Particle verb formation
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1. What is a particle verb?
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This article provides an overview of the empirical phenomena and theoretical questions associated with particle verbs. We overview the semantic, argument-structural, syntactic and morphological properties of these structures, giving an idea of the issues discussed in the vast literature on the subject.

Keywords: particle, particle verb, complex verb, syntax-morphology interface, argument structure, lexical integrity, Right-Hand Head rule

1 What is a particle (verb)?

The combinations of verbs and preposition-like elements seen in (1) and (2) are referred to as particle verbs (=verb-particle combinations, phrasal verbs, separable (complex) verbs). Definitions of ‘particle (verb)’ vary, but (3) provides a template for a definition of ‘verb particle’ which tries to encapsulate the points of consensus and variation.1

(1) a. I threw the rubbish out. b. I threw out the rubbish.
(2) a. Ich warf den Müll weg. b. Ich habe den Müll weggeworfen. (German)
(3) Properties of verb particles:
   a. Under certain syntactic conditions, particles need not, or may not, be verb-adjacent.
   b. Particles differ from other elements fulfilling condition (a) in that they form a kind of ‘close union’ with a verb whose precise nature differs from theory to theory.
   c. Most, if not all, particles are (or are at least formally related to) complementless prepositions (or ‘directional/locational adverbs’ in traditional terms).

The effects of (3a) are seen in (1a) and (2a). By (3a), the term ‘particle’ will not be used of (true) affixes (even when they have very similar semantics, cf. I overturned the cart vs. I turned the cart over). The notion ‘close union’ in (3b) refers to certain phenomena which have led some analysts to treat particle verbs (in at least some contexts) as being morphological, compound-like entities (consider for instance the Germanophone tradition of referring to particles as trennbare Präfixe ‘separable prefixes’). One such ‘close union’ phenomenon is the fact that certain derivational processes accept particle verbs as input but not other clearly phrasal constructions, consider colloquial English taker-out-er of boxes but *taker-inside(r) of boxes. Another is the fact that the particle in (1b) intervenes between the verb and object, a privilege not enjoyed by other elements in English (in the absence of heavy NP shift effects). In (4) we see examples of constraints on items which can interrupt verb-object adjacency. We will see more ‘close union’ phenomena in sections 3, 4 and 5.

(4) a. push {in/out/up/down/away/over/aside/*inside/*upwards/*through} the box
    b. *talk silly the people; *fold flat the boxes; *let leave the people

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1 The term ‘particle’ is used for various uninflectable elements which do not easily fit into the better-known grammatical categories, say focus-sensitive particles or modal particles. In the literature the term ‘verb particle’ refers exclusively to the verb-dependent preposition-like elements discussed here. In the present work ‘particle’ refers only to these items.
c. let slip\textsubscript{V} a chance, let go\textsubscript{V} the rope, cut short\textsubscript{A} the meeting, set free\textsubscript{A} the captives

To understand (3c), consider firstly (4a), which shows that a subset of complementless prepositions (or ‘(directional) adverbs’, to use the unhelpful terminology from traditional grammar) allows the pre-object placement typical of particles. (4b) indicates the general rule that non-prepositional elements cannot appear in this position. So far the generalisation is that all particles are complementless prepositions, but not vice-versa. Some apparent exceptions like \textit{take home the books} are spurious, since \textit{home} has independent prepositional properties, say right-modification (\textit{run right home}), PP-fronting (\textit{Home ran the children}) and selection by verbs which otherwise only select PPs (\textit{bring/take it home}). Nevertheless, similar evidence for a prepositional analysis of the pre-object items in (4c) is lacking. They thus seem to be genuine exceptions, albeit rare and unsystematic ones. For more challenges to an across-the-board characterisation of particles as prepositions, see Cappelle (2005) on English, Toivonen (2003:246) on Swedish, and Stiebels and Wunderlich (1994) and Zeller (2001b) on German. The latter two studies discuss cases like \textit{staubsaugen} ‘vacuum-clean’ (literally ‘dust-suck’) which are sometimes treated as backformations and show varying degrees of resistance to verb movement. See Fortmann (this volume) on these.

