Title: Preposition Stranding and Extraction from Adjuncts in Germanic

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Preposition Stranding and Extraction from Adjuncts in Germanic*

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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 were designed to capture, but which is not obviously predicted by theories of P-stranding based on parametrisation of PP's status as a bounding node or phase. However, a slightly modified 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

The phenomenon of preposition-stranding, or P-stranding, has an unenviable position as a representative of a class of highly marked syntactic phenomena. Briefly, the puzzle that P-stranding presents is that it is clearly within the space of syntactic possibilities, but it is attested in only a vanishingly small proportion of the world's languages. In fact, one recent discussion, Abels (2003), found only nine or ten languages in which P-stranding was attested, themselves heavily (although not exclusively) concentrated in the Germanic languages. Moreover, these languages did not pattern identically: in three of them (Frisian, Danish, and Icelandic), P-stranding was only attested under A′-movement, while the remaining languages allowed P-stranding in both A- and A′-environments.

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So why, if P-stranding is possible, is it so very rare? The short answer is that we don't know, and unfortunately this paper will not do anything to change that. The rather more modest aim here is to argue for a particular analysis capturing the the implicational relation implicit in the above findings, namely that P-stranding under A-movement is only possible in a language if that language permits P-stranding under A′-movement as well. The eventual shape of this theory will be very close to that proposed by Abels (2003), a variant of what I will call below the *escape hatch* theory of P-stranding, but before we get there, we need to work through the arguments of a quite complementary approach (the *reanalysis* theory), which captures this implicational relation in a quite different way.

In a nutshell, both these theories aim to tie the rarity of P-stranding to the presence of a piece of unusual and only exceptionally available syntactic structure.[1] The further availability of P-stranding under A-movement is then dependent on the existence of a secondary syntactic factor, which only becomes relevant if the unusual structure behind the availability of P-stranding is available in the first place. In each case, this dependence of the secondary syntactic factor on the first is what derives the implicational relation between A and A′ P-stranding. We may schematise the common logic to the two approaches as follows, where the arrows are meant to be read as signifying necessary but perhaps not sufficient conditions.

(1) a. **FACTOR X** → P-stranding under A′-movement;
b. **FACTOR X + FACTOR Y** → P-stranding under A-movement.

In fact, this sort of schema is not logically necessary. Another possibility, which we will in fact end up adopting, is as in (2).

(2) a. **FACTOR X** → P-stranding under A′-movement;
b. **FACTOR Y** → P-stranding under A- or A′-movement.

However, most previous approaches to be discussed here work as in (1). The distinction between them comes in what factor X and factor Y are taken to be. One major difference between the two theories is that the reanalysis theory says that there is something special about the syntactic category V (or VP) in P-stranding languages, while 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:

(3) a. **Reanalysis theory** (as in Hornstein and Weinberg 1981):
(i) **FACTOR X** = reanalysis: in languages with factor X, V and any contiguous VP-internal material to its right may form a constituent (specifically, a complex verb V*) at a particular level of representation.

[1] The weak and ill-defined notions "unusual" and "only exceptionally available" are, of course, jointly the Achilles heel of this class of theories. We may suggest, for example, that a learner will only posit such unusual structures in the presence of robust, frequent, highly salient, unambiguous, etc., data, as opposed to the more abstract and easily triggered generalisations assumed to be learnt in the regular acquisition of syntax. As far as I'm aware, no-one has spelt out these notions explicitly enough to make it clear whether, for example, it is plausible that such a claim can explain the fact that P-stranding in some branch of Germanic was presumably at some point an innovation with respect to overwhelmingly non-P-stranding Indo-European. Once again, though, addressing this serious problem lies beyond the scope of this paper.

(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 languages 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 what these choices buy us, then, it is clear that in the escape hatch theory, all the action is going on within PP. Whenever we find a property of P-stranding that cannot be described in purely PP-internal terms, we have a potential argument for the reanalysis theory, and against the escape hatch theory. I discuss two such arguments here. These concern a second class of marked A′-extractions, from constituents which I will call Bare Present Participial Adjuncts, which bears a certain structural resemblance to P-stranding, and also shows a very similar cross-linguistic distribution to the better-studied P-stranding pattern, 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 P-stranding under A-movement. The first argument that this construction suggests is the following: because the syntactic category P has no privileged place in extraction from BPPAs, the attempt by the escape hatch theory to describe the distribution of P-stranding in terms of properties of P(P) will be no use in an extension to cover this second construction. Secondly, the distribution of extraction from BPPAs and of pseudopassive 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. Seeing as the escape hatch theory relates the availability of P-stranding to PP-internal factors, while the *raison d'être* of the reanalysis theory is to account for this sort of external influence on the transparency of a constituent for extraction, this once again might seem to favour a version of the reanalysis theory over the escape hatch theory. Given the auxiliary assumption (certainly not entirely innocent, but prevalent in the body of research that assumes a "principles and parameters" model of crosslinguistic variation) that it is extremely unlikely that two highly marked syntactic phenomena should be found in only the same handful of languages, if those two phenomena are unrelated, we derive two potential reasons why our theory of these marked extraction phenomena should make reference to reanalysis as well as edges and bounding nodes.

This is not the end of the story, however. Despite this apparent evidence in favour of the reanalysis theory, we will end up rejecting reanalysis, in the specific sense described in (3), in this paper, for two reasons. The first is that serious, and so far unanswered, criticisms of reanalysis as a specifically syntactic operation, reproduced in section 2.2, drastically reduce the attractiveness of that theory. The second is that the escape hatch-based account of P-stranding in Abels (2003) is the only current theory to give us a way to approach the curious *antilocality* property of extraction from PPs, to be described in section 2.3 below. The challenge is then to formulate a version of the escape hatch theory which dodges the challenges from the previous paragraph. This challenge is addressed in two steps. Firstly, the Case suppression factor described in (3) is generalised to apply cross-categorially, and to suppress a wider class of properties than just Case assignment. The external influence on the distribution of P-stranding and extraction from BPPAs is then shown to be due to general, and independently motivated, conditions on movement and/or passivisation.

At this point, we are left with an empirically adequate variant of the escape hatch theory, with no need for an independent reanalysis operation in anything like the above sense.

The rest of the paper is laid out as follows. Firstly, in section 2, I go over the two competing theories of P-stranding in more detail, and show why the escape hatch theory has a clear empirical advantage. Next, in section 3, I present the second marked class of extraction, namely the class of extractions from Bare Present Participial Adjuncts discussed in Truswell (2007a,b), and demonstrate their distributional similarities to P-stranding, as well as the sensitivity of extraction from BPPAs to external factors. Given the above assumptions, the similarities described in section 3 initially appear to argue in favour of a variety of the reanalysis theory of P-stranding. I scrutinise, and eventually reject, that argument in section 4, and engage in the tightrope-walking necessary to explain how a class of A-movements and a class of A′-movements might come to pattern together in this way, to the exclusion of a second, obviously closely related, class of A′-movements. Finally, I conclude in section 5.

2 Two Theories of Preposition Stranding

2.1 The Problem

The basic problem raised by the existence of P-stranding is the following: when it is possible (as in English or Norwegian), it is utterly unremarkable, to the extent that piedpiping of a preposition frequently sounds degraded or artificial under A′-movement, and is completely impossible under A-movement, for principled reasons, if we accept a Case-driven analysis of A-movement. However, in the vast majority of languages, P-stranding is crashingly bad. I illustrate the general case with data from Russian (a relatively liberal language with respect to A′-locality in certain other respects, as demonstrated most recently in Stepanov 2007) and French, in (4) and (5) respectively, while the exceptional P-stranding pattern is demonstrated in (6) for English and (7) for Norwegian, which allow P-stranding under both A′-movement and A-movement (the latter also referred to as the *pseudopassive*). The intermediate pattern is represented by Danish (8) and Icelandic (9), where P-stranding is possible under A′-movement, but not under A-movement.

