples, along with the choice of locative proforms instead of regular pronouns, and the special morphology of the preposition in German, is the surprising fact that the morphologically special prepositions such as *drin* never occur with overt material in complement position. This led Abels (§4.3.3.) to propose a non-stranding analysis according to which the true complement incorporates into P, and the element which leaves PP is base-generated in [Spec,P], a position from which extraction is predicted to be possible in P-stranding and non-P-stranding languages alike. Little hinges on this for our purposes here, however: in terms of the correlation to be proposed below, the more important fact, which is universally agreed on, is that Frisian, Dutch and German all disallow P-stranding in pseudopassive constructions.

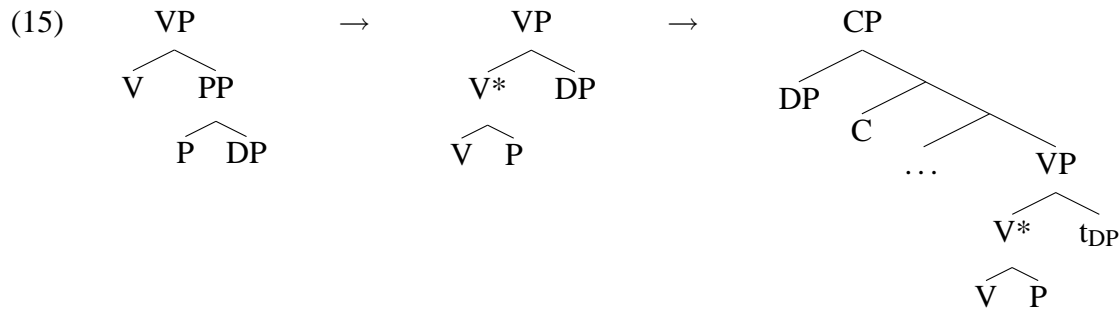
- (14) a. **It idee dat Jan [__ mei] praat wurdt, is net goed.*
The idea that John with spoken was is not good
“The idea that John was spoken with is not good.”⁶
b. **Deze argumenten werden niet [over __] gesproken.*
These arguments were not about talked
“These arguments were not talked about.”
c. **Diese Argumenten sind [an __] gedacht worden.*
These arguments are of thought been

“These arguments have been thought of.” (van Riemsdijk 1978:224)

Although I find the arguments compelling that these languages do not exhibit any P-stranding, it is more important for our purposes that the implicational relation between A' P-stranding and pseudopassivisation is not challenged in any case. The rest of this section describes two previous accounts of this relation.

2.2 *The Reanalysis Theory*

Hornstein & Weinberg (1981) propose a theory of P-stranding based on an operation of ‘reanalysis’, which takes V and any amount of contiguous rightward VP-internal material, and reanalyses that material as a single derived verb V*. If that material includes P, but not its complement, then that complement will behave, post-reanalysis, like a complement of the verb V*. It should therefore be just as mobile as the complement of any other verb.⁷



In order to explain the more restricted distribution of the pseudopassive, Hornstein & Weinberg propose that A-movement must also create subject-predicate articulations in which the predicate must be a ‘natural predicate’, or ‘semantic word’. Although no complete proposal concerning the necessary and sufficient conditions on these notions is presented, Hornstein & Weinberg do offer a couple of heuristics. Firstly, the meaning of semantic words may be determined noncompositionally, and secondly, no subparts of natural predicates are referential. While this is obviously

an incomplete characterisation, the general logic is clear: the conditions which must be met for a language to allow pseudopassivisation are a proper superset of those which must be met for a language to allow A' P-stranding.


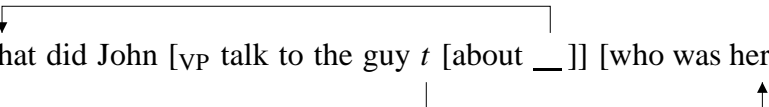
The success of this theory even in the domain for which it was designed depends on one's judgements concerning putative minimal pairs. In these pairs, the internal structure of PP is kept constant, but changes in the external environment of the PP (specifically, attachment inside or outside VP) are claimed to lead to differences in grammaticality. For example, this predicts extraction from an extraposed PP (16) or from a high (e.g. temporal) PP attached above VP (17) to be impossible, and for P-stranding to disambiguate structural ambiguities based on attachment height of PP (18) (all following judgements are Hornstein & Weinberg's).

- (16) a. Who did John [_{VP} speak to Harry [about __]] yesterday?
b. *Who did John [_{VP} speak to Harry] yesterday [about __]? (Hornstein & Weinberg 1981:59)
- (17) a. Who did John [_{VP} arrive [with __]]?
b. *What time did John [_{VP} arrive] [at __]? (Hornstein & Weinberg 1981:56)
- (18) a. (i) John [_{VP} decided [on the boat]] ≈ John chose the boat.
(ii) John [_{VP} decided] [on the boat] ≈ John decided while on the boat.
b. (i) What did John [_{VP} decide [on __]]? ≈ What did John choose?
(ii) *What did John [_{VP} decide] [on __]? ≈ What was John on when he made the decision? (Hornstein & Weinberg 1981:58)

I, along with many other native speakers of P-stranding languages, find these contrasts barely detectable. Of course, if they don't really exist, then this specific reanalysis theory is scuppered.

However, lurking in the background is a more general challenge: if we assume the availability of a reanalysis operation, then how do we constrain it? It clearly cannot be allowed to apply freely, as this would give reanalysis the power to allow any constituent to behave like the complement of V, voiding most locality constraints. In fact, there have been many arguments that a reanalysis operation that forms strings into new syntactic constituents, feeds movement, and allows the complement of the new constituent to behave like a complement of V, cannot be adequately constrained. I reproduce a few of these arguments below. Although I believe that none of them are watertight, they jointly constitute a serious challenge to a reanalysis theory, a challenge that is currently unanswered.⁸

Not all reanalysis can precede all movement Hornstein & Weinberg 1981:74 discuss, sceptically, an argument which suggests that any theory which (a) assumes reanalysis as a precondition for movement, and (b) assumes reanalysis operates on strings, will not work (see also Maling & Zanen 1990:159 and Abels 2003:252). This involves examples like the following, in which the reanalysed string contains a trace of movement, as well as possibly the moved element.

- (19) a. Which problems has Harry been [talked [to __] [about __]]?

 (Hornstein & Weinberg 1981:74)
- b. What did John [VP talk to the guy *t* [about __]] [who was here yesterday]? (Abels 2003:252)


This creates an ordering paradox, where some movements would have to precede reanalysis, which would itself precede further movements. Although a specific set of assumptions about cyclicity,

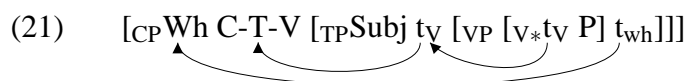
multiple levels of representation and/or the timing of different types of movement might in principle be able to nullify the argument, this at least poses a serious challenge to this type of reanalysis theory.

V and P don't behave like a constituent If V and P form a constituent at a certain level of representation, we would like independent evidence that they behave like a constituent. In fact, though, many constituency tests show the opposite. For example, a preposition cannot be deleted along with V under gapping.⁹

- (20) a. Frank called Sandra and Arthur __ Louise.
 b. Frank talked to Sandra and Arthur __ *(to) Louise. (Baltin & Postal 1996:129)

The weakest conclusion that one may draw from this is that V and P, post-reanalysis, don't behave like a verb. The strongest (apparently adopted by Baltin & Postal) is that they don't behave like a constituent. Either, however, is problematic for Hornstein & Weinberg's reanalysis theory, as only traces case-marked specifically by V (and presumably T, as subjects are moveable) are mobile.

Reanalysis can't be limited to contiguous material Hornstein & Weinberg only discuss English in any depth. One thing that adds to the plausibility of reanalysis in that language is the absence of V-T(-C) movement. Other P-stranding languages do not share this property, however. As noted by Áfarli (1992), this means that in many grammatical cases showing the configuration in (21), either reanalysis would have to be taken to apply to noncontiguous material, or movement out of V* would have to be allowed, in contrast to the behaviour of even morphologically complex regular verbs.



A related point is made by Baltin & Postal (1996:130), concerning examples like the following.

- (22)
- a. The bridge was flown (both) over and under.
 - b. Communism was talked, argued, and fought about.
 - c. Fascism was fought for by Goebbels and then, but, I assure you, only then, against by De Gaulle.

Such examples show that pseudopassivisation is possible in cases where it is implausible to claim that ‘semantic words’ have been formed from reanalysed strings of contiguous VP-internal material which do not contain R-expressions, as Hornstein & Weinberg’s characterisation of ‘semantic words’ would require. A single V can be associated with multiple stranded Ps, at most one of which can be contiguous with V. Likewise, a single P can be associated with multiple Vs. Adverbials can be interspersed among these elements, and these adverbials can freely contain R-expressions. But if we allow strings like those in (22) to count as ‘semantic words’, the reanalysis theory gives us no way of capturing the more restricted distribution of pseudopassives, compared to cases of A’ P-stranding.

In addition to the above problems, no current version of the reanalysis theory is capable of capturing the antilocality of extraction from PP, to be discussed in the following subsection. We have, then, quite an array of problems with the reanalysis theory.

However, there are some appealing aspects to the reanalysis theory. In particular, the theory can explain the influence of certain PP-external factors on the acceptability of P-stranding. One such case, concerning A’ P-stranding, is that certain prepositions are highly reluctant to be stranded, and in some cases, stranding is completely impossible.

- (23)
- a. ??Which meal did you watch TV [during __]?
 - b. *Which problems did you get here [despite __]?

These prepositions seem to have a common characteristic (although see section 4.3 below for an alternative perspective): they head PPs attached VP-externally. Although we will see below that not all VP-external PPs disallow A' P-stranding, it is possible that VP-*internal* PPs in the relevant languages always allow A' P-stranding. Even this one-way implication may be enough to show some external influence on the strandability of P.

Further evidence for sensitivity of stranding to PP-external factors comes from the more restricted distribution of pseudopassives. Here, the ban on extraction from VP-external PPs is apparently total, and at first sight, pseudopassivisation out of adjunct PPs appears to be generally impossible (although, again, this will be qualified in section 4.3).

- (24)
- a. *Lunch was left [after __].
 - b. *This film was fallen asleep [during __].
 - c. *Jane was [travelled [with __]].
 - d. *Jane was jumped up and down [for __].

Moreover, as predicted by Hornstein & Weinberg (1981), pseudopassivisation (at least in English — I will return to this from a comparative perspective) cannot occur when a thematic DP complement of V intervenes between V and P (25), although it is possible across a nonthematic DP (26).