As suggested in (3c), prepositions with complements (or in some theories, overt complements) do not display normal particle behaviour. (5a) illustrates the absence of English of transitive prepositions which can appear in the verb-adjacent particle position (comparable structures do exist in other languages if Baker (1988) was right in analyzing applicative morphemes as incorporated prepositions). Structures like (5b) do not involve particles. They are simple V+PP constructions (often called ‘prepositional verbs’), not particle verbs, because clause-final weak pronouns are excluded from particle verbs (*\textit{take out it}) and because the order object-P is either excluded (*\textit{walk it over}) or has a completely different interpretation (\textit{run them through} ‘run a sword through them’).

\begin{enumerate}[\做起始编号]
\item [a.] *\textit{pull off the sticker the box}. (\textit{= pull the sticker [pp off the box].})
\item [b.] \textit{walk [pp over it]; run [pp through them]}
\end{enumerate}

The insistence on complementless prepositions in (3c) might have exceptions in certain analyses. Certain particles like those in (6a,b) co-occur with arguments which are thematically arguably grounds\textsuperscript{2} of the prepositional relation expressed by the particle, i.e. correspond to complements of prepositions in the glosses. Arguably the objects in such constructions start life in the derivation as complements of prepositions, raising to a structural Case position like arguments of passive or unaccusative verbs, cf. Svenonius (2003). See McIntyre (2007: section 2.2) for an overview of (literature on) these constructions.

\begin{enumerate}[\做起始编号]
\item [a.] \textit{wipe the table off} / \textit{wipe off the table} (cf. \textit{wipe the dust off the table})
\item [b.] \textit{pump the cellar out/pump out the cellar} (cf. \textit{pump the water out of the cellar})
\item [c.] \textit{Du solltest dem Typen nicht hinterher laufen} (German)
\begin{itemize}
\item \textit{you should the guy after run}
\item \textit{“You shouldn’t run after the guy.”}
\end{itemize}
\item [d.] \textit{[pp Dem Typen hinterher] ist keiner gelaufen}
\begin{itemize}
\item \textit{the guy after is nobody run}
\item \textit{“Nobody went after the guy.”}
\end{itemize}
\end{enumerate}

A more complicated case is (6c). The P-element \textit{hinterher} is immediately adjacent to a clause-final verb, a standard position for particles in German. The dative phrase \textit{dem Mann} could be

\begin{enumerate}[\做起始编号]
\item [\textit{figure} (=theme, trajector, locatum, located object) whose location is given, and a \textit{ground} (=reference object, landmark, relatum, location/source/goal), the argument with reference to which the Figure is located and which mostly appears as complement of transitive prepositions. (i) illustrates.
\item [\textit{i.}] \textit{I put the cat\textsubscript{figure} on the table\textsubscript{ground}; We\textsubscript{figure} went into the house\textsubscript{ground}}
\end{enumerate}

\textsuperscript{2} Prepositional items have two main types of arguments, a \textit{figure} (\textit{=theme, trajector, locatum, located object}) whose location is given, and a \textit{ground} (\textit{=reference object, landmark, relatum, location/source/goal}), the argument with reference to which the Figure is located and which mostly appears as complement of transitive prepositions. (i) illustrates.
analysed thematically as the Ground argument of hinterher, similarly to the dative in (6d), where hinterher is a dative-assigning postposition forming a full PP. Such constructions would be problematic for the particles-qua-complementless-prepositions constraint in (3c) only on an analysis which assumes that (6c) contains a PP like that seen in (6d). The non-adjacency between the particle and dative in (d) makes this approach hard to defend; presumably hinterher would have to reanalyse with the verb (without incorporating, since V can move away from hinterher), allowing the dative to scramble despite German’s usual ban on P-stranding. There are alternative analyses which do not counterexemplify (3c). Zeller (2001b:218-225) adumbrated a non-movement account involving percolation of P’s dative feature. Another possibility for at least some such constructions is that the dative is not grammatically represented as an argument of the particle but is a free dative. Recent discussions are McIntyre (2006: section 8) and Oya (2009).

2 Semantic and argument-structural properties of particle verbs

This section discusses the main semantic and argument-structural classes of particle (verbs). The first class is seen in (7). This type of particle, common in all Germanic languages, is called the resultative or directional particle. It predicates a result or direction over a direct argument (i.e. direct object or unaccusative intransitive subject). As is often seen with the oft-discussed resultative constructions, the direct argument need not correspond to the verb’s usual selection restrictions, cf. (7c) and *vote the government (McIntyre 2007 and references).

(7)  
   a. She put a hat on.          [on her head]  
   b. She walked in.            [into a contextually present room/building]  
   c. We voted the government in. [into office/power/parliament etc.]  

In cases like (7) the direct argument is a Figure (as defined in note 2). There is no (overt) ground, though the interpretation of the structures involves an implicit ground, cf. the bracketed information in (7). There are three main types of deviations from this standard type of resultative particle. Firstly, in structures like (6) the Ground is realized instead of or along with the Figure. Secondly, there is a rare and rarely-discussed type of unergative particle construction like look in, phone through where the particle coexists with an Agent without predicating over it (McIntyre 2004). Thirdly, (8) shows a ‘pleonastic’ construction, widespread in German and Dutch but missing in English, in which a prepositional element manifests itself both as a particle and as a case-assigning preposition in the same clause (e.g. Olsen 1996).

