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

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Abstract. Particle-verbs are combinations of verb and particle (Prt). Verb+Prt stay together in the continuous word order (*He ate up the spinach*) but separate in the discontinuous order (*He ate the spinach up*). We use the facts that Prt can be modified in the discontinuous order (*He ate the spinach right up*), even by a phrasal modifier (*He ate the spinach pretty much right up*), and that modification is not possible in the continuous order (**He ate right up the spinach*) to argue for an analysis of Prt modifiers as generated in Spec-PrtP and for verb rather than object-movement to account for the ordering alternation. Adopting a phase-by-phase model of incremental interpretation and assuming PrtP to be a phase, we capture the tendency of Prt in idiomatic Verb+Prt combinations to resist modification (*You pulled the band-aid right off* vs. ?*You pulled the heist right off*).

Keywords. particle verbs; degree modification; (dis)continuous order; verbal head-movement; idiomaticity; phasehood

1. Introduction. Our main endeavor is to account for the word order possibilities in particle verb (PrtV) constructions without operations that are otherwise difficult to motivate for English, in particular, object movement. The basic word order alternation at issue here is shown in (1) and (2).

(1) a. She put on her shoes. (continuous order)
b. She put her shoes on. (discontinuous order)

(2) a. He pulled off the band-aid. (continuous order)
b. He pulled the band-aid off. (discontinuous order)

We also aim to draw attention to degree modification of the particle as an analytical diagnostic, specifically how word order restrictions, as illustrated in (3-4), and the semantics of the modification in cases of multiple modifiers, as shown in (5) and (6), might follow from the phrase-structural representation of the modifier.

(3) a. *She put **right** on her shoes. (continuous order)
b. She put her shoes **right** on (discontinuous order)

(4) a. *He pulled **right** off the band-aid (continuous order)
b. He pulled the band-aid **right** off. (discontinuous order)

(5) a. She put her shoes **almost halfway** on.
b. He pulled the band-aid **pretty much right** off.

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(6) a. He pulled the band-aid **right back on** off.
b. ?He pulled the band-aid **right on back** off.
c. *He pulled the band-aid **back right on** off.
d. *He pulled the band-aid **back on right** off.
e. *He pulled the band-aid **on right back** off.
f. *He pulled the band-aid **on back right** off.

Clearly, the modifiers here do not all directly modify the particle *off*. We have modifiers modifying modifiers. Thus, the order of modifiers is not random. In (6), we can really only get the order of *right* < *back* < *on* < Prt. So, *right* modifies *back*; *right back* modifies *on*; and *right back on* modifies Prt. Note that *back* and *on* are special in that they can function as both Prt (*He pulled her back / We turned the light on*) and modifier.

Our third goal is to appeal to idiomaticity (or lack thereof) to motivate syntactic differences. Notice that the modifier in the (a)-examples of (7-8) distracts from the idiomatic meaning of the V+Prt combination, whereas the modifier in the (b)-examples readily adds to the literal meaning of the particle.

(7) a. ??He pulled the heist right off.
b. He pulled the band-aid 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.

In the (a)-examples, *pull off* means something like 'successfully execute' and *let down* means 'disappoint' whereas in the (b)-examples, the band-aid is literally being removed from a surface and the parents are literally brought from the air back to the ground. It seems, then, that idiomatic V+Prt combinations resist particle modification, at least when they are uttered out of the blue. We will see how this motivates our syntactic analysis of particle verb constructions in section 3.

First, in section 2, we give an overview of major previous approaches to analyzing the observed word order alternation in PrtV constructions as well as the possibility of degree modification. Then, as promised, in section 3, we present our new and improved analysis of particle modification as well as an account of the observed word order alternation without appealing to object movement. In section 4, we rebut an argument for object movement; in section 5, we discuss what is left for future work; and in section 6, we conclude.

2. Major previous approaches. Quite a bit of work has been done on PrtV constructions. Here, we focus on just two major types of analyses, one that posits a complex V+Prt head as introducing the object and another that combines object and Prt into a Small Clause.