- (25) *Mary was [given a book [to __]].

- (26)
- a. I was [taken advantage [of __]].
 - b. It's been [taken care [of __]].
 - c. I've been [made a fool [of __]]!
 - d. No offense, Congressman Goode, but I think you've just been [pulled rank [on __]].

(<http://www.lisnews.org/node/27609>)

Even many adverbials intervening between V and P (although clearly not all, given examples such as (22) above) lead to degraded pseudopassivisation.

- (27)
- a. *She was [provided exclusively [for __]] quite adequately.
 - b. *This matter must be [looked very carefully [into __]].
 - c. *That bed was [slept fitfully [in __]] by Napoleon. (van Riemsdijk 1978:222)

Building constraints such as these into a reanalysis-based theory of P-stranding seems natural, even if no successful such theory has yet emerged. This poses a challenge to a non-reanalysis theory of P-stranding: what else could account for these patterns? One aim in this paper is to take some steps towards a reanalysis-free account of such patterns. This would allow us to account for the empirical phenomena which motivate the reanalysis theory, without also having to subscribe to its problematic aspects.

2.3 *The Escape Hatch Theory*

The other major class of P-stranding theories dates back to van Riemsdijk (1978). Concentrating firstly on A'-movement, van Riemsdijk proposed to extend Chomsky's (1973) theory of subadjacency such that PP, in addition to S and NP, was a bounding node. Moreover, van Riemsdijk introduced the notion of an 'escape hatch', a peripheral position within a projection through which movement must pass if extraction from that constituent is to be possible. The specific formulation of this condition, which has played a central role in most subsequent theories of locality, is as follows.

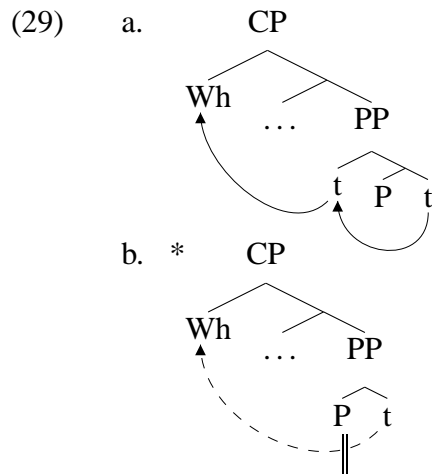
(28) **The head constraint:**

No rule may involve X_i/X_j and Y_i/Y_j in the structure

...X_i... [Hⁿ... [H'... Y_i... H... Y_j...]H'...]Hⁿ... X_j...

(where H is the phonologically specified (i.e. non-null) head and Hⁿ is the maximal projection of H...). (van Riemsdijk 1978:160)

The effect of the head constraint is to allow movement out of a maximal projection only via a specifier or adjoined position above the X' level.¹⁰ The parametrised factor deriving the crosslinguistic patterns is then taken to be the distribution of [Spec,P] positions for use as escape hatches. By assumption, some languages have them and some languages do not, and only those that do have them permit extraction out of PP.

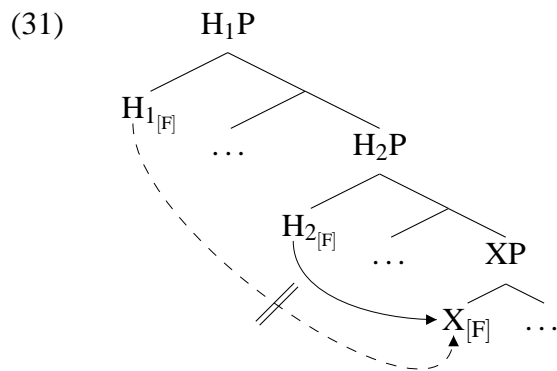


Despite the many positive aspects of this theory, Abels (2003) showed that it was empirically lacking, for a simple reason: van Riemsdijk's theory works by making PP in non-P-stranding languages behave as a strong island: nothing can escape from PP without violating the head constraint. However, non-P-stranding languages may still allow smaller constituents embedded within the complement of P to escape PP:

(30) *Über welches Thema hast du mich noch mal [PP nach ein Buch __] gefragt?*
 About which topic have you me again after a book asked
 "Which topic did you ask me about a book on again?" (Abels 2003:211)

It is therefore not possible to construct an empirically adequate theory of P-stranding based purely on extractability from PP. Some more subtle consideration of phrase-structural relations within PP is necessary as well. Abels' version of an escape hatch theory is designed with these considerations in mind.

Like van Riemsdijk, Abels relates the distribution of P-stranding to the distribution of bounding nodes and escape hatches, but he introduces significant innovations compared to the older theory. One major difference is that Abels works with a descendant of the head constraint, namely a notion of 'phase' similar to that of Chomsky (2000), where the node responsible for bounding properties is not a maximal projection, but the head of that projection. A phase head is defined for Abels as a head bearing unvalued copies of every feature.¹¹ This has two effects. Firstly, a phase head is able to establish Agree relations with any active feature in its c-command domain, and thereby induce movement of a constituent bearing that feature to a specifier position. Secondly, a phase head acts as an intervener for the establishment of such Agree relations by higher heads.

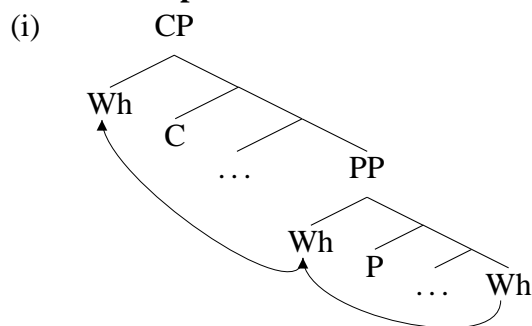


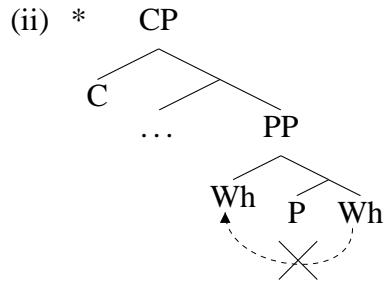
Within a set of assumptions such as this, there is no obvious way to reproduce van Riemsdijk's parametrised distribution of escape hatches: if a phase head H is a universal feature bearer, then Agree relations and movements to [Spec,H] are available as a matter of course on minimalist assumptions. Instead, Abels allows for crosslinguistic variation in the class of phase heads: P is generally a phase head, but not in P-stranding languages.¹²

So far, this yields only a very minor difference between the two types of language: phrases moving out of PP have to pass through an intermediate landing site in [Spec,P] in languages where P is a phase head, but can move in one fell swoop in other languages. However, there is one more piece to Abels' theory: a notion of antilocality (see also Pesetsky & Torrego 2001, among others). Movement is construed as a last resort operation: it is legitimate only if it leads directly to the establishment of new feature-checking possibilities. Now, if the closest possible relationship between two nodes (mutual total c-command) holds between a head H and its complement, no additional locally determined feature-checking possibilities could arise from movement of that complement to [Spec,H], and so such movement is illegitimate.

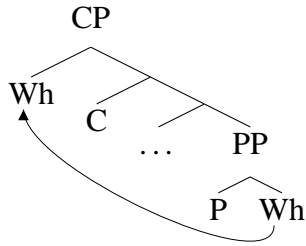
Putting these two pieces together has the effect of immobilising the complement of phase heads: conditions on attraction and intervention mean that anything c-commanded by a phase head H can only move past that head if it agrees with H and stops off in [Spec,H] first of all. But this option is unavailable to the complement of H, because it is already as close as possible to H, and so movement to [Spec,H] (or further) is ruled out by last resort considerations. Therefore, in languages where P is a phase head, the complement of P cannot move, and so P cannot be stranded, as desired.

(32) a. **When P is a phase head:**





b. **When P is not a phase head:**



The escape hatch theory is less insightful about the relation between A' P-stranding and pseudopassivisation. Abels, for instance, assumes a second parameter, determining whether P obligatorily assigns Case to its complement, or only optionally. If the former, then Case-driven A-movement of the complement of P is impossible. Moreover, this parameter is only relevant in languages where P is not a phase head, and so the complement of P is not frozen in place: if P has a DP complement which can't move, then P is the only possible Case-assigner for that DP, and so there will be no visible reflex of any optionality of Case assignment by P.

Because it relies purely on properties of P, and of the Case system, Abels' approach to pseudopassivisation is currently ill-equipped to address the sort of puzzles described in the introduction. Pseudopassivisation patterns crosslinguistically with a type of A'-movement which does not involve extraction from PPs, namely extraction from BPPAs. Both of these properties are problematic for Abels' theory as it stands: the Case suppression mechanism that Abels proposes is irrelevant to A'-movement, where Case is assigned to the foot of the chain, and there is no automatic basis for generalising this mechanism to BPPAs, either. However, the status of Abels' theory as the only account currently able to explain the antilocality of extraction from PP means that it is

guaranteed a place in our overall theory of P-stranding. The first element of our theory will follow Abels, as in (33), then.

(33) **NONPHASAL P** → P-stranding under A'-movement

One task in this paper is to explain how this features in the implicational relations between A' P-stranding, pseudopassivisation, and extraction from BPPAs. As a first step along this path, let's introduce the second class of marked extractions mentioned above.

3. *Another Marked A'-Extraction*

3.1 *Bare Present Participial Adjuncts*

As crosslinguistic syntactic research has grown in scope, it has become increasingly apparent that English, the object language of most early generative texts, is unusual in a good many ways. P-stranding is one of those ways, but English shows a marked profile of possible extractions in other respects as well. Here, I want to concentrate on the class of *Bare Present Participial Adjuncts*, defined as an adjunct headed by a present participle, and not introduced by anything like a preposition. As (35) shows, such adjuncts allow extraction in certain cases.

- (34) a. John came back [whistling polkas].
b. John lay in bed [reading *Ulysses*] all day.
c. John drove Mary crazy [trying to fix the radiator].

- (35) a. What did John come back [whistling __]?
b. What did John lie in bed [reading __] all day?
c. What did John drive Mary crazy [trying to fix __]?

