Sorting things right out:
An analysis of English particle verbs without object movement

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LSA Annual Meeting – January 8-11, 2026

1. Goals

1.1 Account for word order possibilities of Particle Verb (PrtV) constructions without operations that are otherwise difficult to motivate for English, in particular, Object (Obj) movement

Basic word order alternation:
(1)　a.　She <u>put on</u> her shoes.　　　　(continuous order)
　　　b.　She <u>put</u> her shoes <u>on</u>.　　　　(discontinuous order)

(2)　a.　He <u>pulled</u> the bandaid <u>off</u>.　　　(continuous order)
　　　b.　He <u>pulled off</u> the bandaid.　　　(discontinuous order)

1.2 Draw attention to degree modification of Prt as an analytical diagnostic, specifically how word order restrictions (see (3-4)) and the semantics of the modification in cases of multiple modifiers (see (5)) might follow from the phrase-structural representation of the modifier

Word order restrictions:
(3)　a.　She <u>put</u> her shoes **<u>right</u> on**.
　　　b.　*She <u>put</u> **<u>right</u> on** her shoes.

(4)　a.　He <u>pulled</u> the bandaid **<u>right</u> off**.
　　　b.　*He <u>pulled</u> **<u>right</u> off** the bandaid.

　　　=> Only the discontinuous order allows Prt modification

Multiple modifiers:
(5)　a.　She <u>put</u> her shoes **<u>almost halfway</u> on**.
　　　b.　He <u>pulled</u> the bandaid **<u>pretty much right</u> off**.

　　　=> There can be more than one modifier, but they don't all modify Prt directly

Order of modifiers:
(6)　c.　He <u>pulled</u> the bandaid **<u>right back on</u> off**.
　　　d.　?He <u>pulled</u> the bandaid **<u>right on back</u> off**.
　　　e.　*He <u>pulled</u> the bandaid **<u>back right on</u> off**.
　　　f.　*He <u>pulled</u> the bandaid **<u>back on right</u> off**.
　　　g.　*He <u>pulled</u> the bandaid **<u>on right back</u> off**.
　　　h.　*He <u>pulled</u> the bandaid **<u>on back right</u> off**.

=> The order of modifiers is not random: right < back < on < Prt
=> *right* modifies *back*; *right back* modifies *on*; and *right back on* modifies Prt
(Note: *back* and *on* are special in that they can function as Prt as well)

1.3 Appeal to idiomaticity (or lack thereof) to motivate syntactic differences

(7) a. ??He pulled the heist right off.
  b. He pulled the bandaid right off.

(8) a. ??By failing the test, I let my parents right down.
  b. After our hot air balloon ride, I let my parents right down.

> => Idiomatic V-Prt combos resist Prt modification, at least when uttered out of the blue

2. Major previous approaches

We focus on two major types of analyses. For a thorough overview, see Larsen 2014.