2.1. OBJECT AS ARGUMENT OF V+PRT. In this type of approach, the object is the argument of a complex V+Prt head, as proposed by Johnson (1991) and later adapted by Basilico (2008). Johnson argues that the object moves to Spec-μP (see Figure 1a) for Case-licensing and word order reasons, which we will explain and argue against at the end of this subsection. Johnson derives the continuous word order by head-moving V+Prt to v, above the object, as shown in Figure 1a, and the discontinuous order by excorporating V and leaving Prt below the object, as shown in Figure 1b. In these figures, some labels are adapted and some of steps of head-movement are omitted.

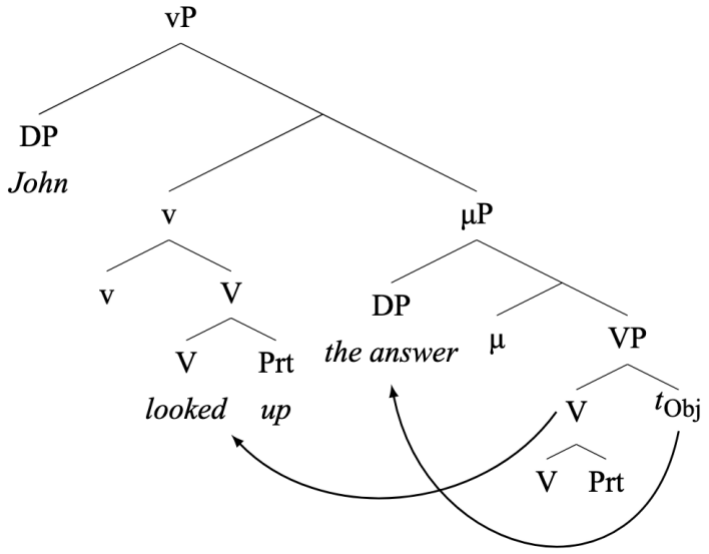

Figure 1a. Johnson's (1991) analysis of the continuous order

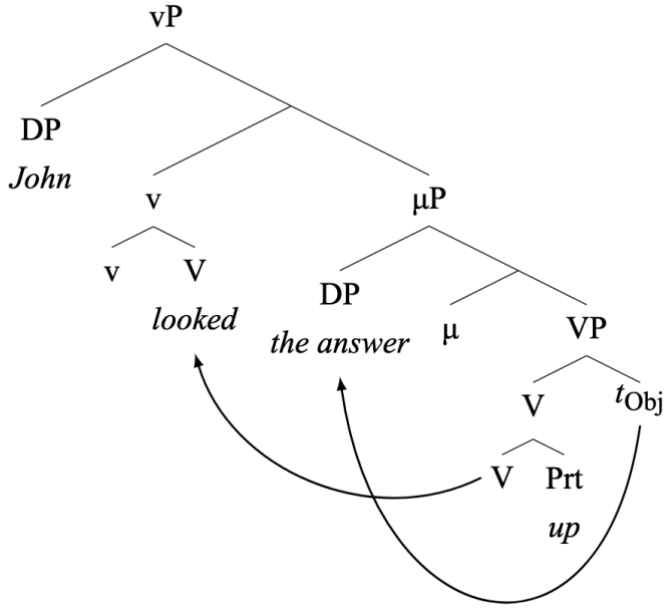

Figure 1b. Johnson's (1991) analysis of the discontinuous order

Next, we focus on Basilico's (2008) approach, which is similar to Johnson's in that V and Prt form a complex head. However, for Basilico, the verb is decomposed into root and categorizer, following much work in Distributed Morphology. We adopt Merchant's (2019) use of "V" for the categorizing head and "v" for the agentive / active Voice-head and have adapted Basilico's node labels accordingly. The particle (Prt) merges with the root (√). The position of the object depends on whether Prt projects or √ does.

