Particle verbs (two separate words constituting a single lexical unit) are a notorious problem in linguistics. Is a particle verb like look up one word or two? It has its own entry in dictionaries, as if it is one word, but look and up can be split up in a sentence: we can say He looked the information up and He looked up the information. But why can we say He looked it up but not He looked up it? In English look and up can only be separated by a direct object, but in Dutch the two parts can be separated over a much longer distance. How did such hybrid verbs arise and how do they function? How can we make sense of them in modern theories of language structure? This book sets out to answer these and other questions, explaining how these verbs fit into the grammatical systems of English and Dutch.

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A comparative study of particles and prefixes

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Contents

List of tables ix
Preface xi
List of abbreviations and symbols xii

1 Separable complex verbs 1
1.1 Introduction 1
1.2 Preverbs, a pervasive phenomenon 7
1.3 Outline of the book 11

2 The paradox of particle verbs 14
2.1 Introduction 14
2.2 Particles: words or constituents? 14
2.3 Particles: XPs that are syntactic predicates 18
2.4 Particle order and predicate order 29
2.5 The analysis of particles in the literature 35
2.6 The role of Information Structure in English 48
2.7 Conclusion and outlook 50

3 The synchronic analysis of Dutch SCVs 52
3.1 Introduction 52
3.2 Particles as non-projecting words 53
3.3 The semantic structure of SCVs 69
3.4 SCVs as constructional idioms 80
3.5 Summary 90

4 The diachronic analysis of Dutch SCVs 92
4.1 Introduction: the grammaticalization of SCVs 92
4.2 Adjacency 95
4.3 Reanalysis and argument structure 104
4.4 The diachrony of SCVs with nominal and adjectival predicates 117
4.5 Conclusions 119
### Contents

5  The lexical decomposition of Present-Day English verb particle combinations 121

5.1 Introduction 121
5.2 Information Structure and particle order versus predicate order 122
5.3 The semantics of PDE verb particle combinations 125
5.4 PDE particles as optionally projecting words 128
5.5 PDE verb particle combinations and word formation 133
5.6 Other resultative constructions 134
5.7 Discussion and conclusions 136

6  The diachrony of the English verb particle combination 139

6.1 Introduction 139
6.2 Old and Middle English word order: OV, VO and finite verb movement 140
6.3 The morphosyntactic status of particles in the history of English 144
6.4 The role of particles in the syntax of Old and Middle English 153
6.5 Discussion and conclusions 172

7  The diachrony of prefixes in West Germanic 174

7.1 Introduction 174
7.2 Early Germanic prefixes 176
7.3 The rise of prefixes 183
7.4 The diachrony of prefixes 191
7.5 Conclusion 207

8  Conclusions 210

Appendix: Historical corpora of English and Dutch 214
Notes 216
References 226
Author index 239
Subject index 242
Tables

2.1. Age of acquisition of particles and SCVs by Dutch children.  
4.1. Reanalysis patterns for different XPs grammaticalizing into particles.  
6.1. The position of the particle with respect to the non-finite verb in the O3 period.  
6.2. The position of the particle with respect to the non-finite verb in ME.  
6.3. Postverbal particle patterns with non-finite VPCs in ME.  
6.4. The position of particles with respect to the non-finite verb in eModE.  
6.5. The position of the particle with respect to the finite verb in the O3 period.  
6.6. Particle position and V-movement in main clauses in ME.  
6.7. The position of the particle with respect to the finite verb in ME.  
6.8. The position of the particle with respect to the finite verb in eModE.  
7.1. Prefixes in Germanic.
Preface

This study is the result of a research project on *The diachrony of complex predicates in the West Germanic languages*, undertaken by the authors, with Geert Booij and Ans van Kemenade as principal investigators, and sponsored by the Netherlands Organization for Scientific Research NWO (project 360–70–050). During the project, Geert Booij, Corrien Blom and Bettelou Los were based at the Vrije Universiteit Amsterdam, and Ans van Kemenade and Marion Elenbaas at the Radboud University Nijmegen. As part of the project, Corrien Blom, whose Ph.D. position was funded by the Vrije Universiteit, wrote a dissertation *Complex predicates in Dutch: Synchrony and diachrony* (Utrecht: LOT), defended on 8 September 2005 at the Vrije Universiteit Amsterdam, and Marion Elenbaas defended her dissertation *The synchronic and diachronic syntax of the English verb–particle combination* (Utrecht: LOT) at the Radboud University Nijmegen on 8 January 2007. The present book integrates parts of these dissertations with the overall results of the project.

The principal investigators organized an international *Workshop on Preverbs* on 19 and 20 January 2001 in Nijmegen; a selection of the papers has been published as a thematic part, edited by the principal investigators, of the *Yearbook of Morphology 2003*, edited by Geert Booij and Jaap van Marle, 1–212 (Dordrecht: Kluwer).

There were stimulating contacts with other scholars working on particle verbs and complex predicates: Farrell Ackerman, Nicole Dehé, Andrew McIntyre, Jochen Zeller, Teresa Biberauer, Ian Roberts, Ray Jackendoff, Adele Goldberg and Anke Lüdeling. Corrien Blom also discussed her work with linguists at Stanford University. The project members invited Peter Svenonius (University of Tromsø), who has published extensively on particle systems in the Germanic languages, to Nijmegen on 16 June 2004 for discussions. We thank these colleagues for their input and inspiration.

This book also greatly benefited from the remarks of an anonymous reviewer in the final stages of its going to press, which we hereby gratefully acknowledge.
### Abbreviations and symbols