(8) Aus der Kirche will sie nicht austreten.  
    out.of the church wants she not out.step  
    ‘She doesn’t want to leave the church.’

Resultative particles need not have (purely) spatial meanings: turn off the light or put out the fire have a clearly resultative semantics but do not have spatial-directional content. Various writers (say Cappelle 2005, Lindner 1983, McIntyre 2002, 2003, Stiebels 1996) posit resultative meanings for non-spatial particle verbs whose resultative character is not immediately obvious. For instance, Lindner (1983: 80-87, 125-138) argued that the particles in (9) are metaphorically motivated result predicates expressing cognitive availability.

(9)  
   a. {search/seek/point/pick/find/work/tease/figure} out the answer  
   b. {dream/think/bring/summon/call/play/look} up the argument  

Several types of particles are commonly referred to as ‘aspectual’ particles since (at first sight) they appear to be aspectual operators or to give information about the temporal contours of the event or its Aktionsart. There are two main types. Those in (10) normally require a direct argument (even if the verb does not select one), while those in (11) are atransitive, being incompatible with direct objects. For more discussion of aspectual

(10) a. eat the chicken up; think the matter *(through/over)
b. Gabi will {das Buch anlesen/das Problem *(an)denken}.
   Gabi wants {the book ‘at’.read/the problem ‘at’.think}
   “Gabi wants to start {reading the book/thinking about the problem}.”

(11) a. She played (*her guitar) {on/around/away/along}.
b. hammer (*the metal) around/away (in sense ‘hammer around/away on the metal)
Another seldom-discussed type of particle is seen in (12). Here the particles are neither resultative nor aspectual. Their interpretations are modifier-like for instance in that in (11b) is not directional. See Blom (2005:132-135, 148-152, 168-173) on Dutch examples.

(12) a. den Ofen VORheizen; ein Bier MITtrinken [German]
   the oven pre.heat a beer with.drink (i.e. with other people)
b. I ate dinner IN; I slept IN

Any discussion of the semantics of particle verbs will be complicated by the fact that many of these creatures are idiomatic to some degree. One cannot derive the meaning of German AUfhörEN ‘stop’ (literally ‘up hear’) compositionally. Examples like (9) are arguably motivated to some extent, but are at least partly idiosyncratic and at best semi-productive. Subtler problems attend examples like (13), where the implicit Ground in (a) is deduced on the basis of contextual knowledge while that in (b) is deduced on the basis of associative relationships (between coats and their wearers). (c) allows either strategy, which makes one wonder whether the interpretations of (a,b) can be derived by pure pragmatic reasoning without the help of any lexical stipulations.

(13) a. I went to the wall and took the sticker off.       [off the wall]
b. I went to the washing line and took my coat off.   [’off me’, not off the line]
c. I went to the bag and put my false teeth in.      [in my mouth or in the box]


3 The syntax of particle verbs

Here we will discuss the main options for analysing the syntactic structure of verb-particle constructions. The remarks will be brief since the subject is treated in greater detail in Dehé (this volume) and in other overviews like Dehé et al. (2002), Haiden (2006).

With exceptions discussed below, most structural analyses of verb-particle constructions are of two main types:

Object-Particle Analyses: This term is used here for analyses which assume that there is a stage in a syntactic derivation where the particle forms a constituent with a direct argument (i.e. (the trace of) a direct object or unaccusative subject).

Complex Predicate Analyses: The verb and particle form a constituent (be it morphological or syntactic) which does not include the direct argument.

Many object-particle analyses explicitly describe the object-particle constituent as a small clause or comparable constituent (e.g. den Dikken 1995; Hoekstra 1988; Kayne 1985; Ramchand and Svenonius 2002), while others assume that the particle takes the direct argument as its complement (Harley and Noyer 1998; Zeller 2001a). In these analyses the syntax directly reflects the fact that direct arguments are arguments of particles at least in resultative particle constructions. For structures like turn the light off the existence of a predicative small clause is independently motivated by e.g. copula predications (The light is
off) and absolutes (With the light off I can’t work). The absence of such possibilities with other constructions (take the books away but *The books are away; *with the books away...) is sometimes advanced as an argument against object-particle analyses, but the argument is not telling given that the copula and absolute constructions are independently incompatible with directional expressions (*the books are onto the table; *with the books onto the table...).