In Figure 2a, which shows how Basilico derives the continuous order, √ projects, V merges, and the object is merged in the complement-to-V slot, getting Case-licensed in situ. In Figure 2b, which shows the derivation of the discontinuous order, Prt projects, the object is merged in the

complement-to-Prt slot, and then V merges. This requires the object to move to Spec-VP to get Case-licensed. In both derivations, the root excorporates from the complex head, stranding the particle.

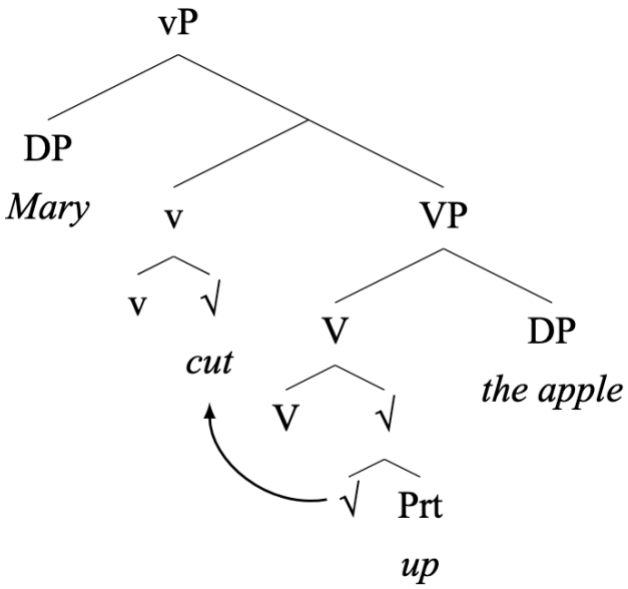

Figure 2a. Basilico's (2008) analysis of the continuous order

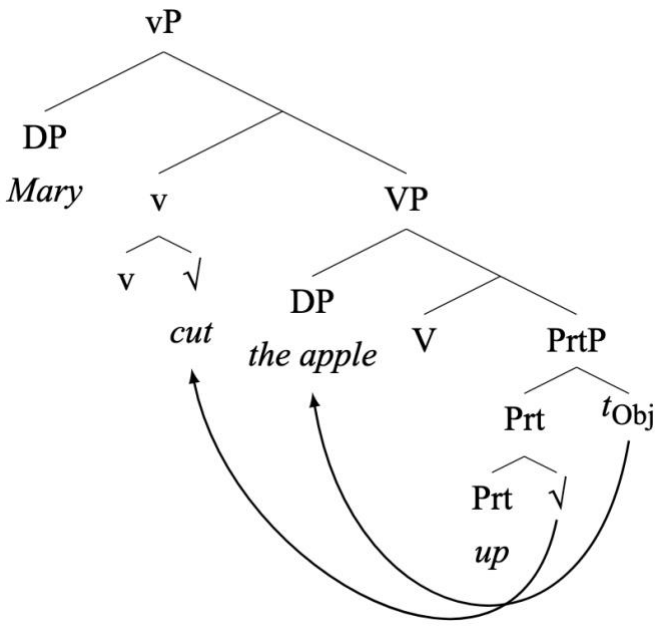

Figure 2b. Basilico's (2008) analysis of the discontinuous order

In line with both Johnson's and Basilico's accounts, we posit a level of representation where the object is higher than the complement-to-V slot as well as a head-adjunction structure consisting of Prt and (what ends up as) V. We follow Johnson (1991) in that Prt optionally gets

left behind by the excorporating verbal head, but we follow Basilico (2008) in that our verbal head starts out as √, i.e., we decompose the verb into √ and categorizer (V). We also adopt from Basilico the possibility of a projecting Prt, i.e., a PrtP.