The legitimacy of this extraction is surprising in the light of modern syntactic theory (e.g. Uriagereka 1999, Stepanov 2007), where it is generally assumed that extraction from adjuncts is impossible (but see Chomsky 1982, 1986 and Cinque 1990 for often-overlooked equivocations about this generalisation). BPPAs are not alone in this respect: we have also seen above that extraction from many adjunct PPs is more or less as acceptable as extraction from argument PPs.¹³ However, the patterns of extractions from these two classes of adjuncts are not identical. This will become clearer when we turn to cross-linguistic data in the following subsection, but one piece of evidence against such a unification is that there is no A-movement out of BPPAs, unlike PPs, even in languages with relatively unconstrained A-movement, like Norwegian.

- (36) a. (i) Which bed do you sleep [in __]?
- (ii) This bed has been slept [in __]!
- b. (i) What did John arrive [whistling __]?
- (ii) *The *Marseillaise* was arrived [whistling __].
- (iii) **Marseillaisen ble ankommet [pystrende (på) __]*.
Marseillaise.the was arrived whistling on
 “The *Marseillaise* was arrived whistling.”

There is no great surprise in the impossibility of A-movements like those in (36bii–iii). One possible explanation for it runs along the following lines. An important component of many theories of the passive (ultimately from Jaeggli 1986) is that the external argument role, together with some non-nominative Case, is assigned to the passive morpheme *-en*. This deprives some other member of the verb’s argument complex (in an extended sense, including PP arguments and some PP adjuncts) of Case, forcing it to raise to [Spec,T], where it can be assigned nominative Case. If the argument that raises is a ‘deep’ direct object, we get a regular passive; if it is a ‘deep’ complement

of a preposition, we get a pseudopassive. However, in a BPPA construction, we are dealing with two separate verbal argument complexes, and it doesn't go without saying that manipulations, such as passivisation, of the one will affect the other in any way. One interpretation of (36b) is to take it as evidence that attaching *-en* to the matrix verb is not enough to allow the passive morpheme to steal a Case that would ordinarily be assigned to an argument in the participial VP. If anything along these lines is correct, though, it argues against a straightforward identification of extraction from BPPAs with P-stranding: their distributions are just too different.

Although examples like (35) are quite acceptable, their distribution within a given language is far from free. One salient restriction on them involves an interaction between extraction from a BPPA and the aspectual class of the VP that it modifies. To a first approximation, extraction from a BPPA is only possible if the BPPA modifies a VP that describes an accomplishment or an achievement. Moreover, the interpretation is different in those two cases: in the accomplishment case (37a), John's whistling is interpreted as the cause of Mary's craziness, while in the achievement case (37b), the whistling does not cause John's arrival, but merely occurs at the same time or immediately before.

- (37) a. **Accomplishment matrix VP:** What did John drive Mary crazy [whistling __]?
- b. **Achievement matrix VP:** What did John arrive [whistling __]?
- c. **Point matrix VP:** *What did John [notice his brother] [whistling __]?¹⁴
- d. **Activity matrix VP:** *What does John work [whistling __]?
- e. **State matrix VP:** *Which magical tune does John know Georgian [whistling __]?¹⁵

The following partially replicates the paradigm in Norwegian: as far as I am aware, very much the same interpretive factors are at work in every language allowing this construction.

- (38) a. *Hvilken sang kom han [plystrende på ___]?*
 Which song came he whistling on
 “Which song did he arrive whistling?”
- b. **Hvilken sang jobber han [plystrende på ___]?*
 Which song works he whistling on
 “Which song does he work whistling?”

This pattern can be accounted for in terms of a condition which I will call the ‘Single Event Condition’, introduced and discussed at length in Truswell (2007a,b). It is formulated as follows.

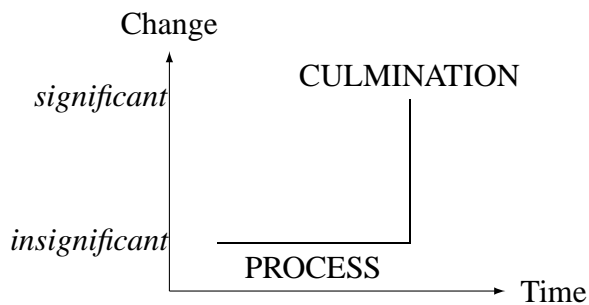
(39) **The Single Event Condition:**

An instance of *wh*-movement is acceptable only if the minimal constituent containing the head and the foot of the chain describes a single event.

Starting from the assumptions that verbs describe events (Davidson 1967) and that some event descriptions have smaller event descriptions as proper subparts (Dowty 1979, Bach 1986), the Single Event Condition permits extraction from a BPPA only if the two simple events described by the matrix VP and the participial phrase can be combined into a single, more complex, event description. Note, though, that the Single Event Condition is formulated as a general condition on movement, intended to have effects above and beyond BPPAs. Justifying this claim would take too long here, but we will see evidence below that it constrains P-stranding, and Truswell (2007b) discusses its effects on extraction from other classes of adjuncts, as well as the distinction between grammatical extraction from the clausal complements of bridge verbs and ungrammatical extraction from the complements of factive verbs.

To flesh out the predictions of the Single Event Condition, I assume a standard decompositional model where a verb phrase can describe a complex event consisting of maximally two subevents: a temporally extended process, which immediately precedes a pointlike culmination, or moment of linguistically significant change.

(40)



Varying which of those two components are present gives us four possible classes:¹⁶

- (41)
- a. PROCESS + CULMINATION: Accomplishment, achievement
 - b. PROCESS: Activity
 - c. CULMINATION: Point
 - d. \emptyset : State

Putting this together with the observations in (37), we are led to the generalisation that extraction from a BPPA is only possible if it modifies a VP describing an event consisting of a process subevent and a culmination subevent.¹⁷ To see why this might hold, recall that the Single Event Condition states that movement can only take place across constituents describing a single event. It is therefore necessary for the matrix VP event description and the BPPA event description to jointly form a description of a single complex event, if extraction is to be possible. That requires a configuration as in (41a), with two slots for subevent descriptions, which is what lies behind the explanation for the fact that extraction is only possible from BPPAs modifying VPs describing just such complex events.

This is as much of a sketch of the constraints on extraction from BPPAs as space permits here. In section 4.3 below, we will extend the scope of the Single Event Condition to cover patterns of

extraction out of PP. Firstly, though, I want to establish the cross-linguistic correlation between P-stranding and extraction from BPPAs.

3.2 BPPAs Crosslinguistically

It is well known that P-stranding, under both A- and A'-movement, is very rare crosslinguistically. Although extraction from BPPAs has not been very well studied from this perspective, initial indications are that the same is true of them, and that, moreover, there is a correlation between those languages that allow P-stranding and those that allow extraction from BPPAs. English, as we have seen, allows extraction from BPPAs, as well as P-stranding under both A- and A'-movement (42). So does Norwegian (43) and some Swedish idiolects (44).

- (42) a. Who did John speak [to __]?
- b. John was spoken [to __].
- c. What did John arrive [whistling __]?
- (43) a. *Hvem har Per snakket [med __]?*
 “Who has Peter talked with?” (Merchant 2001:93)
- b. *Han ble ledd [av __].*
 “He was laughed at.”
- c. *Hvilken sang kom han [plystrende på __]?*
 Which song came he whistling on
 “Which song did he arrive whistling?”
- (44) a. *Vem har Peter talat [med __]?*
 “Who has Peter talked with?” (Merchant 2001:93)
- b. %*Skandalen skrattades [åt __].*
 Scandal.the was.laughed at
 “The scandal was laughed at.”¹⁸
- c. *Vilken sång kom han in i rummet [visslande på __]?*
 Which song came he in in room.the whistling on
 “Which song did he come into the room whistling?”

In contrast, most languages allow none of these constructions.¹⁹ This is true, for instance, of Dutch (45), putting aside the question of stranding by *r*-pronouns, and Greek (46).²⁰

- (45) a. **Wie heb je [op __] gerekend?*
 Who have you on counted
 “Who did you count on?” (van Riemsdijk 1978:137)
- b. **Deze argumenten werden niet [over __] gesproken.*
 These arguments were not about talked
 “These arguments were not talked about.”
- c. **Wat is Jan [__ fluitend] gearriveerd?*
 What is John whistling arrived?
 “What did John arrive whistling?”
- (46) a. **Pjon miluses [me __]?*
 who talk.2SG with?
 “Who were you talking with?”
- b. **O Janis ipothike [me __].*
 The John speak.PASS with.
 “John was spoken with.”
- c. **Ti eftase o Janis [tragudhondas __]?*
 What arrived the John singing
 “What did John arrive singing?”

The initial evidence suggesting a clustering of these properties is quite strong, then. However, things get more complicated when we turn to the intermediate class of languages described in section 2.1, which allow P-stranding under A'-movement but not under A-movement. Surprisingly, these languages also disallow extraction from BPPAs under A'-movement, despite the fact that this latter type of extraction might have reasonably been expected to pattern with A' P-stranding. I illustrate this below for the three languages known to fit this pattern, Danish (47), Icelandic (48), and Faroese (49).

- (47) a. *Hvem har Peter snakket [med __]?*
 “Who has Peter talked with?” (Merchant 2001:93)
- b. **Han blev grinet [af __].*
 “He was laughed at.”
- c. ??*Hvilken sang ankom John [fløjtende på __]?*
 Which song arrived John whistling on

“Which song did John arrive whistling?”²¹

- (48) a. *Hvern hefur Pétur talað* [við ___]?
“Who has Peter talked with?” (Merchant 2001:93)
- b. **Ég tel Vigdís vera oftast talað vel* [um ___].
I believe Vigdís be.INF most.often spoken well of.
“I believe Vigdís to be most often spoken well of.” (Maling & Zaenen 1990:156)
- c. **Hvað kom Jón* [flautandi ___]?
What came John whistling
“What did John arrive whistling?”
- (49) a. *Hvörjum bili koyrir tú* [í ___]?
Which car drive you in
“Which car do you drive in?”
- b. **John varð tosaður* [við ___].
“John was talked with.”
- c. %*Hvönn sang kom John* [brtkslandi ___]?
Which song came John whistling
“Which song did John arrive whistling?”²²

The correct generalisation, then, appears to be that A'-extraction from BPPAs is possible only in those languages which allow pseudopassivisation. To be sure, the heavy Germanic bias in the languages compared here means that this conclusion is only provisional, but this is the generalisation that I will attempt to explain in the rest of this paper.