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>=</td>
<td>clitic boundary</td>
</tr>
<tr>
<td>A</td>
<td>Adjective</td>
</tr>
<tr>
<td>ACC</td>
<td>Accusative</td>
</tr>
<tr>
<td>AP</td>
<td>Adjective Phrase</td>
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<tr>
<td>AdvP</td>
<td>Adverb Phrase</td>
</tr>
<tr>
<td>BPS</td>
<td>Bare Phrase Structure</td>
</tr>
<tr>
<td>DAT</td>
<td>Dative</td>
</tr>
<tr>
<td>DOR</td>
<td>Direct Object Restriction</td>
</tr>
<tr>
<td>DP</td>
<td>Determiner Phrase</td>
</tr>
<tr>
<td>ECM</td>
<td>Exceptional Case Marking</td>
</tr>
<tr>
<td>eME</td>
<td>early Middle English</td>
</tr>
<tr>
<td>eModE</td>
<td>early Modern English</td>
</tr>
<tr>
<td>GEN</td>
<td>Genitive</td>
</tr>
<tr>
<td>I</td>
<td>head of IP</td>
</tr>
<tr>
<td>ICE</td>
<td>Idiomatically Combining Expression</td>
</tr>
<tr>
<td>ICV</td>
<td>Inseparable Complex Verb</td>
</tr>
<tr>
<td>IEPS</td>
<td>Inferable Eventual Position or State</td>
</tr>
<tr>
<td>INF</td>
<td>Infinitive</td>
</tr>
<tr>
<td>INTERROG</td>
<td>Interrogative Particle</td>
</tr>
<tr>
<td>IOBJ</td>
<td>indirect object</td>
</tr>
<tr>
<td>IP</td>
<td>Inflection Phrase</td>
</tr>
<tr>
<td>LCS</td>
<td>Lexical Conceptual Structure</td>
</tr>
<tr>
<td>LFG</td>
<td>Lexical Functional Grammar</td>
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<tr>
<td>LIP</td>
<td>Lexical Integrity Principle</td>
</tr>
<tr>
<td>lME</td>
<td>late Middle English</td>
</tr>
<tr>
<td>lOE</td>
<td>late Old English</td>
</tr>
<tr>
<td>MD</td>
<td>Middle Dutch</td>
</tr>
<tr>
<td>ME</td>
<td>Middle English</td>
</tr>
<tr>
<td>MNW</td>
<td><em>Middelnederlands Woordenboek</em> ('Middle Dutch Dictionary')</td>
</tr>
</tbody>
</table>

xii
Abbreviations and symbols

N  Noun
NEG Negative element
NEUT Neuter
NOM Nominative
NP Noun Phrase
OBJ Object
OE Old English
OED Oxford English Dictionary Online
ON Old Norse
P Preposition
PDD Present-Day Dutch
PDE Present-Day English
PDG Present-Day German
PG Proto-Germanic
POBJ Pre/postpositional Object
PL Plural
PP Prepositional Phrase
PREF Prefix
Prt Particle
PV Preverb
REFL reflexive pronoun
RES Resultative
RHR Right-hand Head Rule
SC Small Clause
SCV Separable Complex Verb
SG Singular
(S)OV Subject Object Verb
Spec Specifier
SUBJ Subject
(S)VO Subject Verb Object
V Verb
VP Verb Phrase
VPC Verb Particle Combination
V2 Verb Second (Constraint)
W core (primary) predicate in the resultative LCS
WH question word
XP Phrase with X as head
1 Separable complex verbs

1.1 Introduction

In this monograph, we present a comparative and historical analysis of particle verbs in the West Germanic languages, with special focus on Dutch and English. Taking particle verbs as one type of complex predicate, our account is embedded in a broader discussion of such constructions in the Germanic languages and cross-linguistically. Complex predicates in general, and the morphosyntactic and semantic behaviour of West Germanic particle verbs in particular, present a number of intriguing analytical challenges which touch on the relation between morphology and syntax and more generally on the architecture of grammar. These challenges are compounded when we take on board the historical development of Dutch and English particle verbs. We will show that in their older stages, Dutch and English particle verbs were much more similar than they are in the present-day languages. This should be viewed against the backdrop of the fact that Dutch and English were generally more similar in their older stages: Middle Dutch (MD) was a looser variety of SOV language than Present-Day Dutch (PDD), and early English had substantial SOV characteristics. Furthermore, early English, like Dutch, had a form of Verb Second (V2) for all lexical finite verbs. Both these properties are crucial to the word order of SCVs in PDD: verb particles are in clause-final position in main clauses and are stranded there by V2:

(1) a. Jan belde zijn moeder op. 
   John phoned his mother up
   ‘John phoned his mother.’

b. Gisteren belde Jan zijn moeder op. 
   Yesterday phoned John his mother up
   ‘Yesterday, John phoned his mother.’

c. Ik wilde dat Jan zijn moeder opelde. 
   I wanted that John his mother up-phoned
   ‘I wanted John to phone his mother.’
We will see that these two properties are very dominant characteristics of particle verbs in Old English (OE) as well. In its further historical development, English diverged from this West Germanic SOV mould, losing SOV word order, which ensured that particles became exclusively postverbal, and losing finite verb movement (V-movement), further circumscribing the word order patterns of particle verbs. Even though the morphosyntax of particle verbs underwent pervasive change in the history of English, more prominently so than in the history of Dutch, the analytical puzzles they present still have important points in common. We turn to these first in the next subsection.

### 1.1.1 Separable complex verbs

The West Germanic languages have the common property of having a class of complex predicates which in the literature on Dutch and German is referred to as Separable Complex Verbs (SCVs), and in the literature on English as the Verb Particle Combination (VPC), among numerous other terms. In these three languages together, the terms refer to combinations of a verb and another word that is traditionally referred to as a preverb. SCVs and VPCs raise a number of analytical issues which are discussed in chapter 2, and which form the backdrop for a comparative study of the history of the construction in Dutch and English.

Let us first consider some of the basic phenomena involved. Preverbs in PDD and Present-Day German (PDG) are quite similar in their behaviour. Most of them derive historically from adpositions and adverbs. In addition, there are some nouns and adjectives that pattern in the same way as preverbs, in the sense that the N-V or A-V combination behaves as an SCV. Preverb–verb sequences in these languages differ from prefixed verbs and verbal compounds in that the preverb is separable from the verb. Dutch and German word order is asymmetric between main clauses and subclauses: main clauses have XvSOV word order (where v stands for the finite verb), and subclauses have SOV word order. This difference in word order has the effect that preverbs can be stranded in clause-final position in the main clause, as a result of V-movement to second constituent position of the verbal part of the separable verb complex. The separability of preverbs in Dutch is illustrated in (2) (Booij 2002a: 205):

\[(2)\]

\[
\begin{align*}
\text{main clause} & \quad \text{subclause} \\
\text{a. } & \text{Hans } belde \text{ zijn moeder } op. \\
& \quad \ldots \text{Hans zijn moeder } op\text{-}belde \\
& \quad \text{‘Hans phoned his mother (up).’} \\
\text{b. } & \text{De fietser } stortte \text{ neer.} \\
& \quad \ldots \text{de fietser } neer\text{-}stortte \\
& \quad \text{‘The cyclist hurtled down.’} \\
\text{c. } & \text{Jan } maakte \text{ het huis } schoon. \\
& \quad \ldots \text{Jan het huis } schoon\text{-}maakte \\
& \quad \text{‘John made the house clean. / John cleaned the house.’}
\end{align*}
\]
d. Rebecca speelde piano. . . . Rebecca piano-speelde
‘Rebecca played the piano.’

e. Dit resultaat stelde ons teleur. . . . dit resultaat ons teleur-stelde
‘This result made us sad. / This result disappointed us.’