(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. *Stul/stule sideli [na __].
Chair.NOM/LOC sat.3PL.IMPF on
The chair was sat on.[2]

[2]The 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 pseudopassive in all languages with rich case systems, however, given the existence in many languages of non-nominative subjects. See Maling and Zaenen (1990, §2) for discussion.

(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. (?)[To whom] did you speak __ ?[3]
b. Who did you speak [to __]?
c. 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 Vigdísi 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.[4] (Maling and Zaenen 1990:156)

As Abels (2003), and Bouchard (1982) before him, 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.

[3]As is well known, English P-stranding variants are prescribed against in traditional grammars but almost universally attested and judged as fully grammatical by those who either don't know or don't care about the views of prescriptive grammarians. The status of the piedpiping variant is less clear: to my ears, it sounds unnatural, and the claim is occasionally made that it is ungrammatical, but that seems too strong: many, if not most, speakers preferably piedpipe prepositions in some circumstances, depending on stylistic and other factors, so optional piedpiping cannot be dismissed without labelling the language of those speakers as unnatural.

[4] It is necessary to use a more complex construction to demonstrate the absence of pseudopassive in Icelandic, because of cases which look like pseudopassive, but turn out to be fronting of the complement of P under A′-movement, as in (i).

(i) Þessa konu er oftast talað vel [um __].
That woman.ACC is usually spoken well of. (Maling and Zaenen 1990:155)

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

(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)

Unlike genuine movement dependencies, this apparent case of P-stranding in Québec French fails to obey the Complex Noun Phrase Constraint, and therefore is more naturally analysed as a base-generated dependency between an antecedent and a null resumptive pronoun. In that case, the occurrence of a preposition without an overt complement is not sufficient to diagnose genuine P-stranding by A′-movement.

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 P-stranding in A-movement is even shorter. Abels (2003:230), the most thorough investigation I have seen, lists only the following: Danish, Icelandic, and Frisian allow A′ P-stranding but no pseudopassive (we might add Faroese to this list), while Norwegian, Swedish, English, Vata, Gbadi, Prince Edward Island French, and possibly Papiamentu allow both A′ P-stranding and pseudopassive.[5] Two controversial omissions from that list are Dutch and German, which have a construction that looks like a very limited form of A′ P-stranding. Regular cases of P-stranding like (6) and (7) are impossible in these languages, as illustrated below for German, but a limited form of dependency is possible, in which a fronted pro-locative occurs, while the complement of P is absent, and P itself frequently takes a special morphological form, as in (12).

(11) a. *Was hast du mit gerechnet?
What have you with counted
What did you expect?
b. *Welchem Bett hast du {in/ drin} geschlafen?
Which bed have you in/ dr-in slept
Which bed did you sleep in?

(12) a. Wo hast du mit gerechnet?
Where have you with counted
What did you count on?
b. Wo hast du {*in/ drin} geschlafen?
Where have you in/ dr-in slept
What did you sleep in? (Abels 2003:193–5)

If this is P-stranding, in the sense of fronting of the *wh*-locative from the complement position of P, then it certainly has an unusual clustering of properties. Along with the special morphology of the preposition and the choice of locative proforms instead of regular pronouns, there is the surprising fact that the morphologically special prepositions such as *drin* above never occur with overt material in complement position. Although this is widely accepted as genuine P-stranding, this is not necessarily true, as argued by Abels (§4.3.3.). 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 Dutch and German do not allow P-stranding in pseudopassive

[5] Van Reimsdijk (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.

constructions.

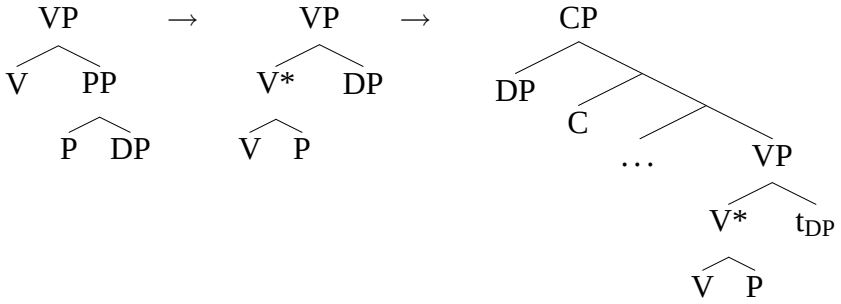
(13) a. *Deze argumenten werden niet [over __] gesproken.
These arguments were not about talked
These arguments were not talked about.
b. *Diese Argumenten sind [an __] gedacht worden.
These arguments are of thought been
These arguments have been thought of. (van Riemsdijk 1978:224)

There are many more mysteries about P-stranding (not least the fact that P-stranding is possible even out of many adjunct PPs, a problematic fact that I will return to in section 4), but the implicational relation between A′ P-stranding and pseudopassive is the mystery that I concentrate on here. In the rest of this section, I describe two theories of P-stranding that aim to account for this relation.

2.2 The Reanalysis Theory

Hornstein and 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 happens to include 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.[6]

(14)



In order to explain the more restricted distribution of the pseudopassive, Hornstein and 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 and Weinberg do offer a couple of heuristics. Firstly, the meaning of semantic words may be determined noncompositionally, and secondly, no subparts of semantic words are referential. While this is obviously an incomplete characterisation, the general logic is clear, and in keeping with that set out in (1): the

[6] A 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*. It is then the absence of uniquely determined relations of c-command and so on which is responsible for the extra mobility of that complement post-reanalysis. It is not clear how much 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.

conditions which must be met for a language to allow pseudopassive formation are a proper superset of those which must be met for a language to allow A′ P-stranding. The full set of assumptions for this theory are listed below.

(15) a. A rule of reanalysis can form a complex verb V* from V and other material if:
  (i) That material is contiguous with V (to V's right)
  (ii) That material is entirely VP-internal
 b. (i) V* is a constituent at a level of representation no later than that at which Case is assigned.
  (ii) At that level of representation, the "normal" complement of P behaves as a complement of V*.
 c. (i) V and V* assign objective Case to their complement (i.e. reanalysis feeds Case assignment).
  (ii) P assigns oblique Case to its complement.
 d. (i) Empty categories bearing objective Case are possible.
  (ii) Empty categories bearing oblique Case are impossible.
  (iii) Reanalysis must apply in A-movement as well as A′-movement (otherwise P would assign oblique case to *t*).
 e. A-movement is only possible if it meets conditions on Predication (not explicit in Hornstein and Weinberg): the sister of *t* must be a 'semantic word' or 'natural predicate':
  (i) Its meaning may be determined noncompositionally.
  (ii) It cannot include referring expressions as subparts.

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 minimal pairs, the internal structure of PP is kept constant, but changes in the external environment of the PP are reported by Hornstein and Weinberg to lead to differences in grammaticality. I, apparently along with many other native speakers of P-stranding languages, find these contrasts very mild, which casts some doubt on the plausibility of this particular form of the reanalysis theory. The minimal pairs contrast extraction from a VP-internal PP, where reanalysis is claimed to be possible, with extraction from a VP-external PP, where reanalysis is claimed to be impossible. For example, this would lead us to expect 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 and Weinberg's).