4. The Analysis

4.1 Factor Y and A-movement

We have seen that the crosslinguistic distributions of A' P-stranding, pseudopassivisation, and extraction from BPPAs, are related. A' P-stranding has a restricted crosslinguistic distribution, and a fairly restricted distribution within a given language. Pseudopassivisation is available in a proper subset of languages with A' P-stranding, and obeys all the same restrictions, and more, within a given language. Finally, extraction from BPPAs is, it seems, available in just those languages with

pseudopassivisation, but until now, the restrictions on its distribution within a given language have been too distinct for direct comparison. The goals of this section are, on the one hand, to fill in this blank in the set of relations, and on the other hand, to account for them. We have chosen a theoretical construct which accounts for at least the fact that A' P-stranding is not universally available, namely parametrisation of the choice of P as a phase head. However, the rest of the analysis is still up for grabs.

As a first step towards remedying this, consider the following generalisation concerning A-movement. Why I am starting here will hopefully make sense soon, but for now, the intuitive link to Abels' (2003) proposal (see section 2.3) that P only optionally assigns case in pseudopassive languages should at least be clear.

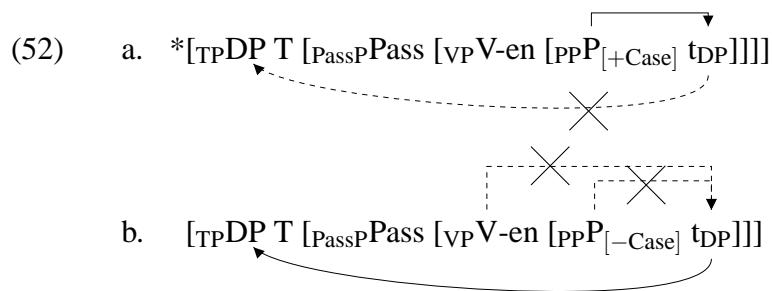
(50) A-movement never crosses the maximal projection of a potential Case assigner.

Given certain assumptions about feature visibility, it is straightforward to reduce (50) to a theorem within the minimalist program. Regardless, it is certainly empirically accurate, at least for the core cases of A-movement. Assuming with Chomsky (2008) that Case assignment by T and V is ultimately due to the locally c-commanding strong phase heads C and v*, Passive is movement from object to subject position, in the absence of a v* Case assigner (51a); Raising to subject and passive of an ECM verb are movement from subject to subject position, in the absence of v* and embedded C Case assigners (51b); and Raising to object is movement from subject to object position, in the absence of a C Case assigner (51c).²³

- (51) a. **Passive:** $[_{TP} \text{Subj } T [_{vPV} [_{VP} V t_{\text{Subj}}]]]$
- b. **Raising to Subject, ECM-passive:** $[_{TP} \text{Subj } T [_{vPV} [_{VP} V [_{TP} t_{\text{Subj}} \dots]]]]$
- c. **Raising to Object:** $[_{TP} \text{Subj } T [_{v^*P} t_{\text{Subj}} v^* [_{VP} \text{Obj } V [_{TP} t_{\text{Obj}} \dots]]]]$

Now, let's turn our attention to A-movement out of PP. The prediction of (50) is clear: P is able to assign Case, presumably universally, and so A-movement cannot cross P. We can also tell an intervention-based story why such a condition should hold: if Case features intervene in Agree relations among other Case features, then a DP should only be able to Agree for Case with the minimally c-commanding Case assigner. This gives us a reason why A-movement out of PP is generally impossible: P is perfectly capable of assigning Case to its complement, and so more remote Case assigners don't get a look in.

This much of the account is, in fact, common to the approaches of Hornstein & Weinberg (1981) and Abels (2003), anachronisms aside. The next step is to account for the exceptional availability of A-movement of the complement of P in English, Norwegian, and Swedish. Here, too, I continue to follow the earlier accounts. Specifically, I assume that, in the exceptional cases in which pseudopassive is possible, this is because the case-assigning properties of P are somehow suppressed. In Abels' theory, this is taken as a primitive, whereas for Hornstein & Weinberg, it is a consequence of reanalysis, but the effect here is the same. Given generalisation (50), we can now account for the pseudopassive case. P is, under normal circumstances, a Case assigner, which makes A-movement past P unnecessary, and so impossible for economy reasons. However, if P's ability to assign Case is suppressed, A-movement past P is no longer problematic. The argument cannot receive case from P, but also cannot receive case from V, as in the standard analysis of the English passive (I return to passives in other languages in section 4.3), and so is forced to raise.



We assume, then, that P may or may not assign Case to its complement in pseudopassive languages. Only if P fails to assign case to its complement, and if V's accusative Case is absorbed by the passive morpheme, will pseudopassivisation be necessary, and so, by economy conditions, possible. We may therefore offer a provisional analysis of the implicational relations between A' P-stranding and pseudopassive as follows, essentially as in Abels (2003).

(53) **FACTOR X** and **FACTOR Y** (first pass):

- a. **NONPHASAL P** → P-stranding under A'-movement;
- b. **NONPHASAL P + CASE SUPPRESSION ON P** → P-stranding under A-movement.

However, there is as yet nothing in this story to explain the more restricted distribution of pseudopassive relative to A' P-stranding *within* a given language. Moreover, we don't know why the possibility of Case suppression should correlate with A'-extraction from BPPAs. This latter problem is the focus of the next subsection, following which I return to restrictions on pseudopassivisation.

4.2 *Factor Y and Phases*

We now have a theory (as in Abels 2003) of the crosslinguistic relation between A' P-stranding and pseudopassivisation. This section hopes to show that a natural extension, plus a couple of auxiliary assumptions, can account for the fact that languages with pseudopassives allow extraction out of BPPAs as well.

The first tool we need is a distinction between uninterpretable features and selectional requirements. This distinction is a natural one. The selectional requirements of a head are satisfied very locally, on most conceptions. On the other hand, uninterpretable features are what allows for action at a distance, or the formation of nonlocal dependencies, in syntax.

To make the connection between pseudopassives and A'-extraction from BPPAs, I need to make specific assumptions about which relations come under the heading of 'selectional requirements', and which come under the heading of nonlocal dependencies mediated by uninterpretable features. Firstly, I assume that Case assignment is mediated by uninterpretable features on the Case-assigning head, as in standard minimalism. This follows if the local/nonlocal division suggested above is accurate: although Case-assignment is frequently very local, it may occur at a distance, perhaps in expletive-associate constructions, and certainly in examples of Case-driven A-movement, if the minimalist assumption that movement is driven by Agree is correct. Secondly, I assume, with Abels (2003), that phase heads are defined by the uninterpretable features that they bear, although I remain agnostic about exactly which features should be implicated in this move. When H is a phase head, then, it bears certain uninterpretable features that are responsible for its behaviour as a phase, and when H is not a phase head, those features are absent.²⁴ Typical subcategorisation, however, is a regular, local, selectional requirement, distinct from the Agree system.

Moreover, I need the following stipulation.

- (54) a. The present participle in BPPAs is always a phase head.
 b. The phasehood of prepositions is subject to crosslinguistic variation.

Now comes the leap. In the previous subsection, I described factor Y, the factor controlling the possibility of pseudopassivisation, as an operation which suppresses P's ability to assign Case, while preserving its selectional requirements. On current assumptions, this means that factor Y removes (or somehow renders inconsequential) the uninterpretable features on P that drive Case assignment. Let's now expand this to uninterpretable features in general.²⁵

- (55) **FACTOR Y** = feature suppression, an operation which:

- a. removes (or renders inconsequential in some other way) certain uninterpretable features on a head X;
- b. preserves X's selectional requirements.

It should be clear that the pseudopassive story from the previous subsection fits this description. Let's now see how this extends to extraction from BPPAs. Because BPPAs are always headed by a phase head, extraction of the complement of BPPAs is generally impossible, according to the antilocality considerations of Abels (2003).

$$(56) \quad *[\text{CP Wh C} \dots [\text{VP}[\text{VP V} \dots] [\text{V}_{\text{ingP}} \text{t}_{\text{Wh}} \text{V-ing}_{\text{uF}_1 \dots \text{uF}_n} \text{t}_{\text{Wh}}]]]$$

However, feature suppression is able to apply to the present participle, removing the relevant uninterpretable features (while leaving others, such as those responsible for Case relations, intact). Because phase heads are defined in terms of such features, this has the effect that the present participle no longer behaves as a phase head. Extraction is, therefore, straightforward.

$$(57) \quad [\text{CP Wh C} \dots [\text{VP}[\text{VP V} \dots] [\text{V}_{\text{ingP}} \text{V-ing t}_{\text{Wh}}]]]$$

There are several problematic aspects to this theory. For one thing, as an anonymous reviewer points out, it relies on a relativised notion of phase heads, where a present participle is treated as a phase head only when it is within an adjunct. Complement participial phrases allow subextraction quite freely in many languages, in contrast to BPPAs. However, this need to relativise phasehood to the phrase-structural configuration of a head represents a departure from the norm, whereby certain heads are considered phases, regardless of the broader phrase-structural context in which they are situated.

Secondly, this theory makes a prediction that extraction of more deeply embedded constituents

from within BPPAs, such as (58), should be grammatical even in languages where extraction of the complement of the present participle is impossible, as antilocality considerations have nothing to say here. This prediction is falsified by examples like the following, from Icelandic:

- (58) **Hvað kom Jón til baka reynandi að tala um?*
What came John to back trying to talk about
“What did John come back [trying to talk about __]?”

This means that the theory presented here will require some nontrivial modifications before it accounts for the full range of facts. However, it does have the virtue of accounting for the surprising crosslinguistic correlation between a type of A-movement (pseudopassive) and a type of A'-movement (extraction from BPPAs), by relating both phenomena to a common feature suppression mechanism. I adopt it here, in the hope that the problematic aspects can be remedied in the future.²⁶

To be clear, note that the way in which these assumptions capture the one-way implication between pseudopassive and A' P-stranding deviates from the logic of Abels (2003) and previous accounts, summarised in (1). Previous accounts tied the availability of A' P-stranding to some syntactic factor, and the further availability of pseudopassives to some other factor dependent on the first. Here, however, as schematised in (3), the two factors are independent of each other: the availability of nonphasal P in a language is independent of the availability of feature suppression. However, the former allows only A' P-stranding, while the latter allows P-stranding under both A- and A'-movement, as well as extraction from BPPAs. If pseudopassivisation is available in a language, then, feature suppression is available. And if feature suppression is available, then it can apply to P, removing its uninterpretable features and preventing it from behaving like a phase head. This allows A' P-stranding, which means that A'-movement of the complement of P is always possible in languages with pseudopassivisation. This is where the crosslinguistic one-way

implication that pseudopassive languages always allow A' P-stranding comes from. We therefore have the final version of the factors allowing P-stranding under A- and A'-movement.