The applicability of object-particle analyses beyond resultative particles is less clear since the argument-structural properties of non-resultative particles remains unclear (see McIntyre 2007 for an overview). Certain aspectual particles coexist with arguments not selected by the verb, see (14). This is expected under an object-particle analysis, but applying such an analysis to adjunct-like particles (recall section 2) in constructions like German den Ofen VORheizen ‘preheat the oven’ seems hard to accept unless some music-of-the-future semantic analysis shows that the object relates semantically to the particle and that the intuition that VOR expresses a temporal relation between two events is wrong. Object-particle proponents have not addressed such cases, but it is possible that some particle verbs require an object-particle analysis while others require some other analysis. One precedent is Wurmbrand’s (2000) claim that some particles involve small clauses and others involve complex predicates, though for her the distinction is based on semantic transparency rather than argument-structural considerations.

(14) think the problem through/over / *think the problem
Complex predicate analyses come in two main forms. On one view, particle verbs start life as syntactic constituents, often V’ (Booij 1990; Lüdeling 2001; Müller 2002; Zeller 2001b, 2002). Another type of analysis assumes that particle verbs are initially assembled (whether in syntax or in a pre-syntactic lexical/morphological component) as compound-like entities which form syntactic complex heads for some purposes (Dehé 2002; Farrell 2005; Johnson 1991; Neeleman and Weerman 1993; Stiebels and Wunderlich 1994; Stiebels 1996). There are also various hybrids between the two types of complex predicate analyses, for instance analyses which assume that a particle initially merges with a verb in a phrasal configuration but reanalyses with, or incorporates into, the verb to form a complex predicate with it (Basilico 2008; Haider 1997; Toivonen 2003; Winkler 1997; Zeller 2002).

If a given type of complex predicate analysis is applied to all kinds of particle verbs, it will need to be supplemented by a theory of how the arguments of the particle and verb can be realised outside the particle verb. For resultative particles and others like those in (14), the particle must be able to contribute an argument to the whole construction. Some theories allow the direct argument to be shared by the verb and particle (e.g. Haider 1996; Neeleman and Weerman 1993). For this to be maintained, such accounts will need to address the problem of intransitive particles like (11), a phenomenon which goes beyond ‘aspectual particles’, cf. phone (*the secretary) through, see (*people) into the window, shoot (*a bird) into a tree. The incompatibility of these particles with objects selected by the verb follows simply if one assumes that verbs cannot link their direct arguments when particles and other secondary predicates are present (McIntyre 2004, Zeller 2001b), but the overview in McIntyre (2007) shows that such accounts are not compelling.

We should finally note some types of analyses which cannot be described as either complex predicate or as object-particle analyses. Firstly, there is a rare type of analysis which assumes that (some) particles are inserted higher in the structure than verbs and direct arguments (Nicol 2002, and Miller 2010 for aspectual particles). Secondly, there are various accounts which mix the complex predicate and object-particle analyses. These include accounts like Wurmbrand (2000) which assume that each analysis is valid for different classes of particle verbs. One may also assume that a particle in some kind of object-particle constituent incorporates into the verb, forming a complex head with it (similarly to what occurs in the hybrid complex predicate analyses noted above), see e.g. Harley and Noyer (1998). Partially
similar is the idea in den Dikken (1995) that the particle undergoes abstract reanalysis with the verb. For other accounts which explicitly try to capture benefits of both small clause and complex predicate analyses, see e.g. Basilico (2008) or Ramchand and Svenonius (2002). This necessarily brief discussion of the structure of particle verbs will be taken up again in section 5, where we discuss the virtues and problems of the idea endorsed in some analyses reviewed above that particle verbs can be morphologically complex heads. This requires us to discuss the interactions between particle verbs and morphology, which we do in section 4.

4 Particle verbs and morphology

This section selectively reviews the morphological phenomena which a theory of particle verbs must deal with, independently of one's stance in the debate on whether particle verbs are morphological or phrasal constructs.

4.1 Particle verbs and inflection

Germanic inflectional exponents are realised on verb stems, not on particles. In English one finds *walked out* but not *walk out-ed*. In languages with head-final particle verbs like German and Dutch inflectional prefixes intervene between the particle and verb, cf. German *wegzuschmeißen* ‘to throw away’, *weggeschmissen* ‘thrown away’ (from *wegschmeiß* ‘throw away’). See e.g. Müller (2003), Stiebels and Wunderlich (1994) and Zeller (2002) for discussion of the German cases.

The irrelevance of particles to inflectional morphology is sometimes taken as an argument that particle verbs cannot be morphologically complex entities. However, this argument would be telling only if one could legitimately exclude the possibility that the inflectional exponents in question must be realised on heads of words rather than on the edge of X° elements. This possibility is hard to exclude given cases discussed in Stump (1994) in which we find inflectional affixes which are realised both on the head of a word and on the word’s edge (e.g. Breton *bagouigoú* ‘little boats’, plural of the left-headed *bagig* ‘boat (diminutive)’).