2.1 Obj is argument of V+Prt (Johnson 1991, Basilico 2008)

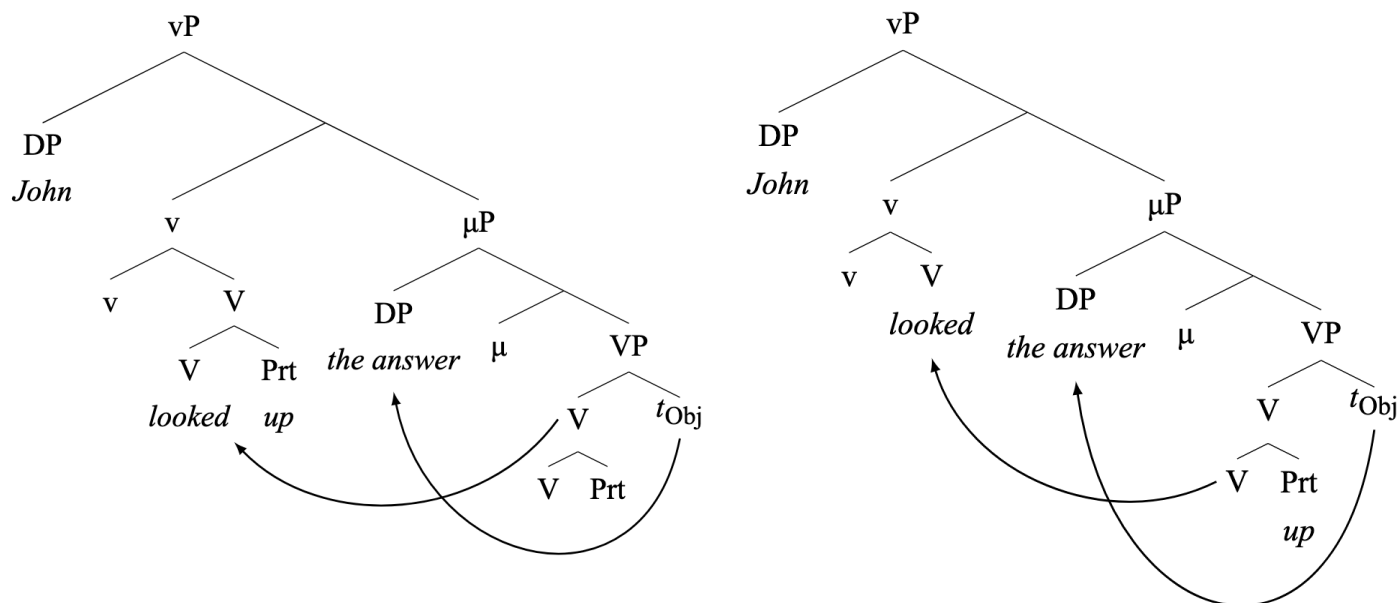- Johnson 1991: V+Prt head-adjunction and Obj shift

Figure 1: Johnson's (1991) analysis of the PrtV alternation, some labels adapted. Head movement through μ omitted.

- o Obj moves to Spec-μP (argued for on independent grounds, see below)
- o Continuous order: V+Prt head-moves to v, above Obj
- o Discontinous order: V excorporates, leaving behind Prt below Obj
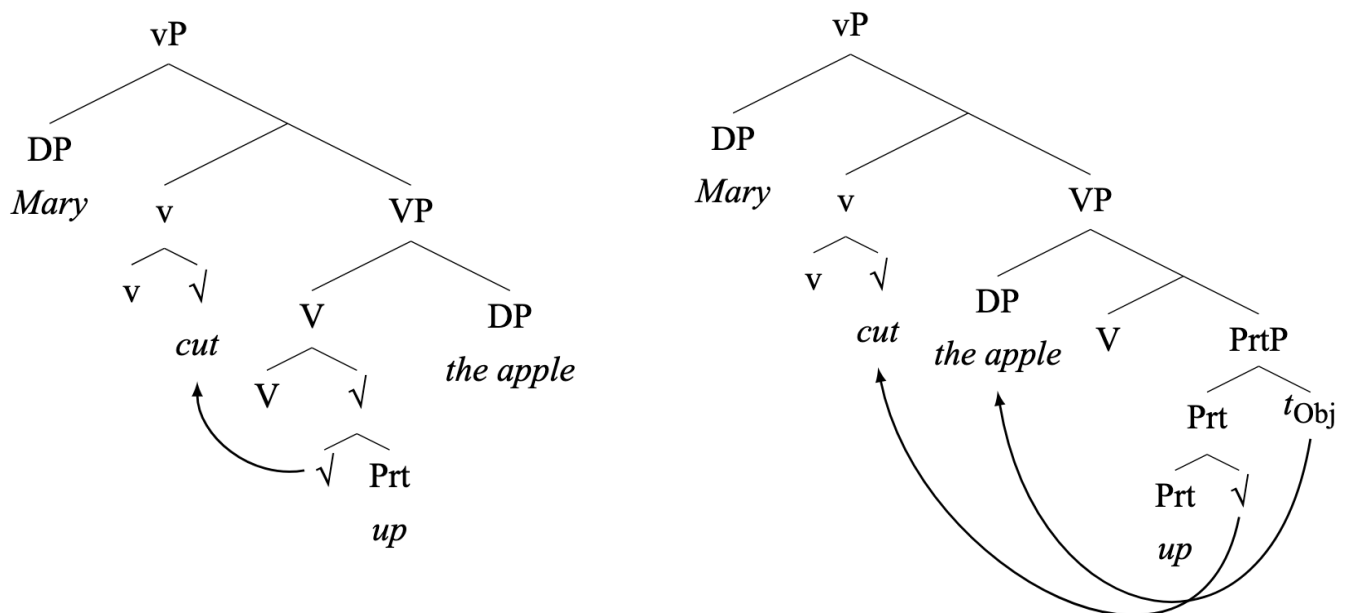
- A more recent similar account (Basilico 2008)