In the first example, the word *op* ‘up’ combining with the verb can also be used as an adposition. In that case, the non-verbal element is also referred to as a particle, and combinations of a particle and a verb form a highly productive class of SCVs. In the second example, the word *neer* ‘down’ can also be used as an adverb. (2c) and (2d) show that adjectives (like *schoon* ‘clean’) and nouns (like *piano*) can also occur in SCVs. In the last example, the preverb *teleur-* ‘sad’ cannot occur as an independent word. SCVs are felt to be word-like units, which is reflected in Dutch orthography where SCVs are written as one word, without internal spacing if the two constituent words are adjacent.

The separability of SCVs is further manifested in a number of other syntactic constructions in Dutch, as exemplified in (3):

(3)  
   a. . . . dat hij urenlang heeft geprobeerd zijn moeder *op te bellen*
       ‘. . . that he tried for hours to reach his mother by phone’
   b. . . . dat hij zijn moeder gisteravond *op-ge-beld* heeft
       ‘. . . that he called (up) his mother last night’

In (3a) the particle is separated from the verb by the infinitive marker *te* ‘to’, and in (3b) by the perfective prefix *ge-*. In derivational morphology, SCVs behave similarly: for instance, the *ge*-nominalization of *opbellen* is *opgebel* ‘calling-up’, with the prefix between the particle and the verbal stem.

A number of particles correspond to bound morphemes with an identical phonological form, but these are real prefixes that cannot be separated from the verbal stem. Prefixed verbs carry main stress on the verbal stem, not on the prefix, whereas the corresponding SCVs carry main stress on the non-verbal constituent. This yields minimal pairs like the following:

(4)  
      SCV   prefixed verb
      dóor-boren ‘to go on drilling’  door-bören ‘to perforate’
      óm-blazen ‘to blow down’   om-blázen ‘to blow around’
      ónder-gaan ‘to go down’   onder-gáan ‘to undergo’
      óver-komen ‘to come over’   over-kómen ‘to happen to’
      vóór-komen ‘to occur’   voor-kómen ‘to prevent’
Separable complex verbs

Similar facts can be cited for German (Lüdeling 2001; Zeller 2001a, 2003): German preverbs can be stranded and they can be separated from the verb by the infinitive marker zu ‘to’ and by the participial prefix ge-.

Like VPCs in English (cf. Brinton 1988; Brinton and Akimoto 1999), the meaning of the preverb–verb combination (PV-V) in Dutch and German is often not fully predictable, and this implies that these combinations are lexical units of some sort. Typically, the preverbs contribute to the aspectual properties of the PV-V, in particular lexical aspect (Aktionsart) such as telicity or duration, and thus they may also affect the syntactic valency of the verb. For instance, the Dutch verb lopen ‘to walk’ is intransitive, whereas the SCV aflopen ‘to tramp’ can be used as a transitive verb, as in the VP de straten aflopen ‘to tramp the streets’. In this respect, preverbs are quite similar to verbal prefixes that also influence the aspectual and syntactic properties of a verb.

A second domain in which the unitary character of the PV-V combination manifests itself, is that of word formation: PV-Vs can feed word formation, both compounding and derivation, as illustrated by the following examples from Dutch with SCVs in the left column (from Booij 2002a: 209):

(5) a. deverbal suffixation
   aanzien ‘estimate’ aanzien-er ‘estimator’, aanzien-ing ‘estimation’
   b. deverbal prefixation
   in-plan ‘plan’ in-plan-er ‘planner’
         uit-geef ‘publish’ her-uit-geef ‘to republish’
   c. compounding with verbal left constituent
   door-kies ‘dial through’ door-kies-nummer ‘direct number’
         door-kijk ‘see through’ door-kijk-bloes ‘lit. see-through blouse, transparent blouse’

These PV-V sequences pose a challenge for our view of the relation between syntax and morphology. On the one hand, PV and V do not form a syntactic atom, as is clear from their separability in various syntactic contexts. Yet, their behaviour is similar to that of complex, morphologically derived verbs in the sense that they form lexical units of some sort, expressing aspectual notions and having derivational effects such as affecting the valency of the verb. They thus raise some intriguing questions with respect to the question of how to model the relation between syntax and morphology.

Let us now turn to the English VPC. Unlike in Dutch and German, where particles are always preverbal when adjacent to the verb, English particles always follow the verb. Also, particles in English can be famously separated from the verb, yielding the particle alternation as in (6):

(6) a.
   open the door
   b.
   open the door to

These examples illustrate the particle alternation in English, where the particle to can be separated from the verb. The particle to can be added to the verb to form a new verb phrase, as in option (a), or it can be placed after the verb, as in option (b). This particle alternation is a well-known feature of English syntax and highlights the role of particles in forming new verb phrases.
(6)  a. Suzanne looked up the information.
    b. Suzanne looked the information up.

However, the conditions on separability of verb and particle in English are very different from those in Dutch and German: separability in English is not triggered by productive (morpho)syntactic processes such as V-movement, infinitive marking and perfect prefixation. Rather, the English particle alternation offers two word order options, and the choice between them does not seem to be dictated by any syntactic considerations. In fact, we will argue in chapter 5 that this choice is dictated by considerations of information structure (cf. Dehé 2002).

The behaviour of the English VPC is similar to that of Dutch and German SCVs in that it offers similar paradoxes: verb and particle form a semantic, and hence a lexical unit, and yet they do not qualify as words since they are not syntactic atoms, as shown by (6). But even though the VPC in English is not a syntactic atom, it may be input to derivational morphology, like its Dutch and German sisters. In this context, it is interesting to note that in English the postverbal position of the particle is maintained in derivation, which gives rise to a violation of the Right-hand Head Rule (RHR, see Williams 1981). The examples in (7) illustrate this:

(7)  a. a fallout, a break-up, a kick-off, a break-in
    b. a pull-down menu, a dial-up connection

This paradox between syntactic separability and lexical unity echoes that discussed above for Dutch and German, even though there are important differences between the actual realization of the VPC within the morphosyntactic make-up of English on the one hand and Dutch and German on the other hand: English has rigid SVO as the unmarked word order, whereas Dutch and German are SOV languages with V-movement in root clauses.

The behaviour of SCVs in the West Germanic languages raises some major research questions which will be addressed in this monograph. The first of these questions concerns the synchronic status of VPCs: how can their syntactic, semantic and morphological properties be given a satisfactory account? The paradox between lexical and semantic unity and word-like behaviour on the one hand, and syntactic separability on the other hand (suggesting phrasal status), shows that SCVs/VPCs straddle the boundary between syntax and morphology. Even though the surface reflexes of this differ between English and Dutch and German, the larger question is identical. This suggests that the source of this paradox should be in the nature of the particle rather than its precise morphosyntactic context. We will address this in detail in chapter 2.
A second question concerns the divergent behaviour of English on the one hand, and Dutch and German on the other hand. Where particles in Dutch and German are always preverbal unless stranded in clause-final position by V2, particles in English are always postverbal, and their separability from the verb is not caused by any productive syntactic processes. Both English and Dutch (and German) developed from historical stages that were substantially SOV with some form of V2. While in Dutch, SOV word order has become stricter since medieval times and V2 is still thriving, English has lost SOV word order as well as V-movement. In spite of these far-reaching developments, the fundamental properties of particles still pose the same challenges, as noted above.

