Reanalysis as Raising to Object[*]

Alex Drummond & Dave Kush
University of Maryland, College Park

1 Introduction

Two central components of GB theory, the Binding Theory and the Case-theoretic account of A-movement, crucially depend on a "reanalysis" operation:[1]

Case-theoretic account of A-movement:

(1) $John_1$ was spoken to t_1. [Pseudo-Passive]

- P reanalyzes with V to form a complex verbal head. The passive morpheme then absorbs the Case that this verbal head would otherwise assign to *John*.

Binding Theory:

(2)   I talked [$_{PP}$ to $John_1$] about $himself_1$.

- The structure introduced by *to* is destroyed by reanalysis, so that *John* c-commands *himself*.

We will present a new account of reanalysis with the following properties:

- There is no literal reanalysis operation. (V and P do not combine to form a complex verbal head.)

- We make use of vP-internal AgrO heads of the kind originally proposed by Koizumi (1993), Lasnik (1999).

[1] There is a long tradition of reanalysis analyses in the literature. See – amongst many others – Postal (1971), Chomsky (1975), Hornstein & Weinberg (1981), Bresnan (1982). Baltin & Postal (1996) provide a comprehensive list of references.

- We attempt to accommodate only the pseudopassivization and binding phenomena. Reanalysis has sometimes been invoked to explain preposition stranding under *wh*-movement, but we take this to be an essentially independent phenomenon (see §7.1).

2 The analysis

Ordinary PPs:

- P assigns Case in combination with a higher Agr head.

- The DP complement of P moves covertly to the specifier of P-Agr.

(3)   LF: $[_{\text{P}-\text{AgrP}}\ \text{DP}_1\ [_{\text{P}-\text{AgrP}'}\ \text{P-Agr}\ [_{\text{PP}}\ t_\text{P}\ t_1]]]$

"Reanalyzed" PPs:

- The Agr head immediately above P is missing.

- This forces P to raise covertly to the specifier of a higher vP-internal AgrO head (Koizumi 1993, Lasnik 1999). The DP complement of the P then follows suit.

- From this position, the DP c-commands adjuncts/arguments to its right.

(4)   LF: $[_{\text{v}'}\ \text{v}\ [_{\text{AgrO}-\text{P}}\ \text{DP}_1\ [_{\text{AgrO}-\text{P}'}\ [\text{AgrO}\ [_{\text{VP}}\ \text{V}\ [_{\text{PP}}\ t_\text{P}\ t_1]]]]]]$

The analysis in (4) has a number of advantages over previous proposals. In particular, it meets many of the objections to reanalysis raised in Baltin & Postal (1996).

3 Pseudopassives

As with other reanalysis accounts, pseudopassives are derived without difficulty, since the complement of the preposition behaves in the relevant respects like a direct object – both are assigned Case by an Agr head between v and V.

Following the standard GB account of passivization, we assume that the addition of passive morphology to the verb voids [Spec,AgrOP] as a Case position. As a result, the complement of the preposition must raise to a higher position to receive Case.

4 Locality constraints on pseudopassivization

Movement of P to Agr is, as would be expected, subject to locality conditions. Thus, the presence of a closer PP in (5c) blocks pseudopassivization:

(5) a. $John_1$ was spoken to t_1 about Mary.
     b. $John_1$ was spoken about t_1.
     c. * $John_1$ was spoken to Mary about t_1.

On previous analyses, such as Bresnan (1982), (5c) would be ruled out due to a linear adjacency requirement: V+P must be adjacent to form a complex verb. However, if it is reanalysis that permits binding in (6), then such a constraint cannot be operative.

(6) a. John spoke (frequently) to $Bill_1$ (frequently) about $himself_1$.
     b. LF: $[_{vP}$ spoke$_{v-V}$ $[_{P-AgrP}$ $Bill_1$ P-Agr $[_{VP}$ t_V $[_{tP}$ t_1 $]]]]$

Our analysis captures the locality constraints on reanalysis in (5) without imposing a linear adjacency requirement. Depending on the precise formulation of Minimality/Shortest Move, pseudopassivization is blocked in (5c) either because Minimality blocks movement of *about* over the *to* PP, or because movement of *to* to Agr would be "shorter" than movement of *about* to Agr.[2] However, the contrast in (7) appears at first to present a paradox. The possibility of binding in (7a) is expected, since in terms of Minimality/Shortest Move, nothing intervenes between P and Agr. In contrast, (7b) appears to suggest that there is in fact an adjacency constraint on pseudopassivization:

(7) a. John talked (frequently) to $Mary_1$ (frequently) about $herself_1$.
     b. John was spoken (* frequently) to (frequently).