Figure 2: Basilico's (2008) analysis of the PrtV alternation, some labels adapted.

- o Verb is decomposed into Root and categorizer (V)
- o Prt merges with Root, and either Prt projects (PrtP) or Root does (RootP); that affects where Obj is merged
- o Continuous order: Root projects, V merges, Obj is merged in Comp-VP and is licensed in situ
- o Discontinuous order: Prt projects, Obj is merged in Comp-PrtP, V merges; Obj must move to Spec-VP to get case-licensed
- o Root always excorporates, stranding Prt

- What we adopt:
  - o V+Prt head-adjunction and optional V-excorporation (from Johnson)
  - o A level of representation where Obj is higher than Comp-VP (from both)
  - o V+Root decomposition (from Basilico)
  - o Possibility of PrtP (from Basilico)
- What we do differently:
  - o Obj doesn't shift but *originates* high
    - ▪ verb is decomposed into root ($\sqrt{}$) and verbalizer (labelled V; Merchant 2019)
    - ▪ Obj isn't argument of $\sqrt{}$, but rather V — following work in syntax (Merchant 2019) and event semantics (Parson 1990, Lohndal 2012)
  - o Manner adverbs and case are not independent motivation for Obj mvmt:
    - ▪ how and where Adv-adjunction takes place is debatable; there are other ways to explain *Mikey visited quietly his parents*
    - ▪ Obj can be case-licensed at a distance by Agree (Chomsky 2000, 2001)
  - o We focus on Prt modification facts

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- Johnson analyzes Prt modifiers as head-adjoined, without considering phrasal modifiers
- <mark>Basilico…</mark>

2.2 Obj is argument of Prt: Small clause analyses (Harley & Noyer 1998, Harley 2008; see also Kayne 1985, Svenonius 1994, den Dikken 1995)
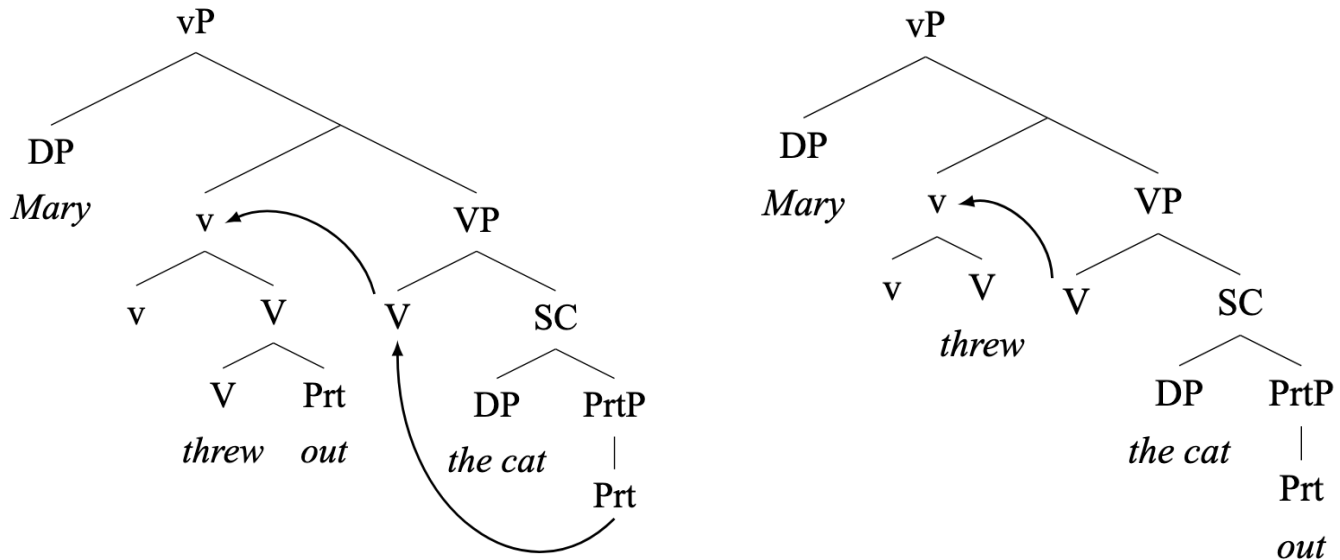