(16) a. Who did John [$_{VP}$ speak to Harry [about __]] yesterday?
 b. *Who did John [$_{VP}$ speak to Harry] yesterday [about __]? (Hornstein and Weinberg 1981:59)

(17) a. Who did John [$_{VP}$ arrive [with __]]?
 b. *What time did John [$_{VP}$ arrive] [at __]? (Hornstein and 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 and Weinberg 1981:58)

Of course, if these perceived contrasts don't really exist (and at least in my own idiolect, there may be some slight preference for the unstarred examples, but all the above are basically unexceptionable), 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. Several works have appeared showing that it is impossible to constrain reanalysis adequately. These criticisms are all based on a few assumptions concerning reanalysis, namely that it literally forms new syntactic constituents (and possibly erases old constituent boundaries), that it feeds movement, and that the complement of a reanalysed V–P string behaves like the complement of V rather than the complement of P. 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.[7]

Not all reanalysis can precede all movement Abels (2003) gives an argument (already present, and sceptically discussed, in Hornstein and Weinberg 1981:74, fb.23 — see also Maling and Zaenen 1990:159) which strongly suggests that any attempt which (a) assumes reanalysis as a precondition for movement, and (b) assumes reanalysis operates on strings, will not work. This involves examples like the following, in which the reanalysed string contains a trace of movement, as well as possibly the moved element. This creates an ordering paradox, where some movements would have to precede reanalysis, which would itself precede further movements. Although the argument is not watertight, and a very specific set of assumptions about cyclicity and 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.

(19) a. What did John [$_{VP}$ talk to the guy *t* [about __]] [who was here yesterday]?

b. What did you [$_{VP}$ talk to the guy [who Peter kissed *t* on the face] [about __]]? (Abels 2003:252)

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.[8]

(20) a. Frank called Sandra and Arthur __ Louise.

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

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

b. Frank talked to Sandra and Arthur __ *(to) Louise. (Baltin and 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 and Postal) is that they don't behave like a constituent. Either, however, is problematic for Hornstein and Weinberg's reanalysis theory, as it is specifically traces which are case-marked by V (and presumably T, as subjects are moveable) which are mobile.

DP behaves like the complement of P rather than the complement of V Not every preposition allows stranding. If we take availability of stranding as diagnostic of the availability of reanalysis, then we can compare the behaviour of a DP complement of V, of a reanalysable P, and of a non-reanalysable P.[9] According to Hornstein and Weinberg, the first two should pattern together. However, in many respects, it is the latter two that pattern together. One such example comes from subdeletion. Without going into details of the analysis of this construction, it is clear that the two PPs form a natural class to the exclusion of the preposition-less example, and reanalysability has no effect on the availability of subdeletion here.

(21) a. Larry screamed more of those words than he did __ of these words.
b. (i) These people were talked to __ .
(ii) *Jane talked to more of these people than Sally talked to __ of those people.
c. (i) *Algebra classes should not be acted up in __ .
(ii) *Marsha acted up in more of those algebra classes than Jane acted up in __ of these algebra classes. (Baltin and Postal 1996:130–1)

Baltin and Postal's conclusion is that the complement of P always behaves like the complement of P. Of course, this conclusion is contingent on a good many assumptions about levels of representation and the analysis of subdeletion, but it still poses a problem for theories on which all of the above gaps are complements of V* at some level of representation.

Reanalysis can't be limited to VP-internal material This criticism is in fact already present in Hornstein and Weinberg (1981, fn.25), concerning examples like the following.

(22) a. What day did John [$_{VP}$leave] [on __]?
b. Which act did John [$_{VP}$leave the theatre] [before/after __]? (Hornstein and Weinberg 1981:79, examples originally due to David Pesetsky)

Assuming that temporal PPs are VP-external, and (as in Hornstein and Weinberg's theory) even A′ P-stranding is due to reanalysis, we are forced to conclude that reanalysis is not limited to VP-internal material. Hornstein and Weinberg essentially dismiss the data, implying that such

[9]The actual examples below use pseudopassivisation as a diagnostic of reanalysis. This is not in keeping with the reanalysis theory of Hornstein and Weinberg (1981) (although it is consistent with the use of reanalysis in van Riemsdijk 1978, for example), which weakens this particular example: examples like *which class did you act up in?* suggest that stranding, and so reanalysis on Hornstein and Weinberg's theory, is equally available in the two cases. However, the example still carries some force, as the contrast between subdeletion within a VP and within a PP remains unexplained.

sentences are ungrammatical but acceptable, a move that has horrifying consequences for the empirical basis of linguistic theory. The alternative would be simply to remove the stipulation that only VP-internal material can be reanalysed as part of V*, but this complicates the mechanism somewhat (for example, what is the privileged status of V with respect to V*, if material from outside VP can be included within the reanalysed constituent?).

Reanalysis can't be limited to contiguous material This point is made most forcefully by Baltin and Postal (1996:130), on the basis of examples like the following.

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

What such examples show is that there is no reanalysis of contiguous VP-internal material which (a) feeds movement, (b) excludes R-expressions (as is necessary for "semantic word" formation according to (15eii) above), and (c) operates on strings. A single V can be associated with multiple 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. Accounting for all of this under a single rule of reanalysis applying to contiguous strings of material leads to a overly powerful tool, incapable of capturing the more restricted distribution of pseudopassives compared to cases of A′ P-stranding.

In addition to this, it should be noted that 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 is tailor-made to explain the influence of 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.

(24) 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 it is certainly not universally true that VP-external PPs disallow A′ P-stranding (see (22) above for disconfirming evidence), it is possible that VP-*internal* PPs always allow A′ P-stranding.

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 from out of adjunct PPs appears to be generally impossible (although, again, this will be qualified in section 4.3 below).

(25) 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 and Weinberg (1981), pseudopassivisation cannot occur when a referential DP complement of V intervenes between V and P (26), although it is possible across a nonreferential DP (27).

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

(27) 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 (23) above) lead to degraded pseudopassivisation.

(28) 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 is quite natural, even if no successful such theory has yet been produced. This poses a challenge to a non-reanalysis theory of P-stranding: what else could account for these patterns? Although I will not claim to have a definitive answer in this paper, I will suggest certain 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.

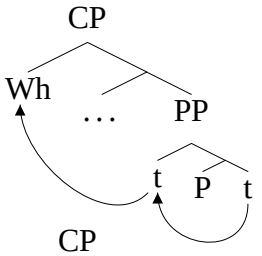
2.3 The Escape Hatch Theory

The other major class of P-stranding theories dates back to van Riemsdijk's (1978) seminal treatment. Concentrating firstly on A′-movement, van Riemsdijk proposed, in a nutshell, to extend Chomsky's (1973) theory of subjacency 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 successive-cyclically if extraction from that constituent is to be possible. The specific formulation of this condition, which has played a central role in one guise or another in most subsequent theories of locality, is as follows.

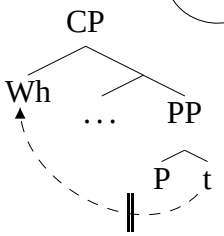
(29) **The head constraint:**
No rule may involve X_i/X_j and Y_i/Y_j in the structure
$\ldots X_i \ldots [_{H^n} \ldots [_{H'} \ldots Y_i \ldots H \ldots Y_j \ldots]_{H'} \ldots]_{H^n} \ldots X_j \ldots$
(where H is the phonologically specified (i.e. non-null) head and H^n is the maximal projection of H…). (van Riemsdijk 1978:160)

The effect of the head constraint is to allow movement out of a maximal projection only via a landing site above the X′ level, in a specifier or adjoined position.[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, as seen in P-stranding.