4.2 Particle verbs as input to derivational morphology and compounding

In head-final languages like Dutch and German, particle verbs freely feed word formation processes, as (15) illustrates with German data. (15a,b) are compounds with particle verbs as nonheads and (15c-g) illustrate particle verbs inside other types of derivational morphology.

The types in (15e-g) raise special problems. In (e) the nominalising circumfix Ge_e takes the whole particle verb as its semantic input (as is clear from cases where the particle verb is

\[ \text{(15)} \]

\[ \text{a. ANziehsachen} \quad \text{‘on.put.things = clothes’} \]

\[ \text{weggehabend} \quad \text{‘away.go.evening = evening where someone goes out’} \]

\[ \text{b. ABfahrbereit} \quad \text{‘off.go.ready = ready to leave’} \]

\[ \text{wegwerffreudig} \quad \text{‘away.throw.joyful = who likes throwing things out’} \]

\[ \text{c. Rumlsteherei} \quad \text{‘round.stand.Af = standing around’; ANbieter} \quad \text{‘to.offerer = provider’} \]

\[ \text{d. unAUFhörlich} \quad \text{‘un.cease.ly = unceasing’; ANnehmbar} \quad \text{‘to.take.able = acceptable’} \]

\[ \text{e. RUMgelabere} \quad \text{‘around.Af.chat.Af = incessant chatter’} \]

\[ \text{EINGekaufe} \quad \text{‘in.Af.buy.Af = negatively evaluated shopping’} \]

\[ \text{f. UMzug} \quad \text{‘moveN < UMzieh- ‘move houses/flats’} \]

\[ \text{aufnahme} \quad \text{‘taking up’ < AUFnehm- ‘take up’} \]

\[ \text{g. ANkunft} \quad \text{‘arrival’ < ANkomm- ‘arrive’} \]

\[ \text{UNTERkunft} \quad \text{‘accommodation’ < UNTERkomm- ‘find/have accommodation’} \]

The types in (15e-g) raise special problems. In (e) the nominalising circumfix Ge_e takes the whole particle verb as its semantic input (as is clear from cases where the particle verb is

\[ \text{3 In (15a,b) there is no evidence that the particle verbs have been nominalised. German is much freer than English in forming compounds with verb stems as nonhead (Gast 2008).} \]
lexicalised), even though the prefixal part intervenes between the particle and verb (discussions include Lüdeling (2001); Müller (2003); Stiebels and Wunderlich (1994)). Structures like (15f-g) (‘root nominalizations’) do not involve synchronically productive affixation or vowel/consonant mutation processes. They could be analysed either as idiosyncratic spellouts of the verb roots plus nominalizers, or as allomorphs of the verb roots which surface in nominal environments. In (g) the –kunft-nominals show the additional complication that –kunft only co-occurs with particles. For more on root nominalizations, see Stiebels/Wunderlich (1994), Becker (1993:15f).

Here it is expositionally expedient to prefigure the question of section 5 regarding the possible status of particle verbs as compound-like morphological objects (complex heads). It is often argued that instances of particle verbs feeding affixation or compounding need not show that particle verbs are morphological structures, since clearly phrasal constituents can also feed affixation and compounding. Instances of this include phrasal compounds like the particle-verbs-are-compounds stance and nominalisations like the destruction of the evidence immediately, where the adverb indicates that the nominaliser attaches to a verb but to a VP or larger constituent (Fu et al. 1997). There are, however, several complications. As part of an argument that particle verbs, though initially merged in phrasal configurations, reanalyze as X° items inside complex verbs, Zeller (2001:ch. 6) notes that many German affixes simply do not tolerate phrasal input. One can add that compounds like (15a) do not evince the expressive, jocular or stylistically marked feel of phrasal compounds discussed in Meibauer (2007), and that compounds like (15b) do not have the ungrammatical feel of structures like *nach-Leipzig-fahr-bereit ‘ready to go to Leipzig’. However, Lüdeling (2001) and Lüdeling and de Jong (2002) argue that affixes which allow particle verbs but not uncontroversially phrasal structures as input are sensitive to factors other than the word-phrase distinction, including pragmatic considerations and a requirement that certain affixes attach to lexically listed input (the latter idea is criticised in Müller 2002:314-337). More work will be needed to determine the precise details of the selection restrictions of the affixes in question before their relevance to the complex word view of particle verbs can be established.