The following is a preview of what we will do differently than Johnson and Basilico in section 3 when we lay out our proposal. In our account, the object does not shift but originates high. In line with other work in both syntax (Merchant 2019) and event semantics (Parson 1990; Lohndal 2012), we propose that the object is not the argument of √ but rather of the categorizing V-head. Furthermore, unlike Johnson (1991), we do not take manner adverbs (as in *Mikey visited his parents quietly*) and Case-licensing to be independent motivation for object movement. How and where adverb adjunction takes place is debatable, so there are ways other than object shift to explain the ungrammaticality of **Mikey visited quietly his parents*. Also, it is well known that, in English, the object can be Case-licensed at a distance, via static Agree (Chomsky 2000, 2001). Finally, unlike both Johnson and Basilico, we pay close attention to particle modification facts. Johnson analyzes Prt modifiers as head-adjoined, without considering phrasal modifiers. Basilico does account for the impossibility of a modified Prt in the continuous order (**She put right on her shoes*) by positing a PrtP (his *p*P) that has the modifier in its specifier, but he does not consider Prt modifiers that are themselves modified.

Before we lay out the details of our own proposal, the following subsection presents the other major type of previously proposed PrtV construction accounts to which we compare ours.

2.2. OBJECT AS ARGUMENT OF PRT: SMALL CLAUSE ANALYSES. In this type of approach, the object is the argument of the Prt. In Harley's (2008) analysis of the continuous order, shown in Figure 3a, Prt head-moves to V, and then both Prt+V head-move to v (again we adapted some node labels). In contrast, in her analysis of the discontinuous order, shown in Figure 3b, Prt stays in situ.