(30) a.



b. *



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 condition, and the complement of P has no special status in that respect. However, many non-P-stranding languages nevertheless allow constituents smaller than that complement to escape PP:

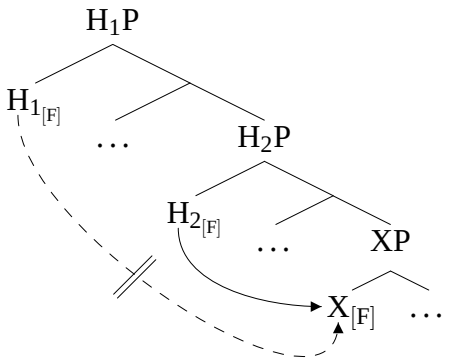
(31) Über welches Thema hast du mich noch mal [$_{PP}$ nach ein Buch __] gefragt?
About which topic have you me again after a book asked
Which topic did you ask me about a book on again? (Abels 2003:211)

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 edges 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* broadly 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. This has two effects. Firstly, a phase head will be 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 will act as an intervener for the establishment of such Agree relations by higher heads.

[10] I 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.

(32)



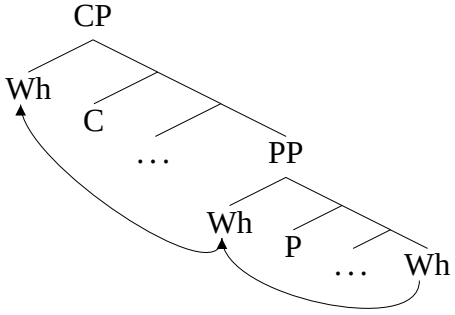
Within a set of assumptions such as this, there is no obvious way to reproduce van Riemsdijk's parametrised distribution of escape hatches: if a phase head H is a universal feature bearer, then Agree relations and movements to [Spec,H] are available as a matter of course on minimalist assumptions. Instead,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

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. 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 we assume that 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.

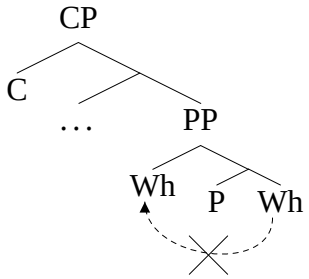
Putting these two pieces together has the effect of immobilising the complement of phase heads: conditions on attraction and intervention mean that anything c-commanded by a phase head H can only move past that head if it agrees with H and stops off in [Spec,H] first of all. But this option is unavailable 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.

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

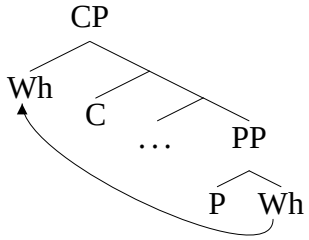
(i)



(ii) *



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



What does the edges theory have to say about the implicational relation between A′ P-stranding and pseudopassive? Here, once again, van Riemsdijk (1978) and Abels (2003) diverge. Van Riemsdijk assumes an independent reanalysis mechanism to explain the existence of the pseudopassive. This is argued (p.233) to void the relevance of the head constraint for P. We therefore derive the implicational relation between A- and A′-movement, through a slightly different route from that schematised in (1) (in fact, a route closer to that which I will take in this paper): there are two factors which can allow extraction from PP, namely the presence of an edge position, which is not sufficient to allow pseudopassivisation, and reanalysis, which allows P-stranding by both A- and A′-movement. If a language has pseudopassivisation, it therefore has reanalysis, and so gets A′ P-stranding for free.

The majority of the criticisms from the previous section still apply to this theory, however, even if we restrict reanalysis to pseudopassivisation (and thereby lose the implicational relation between A and A′ P-stranding). I therefore follow Abels (2003) in rejecting this approach to the pseudopassive. Abels 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 ruled out. 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 in Case assignment by P. Abels also succeeds, therefore, in capturing the implicational relation between A and A′ P-stranding, without resorting to reanalysis.

However, 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 sort of Case suppression that Abels proposes is irrelevant to A′-movement, where Case is assigned to the foot of the chain, and the generalisation from PP to BPPAs is not there automatically, either. Having said that, though, 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. We may sum up the current state of this approach as in (34), then.

(34) a. **NONPHASAL P** → P-stranding under A′-movement;
b. **NONPHASAL P + FACTOR Y** → P-stranding under A-movement **OR**
c. **FACTOR Y** → P-stranding under A- or A′-movement.

One task in the rest of this paper is to make an explicit proposal concerning the nature of this factor Y. 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 just 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 such as a preposition or phrases like *in order*. As (36) shows, such adjuncts allow extraction in certain cases.

(35) a. John came back [whistling polkas].
b. John lay in bed [reading *Ulysses*] all day.

(36) a. What did John come back [whistling __]?
b. What did John lie in bed [reading __] all day?

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). However, BPPAs are not alone in this respect: extraction from many adjunct PPs is more or less as acceptable as extraction from argument PPs.[11] This suggests an easy analysis of examples like (36), which would work by assuming that the present participial forms *reading* and *whistling* are, in some sense, prepositional, either literally or because they share some feature which plays a crucial role in the availability of P-stranding. Whatever conspires to make adjunct P-stranding available would then extend straightforwardly to the extractions from adjuncts in (36).

Even disregarding the fact that there is no widely accepted theory of why adjunct P-stranding is possible in the first place, this is a pretty unlikely analysis, but I will also show that it is empirically untenable. The strongest evidence that things are more complicated than this will come with the discussion of cross-linguistic data in the following subsection, but one piece of evidence

[11] I do not wish to claim that this exhausts the list of possible extractions from adjuncts. Truswell (2007b) shows that it clearly does not. See the conclusion for some speculative comments on how other legitimate extractions from adjuncts fit into the picture.

against identifying BPPAs and PPs as the same category is a very simple one: there is, presumably universally, no A-movement out of BPPAs, unlike PPs.

(37) a. (i) Who did you speak [to __]?
(ii) John was spoken [to __].
b. (i) What did John arrive [whistling __]?
(ii) *The *Marseillaise* was arrived [whistling __]?

I have no particularly deep explanation for this fact, but one possibility is the following: passive morphology only attaches to verbal heads, and an argument can only be fronted by passivisation if the verbal head that it is an argument of bears passive morphology. This rules out (37bii), as the verbal head that *The Marseillaise* is an argument of, namely *whistling*, does not bear passive morphology. On the other hand, this does not suffice to rule out the pseudopassive case (37aii), as *John* is probably not an argument of a verbal head in this case, and if one were to argue that *John* is really an argument of *speak* here, then that verb is bearing passive morphology, as required. If anything along these lines is correct though, it argues against an identification of BPPAs with PPs: the categorial difference between the two plays a crucial role in this story.

Although examples like (36) are quite acceptable, their distribution within a given language is far from free. Although lack of space (and lack of knowledge) prevent me from giving a full account of constraints on extraction from BPPAs here, I give a sketch of one salient restriction below. This 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.

(38) 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 __]?[12]
d. **Activity matrix VP:** *What does John work [whistling __]?
e. **State matrix VP:** *Which magical tune does John know Georgian [whistling __]?[13]

The following partially replicates the paradigm in Norwegian: as far as I am aware, very much the same interpretive factors are at work in both Norwegian and Swedish, the other two pseudopassive languages discussed in this paper.

(39) 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?

[12]This 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.

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

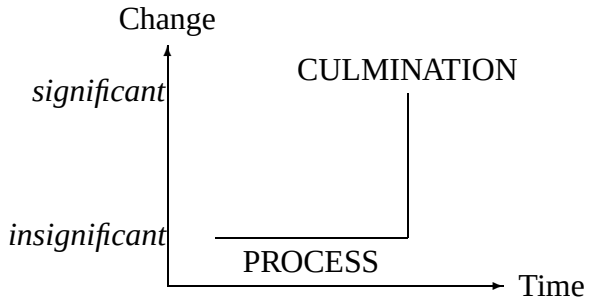
This pattern can be accounted for in terms of a condition which I will call the *Single Event Condition*, introduced and discussed at length in Truswell (2007a,b). It is formulated as follows.