Head-initial particle verbs found in languages like English present greater difficulties when one attempts to combine them with derivational suffixes. As (16) suggests, there is tension between attaching the suffix to the head of the particle verb (i.e. to the verb stem), and attaching it outside the particle verb. This tension is sometimes resolved by reduplicating the affix4. With few exceptions (notably Cappelle 2010, Walker 2009), the reduplication phenomenon has had surprisingly little attention. If the reasons for the reduplication were better understood it might be possible to determine whether the attachment of suffixes outside the particle verb can yield an argument for the complex head analysis of particle verbs.

(16) a. passer-by, hanger-on, foldable up
    b. pick-up-able, un-make-up-able, walk-outer
    c. taker-outer, fixer-upper, filler-inner of forms, showy-offy
    d. present giver-out-er-er
    e. taker-out-ee (‘one who is taken out’)
    f. screwed-up-(ed-)ness <screwed-up(*ed)

Structures of the types seen in (17) avoid problems associated with adding suffixes to left-headed structures. Nominals like (17a) are common (Fraser 1976:28 lists dozens). The

4 Reduplications like (16c-f) are of low text frequency and are not accepted by all speakers. Apart from cases like passer-by, hanger-on, all the constructions are colloquial and subject to attacks by purists. Nevertheless, all data in (16) are attested, and most types of examples could be multiplied using internet searches, suggesting that not all cases can be dismissed as metalinguistic affix-play.
structures could be analysed either as stress-shift conversions (cf. réject < rejéct) or as exocentric compounds interpreted as lexically related to particle verbs (Olsen 1997; Stiebels and Wunderlich 1994). In the nominals and adjectival participles in (17b,c) the particles appear before the verb stems. Berg (1998) argued that some nominals like (b) are derivationally related to particle verbs. However it is captured theoretically, such a relation is certainly possible in view of the existence of synthetic compounds related to phrasal idioms (tantrum-throwing / throw a tantrum; dummy-spit / spit the dummy). A final point regarding (17) is that there are formally similar constructions which are not related to (currently existing) particle verbs (tradeoff, onset), see e.g. Marchand (1969:108-121, 382-386).

(17)  
(a) handout, spellout, sendup, putdown, flashback, bailout, takeoff, takeover, stuffup, 
workout, turnoff, showoff, dropout, runaway,  
(b) offcut, outtake, outbreak, overpass, outcast, outflow, outcry, income, input  
(c) incoming, ongoing, upcoming, offputting  

Note finally that certain types of affixation attach to the verb stem without reduced acceptability. These include of–ing nominalisations (18a) and gerunds (18b) (see e.g. Harley and Noyer (1998) on the difference) and adjectival participles (18c). An interesting subject for future research would concern the reasons for the differing behaviour of the affixes in (18) and (16).  

(18)  
(a) the turning {off} of the lights {*off}  
(b) their turning {off} the lights {off}  
(c) sawnoff shotguns; un-written-up/under-worked-out ideas; falling-down houses  

4.3 Verb stems in particle verbs  
We now discuss some problems concerning the types of elements which can function as verb stems (or: non-particle elements) in particle verbs. Firstly consider the English and German examples in (19). Here the non-particle elements lack (relevant) counterparts which can be used as verbs outside the combination with the particle. Explaining this by treating the particles as heads of the construction is not an option since verbal inflection is realized on the non-particle element and since the particles act like prepositions according to certain tests (e.g. preposition-specific modifier: dumb it back down, soldier right on). The alternative is that the constructions exploit the conversion (zero derivation) patterns already available without particles, with the additional complication that certain conversions are (in some yet-to-be-understood sense) licensed only in the presence of a particle. For discussion of data like (19) see especially Stiebels (1998), as well as e.g. Booij (2002), Kolemainen (2006:48-52), McIntyre (2002), Müller (2002:337f), Olsen (1998), Zeller (2001b:211-215).  

(19)  
(a) slot in, ferret/bottom out, muck up/around, soldier on, beaver away, pig out  
(b) wise up, dumb down  
(c) AUFbahr- ‘put on a stretcher’, EINSack- ‘put in a sack’, EINSarg- ‘put in a coffin’  
(d) AUFfrisch- ‘freshen up’, ANreicher- ‘enrich’  

Perhaps unsurprisingly, particles do not usually exhibit the types of morphological and phonological restrictions found with affixes. One potential exception is Fraser's (1976:13-16) observation that most English particle verbs have monosyllabic or forestressed bisyllabic stems, cf. {ring/phone}*telephone} her up. A related observation is that in (20) the non-

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5 One informant who was asked to form an –er-nominal from take out suggested out-taker, employing a strategy similar to (17c) rather than the strategies seen in (16).  
6 It is noteworthy that the problems discussed occur in constructions like worm one’s way in, where worm is not independently usable as a verb, and one’s way is clearly a syntactic entity, cf. attestations like corporations have wormed their insidious way into governments.
particle element obligatorily appears in a clipped form not found without the particle. The theoretical significance of these observations is unclear given the sporadic nature of data like (20) and the existence of exceptions to the tendency: partition off, separate out, continue on, gallyvant around.