(59) **FACTOR X AND FACTOR Y** (final version):

- a. **NONPHASAL P** → P-stranding under A'-movement;
- b. **FEATURE SUPPRESSION** → P-stranding under A- or A'-movement, A'-extraction from BPPAs.

This gives us the bare bones of a theory able to capture the crosslinguistic generalisations laid out in this paper. However, so far, we have nothing to say about restrictions on the operations in question. In actual fact, I hope to treat these as a logically separate issue, concerning the interaction of general conditions on movement and passivisation with these particular constructions. The following subsection spells out the details.

4.3 *Limits on P-stranding*

So far, this paper has introduced just two sets of constraints on movement. The first concerns the cyclicity-inducing and antilocality properties of phase heads, themselves derived from general considerations of economy and feature visibility. The second is the Single Event Condition (39), repeated below.

(60) **The Single Event Condition:**

An instance of *wh*-movement is acceptable only if the minimal constituent containing the head and the foot of the chain describes a single event.

This condition was motivated above with reference to extraction out of BPPAs, and in fact, I will have nothing more to say about the limits on extraction from BPPAs in this paper. Here, though, I

will show that this condition also regulates the distribution of examples of P-stranding in a given language. This will be the last word in this paper on restrictions on A'-extraction from PP. However, more will have to be said concerning the more restricted distribution of pseudopassivisation, illustrated in section 2.2. I will argue that the extra restrictions in this case come from general constraints on passivisation, pseudo or regular. Initially, the data considered will be exclusively from English. I will reintroduce Norwegian data later in the section, to discuss the different properties of passives in the two languages.

Turning first, then, to the effect of the Single Event Condition on extraction from PPs, I wish to distinguish between two ways in which a PP's denotation could interact with an event description. Firstly, the PP could further specify the nature of the event in question, in the way familiar from Davidson (1967), for example by specifying an extra participant in the event (61a). Secondly, the PP could introduce a relation between the event described in the matrix VP and a second event (61b).²⁷

- (61) a. $\exists e, y. (P(e) \wedge \text{with}(e, y))$
 b. $\exists e_1, e_2. (P(e_1) \wedge \text{during}(e_1, e_2))$

Representations like (61a) clearly satisfy the Single Event Condition, as they only contain one event variable. In cases like (61b), however, the issue is more cloudy. Clearly, two event variables are involved, but can the two be construed as subevents of a larger macroevent?

Space reasons prevent me from justifying this response (see Zacks & Tversky 2001, von Stechow 2002, Wolff 2003, and Truswell 2007b, ch.2 for pertinent discussion), but I suggest that whether representations like (61b) are acceptable depends primarily on the type of perceived relation between events. Purely temporal relations, for example, such as that typically expressed by *during*, will not satisfy the Single Event Condition. However, if the two events can be construed

such that one of the events is perceived as (roughly) causing, enabling, or leading to the other (call such a relation a ‘contingent’ relation), then the Single Event Condition will be satisfied, just as it was satisfied despite the presence of multiple subevents in the discussion of extraction from BPPAs in section 3.1.

Even this rough sketch makes some predictions. Firstly, in P-stranding languages, A’ stranding of prepositions which do not relate two events should be quite free. That seems correct: adverbial PPs specifying locative, benefactive, instrumental, and ‘accompaniment’ arguments (call them ‘quasiarguments’) all allow extraction as easily as argumental PPs.

- (62)
- a. Which room did you meet [in __]?
 - b. Who did you do that [for __]?
 - c. What did you make that [with __]?
 - d. Who did you go there [with __]?
 - e. Who did you rely [on __]?

Secondly, when there is no chance that two events can be construed such that one leads to the other, then the Single Event Condition should always be violated, and so extraction from PP should always be impossible. Again, that seems to be true.

- (63)
- a. *Which problems did you get here [despite __]?
 - b. *Which arguments do you believe that [notwithstanding __]?²⁸

Finally, when a preposition specifies a relation which is *compatible* with, but does not require, a construal with a contingent relation, we should find a degree of variability, depending on how plausible the contingent construal is. That seems accurate, too. Even a preposition such as *during*, which is generally considered not to be strandable, can be stranded if a contingent construal is

available, and such cases are much more common with *before* and *after*, for example.

- (64) a. *Which meal did you read a book [during __]?
b. %Which play did you fall asleep [during __]?

So on a certain conception of what it means to be a single event, the Single Event Condition constrains A' P-stranding as well as extraction from BPPAs. Turning to pseudopassivisation, we certainly don't find any counterexamples to the Single Event Condition (pseudopassivisation is possible in a proper subset of the environments in which A' P-stranding is possible, and so if A' P-stranding does not provide counterexamples to the Single Event Condition, then pseudopassivisation cannot). So adversative PPs headed by *despite* or *notwithstanding*, for example, are no more strandable under A-movement than under A'-movement.

- (65) a. *My fears were [often travelled [despite __]].
b. *Those public order laws were [regularly drunk [notwithstanding __]].

However, the effect of the condition is less obvious because of additional restrictions on pseudopassivisation. Firstly, in many of the cases such as (64), where A'-extraction is dependent on a particular construal, pseudopassivisation is universally impossible.

- (66) a. %Which play did you fall asleep [during __]?
b. *This play was fallen asleep [during __].

- (67) a. Which meal should we leave [after __]?
b. *This meal should be left [after __].

Secondly, (68) shows that even adverbial PPs specifying additional quasiarguments don't generally allow pseudopassivisation (although we will return presently to some exceptions): only regular PP

arguments productively allow pseudopassivisation (69).

- (68) a. *This room was met [in __].
b. *Jane was jumped up and down [for __].
c. *Jane was [travelled [with __]].
- (69) a. John was [spoken [to __]].
b. John was [relied [on __]]

Another discrepancy between A' P-stranding and pseudopassivisations concerns the generalisation mentioned in section 2.2 that pseudopassivisation in English cannot take place across a thematic DP or many adverbials, unlike A' P-stranding.

- (70) a. *Mary was [given a book [to __]].
b. Who did you [give a book [to __]]?
- (71) a. *She was [provided exclusively [for __]] quite adequately.
b. *This matter must be [looked very carefully [into __]].
c. *That bed was [slept fitfully [in __]] by Napoleon. (van Riemsdijk 1978:222)

This gives us three constraints on pseudopassivisation, which conspire to obscure the effect of the Single Event Condition. Pseudopassivisation is always impossible from a VP-external PP, and is generally impossible from a nonargumental PP. Moreover, pseudopassivisation in English cannot cross a thematic DP complement.

In fact, I have nothing much to offer concerning the first of these restrictions: perhaps feature suppression, and so pseudopassivisation, is restricted to heads whose maximal projection is a sister of a projection of V. The fact that the PPs participating in alternations like (66)-(67) are always attached VP-externally would then explain the difference between P-stranding under A- and A'-

movement in such cases.²⁹ Regarding the other two restrictions, though, the general strategy here will be to reduce them to general constraints on passivisation. The restricted distribution of pseudopassivisation is therefore due to the fact that it must obey all the constraints that A' P-stranding obeys, plus independent constraints on passivisation. Once both factors are controlled for, few if any restrictions need to be attributed specifically to pseudopassivisation.

I turn firstly to the generalisation that pseudopassivisation out of quasiargumental PPs is frequently degraded. Note firstly that the generalisation is not exceptionless, as the following show.

- (72)
- a. This class has been [messed around [in __]] for the last time!
 - b. John has been [walked out [on __]] more often than anyone should have to bear.
 - c. This trampoline has been [jumped up and down [on __]] for years, and it's as good as new.

It seems that the difference between acceptable cases like (72) and unacceptable cases like (68) is due to a general semantic condition on passive sentences. While this difference is notoriously hard to pin down (see Fiengo 1974, Takami 1992, and references therein), it shows up in the following two examples.

- (73)
- a. Merlin is looking for a unicorn.
 - b. A unicorn is being looked for by Merlin. (Fiengo 1974:51)

Unlike (73a), (73b) seems to imply the existence of a unicorn, and also suggest that it is being affected, in some sense, by the search.³⁰ This affectedness constraint plausibly explains why many statives resist passivisation.

- (74)
- a. *Four is equalled by 2+2.
 - b. *This table is resembled by that table.

- c. *French is known by John.

This suggests a reason why quasiargumental PPs generally don't allow pseudopassivisation, but occasionally do. The sort of argumental roles expressed by quasiargumental PPs don't generally affect the complement of the preposition, which means that that DP is generally not a fit subject for a pseudopassive clause. This is true of all the examples in (68) above. However, it is not always true, and (72) lists some of the cases where the pseudopassivised subject *is* affected by the event in question. We can sharpen this to some extent by adopting an independent heuristic test for affectedness: if a phrase can follow *what happened to NP* then NP is affected by the action in question.³¹

- (75) a. What happened to John is that he was walked out [on __] again.
b. #What happened to this room is that it was met [in __].

Such considerations also suggest why many acceptable examples of pseudopassivisation out of quasiargumental PPs, like those in (72), include phrases like *once too often*, or *for the last time*: one of the uses of such phrases is to imply that an action does have an effect, when this may not otherwise be clear.

A further consequence of this approach concerns a clear distinction between *with*, expressing accompaniment, and instrumental *with*: the latter allows pseudopassivisation more readily than the former.

- (76) a. *My brother has been [travelled [with __]] every day since his birth.
b. *I was [walked [with __]] for a while, but now I'm walking alone again.
- (77) a. This pen has been [written [with __]] every day since the death of Mr. Biro.
b. This broken shovel has clearly been [shovelled [with __]] rather too enthusiastically.

This is because using an object for some purpose is more likely to affect or characterise that object than that object simply accompanying something. However, if an accompaniment relation does have some more salient effect on the pseudopassive subject, then cases like (76) become more acceptable. For instance, in (78), the accompaniment relation is what leads to the children in question being safe.

(78) ?Children are [travelled [with __]] at all times by accredited childminders.

It may initially seem like the affectedness requirement could account for the impossibility of pseudopassivisation out of temporal PPs as in (66)–(67) above. However, a minimal pair shows that something beyond affectedness is at work here. In the following, the meaning is very much the same in terms of the reviewers' response to the film, and any effect that this may have on (the status of) the film. However, (79a) is grammatical, while (79b) is unacceptable.

- (79) a. What happened to this film is that it was walked out [of __] by dozens of reviewers.
b. *What happened to this film is that it was walked out [during __] by dozens of reviewers.