(40) **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.

Note that the Single Event Condition is formulated as a general condition on movement. Justifying this claim would take too long here, but see Truswell (2007b) for extensions that deal with patterns of 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. However, taken in conjunction with a standard decompositional theory of lexical aspect, this condition makes quite specific predictions, which appear to be borne out.

The decompositional model I have in mind is one according to which a verb phrase can describe a complex event consisting of maximally two parts: a temporally extended process, which immediately precedes a pointlike culmination, or moment of linguistically significant change.

(41)



Varying which of those two components are present gives us four possible classes:[14]

(42) a. PROCESS + CULMINATION: Accomplishment, achievement
b. PROCESS: Activity
c. CULMINATION: Point
d. ∅: State

Putting this together with the observations in (38), we are led to the generalisation that extraction from a BPPA is only possible if it modifies a VP describing an internally complex event (with process and culmination). To see why this might hold, I adopt Davidson's (1967) hypothesis that verbs are predicates of events. This means that the matrix verb introduces an event variable,

[14]The reason for assuming that the classes line up in this way has to do with the distributional tests given by Vendler (1957) to determine membership of different aspectual classes. So classes containing a process component can form progressives quite freely, and presence or absence of a culmination corresponds to the *in 5 minutes/for 5 minutes* distinction.

and the BPPA introduces a separate event variable. However, 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 (42a), 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 is necessary here. In section 4.3 below, we will extend the scope of the Single Event Condition to cover certain patterns in extraction out of PP as well. 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 have not been very well studied from this perspective, initial indications are that the same is true of them, and that, moreover, there is a significant overlap 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 (43). So does Norwegian (44) and Swedish (45).

(43) a. Who did John speak [to __]?
b. John was spoken [to __].
c. What did John arrive [whistling __]?

(44) 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?

(45) 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.[15]
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?

[15]A parallel example, *Hon skrattades åt* 'She was laughed at', is given as ungrammatical by Maling and Zaenen (1990:162). Although native speakers do consider this construction more marginal than, say, its English counterpart, this seems too strong. Several examples of *NP skrattades åt* are found on Google, for example. Also, the periphrastic passive, as in (i), may be more acceptable for many speakers. Thanks to Anders Holmberg for clarifying this point,

In contrast, most languages allow none of these constructions.[16] This is true, for instance, of Dutch (46), putting aside the question of stranding by *r*-pronouns, and Greek (47).[17]

(46) a. *Hoevel geld had ze [op __] gerekend?
How much money has she on counted
How much money did she count on? (Abels 2003:187)
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?

(47) 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 in favour of 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

among others.

(i) Hon blev skrattad [åt __].
She was laughed at.

[16]Merchant (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 technically incorrect (the literature mentions Vata, Gbadi (Koopman 1984), Prince Edward Island French (King and Roberge 1990), and possibly Papiamentu (Abels 2003) and Macedonian (van Riemsdijk 1978)) but 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 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.

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

(i) Jan is tango's fluitend gearriveerd.
John is tangos whistling arrived
John arrived whistling tangos.

(ii) O Janis eftase tragudhondas ti Masaliotidha.
The John arrived singing the Marseillaise

latter type of extraction might have reasonably been expected to pattern with A′ P-stranding. I illustrate this below for the three major languages known to fit this pattern, Danish (48), Icelandic (49), and Frisian (50).[18]

(48) 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?[19]

(49) a. Hvern hefur Pétur talað [við __]?
Who has Peter talked with? (Merchant 2001:93)
b. *Ég tel Vigdísi 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. (Maling and Zaenen 1990:156)
c. *Hvað kom Jón [flautandi __]?
What came John whistling
What did John arrive whistling?

(50) a. Wa hast [__ mei] praat?
Who have.2SG with talked
Who did you talk to? (Hoekstra 1995:97)
b. *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.[20]
c. *Wat is Jan [__ fluitsjend] oankaam?
What is John whistling arrived

[18]It is in fact not clear whether Frisian is a genuine P-stranding language. Perhaps the most common claim in the literature, due to Hoekstra (1995), is that examples such as this one are due to the presence of a null resumptive pronoun as the object of *mei*, along the lines suggested for Québec French in (10) above. The full analysis is that stranding is only possible in the OV Germanic languages of postpositions, and that those postpositions are to be analysed with a null resumptive complement. The difference between Frisian and, say, Dutch, is that Frisian allows postpositions in many more cases than the other languages. However, this nonmovement analysis has been challenged by Abels (2003:185–7) on the basis of a generalisation about comparatives, which need not concern us here. For what it's worth, there may not be any real disagreement here: if Abels' analysis of Dutch and German *r*-pronouns (which does not rely on resumption, and does not involve movement across P) is tenable, then it is straightforwardly extendable to cover the freer distribution of apparent P-stranding in more widely postpositional Frisian, preserving both Hoekstra's generalisation about stranding of postpositions only, and Abels' concerns about comparatives. Which analysis of Frisian A′ constructions turns out to be correct is of rather secondary importance for our current concerns. More important is the fact that pseudopassive in Frisian is impossible. To the best of my knowledge, there is no disagreement on that point.

[19]I 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 *på*), 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.

What did John arrive whistling?

The correct generalisation, then, appears to be that A′-extraction from BPPAs is possible only in those languages which allow P-stranding under A-movement. To be sure, the heavy bias in the languages compared here towards a couple of western European families means that this conclusion is only provisional,[21] 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 now gathered a set of relations among the distributions of three constructions, namely A′ P-stranding, pseudopassivisation, and extraction from BPPAs. 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 is held to account 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 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.

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

Given certain assumptions about feature visibility, it is straightforward to elevate (51) to the status of a theorem within the minimalist program. More importantly for my present concerns, (51) is certainly empirically accurate, at least for the most central cases of A-movement. Passive is

[20] As with Icelandic (see footnote 4), it is necessary to construct a slightly more complex example to see the impossibility of pseudopassive in Frisian, as the basic order in (i) is, in fact, grammatical.

(i) 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* (this argument is due to Ger de Haan).

[21] I have been unable to find native speakers of these languages to check whether the correlation holds here too, but clearly this would be an important next step in this line of research.

movement from object to subject position, in the absence of a v* Case assigner (52a);[22] Raising to subject is movement from subject to subject position, in the absence of v* and embedded C Case assigners (52b); and Raising to object is movement from subject to object position, in the absence of a C Case assigner (52c).[23]

(52) a. **Passive:** $[_{TP}\text{Subj}\ T\ [_{vP}v\ [_{VP}V\ t_{Subj}]]]$

b. **Raising to Subject:** $[_{TP}\text{Subj}\ T\ [_{vP}v\ [_{VP}V\ [_{TP}t_{Subj}\ \ldots]]]]$

c. **Raising to Object:** $[_{TP}\text{Subj}\ T\ [_{v*P}t_{Subj}\ v^*\ [_{VP}\text{Obj}\ V\ [_{TP}t_{Obj}\ \ldots]]]]]$

Now, let's turn our attention to A-movement out of PP. The prediction of (51) is clear: P is able to assign Case, presumably universally, and so A-movement cannot cross P. Moreover, we can tell an obvious 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.

So far, so good. This much of the account is, in fact, common to the approaches of Hornstein and 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 and Weinberg, it is a consequence of reanalysis, but the outcome is the same, in this respect at least. We can now ask what this buys us, and given generalisation (51), the pseudopassive case is now straightforward. P is, under normal circumstances, a Case assigner, and so A-movement past P is 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 with the regular passive, and so is forced to raise.

