

Late Syntactic Word Formation, Without Movement*

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1 Syntactic words

There are syntactic words, which are distinct from listemes (listed lexical entries, Di Sciullo and Williams 1987) and from phonological words. Although the size of syntactic words varies from one language to the next, it can be shown that the syntactic word is of significance for semantic interpretation. For example, consider the combination of a verb and a directional particle, which can be one syntactic word or two, independently of whether it constitutes a single listeme or a productive, compositional combination.

(1)		One syntactic word	Two syntactic words
	One listeme (idiomatic)	<i>upload</i>	<i>boot up</i>
	Two listemes (compositional)	<i>outswim</i>	<i>swim out</i>

Combinations like *upload* ('copy [a file] onto a larger computer') and *boot up* ('load an operating system into RAM') are idiomatic, so they must be listed. Combinations like *swim out* and *outswim* are entirely productive with straightforwardly compositional meanings, so they need not be listed. At the same time, *upload* is a single word syntactically, though one consisting of two phonological words, one adjoined to the other, and similarly for *outswim*.

The prefix *re-* is sensitive to the syntactic word boundary (Williams 2014): it can attach to one-word V-Prt combinations but not to two-word combinations (Keyser and Roeper 1992).

(2)	re-upload	*re-boot up
	re-outswim	*reswim out
	re-overturn	*return over
	re-uproot	*reroot up

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The reason that the right-hand examples are bad, following Williams, is that *re-* must have semantic scope over the result state predication of the event description, which I assume is represented syntactically by a head RES (Ramchand 2008). In verb-particle combinations, the particle overtly lexicalizes the syntactic RES head (Ramchand and Svenonius 2002). The pattern in (2) shows that the scope of *re-* is restricted to the syntactic word.

In this paper I show that syntactic words like the prefixed ones above can be formed in the course of the syntactic derivation, in fact rather late in the derivation. If complex word formation were due to movement, as often assumed, then this would have to be countercyclic (that is, *re-* would have to attach to its host after both were embedded in a larger structure). However, I argue that the complex word formation in question occurs without movement, eliminating any need for countercyclic movement in this analysis. In fact, my analysis builds on a syntactic alternative to head movement, one in which V-to-T and V-to-C are treated as part of a linearization procedure (Brody 2000; Adger et al. 2009).

2 Head movement and separable prefixes

A signature example of head movement (using the term descriptively) is the linearization of the finite verb in the second position in the V2 phenomenon. Appearance in the second position is a diagnostic for syntactic wordhood. In German and Dutch, the particle plus verb form a wordlike cluster when in situ, but are separated by V2 (separable prefix verbs).

- (3) a. omdat deze uitgeverij zulke boeken vandaag de dag niet uitgeeft
because this publisher such books today the day not out.gives
 ‘because this publisher does not publish such books today’
 b. Vandaag geeft deze uitgeverij zulke boeken niet uit.
today gives this publisher such books not out
 ‘Today this publisher doesn’t publish such books’

If the verb-particle cluster remains in situ, then the German or Dutch counterpart to *re-* may prefix to it. However, the *re-* prefix is impossible if the finite verb moves to second position (Koopman 1995).

- (4) a. omdat deze uitgeverij zulke boeken vandaag de dag niet
because this publisher such books today the day not
 her-uitgeeft
re-out.gives
 ‘because this publisher does not republish such books today’
 b. *Vandaag geeft deze uitgeverij zulke boeken niet her-uit.
today gives this publisher such books not re-out
 c. *Vandaag her-geeft deze uitgeverij zulke boeken niet uit.
today re-gives this publisher such books not out
 d. *Vandaag her-uitgeeft deze uitgeverij zulke boeken niet.
today re-out.gives this publisher such books not

The possibility of *re-* prefixation to the cluster in (4a) shows that a syntactic word can be created from the cluster, through (a kind of) incorporation (Baker 1988). But V2 strands the particle (as in (3b)), showing that incorporation cannot automatically apply to the cluster before C is merged at the top of the clause (since V2 never separates uncontroversial words such as derived words and compounds).

3 The order of operations

I suggest that the facts mentioned above show that the order of operations is as follows (Prt = ‘particle’):

- (5)
 - a. Merge: V with Prt, *re-* with V
 - b. Label and linearize: if C is matrix, then V linearizes at C
 - c. Incorporate: Prt may incorporate to V if they are located in the same cluster (i.e., if they haven’t been separated by linearization)
 - d. LF: At LF, *re-* must scope over RES in the syntactic word (including Prt-V if they have been combined by incorporation)

I will argue that category labeling is relevant to surface linearization. The step of labeling and linearization, (5b), must precede incorporation, (5c), or else the incorporated Prt-V would be attracted to second position.

The sequence of operations has the consequence that Prt and *re-* are incompatible on a finite verb in a matrix clause. The condition in (5d) also has the consequence that *re-* cannot attach to unincorporated particle verbs in English (as discussed by Keyser and Roeper 1992).

Attempts to avoid the conclusion that incorporation is syntactic fail. If incorporation were presyntactic, then it could not be blocked by V2. If incorporation were postsyntactic, then it would either have to be an LF or a PF phenomenon. If it were a PF phenomenon, it could have no effect on interpretation, and the condition on *re-* would also have to be a PF condition. But plausible PF conditions on *re-* are satisfied by either or both of (4b–c), so the problem cannot be a PF problem. If incorporation were an LF phenomenon, then it should be able to apply under reconstruction: the verb and particle are clearly interpreted as a unit, even when separated by V2, so must be unified by reconstruction at LF, at which point incorporation could occur if it were an LF phenomenon.

4 Consequences

Analyses of the syntactic word often rely on head movement (e.g., Baker (1988); Julien (2002)), which has proven to be problematic for both theoretical and empirical reasons (e.g., Matushansky 2006). Recasting head movement phenomena in terms of phrasal movement fails to account for the consistent language-internal prosodic characteristics distinguishing words from phrases (Svenonius 2016). Williams (2014) has argued that only a lexicalist solution could account

for the facts of *re-*; but the lexicalist alternatives cannot account for late syntactic word formation of the type discussed here, where the particle must be able to incorporate after the point in the derivation where V2 could have taken place. I have provided a syntactic account for Williams' observations concerning *re-* which relies neither on head movement nor phrasal movement for word formation. The account provides a novel explanation for the impossibility of combining *re-* with English particle verbs (Keyser and Roeper 1992) and unifies it with an account of immobile verbs in V2 Germanic (Vikner 2005).

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