This paradox can be resolved using a proposal of Caponigro & Schütze (2003). C&S argue that V does not raise overtly to v in English passives. This accounts for the word order in existential constructions such as (8):

(8)   There were three men arrested.

Given our account of reanalysis, C&S's hypothesis also explains the adjacency constraint on pseudopassivization seen in (7b). The structure in (9) provides no position for an adverb to adjoin between *spoken* and *to*; in contrast, an adverb may be adjoined to AgrP in (6b), and hence appear between *spoke* and *to*.

(9) $[_{vP}$ $[_{AgrP}$ P-Agr $[_{VP}$ spoken$_V$ $[$ t_P t_{John} $]]]]$

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[2] It may be possible for the *about* PP to adjoin in a position above the *to* PP. However, in a structure where the *about* PP is an adjunct, movement of the P head out of this adjunct would be an island violation.

Further support for this analysis derives from certain cases of "idiomatic" pseudopassivization:

(10)   John$_1$ was taken advantage (* frequently) of t_1 (frequently).

These show that even in the pseudopassive case, the restriction on adverb placement does not derive from a requirement that the preposition and the verb bearing passive morphology be linearly adjacent.[3]

5   Binding

If covert A-movement can feed binding, then the DP in a structure such as (11) is able to bind into arguments/adjuncts to its right (since it c-commands them):

(11)   LF: [$_{v'}$ v [$_{AgrO-P}$ DP$_1$ [$_{AgrO-P'}$ [AgrO [$_{VP}$ [$_{VP}$ V [$_{PP}$ t_P t_1]] ADJUNCT]]]]

As pointed out by van Riemsdijk & Williams (1986), the contrast in (12) appears to lend support to the reanalysis account of binding out of PPs:

(12)   a. ?? [To whom]$_1$ did Mary talk t_1 about himself$_1$.
        b.   Who$_1$ did Mary talk to t_1 about himself$_1$.

Baltin & Postal argue that (12) does not in fact support reanalysis. They point out that if reanalysis is an optional process – as in fact it must be – then the presence of a Condition B effect in (13) is unexpected:

(13)   * John talked to Mary$_1$ about her$_1$. *(B&P's judgment)*

However, (13) is judged to be marginally acceptable by Reinhart & Reuland (1993) and Büring (2005), and most speakers find a clear contrast between (14a) and (14b):

(14)   a. * John$_1$ talked to Mary$_2$ about him$_1$.
        b. ? John$_1$ talked to Mary$_2$ about her$_2$.

B&P also point to the Condition B effect in (15). Since the PP has undergone *wh*-movement, its head clearly cannot have reanalyzed, and the Condition B effect is therefore unexpected:

(15)   * To whom$_1$ did you talk about him$_1$.

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[3] Passives such as "Advantage was taken of John" suggest that "take advantage" is not always an unanalyzable complex. Thus, in order to maintain a strict linear adjacency requirement on pseudopassivization, one would have to propose two separate optional reanalysis operations: one to reanalyze *take* with *advantage*, and then another to reanalyze *take advantage* with *of*.

We have no satisfactory explanation to offer for the deviance of (15), but we do not think that Condition B is responsible. This is because a similar effect is found even when the underlying structure does not induce a Condition B violation. E.g., the effect is seen in (16b), even though it is absent in a declarative with the same argument structure – (16a):[4]

(16) a. I talked about John$_1$ near him$_1$.
      b. * About whom$_1$ did you talk near him$_1$.

6 Direct object diagnostics

Baltin & Postal point to a number of respects in which the complements of reanalyzed prepositions do not behave like direct objects.