A further striking difference between English and Dutch/German that has been only barely touched on so far is that Dutch and German have a class of inseparable prefixes which show considerable overlap in function and meaning with PV-V combinations. This class of inseparable prefixes existed in early English as well, but is obsolete, apart from a few lexicalized relics. Some examples from Dutch and German are given here:

(8)

<table>
<thead>
<tr>
<th>prefix</th>
<th>particle</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. PDG ver-átmén</td>
<td>PDD úít-blazen</td>
</tr>
<tr>
<td>b. PDD ver-jágen</td>
<td>PDD wé-g-jágen</td>
</tr>
<tr>
<td>c. PDD ver-bánnén</td>
<td>PDD úít-bánnén</td>
</tr>
<tr>
<td>d. PDD be-lópen</td>
<td>PDD ánf-lópen</td>
</tr>
<tr>
<td>e. PDD vol-hárden</td>
<td>PDD vól-houdén</td>
</tr>
<tr>
<td>f. PDG er-wáchsen</td>
<td>PDG ánus-wáchsen</td>
</tr>
<tr>
<td>g. PDD ont-kíemen</td>
<td>PDG ánus-/áuf-keímen</td>
</tr>
</tbody>
</table>

The examples in each case give the bound prefix first, followed by a synonymous or near-synonymous particle variant. Interestingly, this functional overlap also includes identical effects on the valency of the verb, and Aktionsart effects. For example, in (8d), attaching a prefix or a particle to an intransitive verbal base _lopen_ ‘walk’ yields a transitive verb in both cases: *het oppervlak belopen* ‘walk the surface’; *de straat aflopen* ‘walk down the street’. The fact of this large functional overlap between verbs with separable and inseparable prefixes raises a further set of interesting research questions: What does the nature of this functional overlap between inseparable and separable prefixes tell us about the status of both elements? Are inseparable and separable prefixes historically related, and if so, do inseparable prefixes represent a particle that has been further grammaticalized to a bound morpheme? And why were inseparable prefixes quite comprehensively lost in the history of English?

These descriptive and analytical questions also bear on a more general theoretical question: How can the architecture of the grammar be conceived of
in such a way that we can do justice to the complex array of facts concerning particle verbs and prefixed verbs as discussed in the chapters of this book?

1.2 Preverbs, a pervasive phenomenon

The occurrence of preverbs is not restricted to the West Germanic languages, or to the Germanic or Indo-European language family in general. The notion preverb is a traditional descriptive notion in Indo-European linguistics. It refers to morphemes that appear in front of a verb, and which form a close semantic unit with that verb. In many cases the morpheme that functions as a preverb can also function without a preverbal context, often as an adverb or an adposition. Most linguists use the notion preverb as a cover term for preverbal words and preverbal prefixes. The preverb may have the status of an independent word, and in that case it may be separated from the verb, the phenomenon of tmesis\(^1\) (Watkins 1964). It may also have developed into a bound morpheme, that is, a prefix that is not separable from the verb, in some cases with a concomitant reduction of its phonological form. If the preverb has become a real prefix, we may use the more specific notion of complex verb, whereas we take the notion complex predicate to refer generally to multi-morphemic expressions with verbal valency. That is, we make a terminological distinction between complex predicates and complex verbs. The latter are multi-morphemic, but behave as single words.

For both complex predicates in general (cf. Spencer 1991; Ackerman and Webelhuth 1998) and complex verbs (cf. Miller 1993) the question has been raised as to how and where in the grammar they should be accounted for. Well-known examples of complex predicates are auxiliary–verb sequences, serial verb constructions, the coverb–verb combinations of Northern Australian languages (Schultze-Berndt 2003), similar light verb constructions in other languages, and verb raising constructions in the Germanic languages. These different types of complex predicates challenge our views of the architecture of the grammar, and the relation between syntax, morphology and the lexicon.

Complex predicates of the PV-V type occur in most European languages, both the Indo-European languages (Watkins 1963, 1964) and those of the Finno-Ugric family (Ackerman and Webelhuth 1998; Ackerman 2003), and in Georgian and Caucasian languages (Harris 2003). A number of mostly descriptive articles on preverbs in the languages of Europe can be found in Rousseau (1995). In particular, particle verbs in Germanic languages have received a lot of attention in the recent literature (Ackerman and Webelhuth 1998; Lüdeling 2001; McIntyre 2001a, 2002, 2003; Booij 2002a; Dehé and
Separable complex verbs


It is indeed striking that the phenomenon of PV-V combinations is not restricted to the Indo-European languages, which suggests that universal mechanisms of reanalysis and language change are at play in the development of the class of preverbs. We hypothesize that the development of preverbs and prefixes is a case of the universal mechanism of grammaticalization.

For the preverb situation in Indo-European, Kuryłowicz (1964) and Watkins (1964) remain the authoritative sources. In the early stages, preverbs seem to have been independent constituents. Kuryłowicz notes that, since in many of the daughter languages preverbs behave both as preverbs and as prepositions, it is thought that the origin of both preverbs and prepositions is adverbial (see also Baldi 1979). The basis for the divergence in word class in the daughter languages is in the potential for variation between various syntactic modification relations. When a particle appeared with a transitive verb, it was ambiguous between a modifier of the verb (in which case it was interpreted as an adverb) and a modifier of the object (and was interpreted as a preposition/predicate). Beside this, the particle could modify other adverbs and be positioned accordingly. For a list of preverbs with cognates in the various languages, the reader is referred to Beekes (1995). Kuryłowicz (1964) gives a brief discussion of some developments in the early Indo-European languages.