(53) a. $*[_{TP}DP\ T\ [_{PassP}Pass\ [_{VP}V\text{-}en\ [_{PP}P_{[+Case]}\ t_{DP}]]]]$

b. $[_{TP}DP\ T\ [_{PassP}Pass\ [_{VP}V\text{-}en\ [_{PP}P_{[-Case]}\ t_{DP}]]]$

[22] This way of talking assumes the position in Chomsky (2004), according to which the Case-assigning abilities of T and V are ultimately due to the locally c-commanding strong phase heads C and v*.

[23] Questions 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, say, strong phases.

That does not obviously overgenerate. We now assume that P may or may not assign Case to its complement in pseudopassive languages. A similar assumption about V is standard, in order to cope with optional objects. If P fails to assign case to its complement, V would be the most local c-commanding Case assigner, under normal assumptions. It is not clear that we would expect any visible reflex, if V were to assign Case to the complement of P. Only if both V and P fail to assign Case to P's complement will pseudopassivisation be necessary, and so, by economy conditions, possible. A combination of Case- and theta-theoretic considerations conspire to limit that possibility to just the cases under consideration, among grammatical examples. We may therefore offer a provisional analysis of the implicational relations between A′ P-stranding and pseudopassive as follows, essentially as in Abels (2003).

(54) **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 Case suppression should allow 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 (essentially from Abels 2003) of the crosslinguistic relation between A′ P-stranding and pseudopassive. This section hopes to show that a natural extension, plus a couple of auxiliary assumptions, can account for the fact that languages with pseudopassive allow extraction out of BPPAs as well.

The first tool we need is a distinction between uninterpretable features and selectional requirements. This distinction, in fact, seems like a natural one on general grounds. 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. The dividing line is a natural one, then.

To make the connection between pseudopassive and A′-extraction from BPPAs, I need to make some more specific assumptions about which relations come under the heading of "selectional requirements", and which are mediated by uninterpretable features, and Agree relations involving them. Firstly, I assume that Case assignment is mediated by uninterpretable features on the Case-assigning head, as in standard minimalism. This is to be expected 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 P is a phase head, then, it bears certain uninterpretable features that are responsible for

its behaviour as a phase, and when P 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.

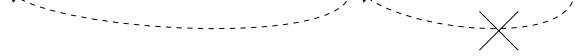
(55) a. The present participle in BPPAs is always a phase head.
b. The phasehood of prepositions is subject to crosslinguistic variation (Abels 2003).

Now comes the leap. I described factor Y in the previous subsection as an operation which suppresses P's ability to assign Case, while preserving its selectional requirements. On the current picture, this means that factor Y removes (or somehow renders inconsequential) the uninterpretable features on P that drive Case assignment. Let's now generalise this to *all* uninterpretable features.

(56) **FACTOR Y** = feature suppression:
a. It removes (or renders inconsequential in some other way) uninterpretable features on a head X;
b. It preserves X's selectional requirements.

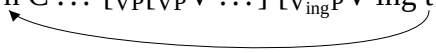
It should be clear that the pseudopassive story from the previous subsection fits this description. Let's now see how this extends to extraction from BPPAs. Because BPPAs are always headed by a phase head, extraction of the complement of BPPAs is generally impossible, according to the antilocality considerations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

(57) *[$_{CP}$Wh C … [$_{VP}$[$_{VP}$V …] [$_{V_{ing}P}$t$_{Wh}$ V-ing$_{uF_1 \ldots uF_n}$ t$_{Wh}$]]]



However, feature suppression is able to apply to the present participle, removing its uninterpretable features. 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.

(58) [$_{CP}$Wh C … [$_{VP}$[$_{VP}$V …] [$_{V_{ing}P}$V-ing t$_{Wh}$]]]



So the same mechanism that suppresses P's ability to assign Case in the pseudopassive can also suppress the phasehood of a BPPA. This is what derives the initially surprising crosslinguistic correlation between a type of A-movement (pseudopassive) and a type of A′-movement (extraction from BPPAs).[25] Note that the assumptions above also capture the one-way implication between pseudopassive and A′ P-stranding, but along the lines of schema (2a) in the introduction (or van

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

[25] It does, however, make a prediction that extraction of more deeply embedded constituents from within BPPAs, such as (i), should be grammatical even in languages where extraction of the complement of the present participle is impossible.

(i) Who did John come back [t$_{Wh}$ saying [that he had met t$_{Wh}$]]

I don't have any reliable data to test this prediction. It seems to me that it is very likely to be wrong, but I will have to leave the reason why for future research.

Riemsdijk 1978, for that matter), rather than (1). 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 P-stranding under both A- and A′-movement. If pseudopassive 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 pseudopassive.

On the other hand, following Abels, P can sometimes fail to be a phase head independently of reanalysis. This has no bearing on the A-movement pattern, which cares only about the Case-assigning properties of P, but it does allow A′-movement of the complement of P. 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 within a given language. 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

To this point, 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 (40), 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. Firstly in this section, though, I will show that this condition also does some work in regulating the distribution of examples of P-stranding in a given language. This will prove to 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.

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).[26]

(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, 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, much in the same way that it was satisfied despite the presence of multiple distinct subevents in the discussion of extraction from BPPAs in section 3.1.[27]

Although the reasons for adopting such a position are no doubt quite obscure, it does make some predictions. Firstly, A′ stranding of prepositions which do not relate two events should be quite free (in languages which allow it at all). That seems to be correct: adverbial PPs specifying additional locative, benefactive, instrumental, and "accompaniment" arguments (call them *quasiarguments*) all allow extraction roughly as easily as regular 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]

[26]Here, *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.

[27]The reason for stipulating that only events related in such ways can form a single event comes partly from formal semantic considerations, explored most fully in von Stechow (2002), and partly from evidence concerning sequences of events are perceived as forming a single larger event (Zacks and Tversky 2001, Wolff 2003). I refer the interested reader to those works, and to Truswell (2007b, ch.2), for discussion.

[28]To be sure, there are complicating factors in the case of *notwithstanding*, firstly because of its weight, and secondly because it seems to vary between prepositional and postpositional use. The few postpositions in English universally

Finally, when a preposition specifies a relation which is *compatible* with a construal with a contingent relation, but does not entail such a construal, we should find a degree of variability, depending on how plausible the contingent construal is. Once again, that seems accurate. A preposition such as *during*, for example, is generally considered not to be strandable, but some speakers allow stranding even here 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 __]?

We find, then, that, on a certain conception of what it means to be a single event, the Single Event Condition actively constrains A′ P-stranding as well as extraction from BPPAs. When we turn 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). This means, for example, that 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 the additional restrictions on pseudopassivisation, to be discussed below. Firstly, in many of the cases such as (65), 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 come back presently to some exceptions): only regular PP arguments productively allow pseudopassivisation.

(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 __]].

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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).

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

b. John was [relied [on __]]
c. Stuffed toy being [trifled [with __]] by fire tongs (title of an Edward P. Gorey illustration)

The workings of the Single Event Condition are pretty thoroughly obscured at first sight, then. 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 this difference. I have no independent evidence for such a claim, however.[29]

However, I do want to show that the general absence of examples like (68) can be motivated on the basis of general constraints on passivisation. Once these are controlled for, such examples are much improved, in accordance with the Single Event Condition.

This is just one example of a general claim I hope to defend, namely that the more restricted distribution of pseudopassivisation compared to A′ P-stranding is due to the fact that pseudopassivisation moust 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 to the mechanisms that permit pseudopassivisation. Another case in point concerns the generalisation mentioned in section 2.2 that pseudopassivisation cannot take place across a referential noun phrase or many adverbials, unlike A′ P-stranding, but can take place across a nonreferential DP forming part of an idiom chunk.