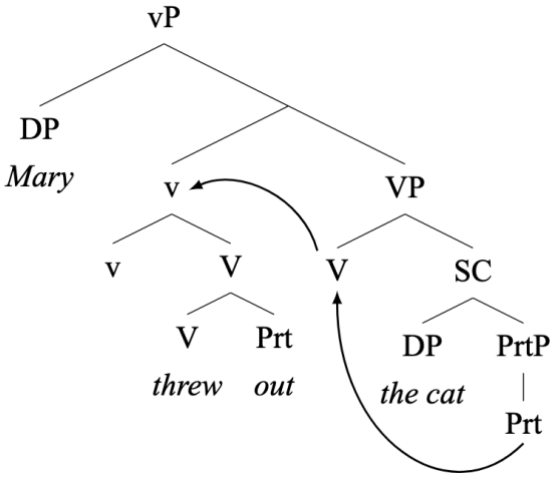

Figure 3a. Harley's (2008) analysis of the continuous order

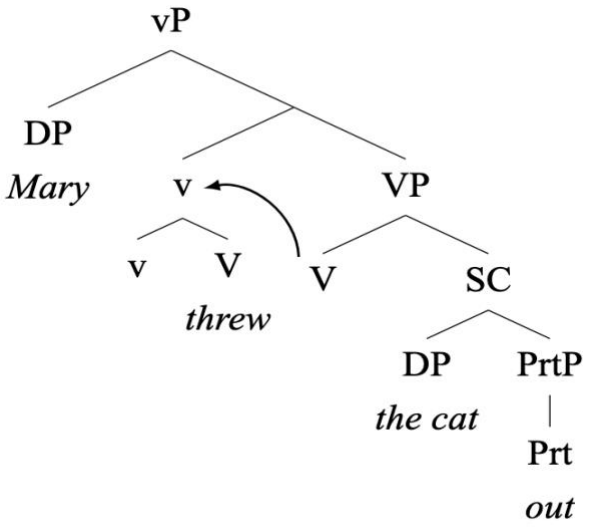

Figure 3b. Harley's (2008) analysis of the discontinuous order

In a nutshell, Prt is the predicate of the small clause (SC), and crucially, the object is the argument of Prt. When the object is the left daughter of SC, the basic word order alternation is derived simply by optional head movement of Prt. This assimilates PrtV constructions to resultative secondary predicates, i.e., offers an elegant unified account, but there is no consensus on the internal structure of SC or the position of the object. In Harley & Noyer's (1998) analysis, which does not use the label "SC", for example, the object is the complement-to-Prt slot (on the right) and therefore necessitates otherwise unmotivated object movement to derive the discontinuous order. Even if the object is in Spec-PrtP, as in Ramchand's (2008) analysis, which avoids the "SC" label as well and offers an elaborate decomposition of the verbal argument domain (see also Ramchand & Svenonius 2002), the object still needs to have the option to move. For Kayne (1985), the object undergoes rightward movement akin to Heavy NP Shift. There is also a recent mixed approach by Larsen's (2014), where the object is ~~e~~ssentially a SC argument when the particle projects a PrtP, but where the object is in the complement-to-V slot when the particle is just a Prt-head.

We adopt the possibility of a projecting Prt, i.e., a PrtP, in addition to Prt as head-adjoined to the verbal root, but in line with UTAH (Baker 1988, et seq), we maintain that the object is always an argument of the verb, not of Prt or SC.

2.3. SUMMARY OF WEAKNESSES OF MAJOR PREVIOUS ANALYSES. For Johnson (1991), Prt is always adjoined to V, which cannot account for particle modification. For Basilico (2008) as well as for the Small Clause approach, the object does not have a consistent position across simple transitive verb and PrtV constructions, which flies in the face of UTAH (Baker 1988). Importantly, few approaches seriously consider particle modification possibilities (Larsen's (2014) being the most thorough), and to the best of our knowledge, none investigate the effect of particle modification on the idiomaticity of V+Prt.

3. Our proposal. We adopt Johnson's (1991) V+Prt head adjunction and head-movement with optional V-excorporation approach, but we do not need object movement. Like Basilico (2008) and Larsen (2014), we focus on particle modification facts, which show that Prt can be phrasal

and thus is not always head-adjoined to V. This leads to two different base configurations. In base configuration I (Figures 4a and 4b), Prt is head-adjoined not to V but to the verbal Root (√). Given the head movement options shown in Figures 4a and b, we derive the two possible orders.

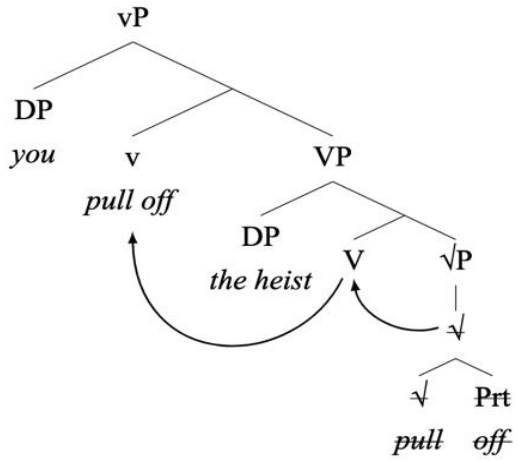

Figure 4a. Adjoined and head-moved Prt: Continuous order (Base configuration I)

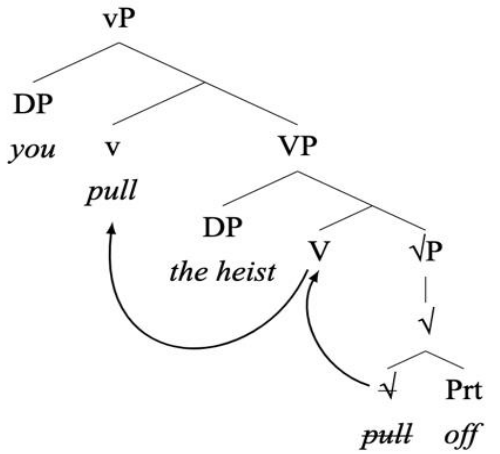

Figure 4b. Adjoined and stranded Prt: Discontinuous order (Base configuration I)

The key difference is whether or not Prt head-moves with √, and this holds regardless of idiomaticity (*You pulled off the heist* or *You pulled the heist off* and *You pulled off the band-aid* or *You pulled the band-aid off*). In base configuration II (Figure 5), we posit PrtP as complement to √. Here, Prt cannot move with the root/verb because whole phrases cannot be involved in head-adjunction.