According to Watkins (1964), preverbs could appear in two basic positions in Sanskrit: a sentence-final one left of the verb it modifies, which is called the contact position and is exemplified in (9); and a sentence-initial one where it is not adjacent to the verb, which is illustrated in (10). This latter position of the preverb in which it does not precede the verb directly is called tmesis. The examples are from Delbrück (1893–1900):

(9) # . . . P V#

dasvasam upa gachatam
worshipper to come
‘come to the worshipper’ (Rigveda I, 47, 3)

(10) #P . . . V#

ati ṭṣtam vavaksita
beyond the harmful smoke have-grown
‘you have grown beyond the harmful smoke’ (Rigveda III, 9, 3)

Preverb and verb are thought to be a kind of syntactic unit. The argument for this comes from the fact that the preverb is stressed only in main clauses (as
in (11) where stress is marked by an acute accent, while in subclauses, in the position preceding the verb, stress shifts to the verb, as in (12). The examples are again from Sanskrit (from Delbrück 1893–1900: 647):

(11) prá gachati
(he) forth goes
‘he goes forth’

(12) yáḥ pra gáchati
who forth goes
‘who goes forth’

This stress shift is thought to be the result of what Watkins calls univerbation, resulting in a lexical unit. According to Kuryłowicz (1964), a consequence of this univerbation was either the enclitic character of the verb (in Sanskrit and Greek), or the proclitic character of the preverb (Old Irish, Germanic and Balto-Slavic). In the daughter families/languages, the preverb maintains in some cases a status as an independent constituent for quite a long time, while others follow various stages in a classical grammaticalization path from preverb > prefix > ultimate disappearance (see also Pinault 1995). Cases in point are developments in Romance and Germanic respectively (see Dufresne et al. 2003; van Kemenade and Los 2003).

Vincent (1999) discusses some interesting cases in Latin from which it is clear that, while in the early Latin prayers preverbs/prepositions must be assumed to have independent constituent status, they become members of compound verb stems, later developing into prefixes. This applies to the following words:

(13) sub ‘under’; trans ‘across; in ‘in’; ab ‘from’; ob ‘against’; cum ‘with’; ex ‘out of’; pro ‘for’

To contrast the two stages, consider the following examples of Latin preverbs (Vincent 1999: 1118): the grammarian Festus makes two remarks on the language of the early prayers:

(14) a. Sub vos placo, in precibus fere cum dicitur, significat id, quod supplico
‘when people say, mostly in prayers, sub vos placo, it means the same as supplico’

b. ob vos sacro, in quibusdam precatiobus est, pro vos obsecro, ut sub vos placo, pro supplico
‘ob vos sacro in certain prayers stands for vos obsecro, just as sub vos placo stands for supplico’

What seems to be the case here is that the preverb in the early prayers is in tmesis, with the personal pronoun encliticized to it by the so-called Wackernagel
Separable complex verbs

effect, by which pronouns and other light elements are encliticized to the first constituent or the first word in the clause. This indicates that the preverb is an independent constituent in first constituent position. The same preverbs form part of compound verb stems in Classical Latin and later become prefixes, as in:

\[(15) \quad \text{submittere ‘to put underneath’; permittere ‘to let through’; transmittere ‘to send across’; transferre ‘to carry across’; perferre ‘to carry through’; obligare ‘to bind’}\]

A similar phenomenon can be observed in Gothic, where the aspectual preverb ga occurs in first constituent position with sentence particles encliticized to it (Eythórsson 1995):

\[(16) \quad \text{ga-u-hva-sehwi}\]
\[\text{ga-wh-anything saw}\]
\[\text{‘whether he saw anything’}\]

The preverb ga- is attested in the old West Germanic languages as the past participle prefix ge-, which disappeared in English but is still widely used in PDD and PDG. It is cognate with Latin cum, and thus clearly a locative or circumstantial item in origin. Phenomena parallel to the preverb–enclitic pronoun/particle . . . V pattern in (14) and (16) have been observed in Hittite and Old Irish (Hopper 1975). These patterns represent instances of preverbs that follow a grammaticalization path as in (17):

\[(17) \quad \text{independent preverb} > \text{left member of verbal compound} > \text{prefix} > (\text{zero})\]

A different type of development is represented by the preverb system that is still very productive in the present-day Germanic languages, in particular in West Germanic mentioned in section 1.1. In the older stages of these languages, there is still a clear differentiation of word class status between adverb and preposition, as observed for Indo-European by Kuryłowicz (1964). For instance, Hiltunen (1983: 20–1) makes a distinction for OE between phrasal adverbs, which do not occur as prepositions and include adun ‘down’, aweg ‘away’, forð ‘forth’, niðer ‘down’, up ‘up’, ut ‘out’, and prepositional adverbs, which can be used as either preposition or adverb and include beforan ‘before’, æfter ‘after’, to ‘to’, ofer ‘over’, ongean ‘towards’. It is probably fair to say that this differentiation lives on to a certain extent into the present-day language. A similar differentiation is suggested by studies on the early stages of other Germanic languages such as Eythórsson (1995) and Ferraresi (2005) on Gothic. The appropriate term for the preverb–verb combination in these languages is SCV, since this term abstracts from the divergent syntactic development
between English on the one hand, and Dutch and German on the other, which we will discuss in more detail below. When we consider the history of the West Germanic languages, it is especially striking that the old preverb–verb system was regimented anew as a syntactically circumscribed and lexicalized system of aspectual marking. During this process, it became immensely productive, as the very lively recent history of Dutch and German SCVs and English VPCs testify.

1.3 Outline of the book

In this book we focus on particles in two West Germanic languages: Dutch and English. The main reason for restricting ourselves to these two languages of the same language sub-family is that it will provide the opportunity to deal with the relevant synchronic and diachronic data in sufficient depth and detail to formulate meaningful answers to questions concerning the nature and the emergence of this type of complex predicate as raised in section 1.1. The choice of Dutch and English as our objects of research is quite appropriate because these two languages share a common past, and yet have diverged in striking ways in the domain of particles. This requires an in-depth diachronic and synchronic account of the relevant facts.

Chapter 2 provides a survey of the relevant semantic and formal properties of Dutch SCVs and English VPCs, and their relationship to prefixed verbs (Inseparable Complex Verbs, ICVs). Based on a critical discussion of the literature, it also presents the starting point of our analysis: both Dutch SCVs and English VPCs are phrasal combinations of words that function as lexical units. Our core hypothesis for the grammatical status of the particle generally is that the particle as a lexical head projects optionally: the default option is that the particle does not project and we formulate an economy principle that accounts for this. If required, the particle may project a phrase. The hypothesis of optional projection substantively accounts for the ambivalent morphosyntactic behaviour of particles, and we will show in subsequent chapters how the options of projection and non-projection work out in the context of the grammatical systems of Dutch and English. The option of non-projection is also at the heart of the grammaticalization development that we discuss for the history of Dutch and English. If we go back here to the grammaticalization path for preverbs as formulated in (17), we may think of the independent preverb stage as one in which the preverb is fully phrasal (XP); the subsequent stage as one in which the particle projects optionally (X(P)) or does not project at all (X); the
prefix stage as one in which the preverb has lost its status as lexical head. The grammaticalization cline can then be expanded to (18).