(20) sum(*marise) up, (*confess up, (con)glomerate) together

Another constraint affecting verb stems in particle verbs is the resistance to prefixed stems seen in (21a). Fraser (1976:15) sees the blockage as phonological, while Keyser/Roeper (1992) assume that particles and prefixes originate in the same syntactic position and are therefore mutually exclusive. The data are complicated by the fact that some speakers accept some of these structures (Farrell 2005) and there is no comparable ban on particle-prefix-verbs in Dutch and German (e.g. den Dikken 2003, Stiebels and Wunderlich 1994).

(21) a. *I preheated it up; *I overworked on; %I resent it off
   b. push the cart back on in

Another empirical phenomenon which could be seen as relevant to (21a) is the existence of apparent cases of particle recursion like (21b). However, notions like ‘particle recursion’ or ‘adding particles to particle verbs’ do not appear apposite here. The string after the object in (21c) is unproblematically analysable as a complex PP with multiple complementless prepositions, and some elements in such combinations, notably back, act like modifiers of particles or prepositions in certain contexts (Cappelle 2008, Svenonius 2010).  

5 The debate concerning particle verbs as morphological objects (complex heads)

Section 1 alluded to the ‘close union’ between particles and verbs. As noted in sections 3 and 4, some linguists capture this phenomenon by treating particle verbs as a type of complex word (compound, morphological object, complex head). This section gives an overview of the pros and cons of this complex word view of particle verbs.

Certain arguments sometimes given for the complex word view are inconclusive. Firstly, idiomatic particle verbs are rightly no longer taken to support this view, since it is well-known that clearly phrasal constructions can have idiomatic interpretations (I could have done without that). Secondly, we noted in section 4.2 that the ability of particle verbs to feed affixation and compounding will not provide a failsafe argument for the complex word view until the selection restrictions of the affixes involved are fully understood.

Perhaps the best (and least known) presently existing argument for the complex word view in English comes from quotative inversion (Collins and Branigan 1997, Toivonen 2003:175f). (22a) shows a particle appearing with the verb in a pre-subject position. (22b) shows that other VP-internal elements do not have this privilege, which would be hard to explain if (22a) were derived by fronting a VP (remnant) around the subject or by extraposing the subject. These problems disappear if we assume that the particle is some type of complex head. Unfortunately, the evaluation of this argument is made harder by the fact that linguists disagreeing with the complex word view have not yet discussed data like (22).

(22) a. ‘Get lost!’, shouted/cried/blurted OUT Marmaduke.
   b. ‘Get lost!’, shouted {OUT/*loudly/*at him} Marmaduke {loudly/at him}

The most immediate obstacle to the complex word view is that particles can be separated from verbs in syntax (e.g. (1a), (2a)), whereas normal morphological objects are inseparable and thus obey constraints like Lexical Integrity (which bans syntactic manipulation of parts of X° items) or the oft-posed ban on excorporation (e.g. Baker 1988:73). This puts an explanatory burden on the complex word view, but whether this burden breaks its back is

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7 This does not exclude the possibility of morphologically complex particles, cf. cases like put aside the problem and the German double particles discussed in McIntyre (2001).
another, partly theory-dependent question. To see this, we have to distinguish two types of complex word approaches:

(i) The particle and verb only enter a complex word configurations in some of their uses (for instance when the particle incorporates into, or reanalyses with, the verb). These uses do not include the uses where the particle and verb are separated syntactically.

(ii) The particle and verb are always initially inserted into syntax as a complex word but are separated in certain contexts.

Proponents of (ii) have the harder task given that uncontroversial complex heads are not normally separable. In deciding whether or not this blows position (ii) out of the water, it is not helpful to mention the fact that affixes do not separate from their hosts, since any theory would presumably need the (empirical equivalent of) a stipulation in the lexical entry of an affix which makes it inseparable from its base, and one can simply say that particles lack this stipulation. The real challenge to (ii) arises when we compare particle verbs to compounds. Here the options seem to be as follows. One could try to argue that verbs separate from particles in, say, verb-second contexts like (2a) because verb movement (or its empirical equivalents) targets verb stems, and there is no reason to pied-pipe the particle, since it is not an affix. To explain why constituents of compound nouns or adjectives do not normally separate, one could assume firstly that normal compound formation turns one of the constituents into an affix-like element, an operation which is sometimes visible, cf. conjunct forms like oft (usable only in compound adjectives: oft-derided) or linking morphs (interfixes) like the –s in tradesman. A second option would be to assume that there are simply no syntactic operations which could legitimately target parts of normal compounds. This would be possible if one assumes that nouns and adjectives do not undergo (the empirical equivalent of) head movement operations, and that compound non-heads cannot undergo phrasal movement (Car he is not a [NP t cat driver]) either because they are not phrases of the appropriate category (e.g. DP) or because such movements would violate island constraints (e.g. the Left-Branch Condition). These positions might be correct, but a satisfying defense would require a substantial crosslinguistic discussion of the reasons for the observation that compounds are crosslinguistically normally inseparable.