(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)

(72) 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 will come back to this set of facts below, but first, let's concentrate on the generalisation that pseudopassivisation out of quasiargumental PPs is frequently degraded. The first thing to note here is that the generalisation is not exceptionless, as the following shows.

[29]Even more speculatively, such a restriction could also explain some pervasive idiolectal variation in the acceptability of examples like (66a) and (67a). If feature suppression is restricted to heads of VP-adverbials, and if feature suppression is sufficient to allow A′ P-stranding as well as pseudopassivisation, 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 few and far between, and so it is quite possible that many language learners would never encounter the robust positive evidence needed to postulate a nonphasal P in such a language. In such a case, communicative efficiency would be hardly, if at all, affected by this different parameter setting, and would only show up in 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 and Weinberg 1981).

(73) 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 (73) and unacceptable cases like (68) is due to a general semantic difference between active and passive sentences. While this difference is notoriously hard to pin down, it shows up in the following two examples.

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

Unlike (74a), (74b) 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.

(75) 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 (73) 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]

(76) 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.

Considerations along these lines also suggests why so many acceptable examples of pseudopassivisation out of quasiargumental PPs, like those in (73), include phrases like *once too often*, or *for the last time* — one of the uses of such phrases is to imply that the action in question does have an effect, when this may not be so clear otherwise.

A further difference which falls out from this approach is that there is a clear distinction between *with* expressing accompaniment and instrumental *with* in this respect: the latter allows pseu-

[30] Note that nothing changes if *seek* replaces *look for*. This suggests that the effect is due to passivisation, and not specifically to reanalysis in the pseudopassive.

[31] This has to be treated as a one-way implication, unfortunately. This is because of a wrinkle in what it means to be "affected" in the above discussion. *This pen* in (77a) below is possibly not affected in any material sense by the repeated writings, but its *status* as a pen of distinction is due to its long years of service. This is apparently enough to allow use of the pseudopassive, but not enough for something to count as *happening to NP*. Perhaps a disjunctive test could be formulated, where every legitimate use of the pseudopassive is because of *what happened to NP* or *what sets NP apart/makes NP special*, but I leave this matter for the future.

dopassivisation much more readily than the former.

(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.

(78) 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.

This is because using an object for some purpose is more likely to affect that object than simply having that object accompany you. However, if an accompaniment relation does have some more important effect on the pseudopassive subject, then cases like (78) become more acceptable. For instance, in (79), the accompaniment relation is what leads to the children in question being safe.

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

It may initially seem like the affectedness requirement could account for the discrepancy between A- and A′-stranding 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, (80a) is fully grammatical, while (80b) is flatly unacceptable.

(80) 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 in other cases. I conclude that the apparent restriction of pseudopassivisation to argumental PPs is not fully general, nor specific to pseudopassives, but rather springs 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 is impossible across a referential DP complement (70). Once again, this recalls a general property of passivisation. To see this, consider the following well-known paradigm.[32]

[32]Things are, of course, more complicated than this. Passivisation across a pronominal object is relatively acceptable, and languages like Norwegian and (marginally) some Northern English dialects allow passivisation across a proper name.

(i) a. A book was given him.
b. Ei klokke vart gitt John __ .
A watch was given John.

Note that these examples also plausibly violate the affectedness requirement discussed above. Intuitively, at least, these sentences are more about what he/John got than what happened to the passive subject. This suggests that these examples behave unlike canonical passives in other respects too. Certainly, I am unaware of any cases in which pseudopassivisation across a pronominal object is possible in English. It remains to be seen whether pseudopassivisation in Norwegian, which is known to be more liberal than in English in some respects, can apply across intervening DP objects, as this would appear to predict. If not, further minor modifications would be necessary to allow some more

(81) 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 __].

There have been plenty of analyses of this pattern over the years, and I won't add to them here, but one salient fact is that no referential DPs intervene between the main verb and NP-trace. This bears a clear resemblance to the restriction on pseudopassivisation noted above.

Of course, what is missing from this paradigm is any *non*referential DPs in regular passive constructions to check whether passivisation across such a DP is possible. What we would need here is something of the form V X NP(nonref) 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 *give NP thanks*, it is the first NP which is referential. 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 passive and pseudopassive in this respect too: neither operation can apply across a referential DP. Once again, this means that it is no longer necessary to construe this as a condition on P-stranding itself.

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.[33]

(82) 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 (82) is one of affectedness. It is the fact that the door was specifically leant heavily on, rather than just leant on, which had the (inferred) effect of breaking the door in (82b). 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. Note that this generalisation, once again, is stated in terms of passivisation rather than specifically pseudopassivisation. Whether this is accurate or not is impossible to test, given the strict adjacency conditions holding between a verb and its object in English. It is at least, however, possible that this is accurate, and so not necessary to to account for this effect within our theory of P-stranding.

In sum, I have tried to argue that it is at least plausible that constraints on P-stranding do not have to be built into our characterisation of the mechanisms allowing P-stranding itself, but rather

external influence on the operation of feature suppression.

[33]However, once again, there does seem to be some effect of linear intervention or height of attachment, which remains unaccounted for here, as the following contrast shows.

(i) This matter must be (very carefully) looked (*very carefully) into (very carefully).

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 that only the nearest referential DP to the verb can be passivised). I don't have a story about why these effects should hold, but the important point 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.

(83)
a. Case assignment is mediated by uninterpretable features.
b. Phase heads are defined by the presence of certain uninterpretable features.
c. Uninterpretable features in the above sense are distinct from strict subcategorisation.
d. The phasehood of P is subject to parametric variation.
e. The head of a BPPA is universally a phase.
f. Antilocality holds: there is no movement from the complement position of a head H to [Spec,H].
g. The Single Event Condition holds: the path crossed by any movement dependency defines a constituent that 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. 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 crude equations.[34]

(84)
a. Extraction from BPPAs = feature suppression + A′-movement.
b. Pseudopassive = feature suppression + A-movement.
c. A′ P-stranding = nonphasal P + A′-movement.

The next three subsections are dedicated to showing that this gives the right clusters of properties for the three constructions.

5.1 The Toolkit and Extraction from BPPAs

By assumption, the head of a BPPA is universally a phase, which means that it universally bears the requisite uninterpretable features to make it a phase, as in Abels (2003). This means that extraction of the complement of a BPPA is ruled out by antilocality considerations unless feature suppression

[34]The fourth logically possible combination, nonphasal P + A-movement, would not be very interesting on this story, as nonphasal P is still a Case assigner and so capable of blocking A-movement, according to (83h).

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.

(85) 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 __]?

(86) 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 came from the interaction of the Single Event Condition with a typical 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 for to extract the complement of P by A′-movement in a given language: either P is not a phase in the language in question, or it is a phase, 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 very impoverished conception of feature suppression that we have arrived at, these two routes to A′ P-stranding are currently empirically indistinguishable. Both have no consequences beyond the fact that P doesn't bear some features that it usually does, and doesn't behave like a phase as a consequence.

If A′ P-stranding is possible at all, then, the only factor from the toolkit that will actively 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 were borne out.

(87) 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 __]?

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

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

5.3 The Toolkit and Pseudopassive

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 behind P's Case assignment abilities is suppressed. The fact that pseudopassivisation relies on the exact 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′-passives *within* a given language, as well as crosslinguistically. Partly, we hypothesised that this may be due to a constraint on feature suppression such that it 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 constraints on pseudopassivisation were shown to restrict the distribution of the passive in general, 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 states (75), and in pseudopassives by, for example, the distinction between passivisation of the complements of instrumental (77) and accompaniment (78) *with*, as well as by the heuristics like *what happened to NP* described above.

(90) a. *Four is equalled by 2+2.
b. *This table is resembled by that table.
c. *French is known by John.

(91) 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.