Figure 3: Harley's (2008) small-clause analysis of the PrtV alternation.

- Prt is predicate of small clause (SC); **Obj is argument of Prt**
  - Basic word order alternation is derived by optional head movement of Prt
  - Assimilates PrtV constructions to resultative secondary predicates
  - No consensus on the internal syntax of SC or the position Obj
    - Obj might be in Comp-PrtP (Harley & Noyer 1998), necessitating otherwise unmotivated Obj movement (cf. Ramchand 2008)
    - Obj might undergo rightward mvmt akin to heavy NP shift (Kayne 1985)
    - More elaborate decompositions are possible too (e.g. Ramchand & Svenonius 2002, Ramchand 2008)
    - Or a mixed approach: Obj is SC argument given PrtP, but Obj is in Comp-VP when Prt is just a head (Larsen 2014)
- What we adopt:
  - Possibility of PrtP (in addition to Prt as head-adjoined to V)
- What we do differently:
  - Obj is an argument of V, not Prt/SC — maintaining UTAH (Baker 1988, et seq)

2.3 Interim summary
- For Johnson 1991, Prt is always adjoined to V, but that can't account for modification
- For Basilico 2008 as well as the Small Clause approach, Obj doesn't have a consistent position across simple transitives and PrtV constructions, which flies in the face of UTAH (Baker 1988)

- Few approaches seriously consider particle modification possibilities (Larsen 2014 being the most thorough), and none investigate the effect of particle modification on V+Prt idiomaticity

3. Our proposal

We adopt Johnson's (1991) V+Prt head adjunction and head-mvmt with optional V-excorporation approach, but we don't need Obj mvmt.

Like Larsen (2014), we focus on Prt modification facts, which show that Prt can be phrasal and thus isn't always head-adjoined to V. This leads to two different base configurations:

- <u>Base configuration I</u>: Prt is head-adjoined not to V but to the verbal Root
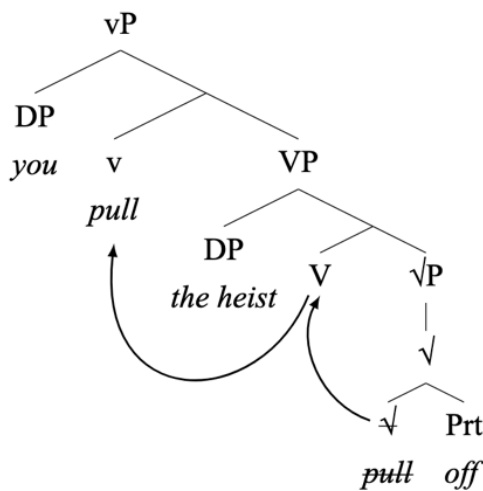   - o Head movement options result in the two possible orders:
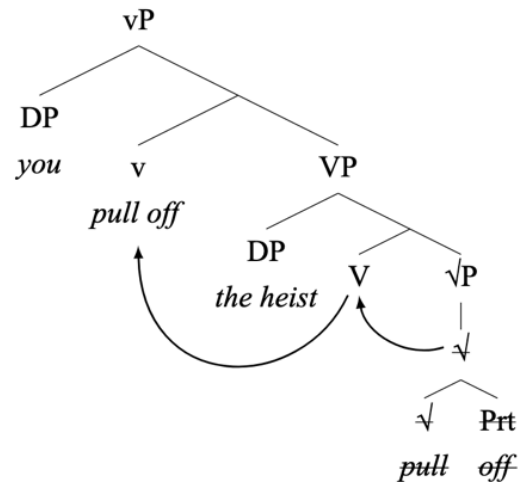
Figure 4: V-Obj-Prt (discontinuous)