The issue of particle modification often crops up in discussions of the complex word view of particles. Particles (or at least complementless prepositions homophonous with particles) can uncontroversially be modified, see e.g. (23a). Proponents of position (ii) above would presumably have to assume a phrasal compound [push [right in]] here. This seems hard to defend given that the ‘close union’ phenomena discussed in section 1 are excluded with modified particles. Thus, English disallows particle-object order in the presence of a modifier, cf. (23b,c), and it is very hard to find convincing examples of particle verb nominalisations where the particle is modified. If some variant of the complex word analysis of particle verbs is right, then data like (23) seem to favor an account like option (i) in the previous paragraph. The modifier would prevent the particle from reanalyzing with, or incorporating into, the verb because English simply does not license phrasal compounds of the type [push [right in]], or because the modifier projects some structure which interrupts the adjacency between particle and verb, so that reanalysis would be excluded by the Head Movement Constraint or some empirically equivalent principle.

(23)  
  a. She pushed the pin [right in].
  b. *She pushed [right in] the pin.
  c. *She pushed in the pin right. (* if right modifies in)
  d. pin pusher-(right)-in-er

A final point to note concerning the complex word view of particle verbs is that English-style verb-initial particle verbs violate the Right-Hand Head Rule of Williams (1981), see e.g. den Dikken (1995:88). To evaluate this point, note firstly that some writers, including Williams
himself (1981:249f), do not see this rule as exceptionless. Williams’ putative counterexamples include denominal prefix verbs lacking unprefixed verbal counterparts (*enthronè but *throne–s). This argument seems dubious given that particles can also ‘license’ zero derivations but are clearly not heads of particle verbs, recall (19). Stronger evidence for left-headed morphological structures in English comes from data like (24), which are attestable among speakers not influenced by language purism. Here plural –s appears on the right edge of the construction. This suggests that the construction is analysed as a morphological object, since plural –s does not otherwise behave like a phrasal affix (the discussion(s) yesterday(*s), the car(s) of his parent(#s)). Nevertheless, structures like mother-in-law and passer-by are clearly left-headed, witness e.g. their semantics and the fact that some speakers additionally attach the affix to the leftmost element, which seems to be a straightforward case of head marking (recall again Stump’s 1994 Breton examples).

(24) mother(s)-in-laws, passer(s)-by, hanger(s)-on(s), fixer(s)-uppers

This section has hopefully clarified some of the issues regarding the debate concerning the complex word view of particle verbs and shown why the last word on the (non)existence of morphological objects consisting of particles and verbs has not been said.

References
Blom, Corrien 2005 Complex predicates in Dutch. Utrecht: LOT.
den Dikken, Marcel 2003 When particles won’t part. Ms. Cuny Graduate Center.
Fraser, Bruce 1976 The Verb-Particle Combination in English. New York: Academic Press.
Lindner, Susan 1983 A Lexico-Semantic Analysis of English Verb Particle Constructions. Bloomington, Indiana:
Indiana University Linguistics Club.

Lüdeling, Anke 2001 *On Particle Verbs and Similar Constructions in German*: Stanford: CSLI.


McIntyre, Andrew 2001 *German Double Particles as Preverbs*. Tübingen: Stauffenburg.


McIntyre, Andrew 2006 The Interpretation of German datives and English have. In: Daniel Hole, André Meinunger and Werner Abraham (eds.), *Datives and Other Cases*, 185-211. Amsterdam: Benjamins.


Miller, Gary 2010 On the syntax of morphology. Ms., University of Florida

Müller, Stefan 2002 *Complex Predicates*. Stanford: CSLI.


Winkler, Susanne 1997 *Focus and Secondary Predication*. Berlin: de Gruyter.


Phrasal verbs have two parts: a main verb and an adverb particle. The most common adverb particles used to form phrasal verbs are around, at, away, down, in, off, on, out, over, round, up: bring in go around look up put away take off. Meaning. Phrasal verbs often have meanings which we cannot easily guess from their individual parts. (The meanings are in brackets.)