This suggests that semantic factors alone cannot account for this discrepancy, and the reason must lie in the syntax, plausibly of feature suppression. However, a case like this where the affectedness requirement fails to ameliorate a case of pseudopassivisation only highlights how strong the effect is elsewhere. I conclude that the apparent restriction of pseudopassivisation to argumental PPs is not fully general, nor specific to pseudopassives, but rather stems from the affectedness requirement on passives in general. There is no need for our theory of P-stranding to account for this, then.

The same moral is suggested by the generalisation that pseudopassivisation in English is impossible across a thematic DP complement (70). Once again, this recalls a general property of passivisation in English. To see this, consider the following well-known paradigm.

- (80) a. (i) Bill gave John a book.
(ii) Bill gave a book to John.
- b. (i) John was [given __ a book].
(ii) A book was [given __ to John].
- c. (i) *A book was [given John __].
(ii) *John was [given a book to __].

One salient generalisation here is that no thematic DPs intervene between the main verb and NP-trace. This bears a clear resemblance to the restriction on pseudopassivisation noted above. However, pseudopassivisation across a *nonthematic* DP is possible.

- (81) a. I was [taken advantage [of __]].
b. It's been [taken care [of __]].
c. I've been [made a fool [of __]].
d. No offense, Congressman Goode, but I think you've just been [pulled rank [on __]].
(<http://www.lisnews.org/node/27609>)

We cannot tell whether this is also possible with regular passives in English. We would need something of the form V X NP_{nonthematic} NP, where X is generally zero. However, I am unaware of any plausible candidates for such a configuration: in more idiomatic V NP NP constructions, such as *show NP the door*, it is the first NP which bears a θ -role. Meanwhile, other plausible potentially relevant configurations, such as V [P NP] NP, don't exist in the base in English. As

far as is testable, then, there is a clear parallelism between passivisation and pseudopassivisation in this respect too: neither operation can apply across a thematic DP in English. Once again, this means that it is unnecessary to construe this as a condition on P-stranding itself.

As is well known, however, there is a bifurcation of the properties of passives in this respect crosslinguistically. The English passive is ‘asymmetric’, in that only one object in a double object construction is passivisable, while the passive in languages like Norwegian is ‘symmetric’, which means that either object can passivise in such cases.

- (82) a. *Jon vart gitt ei fele.*
“Jon was given a fiddle.”
b. *Ei fele vart gitt Jon.*
“A fiddle was given Jon.” (Åfarli 1992:17–8)

I have nothing to add concerning why languages should differ in this way (see Åfarli 1992, Woolford 1993 and Boeckx 2008 for suggestions), but more importantly for my purposes here, when the passive is symmetric, symmetric pseudopassives are also possible. The following examples are clumsy for some Norwegian speakers, and fully acceptable for others, but apparently grammatical in either case.

- (83) a. %*Jens ble gitt ei klokke [til __] igår.*
“Jens was given a watch to yesterday.”
b. %*Vi ble sendt penger [til __] hver måned.*
“We are sent money to every month.”

Once again, then, the restrictions in the passive and pseudopassive cases are parallel from language to language.³²

Finally, we turn to the generalisation that adverbials intervening between V and P block pseudopassivisation (71). Here again, there are counterexamples: cases like the following are quite acceptable.

- (84) a. John has been [talked sternly [to __]].
b. This door has been [leaned heavily [on __]] once too often.

Again, the clearest difference between (71) and (84) is one of affectedness. It is the fact that the door was specifically leant heavily on, rather than just leant on, which had the implied effect of breaking the door in (84b). But in (71c), for example, the fact that Napoleon slept in the bed is what sets the bed apart — the fact that Napoleon slept *fitfully* in the bed doesn't add anything more, under normal circumstances, to our impression of the bed. The generalisation, therefore, seems to be that, in English at least, passivisation is only possible if all the material between V and the trace describes ways in which the passive subject was affected. This generalisation, once again, is stated in terms of passivisation rather than specifically pseudopassivisation. Whether this extension to passivisation is accurate or not is impossible to test in English, given the strict adjacency conditions holding between a verb and its object. It is at least, however, possible that this is accurate, and so not necessary to account for this effect within our theory of P-stranding.

In sum, constraints on P-stranding are plausibly not specific to the mechanisms allowing P-stranding itself, and can be factored out into a general constraint on movement (the Single Event Condition) and two general constraints on passivisation (the affectedness requirement and the condition, specific to languages with asymmetric passives, that the only passivisable thematic DP is the one nearest to the verb). I don't know why these effects should hold, but what matters here is that they are not specific to P-stranding constructions. This leaves us free to state the conditions allowing P-stranding in the maximally simple and general fashion adopted in section 4.2.

5. *Summary and Conclusion*

By now, we have quite a toolkit at our disposal. The assumptions, largely independently motivated but assumptions nonetheless, include the following.

- (85)
- a. Case assignment is mediated by uninterpretable features.
 - b. Phase heads are defined by the presence of certain uninterpretable features.
 - c. Uninterpretable features do not drive strict subcategorisation.
 - d. The phasehood of P is subject to parametric variation.
 - e. The head of a BPPA is universally a phase.
 - f. Antilocality: there is no movement from the complement position of a head H to [Spec,H].
 - g. The Single Event Condition: the minimal constituent containing the head and the foot of the chain describes a single event.
 - h. A-movement never crosses a Case-assigner.
 - i. Passivisation affects interpretation: a passive subject is taken to exist, and to be affected by the predicate expressed by the material between V and *t*.
 - j. In English-type asymmetric passive languages, the only passivisable thematic DP is the one closest to V.
 - k. An operation of feature suppression is available as a marked option.

The goal of this paper has been to use this toolkit to derive the properties of three separate constructions, characterised by the following equations.³³

- (86)
- a. Extraction from BPPAs = feature suppression + A'-movement.
 - b. Pseudopassive = feature suppression + A-movement.

- c. A' P-stranding = nonphasal P + A' movement, or feature suppression + A'-movement.

The next three subsections show that this yields the right properties for the three constructions.

5.1 *The Toolkit and Extraction from BPPAs*

By assumption, the head of a BPPA is a phase, which means that it bears the uninterpretable features which define phasehood, as in Abels (2003). This means that extraction of the complement of a BPPA is ruled out by antilocality considerations unless feature suppression is available to remove the uninterpretable features from the head and so stop it behaving like a phase.

If extraction from BPPAs is possible in a given language, then the only part of the toolkit which will constrain its distribution is the Single Event Condition. We saw in section 3.1 that this was indeed the case, on the basis of the following paradigms from English and Norwegian.

- (87) a. **Accomplishment matrix VP:** What did John drive Mary crazy [whistling __]?
- b. **Achievement matrix VP:** What did John arrive [whistling __]?
- c. **Point matrix VP:** *What did John [notice his brother] [whistling __]?
- d. **Activity matrix VP:** *What does John work [whistling __]?
- e. **State matrix VP:** *Which magical tune does John know Georgian [whistling __]?
- (88) a. *Hvilken sang kom han [plystrende på __]?*
Which song came he whistling on
“Which song did he arrive whistling?”
- b. **Hvilken sang jobber han [plystrende på __]?*
Which song works he whistling on
“Which song does he work whistling?”

The explanation for this pattern comes from the interaction of the Single Event Condition with a decompositional theory of lexical aspect, leading to the generalisation that extraction from a

BPPA is only possible if it modifies a VP describing an internally complex event, such as an accomplishment or achievement.

5.2 *The Toolkit and A' P-stranding*

There are two ways in which it may be possible to extract the complement of P by A'-movement in a given language: either P is not a phase head in the language in question, or it is a phase head, but feature suppression is available to remove the uninterpretable features that lie behind phasehood. The fact that the latter mechanism, but not the former, also allows extraction from BPPAs explains why there is a one-way implication between these two constructions: whenever extraction from BPPAs is available, feature suppression is at work behind the scenes, and so A' P-stranding is possible. However, A' P-stranding could also be possible simply because P isn't a phase in the language in question, which would not be sufficient to allow extraction from BPPAs.

Moreover, because of the frugal conception of feature suppression that we have arrived at, these two routes to A' P-stranding are more or less currently empirically indistinguishable (but see note 29). Both have no consequences beyond the fact that P doesn't bear some features that it usually does, and therefore doesn't behave like a phase head.

If A' P-stranding is possible at all, then, the only factor from the toolkit that will constrain its distribution is, once again, the Single Event Condition. The predictions of the condition in this case are that extraction from quasiargumental PPs should be freely available, extraction from PPs expressing necessarily noncontingent relations among events should be impossible, and that there should be a degree of variability concerning a third class of PPs which express relations among events that are compatible with contingent relations, but do not entail them. All of these predictions are borne out.

- (89) a. Which room did you meet [in __]?
- b. Who did you do that [for __]?
- c. What did you make that [with __]?
- d. Who did you go there [with __]?
- e. Who did you rely [on __]?
- (90) a. *Which problems did you get here [despite __]?
- b. *Which arguments do you believe that [notwithstanding __]?
- (91) a. *Which meal did you read a book [during __]?
- b. %Which play did you fall asleep [during __]?

5.3 *The Toolkit and Pseudopassives*

We assume that prepositions are generally able to assign Case to their complements, and that A-movement across such a Case assigner is generally impossible. Pseudopassivisation is therefore impossible unless the uninterpretable feature driving Case assignment by P is suppressed. The fact that pseudopassivisation relies on the same mechanism as extraction from BPPAs explains why the two are found in just the same languages. The fact that this mechanism is one way, but not the only way, of allowing A' P-stranding explains why all languages with pseudopassivisation and extraction from BPPAs also allow A' P-stranding, but not *vice versa*.

However, the distribution of pseudopassives is more restricted than that of A' P-stranding *within* a given language, as well as crosslinguistically. Partly, I suggested that this may be due to a constraint that feature suppression can only apply to the head of a sister of a projection of V. Ideally, though, we would like it to follow as far as possible from more general factors. We saw that the effects of the Single Event Condition are largely masked in the case of pseudopassivisation, although

certainly no counterexamples were found. However, other restrictions on pseudopassivisation were shown to follow from general constraints on passivisation, rather than just its P-stranding variant.

The first such constraint is that the passive subject must be, roughly, affected by the event described in rest of the passive sentence. In the case of the regular passive, this is seen most clearly in the unacceptability of the passive of many stative verbs (92), and in the case of pseudopassives by, for example, the distinction between passivisation of the complements of instrumental (93) and accompaniment (94) *with*, as well as by the heuristics like *what happened to NP* described above.

(92) a. *Four is equalled by 2+2.

b. *This table is resembled by that table.

c. *French is known by John.