(18) projecting preverb > optionally projecting preverb > non-projecting preverb > prefix > (zero)

Thus, the notion that non-projection is the default option can be viewed as a driving force behind the grammaticalization development.

In chapter 3, we present an analysis of Dutch SCVs in which the particle in an SCV is largely non-projecting. While the syntactic literature on the Dutch SCV focuses predominantly on resultative SCVs, the chapter shows that SCVs in Dutch comprise a much broader semantic range of particles, which are treated separately. Interestingly however, all these particle types do conform to one single morphosyntactic type: \[V' X(P) V\]. This kind of template presupposes that independent syntactic processes can separate the particle from the verb in certain syntactic environments.

The rise of the SCV in Dutch is elucidated in chapter 4. The range of particle types identified in chapter 3 is traced back in time, showing that the particles in non-resultative SCVs can be traced historically to various types of adverbial elements. The chapter shows that a variety of non-verbal elements came to be regimented into the morphosyntactic template established in chapter 3 by a process of grammaticalization from \[XP-V\] to \[X(P)-V\], taking place under a condition of adjacency in an SOV structure. In other words, the immediate preverbal position was essential to this development.

Chapter 5 focuses on the VPC in Present-Day English (PDE), which are almost exclusively resultative. The synchronic analysis of PDE VPCs proposed in that chapter shows that the concept of optional projection of the particle is crucial to an understanding of their behaviour: VPCs systematically allow both options of the template \[V-X(P)\].

Chapter 6 traces the diachrony of the English VPC, showing that particles in OE featured in a system that was characterized by substantial SOV word order and a form of V-movement similar though not identical to that of PDD and PDG. As SOV word order was lost, particles became exclusively postverbal, and as V-movement was lost, their word order patterns became further circumscribed to their present-day status. A special feature of the historical development of English to SVO order is that the particle is not systematically adjacent to the verb: projection of the particle therefore became required for any context in which the particle is separated from the verb by a modifier or an object.

As we saw above, there is a strong historical relationship between prefixes and particles in Germanic. Chapter 7 presents a comparative and historical study
of this relationship in Germanic. Discussing in detail the nature and extent of the functional overlap between subsets of ICVs and SCVs, the chapter shows that one set of prefixes including be-, ver- and ont- in Dutch, represents an older layer of preverbs found across the West Germanic languages (including early English) whose semantics are identical to that of resultative SCVs, and which we therefore hypothesize to be a further grammaticalized version of a resultative particle. Another set of prefixes, including door-, om- and over- in Dutch, is of more recent date and finds its origin in various types of adverbs as also discussed in chapters 3 and 4. It is very striking that the first type of prefix was highly productive in OE and early Middle English (eME) and subsequently lost, and that the second type never developed in English. This suggests once more that the position of the preverb left-adjacent to the verb, as is characteristic of SOV languages like Dutch and German (and early) English, may well be a prerequisite for the grammaticalization of preverbs into inseparable prefixes.

Chapter 8 brings together the main findings of the study and presents the conclusions.
The paradox of particle verbs

2.1 Introduction

In this chapter, we will discuss at some length the analytical paradox presented by particle verbs, showing on the basis of evidence that draws mainly on Present-Day Dutch (PDD) and Present-Day English (PDE) that the status of particles in the particle verb shows a curious mix of lexical, morphological and syntactic properties. This raises the question whether particles are words (lexical heads) or phrases (constituents). We will provide initial motivation for an analysis in which they are both: particles are words (lexical heads) that optionally project a phrase, and this analysis will be developed further in subsequent chapters. The default option is that particles do not project a phrase and thus behave like words, which in varying degrees of lexicalization and idiomatization form a lexical unit with the verb. In contexts where there is sufficient evidence to project a phrase, they may do so and thus behave like a constituent. A further core issue that will be addressed in this chapter concerns the function of particles. Here, we will argue that, whether they do or do not project a phrase, most particles are secondary predicates. An exception are some subclasses of particles in Dutch, and these and their historical origin are discussed in chapters 3 and 4.

The analysis of particles as optionally projecting secondary predicates is presented in sections 2.2, 2.3 and 2.4 of this chapter. Section 2.5 relates this analysis to the main issues that emerge from the extensive literature on particles. Section 2.6 gives a brief discussion of the impact of Information Structure on the choice of particle word order in English. Section 2.7 concludes the chapter with an outlook to the chapters that follow.

2.2 Particles: words or constituents?

Particle verbs in the present-day West Germanic languages typically consist of a verbal base, and a non-verbal part, a particle. By way of example, let us consider once more the Dutch SCV *opbellen* ‘to call up’ (from Booij 1990).
In (1a), a subclause, the particle op ‘up’ precedes the non-finite verb, while in (1b), it is left stranded in clause-final position as a result of Verb Second (V2), by which the finite verb is moved to the position following the first constituent in the main clause. The fact that particle and verb are separated by V2 suggests that SCVs like opbellen are constructed in the syntax.

An argument for treating SCVs as words rather than phrases is that the meaning of the combination opbellen is not completely predictable from its constituent elements bellen ‘ring’ and op ‘up’, which points to an analysis of the SCV as a complex verb, stored in the lexicon as one unit. This analysis is supported by the fact that opbel- may serve as input for word formation processes, as in opbelbaar ‘phone-up-able’.

English VPCs show similar behaviour: particle and verb can be separated as in (2b) below, suggesting once again that they are syntactic rather than morphological units.

But English VPCs too can be input to word formation processes, as in come-at-able, get-at-able or lookers-on (all from the Oxford English Dictionary, OED), suggesting that they are morphological rather than syntactic units.

An objection against treating particle verbs as lexical may be that word formation need not be restricted to words, but can target phrases, too, as in (3a) for Dutch and (3b) for English (the phrasal status of the Dutch examples blotevrouwenblad ‘nude women’s magazine’ and heteluchtballon ‘hot air balloon’) is demonstrated by the adjectival inflection -e):

However, since the derivational suffixes -baar (Dutch) and -able (English) do not combine with phrases, Dutch opbel- and English come-at, get-at must have word status at some level. For English VPCs in particular, an analysis which
The paradox of particle verbs
treats them as compounds has difficulty accounting for the ordering of verb and particle in word formation: regular English compounding yields head-final compounds (e.g. blackboard, underworld, highlight, over-ripe), observing the Right-hand Head Rule (RHR, see Williams 1981). VPC-formations on the other hand are head-initial, with inflectional and derivational affixes necessarily attaching to the head and therefore intervening between verb and particle (Elenbaas 2007: 17):

(4) spiced-up meat, runners-up, looker-on

A second possible argument for analysing particle verbs as words rather than phrases is the fact that the addition of a particle may change the syntactic valency of the verb. Thus, a particle may transitive an intransitive verbal base, as in (5a) for Dutch and (5b) for English.