6.1 Gapping and pseudogapping

In contrast to direct objects, the complements of reanalyzed prepositions do not permit pseudogapping:[5]

(17) a. John saw Mary and Bill Jane. [Gapping]
      b. John saw Mary and Bill Jane. [Pseudogapping]
      c. ?? John talked to Mary and Bill Jane. [Gapping]
      d. ?? John talked to Mary and Bill did Jane. [Pseudogapping]

6.1.1 Pseudogapping

We assume that pseudogapping is predicated on extraction of the object to [Spec,AgrP] above VP prior to ellipsis (Lasnik 1999). Thus, we predict pseudogapping to be degraded in (17c). (18a/b) show the structures for (17a/c) respectively:

(18) a. SS: [$_{v'}$ v [$_{V-AgrP}$ Jane$_1$ [$_{VP}$ [$_V$ saw t_1]]]]
          ('Jane' raises overtly and escapes the ellipsis site.)
      b. SS: [$_{v'}$ v [$_{AgrP}$ [$_{VP}$ [$_V$ talked [$_{PP}$ to Jane]]]]]
          ('Jane' remains as the complement of V at SS and cannot escape the ellipsis site.)

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[4] As pointed out to us during comments on the talk, Weak Crossover may be responsible for this effect. This all depends on what the constituent structure of the vP is, and the extent to which crossover is a structural rather than linear phenomenon. (The *wh*-phrase does not "cross over" its antecedent in linear terms in (16b).)

[5] The judgment on (17d) is somewhat controversial. E.g., Lasnik (1999) has suggested that these are relatively acceptable. Most speakers we have asked find (17d) distinctly worse than (17b).

6.1.2   Gapping

If gapping has a broadly similar derivation to pseudogapping, i.e. one involving extraction of the object from VP (see e.g. Sag 1976, Coppock 2001), then the same logic applies.

If, on the other hand, gapping has the derivation proposed in Johnson (2009), then a different explanation for the ill-formedness of (17c) will be required. According to Johnson, simple cases of gapping are derived by across-the-board raising of the verb to a higher Pred head (tree from p. 307):

(19)
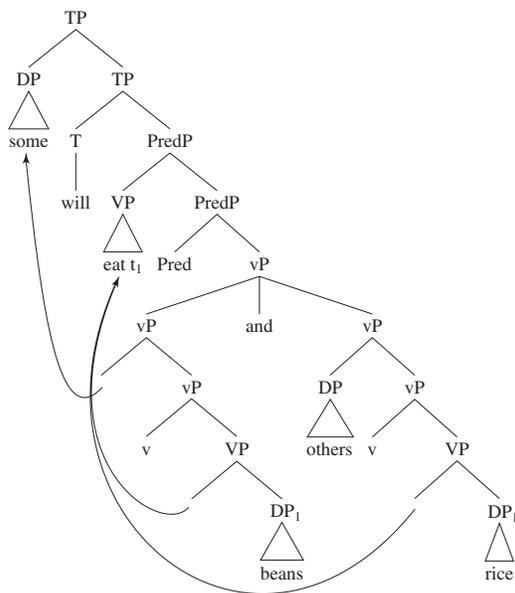
More complex cases are derived by across-the-board raising of a VP to [Spec,Pred] (tree from p. 318):

(20)
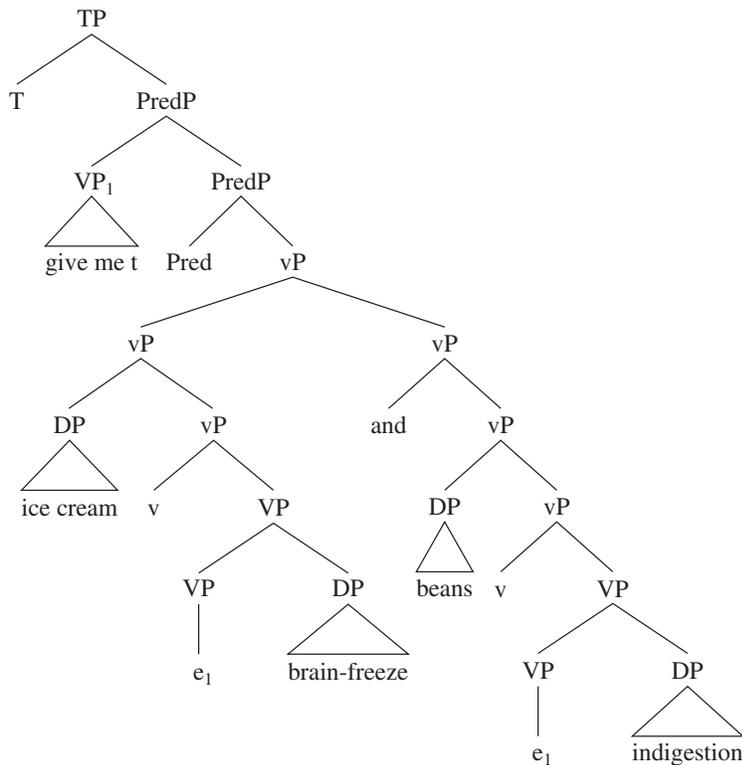
Let us consider these two possibilities in relation to (17c). If the verb moves across the board to Pred, we will derive the grammatical case of gapping in (21):

(21)   John talked to Mary and Bill to Jane.