(93) a. This pen has been [written [with ___]] every day since the death of Mr. Biro.

b. This broken shovel has clearly been [shovelled [with ___]] rather too enthusiastically.

(94) a. *My brother has been [travelled [with ___]] every day since his birth.

b. *I was [walked [with ___]] for a while, but now I'm walking on my own again.

The second constraint on passivisation is that in English-style asymmetric passive languages (but not in symmetric passive languages like Norwegian), the thematic DP closest to V is the only one that can be passivised. This is seen in (80), repeated below: contrast (95bi) with (95ci) for the regular passive case, and (95bii) with (95cii) for the pseudopassive case.

(95) a. (i) Bill gave John a book.

(ii) Bill gave a book to John.

b. (i) John was [given ___ a book].

(ii) A book was [given ___ to John].

- c. (i) *A book was [given John __].
 (ii) *John was [given a book to __].

The short story, then, is that the distribution of the pseudopassive is so restricted because it needs to obey all the constraints on extraction from BPPAs, all the constraints on A' P-stranding, and all the constraints on passivisation.

5.4 Conclusion and Prospects

This investigation started from a crosslinguistic correlation between a marked type of A-movement, namely pseudopassivisation, and a marked type of A'-movement, namely extraction from BPPAs. This correlation allows us to sharpen our picture of the factors allowing these movements. We saw that the patterns of PP-external influence on the availability of these types of movement are due to general constraints either on movement or on passivisation. The final description of feature suppression, the mechanism which allows pseudopassivisation and extraction from BPPAs, is therefore very simple (and in fact, close to the idea presented in Abels 2003).

Much of this paper has been programmatic, posing at least as many questions as it answers. To mention just three, firstly, we would surely like to know more about the relationship between the two mechanisms allowing A' P-stranding. Formally and functionally, they are very close. Is there anything (apart from the logic of the argument) which keeps them from collapsing together?

Secondly, the wider interactions of feature suppression, antilocality, and extraction from adjuncts have been ignored here. Truswell (2007b) showed that certain other classes of adjunct allow subextraction quite productively in English, for example *in order* and *without* clauses, as in (96).

- (96) a. What did you come here [in order to talk about __]?
 b. What did you go away [without thinking of __]?

Crosslinguistically, though, not every language permits such dependencies. Moreover, in such cases, with much more structure inside the adjunct, appealing to antilocality to explain the absence in a given language of such examples is much less attractive (although the ideas sketched in fn.26 might help), as there is a large amount of material separating the foot of the chain from the nearest phase head.

The account of these other types of extraction from adjuncts should probably be partially independent of this account of extraction from BPPAs, for two reasons. Firstly, in the case of extraction from BPPAs, Truswell (2007a) showed that the interpretation of the relation between the events described in the matrix VP and in the adjunct is determined by the aspectual class of the matrix VP: accomplishments yield causal relations, while achievements yield purely temporal relations. No such thing is true in cases like (96), where the factor determining the relation between the two subevents (namely *without*, or *in order*) is internal to the adjunct itself. Secondly, and probably more significantly, the crosslinguistic distribution of examples like (96) is much wider than the distribution of extraction from BPPAs: at least some such examples are available in Romance (see in particular Cinque 1990), and also in Germanic languages like Icelandic which disallow extraction from BPPAs. Examples like (96) are not universally available, however: Dutch, German, and Russian, at the least, disallow them. The reason why will have to wait for future research.

Another question raised by this paper concerns the limits of feature suppression. We surely do not want this mechanism to operate freely. Unconstrained deletion of features would allow us, for example, to intersperse finite and nonfinite clauses in raising constructions (97), whereas actually only the latter should be allowed because of the Case-assigning abilities of the former.

(97) *John seems [that [*t* has fallen over]].

In this paper, I have tentatively proposed that feature suppression might be limited to the heads

of sisters of projections of V. This proposal is sufficient to rule out (97), which would only be derivable by suppressing finite embedded T's Case-checking features. Whether such a proposal is sufficient (or indeed accurate) in the general case remains to be seen.

However, the biggest problem posed by the pseudopassive hasn't even been touched on here. We still have no idea why is it so very rare in the first place. In a sense, the analysis here, if it contains a grain of truth, raises as many problems as it solves. Precisely because our final picture of the feature suppression operation is so simple, we are left wondering why so few languages avail themselves of it. To be sure, this is not just a problem for the present analysis: every account of P-stranding or of pseudopassives that I have seen faces the challenge of simultaneously making these structures available, but not widespread. However, the problem's ubiquity just makes it more pressing.

This means that the immediate priority for extending this line of research is to expand the crosslinguistic database. We know of three further pseudopassive languages (Vata, Gbadi, and Prince Edward Island French). Lack of access to native speakers has prevented me from checking whether extraction from BPPAs is also possible in these cases.³⁴ The possibility of extraction from BPPAs in other, non-pseudopassive, languages should also be investigated. In fact, perhaps the best outcome of such extended crosslinguistic research is that we find extraction from BPPAs to be available in a proper superset of languages with pseudopassives. That would allow a rehabilitation of sorts of pseudopassives within the principles and parameters model. If (*if!*) parameter setting really were a question of flipping a switch, then the fact that only half a dozen languages have pseudopassives, and only a dozen have P-stranding at all, makes these constructions pretty poor candidates for such a parameter: why don't thousands of languages have the construction in question, and why don't we stumble across them all the time? If, however, we find a few plausibly related constructions X such that all languages with pseudopassives also have X, but not *vice*

versa, then we're getting somewhere: we flip a few switches to get X, but we need to flip a few more switches to get pseudopassives. A' P-stranding is one such construction. The hope expressed in this paper is that extraction from BPPAs may be another.

In fact, two of my informants (native speakers of Swedish and Faroese) allow extraction from BPPAs but not pseudopassivisation. In contrast, although many speakers of a pseudopassive language feel extraction from BPPAs to be slightly marginal, none have gone so far as to reject them outright. I take this to be encouraging for our theory of parameters, if not for the specific theory sketched in this paper. Perversely enough, a serious worry for the analysis proposed here is its simplicity. It turns around two simple, binary choice points: either P is a phase head in a given language, or it is not, and either languages can delete uninterpretable features from certain heads, or they can't. Internal to the data presented here, I see no need for anything more complicated than that, but perhaps we should hope that, in the fullness of time, things are not tied together so neatly.

Notes

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²The choice of case on the subject is somewhat arbitrary here, and in other languages discussed

below with rich case morphology: should it bear regular nominative, or the case assigned by the preposition? Ungrammaticality results either way. This case conflict is not sufficient to rule out pseudopassivisation in all languages with rich case systems, however, given the existence in many languages of non-nominative subjects. See Maling & Zaenen (1990, §2) for discussion.

³ We have to use a more complex construction to demonstrate the absence of pseudopassives in Icelandic, because of cases which look like pseudopassives, but turn out to involve A'-fronting of the complement of P, as in (98).

(98) *Þessa konu er oftast talað vel [um __].*
“That woman.ACC is usually spoken well of.” (Maling & Zaenen 1990:155)

The raising to object in (9b) controls for the subjecthood of the fronted argument: because *Vigdís* fails to undergo raising to object in that example, we assume that *Þessa konu* in (98) is in an A'-position, rather than the subject position.

⁴Van Riemsdijk (1978:133) states that Macedonian is also a P-stranding language. I have not seen this elsewhere in the literature, and have been unable to verify what the properties of Macedonian P-stranding are if this is true.

⁵This pattern also occurs in some areas of the Frisian paradigm.

⁶As with Icelandic (see note 3), it is necessary to construct a more complex example to see the impossibility of pseudopassive in Frisian, as the basic order in (99) is, in fact, grammatical.

(99) *Jan wurdt [mei __] praat.*
John was with spoken
“John was spoken with.”

Hoekstra (1995) analyses this as a base-generated dependency between the ‘subject’ (actually in [Spec,C]) and a null resumptive, an analysis which explains why such pseudopassive-like constructions cannot be embedded in Frisian: the antecedent of the null resumptive must be in [Spec,C],

and so cannot follow C^0 *dat* in (14a) (an argument due to Ger de Haan).

⁷A more subtle version of reanalysis is sketched by van Riemsdijk (1978, §6.2), following work by Chomsky. On this theory, P belongs simultaneously to V^* and to PP, and (presumably) the complement of P is immediately dominated by both a projection of P and a projection of V^* . The extra mobility of that complement is then related to the absence of uniquely determined relations of c-command and so on, post-reanalysis. It is not clear how many of the current criticisms apply to such an approach, as the approach has never been developed enough, to my knowledge, to make the empirical predictions clear.

It is important to distinguish Hornstein & Weinberg's type of reanalysis from the separate operation of V' -reanalysis, which played a crucial role in Larson's (1988) seminal discussion of the double object construction. In both cases, extra material comes to be reanalysed as part of a complex verb, which can then assign objective case to its complement. The major difference is that in Larson's case, this material already forms a constituent (a V'), while this is not necessary for Hornstein & Weinberg. Hornstein & Weinberg's analysis of P-stranding makes crucial use of this ability to treat a nonconstituent V-P string as a complex verb, a possibility not countenanced by Larson. As an anonymous reviewer notes, Larson's theory of VP-shells, along with extensions of it in Kayne (1994) and elsewhere, also analyses adjunct PPs as very low complements within VP. This limits the effect of Hornstein & Weinberg's proposal that reanalysis affects only VP-internal material, as a much larger amount of material is treated as VP-internal on a Larsonian analysis. Given the relative acceptability of (16)–(18) (see the discussion in the main text), this may be a welcome effect.

⁸I cannot hope to address every extant criticism of Hornstein & Weinberg here: there are simply too many. Baltin & Postal (1996) alone list at least ten empirical problems, plus further formal and conceptual issues, disregarding footnotes. Hopefully the highlighted problems are representative, though.

⁹Personally, I find this contrast somewhat overstated, but I am confident that other examples could be found making the same point.

¹⁰I will only discuss extraction via specifier positions in this paper. See Chomsky (1986) for some speculation concerning the distribution of adjoined positions, and conditions on movement through them.

¹¹See Chomsky (2008) for a different attempt to derive phases from the distribution of unvalued features.

¹²As pointed out by a reviewer, Abels (pp.227–9) also considers a second form of parametrisation, according to which P-stranding languages are distinguished from non-P-stranding languages by the presence of extra functional structure between P and DP, which has effects for the antilocality principle that we will turn to presently. As far as I can tell, my account is equally compatible with this alternative. However, to the extent that there is independent evidence for extra functional structure in PPs (see Bošković 2004 and Leu 2007), that structure is equally available in P-stranding and non-P-stranding languages. Moreover, Abels discusses some slight reasons to prefer the account in terms of parametrisation of the phasehood of P, so I follow him in this respect.