(5) SCV base verb
    a. de schoenen in-lopen (*de schoenen) lopen
       the shoes in-walk (the shoes) walk
       'to break in the shoes' 'to walk (the shoes)'
    b. cough up the money cough ('the money')

This valency change is part of a wider phenomenon often noted about particle verbs: the unselected object. Particle verbs may appear with objects not selected by the intransitive (unergative or unaccusative) verb on its own as illustrated by the examples in (5), or, if transitive, they may appear with an object not selected by the simplex verb, as in (6):

(6) a. He bought a house.
    b. He bought out the shareholders.

It is even possible for a particle verb to lack an object that the simplex verb would have selected on its own:

(7) The athlete’s legs gave out.

Extensive lists of this phenomenon with English VPCs with out and up are given in Lipka (1972: 197–212).

Changes in syntactic valency are generally thought to be part of derivational morphology and thus due to morphological operations, because syntactic structure is a projection of lexical properties (the Projection Principle in Chomsky 1981). The valency change found in particle verbs has therefore been taken as evidence for their morphological status. The same change in syntactic valency is found with other types of complex predicates, however, as shown in (8a) for Dutch SCVs, and (8b) for English VPCs:
A third argument for word status is semantic: the meanings of particle verbs are often not straightforwardly composed from the meanings that the particle and verb have in isolation: particle verb meanings are conventionalized. Examples of Dutch SCVs with conventionalized meanings are given in (9).

(9)  
(a) de boeken opzoeken  
the books up-search  
‘to look up the books’
(b) de informatie opvragen  
the information up-ask  
‘to ask for the information’
(c) de docent opbellen  
the teacher up-ring  
‘to call up the teacher’
(d) de chirurg oppiepen  
the surgeon up-bleep  
‘to bleep the surgeon’

Op means ‘physically/cognitively/perceptually accessible’ in the SCVs in (9), the meaning of these SCVs being ‘to cause NP to become accessible by V-ing’. De boeken opzoeken, for example, means ‘to cause the books to become accessible by searching’; similar meanings have been motivated for the English particle up (Lindner 1983: 126–7). This meaning appears to be related to the basic, spatial meaning of op/up ‘up(ward), on high’ by mechanisms of semantic extension (e.g. metaphor and metonymy): in SCVs such as opborrelen/bubble up, op/up may simultaneously mean ‘upward’ and ‘visible’. This second (extended) meaning, involving concrete, physical visibility, may be further extended to abstract visibility: the meaning ‘accessible’. In concrete instantiations of SCVs with op ‘accessible’, this meaning may receive a more specific interpretation on the basis of the information provided by the verb and its arguments (e.g. ‘available’ in (9a–b), which contain inanimate direct object referents, and ‘contacted’ in (9c–d), which contain animate direct object referents). Note that op expresses the meaning ‘accessible’ only in SCVs; this meaning is unavailable outside the SCV. It is, in other words, construction-specific. As syntactic combinations are assumed to be transparent, this would seem to indicate that SCVs are morphological rather than syntactic constructs. This idiomaticity of particle verbs, and their very variable degrees of transparency and productivity, is often noted in the literature (e.g.
The paradox of particle verbs

Lüdeling 2001; see also the findings in Biber et al. 1999: 412–13). What is less well known is the fact that particle verbs share these semantic features with other complex predicates: *pry* and *come* will only combine in complex predicates that mean something like ‘apart’, *drive* will only combine with predicates denoting “negative and extreme mental states” (Goldberg and Jackendoff 2004: 559):

(10) a. He *pried* it apart/open/loose/free/*flat/*straight.
    b. It *came* apart/open/loose/free/*flat/*straight.

(11) a. He *drove* her crazy/nuts/bananas/to desperation/to drink/up the wall/meshuga/frantic.
    b. *He drove* her happy/sick/silly/clean/calm/thin/sober.

As complex predicates like those in (10) and (11) are unequivocal syntactic constructs, it would follow that this property of particle verbs cannot necessarily be taken as indicative of word status, and may be syntactic after all.

It is no accident that the syntactic construction seen to share characteristics with particle verbs is the complex predicate. We claim that particles represent grammaticalized predicates which have lost some of their structure in the grammaticalization process, and this loss of structure has allowed them to become, at least in some cases, part of a complex verb. This implies that there has been grammaticalization as well as lexicalization. It is as a result of this that particle verbs are hybrid in nature: they are paradoxically poised between being syntactically constructed on the one hand, and being a lexical combination on the other hand. We have seen that they cannot be analysed as words, but neither can they be analysed as regular syntactic phrases, as we will discuss below: particle verbs are markedly different from syntactic predicates in that they allow a special word order. We will discuss the word order phenomenon more fully in section 2.4.

2.3 Particles: XPs that are syntactic predicates

Complex predicates are syntactic constructions in which an embedded predicate denotes the result of the action of the verb. In traditional grammars, this embedded predicate is variously referred to as an object complement (Quirk and Greenbaum 1973) or an object attribute (Aarts and Aarts 1982), among other terms. Another common term is (resultative) secondary predicate (Nichols 1978), which we will use here. Typical examples feature an Adjective Phrase (AP) as predicate and a light verb as its verb, as in (12a–b).
Particles: XPs that are syntactic predicates  

(12)  
  a. He made his papers available on the Internet.  
  b. He kept the doors open.

The object NP and the resultative secondary predicate are in a subject–predicate relation: in (12a), as a result of the action of the subject he, his papers are available on the Internet; in (12b), the result is that the doors are open. Secondary predicates are by no means restricted to APs: NPs or PPs are also possible. Likewise, the choice of verb is not restricted to light verbs, but may be any verb that can indicate the instrument or manner by which the result was achieved, or even a verb that lexicalizes the complex event including the secondary predicate. The construction is extremely productive, witness these real-life examples collected by Rappaport Hovav and Levin (2001), with an instrument verb and an AP in (13a), a manner verb and a PP in (13b) and a lexicalized predicate verb in (13c):

(13)  
  a. Last night, the dog poked me awake every hour to go outside. (The Toronto Sun, 27 Nov. 1994, p. 6)  
  b. Sudse cooked them all into a premature death with her wild food.  
  c. She might employ it [her body] as a weapon – fall forward and flatten me wafer-thin. (Delia Ephron. 2000. Big City Eyes, New York: Bantam, p. 92)

The sentences in (13) are newly constructed, very creative examples of complex predicates and they all show the subject–predicate relationship between the accusative object and the secondary predicate. In (13a) the result of the dog’s poking was that I was awake; in (13b) they are all (metaphorically) prematurely dead as a result of Sudse’s cooking; in (13c) there is once again a metaphorical result: ‘I am wafer-thin.’