Figure 5: V-Prt-Obj (continuous)

    - o Key difference is whether or not the Prt head-moves with verbal Root
    - o Holds regardless of idiomaticity
        - *We pulled the heist off.*
        - *We pulled off the heist.*

- <u>Base configuration II</u>: PrtP as complement to verbal Root
    - o Prt can't move with V because whole phrases can't be involved in head-adjunction
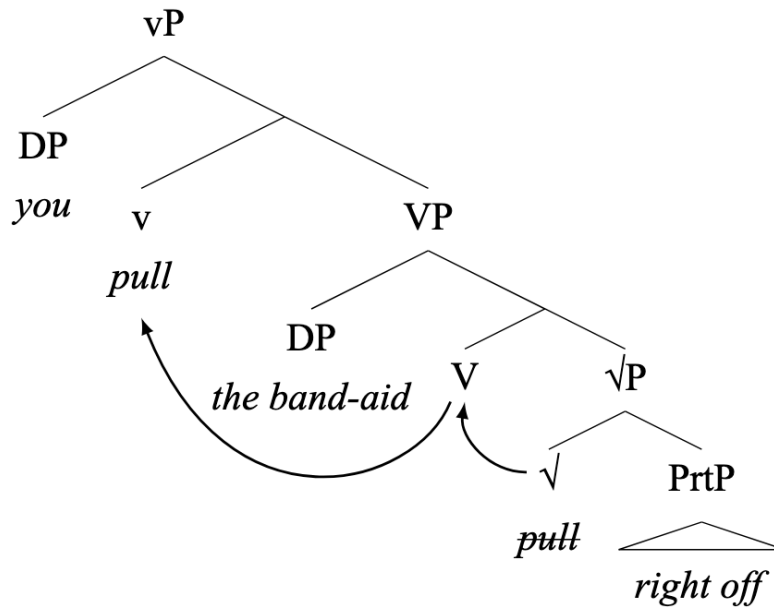
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Figure 6: V-Obj-PrtP (discontinuous order only => *_You pulled right off the band-aid_)

- o Prt is phrasal only when it has a degree modifier (DegP), otherwise it's just a head adjoined to the verbal Root (see Figures 4 and 5)
- o PrtP with DegP in Spec-PrtP analysis is supported by idiomaticity facts/tendencies:
  - ▪ #_We pulled the heist right off._
  - ▪ #_I let my parents right down._
  - ▪ This follows if structures including roots are interpreted phase-by-phase (Arad 2003), and if PrtP is a phase; PrtP meaning can't be influenced by root
  - ▪ Parallel: phasal theta-complete PPs (Baltin 1982, Hestvik 1991, Lee-Schoenfeld 2007)
- o DegP inside PrtP (e.g., _right off_), patterns just like IntP inside AP (e.g., _too proud_) and possessor-DP inside DP (e.g., _the neighbor's dog_): they can each have another (phrasal) modifier as their specifier:
  - ▪ [PrtP [DegP [DegP _pretty much_] _right_] _off_]
  - ▪ [AP [IntP [IntP _all_] _too_] _proud_]
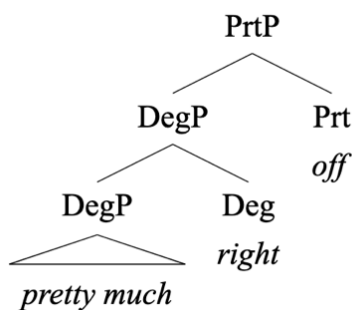 - ▪ [DP [DP [DP _Mr. Smith_]_'s neighbor_]_'s dog_]