To derive (17c), it would be necessary to created a VP constituent with the string yield *talked to* (i.e. a VP excluding the complement of the preposition). However, we have seen in (22b) that the complement of a reanalyzed preposition cannot extrapose, so no such VP constituent can be created.

6.2 Extraposition

Unlike direct objects, the complements of reanalyzed prepositions cannot extrapose (= undergo Heavy NP Shift):

(22) a.   I saw t_1 on Tuesday [the man who I met last week]$_1$.
      b.   * I talked to t_1 on Tuesday [the man who I met last week]$_1$.

Some possible explanations:

(i) Extraposition is a PF process. At PF, the complement of a reanalyzed preposition is in exactly the same configuration as the complement of an ordinary preposition. Thus, there is no reason to expect a difference in behavior w.r.t. extraposition.

(ii) Drummond, Hornstein & Lasnik (2010) attempt to explain the ban on Heavy NP Shift out of PP in a manner which should extend to the reanalysis structure. (If either of P or P-Agr are taken to be phases/linearization domains.)

7 Outstanding issues

7.1 Preposition stranding

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

(23)   Who did John talk to t?

We suggest that reanalysis is not in fact a step in the derivation of P-stranding, but that both phenomena are linked to a language's ability to use P-Agr projections to assign Case to complements of prepositions.[6]

Abels (2003) argues that P is a phase head in non-P-stranding languages, but not in P-stranding languages. His argument rests on the assumption that movement of a P's complement to its specifier would be required prior spell-out. This movement would violate Anti-locality.

Abels also mentions a variation on this analysis (p. 227). In this variation, P is a phase head in all languages, but there is an additional projection present in the PP in P-stranding languages. The presence of this additional projection has the consequence that movement to the edge of the prepositional phrase respects Anti-locality:

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[6] See Trusewell (2009) for another attempt to link preposition stranding to pseudopassivization without implicating reanalysis in both.

(24)   a.   * [$_{PP}$ wh [$_{P'}$ P t]]
         (Non-preposition stranding language; movement from the complement of P to [Spec,PP] violates Anti-locality.)

     b.   [$_{PP}$ wh [$_{P'}$ P [$_{XP}$ ... t]]]
         (Preposition stranding language; presence of XP circumvents Anti-locality.)

We suggest that Agr may be this additional projection. Hence, both preposition stranding and reanalysis require Agr to project a head separate from P. In most languages, the features of English Agr and P appear bundled on a single head, so neither reanalysis nor preposition stranding can occur.

7.2   Can covert A-movement feed binding?

To explain why binding is possible in cases such as (25), we must assume that covert A-movement can feed binding:

(25)   John talked to Mary$_1$ about herself$_1$.

It seems that there is currently not much evidence either for or against covert A-movement feeding binding. Lasnik (1999)'s strongest argument against such feeding rests on a now-somewhat-questionable analysis of English existential constructions, according to which the argument DP raises to the position of the expletive at LF. (For alternatives, see e.g. Williams (1994, 134-137; 2006), Hornstein (2007), Felser & Rupp (2001).)

7.3   The HMC and Relativized Minimality

Movement of P over V to Agr raises some questions regarding the locality constraints on head movement. The movement appears to violate the Head Movement Constraint (Travis 1984).

If we accept the hypothesis that Head Movement is actually a PF process (see e.g. Boeckx & Stjepanovic 2001), and that the HMC therefore applies only to overt head movement, then movement of P across V in the covert syntax will not run afoul of any syntactic constraint.

Alternatively, if head movement of the relevant type does occur in the narrow syntax, it will be necessary to adopt a definition of Minimality/Shortest Move according to which V is not an intervener for P.[7]

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[7] See Baker & Hale (1990) for discussion of Relativized Minimality in the context of head movement. B&H's specific proposal probably would not permit P-to-Agr movement in the reanalysis structure, however.

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