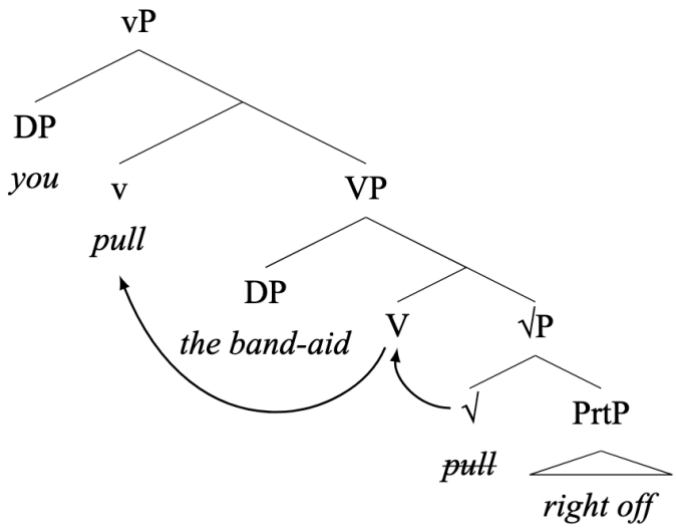

Figure 5. Projecting Prt with modifier: Discontinuous order only (Base configuration II)

Crucially, Prt is phrasal only when it has a degree modifier (DegP); otherwise it is just a head that is adjoined to the verbal root, as shown in Figures 4a and b. The analysis of Prt having DegP in its specifier (Spec-PrtP) is supported by idiomaticity observations. As noted in section 1 (see examples 7-8), idiomatic PrtV constructions resist modification. This follows if structures including roots are interpreted phase by phase (Arad 2003) and if PrtP is a phase because, that way, the meaning of PrtP cannot be influenced by the root. That is, since it is in a self-contained spell-out domain, the modified particle must be interpreted literally (e.g., *right off* and *right down* in the literal directional sense, not in the idiomatic sense of pulling something off or letting someone down). The phasehood of PrtP is parallel to the phasehood of theta-complete PPs (Baltin 1982; Hestvik 1991; Lee-Schoenfeld 2007).

We argue that 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 potentially phrasal modifier as their specifier: [AP [IntP [IntP *all*] *too*] *proud*] and [DP [DP [DP *Mr. Smith*]*'s neighbor*]*'s dog*]. This is illustrated in Figure 6.

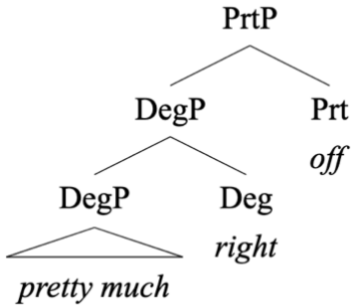

Figure 6. Recursive DegP modification

Thus, we argue against Larsen's (2014: 311) recursive head-adjunction (e.g., [Prt *right* [Prt *back* [Prt *on* [Prt *up*]]]]), which stacks modifiers at the head-level, adjoining each modifying head to the same Prt-head, and therefore does not accurately reflect the compositionality of modification. As

we noted in section 1, multiple modifiers preceding a particle do not all modify this particle directly, and they cannot be added in a random order.

Since our goal is to account for English PrtV constructions without object movement, we need to disprove any independent motivation for such movement. This is what section 4 is about.

4. Rebutting an argument for object movement. Following Kayne (1985), Basilico (2008) notes that subextraction from objects in discontinuous PrtV constructions results in poor acceptability, relative to the continuous order. He uses this as an argument for object movement in the discontinuous order, assuming that moving an object (much like moving a subject) makes it a derived left branch and therefore an island (on subject islands, see e.g., McCloskey 1993).