¹³I do not wish to claim that this exhausts the list of possible extractions from adjuncts: it clearly does not. See the conclusion for some speculative comments on other legitimate extractions from adjuncts.

¹⁴This is ungrammatical if *whistling* is predicated of *John*. The reading in which *whistling* is predicated of *his brother* is irrelevant here, as it does not instantiate a BPPA structure.

¹⁵In this case, even corresponding declaratives are pretty degraded, but it's the best example I know of.

¹⁶The reason for assuming that the classes line up in this way concerns the distributional tests given by Vendler (1957) to determine membership of different aspectual classes. Classes contain-

ing a process component can freely form progressives, and presence or absence of a culmination corresponds to the *in 5 minutes/for 5 minutes* distinction.

¹⁷I assume that the further interpretive distinction between BPPAs modifying accomplishments and achievements is due to a thematic, rather than strictly event-structural, difference between the two classes. The subject of an accomplishment like *drive Mary crazy* is an agent, and so the actions of that subject are responsible for bringing about the culmination, while the subject of an achievement like *arrive* is a patient, and so the subject's actions are not necessarily responsible for bringing about the culmination. The relation between the event described by the BPPA (a modifier describing the subject's actions) and the matrix event follows straightforwardly.

This is relevant to a reviewer's suggestion that BPPAs are headed by a null preposition. In many acceptable cases of extraction from a BPPA, there is a close paraphrase with an overt prepositional complementiser. However, the specific preposition that allows extraction varies with the aspectual class of the matrix predicate. In the case of (37a), the necessary interpretation is that John drove Mary crazy *by* whistling, while in the case of (37b), the necessary interpretation is, roughly, that John arrived *while* whistling. This *while* interpretation is available in declarative equivalents of (37a), and also the activity case (37d). It is insufficient, though, to license extraction from the BPPA in these other cases. In sum, then, although I am agnostic about the possibility that a BPPA is headed by a null preposition in general, I am very doubtful that postulating such a preposition will help us to explain the extraction patterns that we find, as the interpretive restrictions are quite arbitrary from a syntactic point of view.

¹⁸A parallel example, *Hon skrattades åt* "She was laughed at", is given as ungrammatical by Maling & Zaenen (1990:162). This reveals a significant split among Swedish idiolects. Native speakers in general consider this construction more marginal than its English counterpart, particularly when the s-passive is used, as opposed to the periphrastic passive, as in (100).

- (100) *Hon blev skrattad [åt ___].*
 “She was laughed at.”

However, some speakers, presumably including Maling & Zaenen’s informants, view any such examples as fully unacceptable. I will return to this below, but for now, the fact that several examples of *NP skrattades åt* are found on Google, for example, suggests that it is reasonable to conclude that pseudopassivisation is possible for many Swedish speakers. Thanks to Anders Holmberg for clarifying this point.

¹⁹Merchant (2001:92) reports that Matthew Dryer found no examples of productively P-stranding languages outside of Germanic, in a 625-language sample. As seen above, this is not completely representative — the literature mentions Vata, Gbadi (Koopman 1984), Prince Edward Island French (King & Roberge 1990), and possibly Papiamentu (Abels 2003) and Macedonian (van Riemsdijk 1978) — but it still amply demonstrates the undeniable rarity of P-stranding. The question of extraction from BPPAs has never been addressed on anything like this scale, perhaps unsurprisingly. I have only tested the hypothesis that extraction from BPPAs correlates with pseudopassivisation on most modern varieties of Germanic, most major modern varieties of Romance, Greek and Russian. Only time will tell whether this proposed correlation stands up to scrutiny, given a larger and more diverse language sample, including the handful of non-Germanic languages which have been reported to allow pseudopassivisation.

²⁰Of course, many languages lack anything like BPPAs. This is not true in these two cases, where declarative examples are fine, as in (101)–(102), and so the degradation in the main text examples must be due to movement.

- (101) *Jan is tango’s fluitend gearriveerd.*
 John is tangos whistling arrived
 “John arrived whistling tangos.”
- (102) *O Janis eftase tragudhondas ti Masaliothidha.*
 The John arrived singing the Marseillaise

“John arrived singing the *Marseillaise*.”

²¹I have marked this example as ?? rather than * on the basis of one informant, who said that, given a very specific set of circumstances (including a D-linked *wh*-phrase and the particle *pa*), this sentence would be understood, and an interlocutor would “maybe not even frown” upon hearing it. For other informants, this sentence is still flatly ungrammatical.

²²One Faroese informant accepts some examples along these lines, and rejects others. The other rejects all such cases. The dividing lines between these two classes of examples, and also the basis for this idiolectal difference, will have to wait for more research.

²³Questions arise about successive cyclicity in this context. A-movement may well be successive-cyclic, but if it is, it would appear on this line of thought that this is a consequence of the EPP rather than anything narrowly related to Case or phases, as suggested in Chomsky (2008).

²⁴Other uninterpretable features may still be present, however: a nonphasal P head can still assign Case, which is assumed to be mediated by uninterpretable features.

²⁵I have little to offer at this time concerning the constraints on feature suppression. It is formulated here in a maximally general way, and it will become clear in what follows that this is liable to overgenerate.

²⁶Here’s a sketch of how a more empirically satisfactory theory might look. Assume that BPPAs are introduced by a null preposition, so that they look roughly as in (103a). Moreover, assume that PPs, DPs and also the vP layer within a BPPA are all phasal. This means that a common characteristic of PPs and BPPAs is that they contain a phase, whose complement is also a phase, as in (103a–b) (with phases in bold), as opposed to the regular C-T-v*-V sequence, where phases and nonphases are interspersed, as in (103c).

(103) a. PPs: [**PP** [**DP** [NP]]]

- b. BPPAs: [**PP** [**v*P** [VP]]]
- c. Regular clauses: [**CP** [TP [**v*P** [VP]]]]

Next, assume that antilocality can be extended such that, as well as prohibiting movement from complement to specifier, it also prohibits movement from a specifier to the next highest specifier.

- (104)
- a. *_[HP] XP H t_{XP}
 - b. *_[H₁P] XP H₁ [_[H₂P] t_{XP} H₂ Comp]
 - c. [_[H₁P] XP H₁ [_[H₂P] Spec H₂ t_{XP}]]

This has the effect of trapping any moved phrases within the lower phase of PPs and BPPAs: movement to [Spec,D] in (103a) or [Spec,v*] in (103b) is free, but movement from there to the specifier of the immediately dominating PP phase is ruled out by antilocality considerations. Accordingly, extraction from PPs and BPPAs is blocked in the general case. However, if the phasehood of one of the two phases can be removed, along the lines suggested in the main text, then extraction becomes possible.

This approach has several advantages, not least of which are that it circumvents the two major problems described in the text. However, it has nontrivial consequences for our wider syntactic theory. Most notably, it rules out movement from [Spec,T] to [Spec,C] (as in subject *wh*-questions), and from [Spec,V] to [Spec,v*] (as in some analyses of English-style object shift). If Chomsky (2008) is on the right track, there is no genuine movement from [Spec,T] to [Spec,C], and so the first of these problems, at least, might be surmountable. However, the wider challenge is substantial.

²⁷Here, *with* and *during* are taken as indicative of the families of relations in question. *e*, with or without subscript numerals, is a variable over events, and *y* is a variable over individuals.

²⁸There are complicating factors in the case of *notwithstanding*, firstly because of its weight, and

secondly because it varies between prepositional and postpositional use. The few postpositions in English universally disallow stranding, as far as I am aware, for reasons that I won't go into here (but note the tantalising correlation that only postpositions can be stranded in OV Germanic languages, while apparently only prepositions can be stranded in this VO Germanic language).

- (105) a. *Which worries should we go ahead [__ aside]?
b. *How long did you get here [__ ago]?

²⁹More speculatively, such a restriction could also explain some pervasive idiolectal variation in the acceptability of examples like (66a) and (67a). If feature suppression is sufficient to allow A' P-stranding as well as pseudopassivisation, but is restricted to the heads of VP-internal constituents, then the only possible positive evidence in a pseudopassive language for a nonphasal P head (the other route to A' P-stranding) would be stranding of a temporal preposition such as *after* or *during* on a contingent construal. Such examples are quite rare, and so it is possible that many language learners never encounter the positive evidence needed to postulate a nonphasal P. In such a case, communicative efficiency would be hardly, if at all, affected by this different parameter setting, being restricted to the fact that some people are much less willing to accept examples like (66a) and (67a) than others (see, for example, the judgements given in Hornstein & Weinberg 1981).

³⁰Nothing changes if *seek* replaces *look for*. This shows that the effect is due to passivisation, and not specifically to feature suppression in the pseudopassive. Note also that this atelic example suggests that the correct characterisation of 'affectedness' for verbal passives is not identical to its use in the productive line of research into measuring-out effects (Tenny 1987) relating aspectual properties of verbs to properties of their direct objects, which relies on a narrower notion of affectedness.

³¹This has to be treated as a one-way implication, because, for example, *this pen* in (77a) is not affected materially by the repeated writings, although its *status* as a special pen is altered. Even

more surprisingly, as a reviewer points out, parts of idioms can be passivised (*Advantage has been taken of John*) and even pseudopassivised (*That particular windmill has been tilted at before*), despite the fact that affectedness is surely not an appropriate term here. It is less important for my present purposes to characterise the semantic restrictions on passivisation accurately, though, than it is to show that these restrictions hold equally of pseudopassivisation. I therefore stick with the term ‘affectedness’ here, with the warning that it is not completely accurate.

³²Perhaps a more serious challenge in that case comes from those English dialects in which passivisation is only possible across a thematic pronoun but not across a full DP (some speakers also allow passivisation across an intervening proper name).

(106) A book was given %him/%%John/*the librarian.

This variation is problematic for many theories of symmetric and asymmetric passives in its own right, but the further problem in the current context is that no parallel pattern appears to hold in the case of pseudopassives.

(107) John was shown *it/*Mary/*the picture [to __].

I must leave this as an unanswered problem here.

³³The fourth logically possible combination, nonphasal P + A-movement, would be uninteresting on this story, as nonphasal P is still a Case assigner and so capable of blocking A-movement, according to (85h).

³⁴It is, of course, possible that extraction from BPPAs will be independently ruled out, for example because BPPAs do not exist in the language in question, just as they don’t exist in Standard French, for example.

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