(92) 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 only the nearest referential DP to V can be passivised. This was a more problematic generalisation, as regular passivisation can take place across

pronominal complements in English, and across proper names in Norwegian, but no such possibilities exist in the pseudopassive. However, the basic pattern which motivated the putative constraint is seen in (81), repeated below: contrast (93bi) with (93ci) for the regular passive case, and (93bii) with (93cii) for the pseudopassive case.

(93) 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 crosslinguistically 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. This is the end of the summary of the main empirical claims of this paper. I will finish up with a few comments on where we've come, and where we go next.

5.4 Conclusion and Prospects

The starting point for this investigation was a crosslinguistic correlation between a marked type of A-movement, namely pseudopassive, and a marked type of A′-movement, namely extraction from BPPAs. This correlation has allowed us to sharpen somewhat our picture of the factors allowing these movements. The basic conclusion is that the patterns of PP-external influence on the availability of these types of movement are due to either general constraints on movement or general constraints on passivisation. The final description of feature suppression, the mechanism which allows pseudopassivisation and extraction from BPPAs, is extremely simple (and in fact, extremely close to the idea presented in Abels 2003), which is surely a good thing, all else being equal.

Large amounts of this paper have been quite programmatic, posing at least as many questions as they answer. 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 appear to be 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 pushed to one side here. Truswell (2007b) showed that certain other classes of adjunct also allow subextraction quite productively, for example *in order* and *without* clauses, as in (94).

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

In such cases, with much more structure inside the adjunct, appealing to antilocality to explain any absence of such examples is much less attractive, as there is a large amount of material separating the foot of the chain from the nearest phase head. I have no clear idea how to proceed here, although

I am confident that the solution should be partially independent of the account of extraction from BPPAs presented in this paper, 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 entirely by the aspectual class of the matrix VP: accomplishments yield causal relations, while achievements yield purely temporal relations. No such thing is true here in cases like (94), 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 (94) is much wider that 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 (94) are not universally available, however: Dutch, German, and Russian, at the least, disallow them. The reason why will have to be left 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 (95), whereas actually only the latter should be allowed because of the Case-assigning abilities of the former.

(95) *John seems [that [*t* has been likely [*t* to fall over]]].

In this paper, I have tentatively proposed that feature suppression might be limited to the heads of sisters of projections of V, which is sufficient to rule out (95). Whether that 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 reanalysis 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 pseudopassive 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 languages with pseudopassive (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.[35] It would also be useful to continue to check other languages with BPPAs, to see whether they allow extraction. Such work is, unfortunately, bound to be laborious: this is the sort of question that is not touched upon by most grammars, and so we must rely on elicitation. It could well, however, be worthwhile.

Perhaps the best case scenario for such extended crosslinguistic research is that we find extraction from BPPAs to be available in a proper superset of languages with pseudopassive. That would allow a rehabilitation of sorts of pseudopassive 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 pseudopassive, and only ten or so have P-stranding at all, makes these constructions pretty poor candidates for such a parameter: why don't thousands of languages have the

[35] It 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.

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 pseudopassive also have X, but not *vice versa*, then we're getting somewhere: we need to flip a few switches to get X, but we also need to flip a few more switches to get pseudopassive. A′ P-stranding is one such construction. The hope expressed in this paper is that extraction from BPPAs may be another. All of this remains speculation, however, in the absence of any further data to back up these hypothetical switches.

Perversely enough, then, perhaps one of the most serious weaknesses of 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. If they can, then pseudopassivisation and extraction from BPPAs becomes possible. 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.

References

Abels, K. (2003). *Successive Cyclicity, Anti-locality and Adposition Stranding*. Ph. D. thesis, University of Connecticut, Storrs, CT.

Baltin, M. and P. Postal (1996). More on reanalysis hypotheses. *Linguistic Inquiry 27*, 127–145.

Bouchard, D. (1982). Les constructions relatives en français vernaculaire et en français standard: étude d'un paramètre. In C. Lefebvre (Ed.), *La syntaxe comparée du français standard et populaire: approches formelle et fonctionelle, vol.1*, pp. 103–133. Québec, QC: Éditeur officiel du Québec.

Chomsky, N. (1973). Conditions on transformations. In S. Anderson and P. Kiparsky (Eds.), *A Festschrift for Morris Halle*, pp. 232–286. New York: Holt, Rinehart and Winston.

Chomsky, N. (1982). *Some Concepts and Consequences of the Theory of Government and Binding*. Cambridge, MA: MIT Press.

Chomsky, N. (1986). *Barriers*. Cambridge, MA: MIT Press.

Chomsky, N. (2000). Minimalist inquiries: The framework. In R. Martin, D. Michaels, and J. Uriagereka (Eds.), *Step by Step: Essays on minimalist syntax in honor of Howard Lasnik*, pp. 89–115. Cambridge, MA: MIT Press.

Chomsky, N. (2004). On phases. ms., Massachusetts Institute of Technology.

Cinque, G. (1990). *Types of $\overline{A}$-dependencies*. Cambridge, MA: MIT Press.

Davidson, D. (1967). The logical form of action sentences. In N. Rescher (Ed.), *The Logic of Decision and Action*, pp. 81–95. Pittsburgh, PA: University of Pittsburgh Press.

Fiengo, R. (1974). *Semantic Conditions on Surface Structure*. Ph. D. thesis, Massachusetts Institute of Technology, Cambridge, MA.

Hoekstra, J. (1995). Preposition stranding and resumptivity in West Germanic. In H. Haider, S. Olsen, and S. Vikner (Eds.), *Studies in Comparative Germanic Syntax*, pp. 95–118. Dordrecht: Kluwer.

Hornstein, N. and A. Weinberg (1981). Case theory and preposition stranding. *Linguistic Inquiry 12*, 55–91.

King, R. and Y. Roberge (1990). Preposition stranding in prince edward island french. *Probus 3*, 351–369.

Koopman, H. (1984). *The Syntax of Verbs: From Verb Movement Rules in the Kru Languages to Universal Grammar*. Dordrecht: Foris.

Maling, J. and A. Zaenen (1990). Preposition-stranding and passive. In J. Maling and A. Zaenen (Eds.), *Syntax and Semantics 24: Modern Icelandic Syntax*, pp. 153–164. San Diego, CA: Academic Press.

Merchant, J. (2001). *The Syntax of Silence: Sluicing, Islands, and the Theory of Ellipsis*. Oxford: Oxford University Press.

Stepanov, A. (2007). The end of CED? minimalism and extraction domains. *Syntax 10*, 80–126.

Truswell, R. (2007a). Extraction from adjuncts and the structure of events. *Lingua 117*, 1355–1377.

Truswell, R. (2007b). *Locality of Wh-movement and the Individuation of Events*. Ph. D. thesis, University College London.

Uriagereka, J. (1999). Multiple spell-out. In S. Epstein and N. Hornstein (Eds.), *Working Minimalism*, pp. 251–282. Cambridge, MA: MIT Press.

van Riemsdijk, H. (1978). *A Case Study in Syntactic Markedness: The binding nature of prepositional phrases*. Dordrecht: Foris.

Vendler, Z. (1957). Verbs and times. *Philosophical Review 66*, 143–160.

Vinet, M.-T. (1984). La syntaxe du québecois et les emprunts à l'anglais. *Revue de l'association québecoise de linguistique 3*, 221–243.

von Stechow, A. (2002). Temporal prepositional phrases with quantifiers: Some additions to Pratt and Francez (2001). *Linguistics and Philosophy 25*, 755–800.

Wolff, P. (2003). Direct causation in the linguistic coding and individuation of causal events. *Cognition 88*, 1–48.

Zacks, J. and B. Tversky (2001). Event structure in perception and conception. *Psychological Bulletin 127*, 3–21.