(9) a. *Which department does the Dean want to **write** [a report about _] **up** for the Provost?
b. Which department does the Dean want to **write up** [a report about _] for the Provost? (Basilico 2008: 746)

For us, there is no object movement in either order of the PrtV construction, only head-movement of elements around the object. What of the apparent ungrammaticality of (9a)? First, we note that the version without subextraction is fairly unacceptable as a baseline (10), due to the prosodic heaviness inherent in such a syntactically complex object. The added processing difficulty of a *Wh*-dependency is likely causing (9a) to be even less acceptable, independent of the syntactic position of the object. The apparent ungrammaticality of (9a) could be illusory due to interactions of non-grammatical constraints on processing (see e.g., Lewis & Vasishth 2005).

(10) ??Who wants to **write** [a report about which department] **up** for the Provost?

Second, we note that particle modification improves the acceptability of subextraction (11), as does contextually-licensed contrastive focus on the particle (12). In some cases, pied-piping ameliorates subextraction as well (13a), especially if the particle is unstressed. Basilico's (2008) approach predicts all these to be ungrammatical.

(11) ?Which dept. does the Dean want to **write** [a report about _] **right up** for the Provost?

(12) I understand you accidentally turned a machine for potato-peeling OFF during the confusion, but ?what task did you **turn** [a machine for _] **ON**?

(13) ?About which department did the Dean want to **write** [a report _] **up** for the Provost?

The contrast between (9a) and (11–13) suggests an interaction of sentence-processing and prosodic factors that influence the relative acceptability of object subextraction from discontinuous PrtV constructions, which we take to be grammatically well-formed. Likely related are well-known facts about object pronouns, which cannot appear with the continuous order unless focused (14). We follow Basilico (2008) and others in assuming that the object pronoun cliticizes to agentive v, and morphological mechanisms linearize it before the particle, just as they do inflectional affixes lowered from T.

(14) a. You creeped him/HIM out.
b. You creeped out *him/okHIM.

5. Ditransitives. We leave the puzzle of ditransitive PrtV constructions for future work, but the following is a preview of the problems they pose for our account, at least at first sight. Consider the word order possibilities in (15), where we are dealing with a ditransitive particle verb.

(15) a. We fried the kids up some chicken.
b. *We fried the kids some chicken up.
c. ?We fried up the kids some chicken.

Example (a) seems to represent the only readily acceptable word order here, with the order in (b) being clearly unacceptable, and that in (c) being somewhat degraded but acceptable to at least some speakers. The question for us is how to control where the Prt must be stranded. It cannot be left in situ and may need to be prevented from moving all the way up to agentive v as well. Basilico (2008) has an account of some of these facts, but like his account for monotransitive PrtV constructions, it relies on object movement, which we set out to eliminate.

6. Conclusion. With the goal of sorting things right out, we have arrived at an account of PrtV constructions that is simpler than previous approaches in that the object is always generated in the same position and does not have to move. This account comes with a new restriction on particle modification: only non-idiomatic V-Prt combinations readily allow modification of the particle (via DegP in Spec-PrtP).

As for broader implications and theoretical connections, our work touches on the syntax-semantics interface and potentially initiates an investigation of how the connection between particle phrasality/phasehood and idiomaticity as well as theories of root allosemy (Carston 2024) fit into the broader debate about the structure of idioms (Larson 2017; Bruening 2020).

This work also touches on subextraction and sentence processing. Discontinuous PrtV constructions seem to cause processing difficulty due to a nonlocal lexical relationship (Capelle et al. 2010, Czypionka et al. 2018, a.o.). In connection with there being complex semantic restrictions on subextraction from objects (Davies & Dubinsky 2003), subextraction from PrtV objects offers a unique way to study how lexical and syntactic dependencies are processed simultaneously.

Finally, our contribution is relevant for comparative Germanic syntax. PrtV constructions with different syntactic properties are found across Germanic (Larsen 2014, Dehé 2015, a.o.) and in unrelated languages, like Hungarian (Kiss 2006). Thus, it will be interesting to see how the analysis we propose here fares when it is extended beyond English.

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