Figure 6: Recursive DegP-modification of Prt

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- o Compare recursive head-adjunction (Larsen 2014:311): [Prt right [Prt back [Prt on [Prt up]]]], which doesn't accurately reflect compositionality of modification

4. Rebutting an argument for object movement

Kayne (1985) and Basilico (2008) note acceptability contrasts in subextraction from PrtV Objs.

- For Basilico 2008, these contrasts follow if there's Obj mvmt in the discontinuous order (<mark>Figure 2</mark>), and if that renders Obj an island (like Subj; see McCloskey 1993)

(9) a. *Which aliens did the government cover [every encounter with _] up?
     b. Which aliens did the government cover up [every encounter with _]?

(10) a. *This is the subject you threw [all your books about _] out.
     b. This is the subject you threw out [all your books about _].

- However, pied piping makes the (a)-examples better:

(11) a. With which aliens did the government cover [every encounter _] up?
     b. With which aliens did the government cover up [every encounter _]?

(12) a. This is the subject about which you threw [all your books _] out.
     b. This is the subject about which you threw out [all your books _].

- Given this contrast, we suggest:
  - o Subextraction from Objs of discontinuous PrtVs (9a) is degraded because:
    - In general, prosodically heavy Objs (e.g., PP-containing DPs) aren't good in discontinuous order, and subextraction is only possible from such Objs
    - And perhaps the P-gap-Prt sequence is more prone to processing errors, something like double center embedding (cf. Lewis & Vasishth 2005)
  - o Pied piping improves subextraction because:
    - PP-mvmt makes Obj lighter, and yields a N-gap-Prt sequence

5. Left for future work

Ditransitives:
(13) a. We fried the kids up some chicken.
     b. *We fried the kids some chicken up.
     c. *We fried up the kids some chicken.

- How to control where Prt must be stranded? – It can't be left in situ or move all the way up; must be moving along with V until after Ind. Obj.

With modification:

(14) a.   *We fried the kids right up some chicken.
       b.   *We fried the kids some chicken right up.
       c.   *We fried the kids some chicken right up.

- If both Objs originate high (neither as sister to Root), how to prevent Prt modification, i.e., PrtP as complement of Root, just in case the verb takes two DP internal arguments?

6. Conclusion

With the goal of sorting things right out, we have arrived at an account that:
- is simpler than previous approaches in that Obj is always generated in the same position and doesn't have to move
- comes with a new restriction on Prt modification: only non-idiomatic V-Prt combinations (involving PrtP) readily allow it

Broader implications and directions for future research
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Add some big-picture implications of our work (something like in our abstract: "… a previously unnoticed interaction between Prt modification and Root+Prt interpretation, suggesting a condition on the syntax-semantics interface to explore in other constructions and languages.")

5.1 Ditransitives
- *You fried John up some chicken. / *You fried John some chicken up. / *You fried John some chicken up.*
  - With modification: **You fried John right up some chicken. / *You fried John some chicken right up. / *You fried John some chicken right up.*
  - vs. *You fried some chicken right up for John.*
- *You passed John down some tools. / *You passed John some tools down. / *You passed down John some tools.*
  - **You passed John right down some tools. / *You passed John some tools right down. / *You passed right down John some tools.*
  - vs. *You passed some tools right down to John.*

5.2 Infinitival subjects
- *You made John out to be a liar.*

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Details of our analysis that we haven't integrated into section 3:
- Background on root theories
- Phasehood and interpretative effects related to Prt vs. PrtP
  - Maybe the 'head-adjoined' Prt is an adjoined root? (cf. *babysit*)

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