Examples of complex predicates showing some degree of conventionalization are given in (14):

(14)  
  a. They drank the pub dry. (Spencer and Zaretskaya 1998: 2)  
  b. The bears frightened the daylights out of the campers. (McIntyre 2001a: 144)  
  c. I beat the dust out of the sofa. (McIntyre 2001a: 144)  
  d. He worked his fingers to the bone.

A simplified representation is the structure in (15), with a Small Clause (SC, indicating the minimal clause level of a subject and non-verbal predicate), in which the NP is an external argument of the adjective awake:
Note that the object NP me receives its thematic role from the secondary predicate in this representation. This means that it is the secondary predicate that licenses the object and not the verb, which accounts for the phenomenon of unselected objects discussed in section 2.2, i.e. cases such as those in (14a) where the verb on its own, without the secondary predicate, could not select the object.

The observation that particles share many characteristics with other secondary predicates has a long history in the literature, from at least the early fifties onwards (Anthony 1953: 86), and can be found in, e.g., Fraser (1965: 82ff), Legum (1968: 55ff) and Bolinger (1971: 37ff). The parallels between the two structures are semantic (resultative meaning), syntactic (same verbs, same word orders) and intonational, and have led some scholars to posit a predicate analysis for all particles (e.g. Grewendorf 1990; von Stechow 1993; den Dikken 1995).

One test proposed in the literature for a predicate analysis is that the particle can be construed as the predicate in a copular construction (Booij 1998: 8). Examples of such SCVs are Dutch *afmaken* ‘lit. off-make, finish’ and *opeten* ‘eat up’, whose semantics would qualify as synchronically recoverable in the sense that *af* and *op* have a predictable predicate meaning when used with a copula:

\[
\begin{align*}
\text{(16) a. } & \text{Ik maak mijn huiswerk } \textit{af}. \quad \text{Ik make my homework off} \quad \text{my homework is off} \\
& \text{Mijn huiswerk is } \textit{af}. \quad \text{‘I finish my homework.’} \quad \text{‘My homework is finished.’}
\end{align*}
\]

\[
\begin{align*}
\text{b. } & \text{Ik } \textit{eet} \text{ mijn eten } \textit{op}. \quad \text{Ik eat my food up} \quad \text{the food is up} \\
& \text{Het eten is } \textit{op}. \quad \text{‘I finish my food.’} \quad \text{‘The food is finished.’}
\end{align*}
\]

This predicate meaning itself cannot, however, be predicted from the literal prepositional meaning and is most likely due to the use of the particle in this meaning in various SCVs, i.e. the telic meanings (‘finished’) are a convention-ized reinterpretation of the particle, prompted by the large numbers of SCVs where *af* and *op* signal completion. In addition, as noted earlier, particles may have clearly identifiable, extended meanings (like ‘accessible’ for *op/up*) that
are nevertheless only available if the particle is part of an SCV (and does not appear in a copular construction).

The failure of most particles to function as a predicate in a copular construction has often been observed. For example, "he is up" is not available as an interpretation of *phone John up, while "it is up" is available as an interpretation of *eat up all the food. This is usually put forward as an argument against a syntactic analysis of particle verbs. In fact, however, many syntactic predicates similarly fail to appear straightforwardly in a copular construction, cf. the variability of (17a–f), rewriting the predicates of (13)–(14) above as copular constructions:

(17)      a. I am awake.
      b. "They were into a premature death.
      c. I am wafer-thin.
      d. "The pub is dry.
      e. "The daylights were out of the campers.
      f. The dust is out of the sofa.

The varying acceptability of these predicates in copular constructions does not in itself, however, constitute a counterargument to an analysis along the lines of (15) for particles, in which the secondary predicate selects the object. McIntyre (2001a: 144–5) lists a number of other meanings that are "idiosyncratically restricted to a particular structural environment": the malefactive use of *on in my cat died on me, my car broke down on me is not possible as a postnominal modifier (*an accident on me). Goldberg and Jackendoff (2004: 560–2, and references cited there) provide many more examples (e.g. *He is under the table as an analogue to drink him under the table), and set out in detail the idiosyncrasy of other predicates, particularly the choice of PP or AP: stab/bat/put/batter/frighten/crush/scare/burn NP to death versus *dead, but on the other hand he sang himself hoarse versus *to hoarseness, or he ate himself sick versus *to sickness; and he sang himself to exhaustion versus *exhausted. Note that even semantically transparent, relatively non-idiomaticized predicates like into shape and to death cannot function as independent predicates: *he is into shape, he is to death. McIntyre (2004: 546) furthermore points out that directional PPs and continuous change-of-state comparatives (i.e. inherently eventive PPs/APs) are incompatible with copulas although they uncontroversially predicate over NPs: *I am to the station/colder and colder versus I walked to the station/I got colder and colder. He concludes that the copula test is untrustworthy as a test for complex predicates (p. 547). The fact that a large number of particles fail the copula test therefore does not provide evidence against a syntactic analysis of particle verbs in terms of the structure in (15).
Wurmbrand (2000) has argued that transparent VPCs could be analysed as phrasal (i.e., as predicates) and idiomatic VPCs as words, which is roughly in line with Biber et al.’s (1999) finding that the predicate order appears to be more frequent with transparent meanings, as noted in section 2.2. There is evidence in at least two other Germanic languages for such a distinction between predicative particles (i.e., those that are independently attested in predicate function) and non-predicative particles. Swedish non-predicative particles only allow the particle order, even with pronominal NPs, whereas predicative particles also allow the predicate order (Vinka 1999, quoted in den Dikken 2002). A similar distinction has been reported from language acquisition facts in Sawyer (2001) and Clark (1993).

Clark (1993: 28, 81) notes that particles with a literal (spatial) meaning (i.e., path particles, see section 2.5) are among the first forty to fifty words to be acquired. Clark lists the particles up, down, out, off and back as words that children typically use in their early speech for expressing activities or states. During this stage, children also combine particles with NPs (e.g., me up, pyjamas off; Clark 2003: 214). Later on, children start to combine particles with (general purpose) verbs (e.g., go up/down, take off). Diessel and Tomasello (2005: 94) note that fragmented particle constructions, i.e., constructions consisting of a noun and a particle (e.g., shoes on) or an isolated particle in a one-word utterance (e.g., Down!), “account for an average of 26.7% of the early data, while only 10.7% occur in the VPC”. Importantly, they observe that such fragmented particle constructions (in which a verb is lacking) often “express the same meaning as a VPC” (p. 94): Down! can be interpreted as Put me down! or Put it down!, and shoes on can be interpreted as Put the shoes on. This is clear evidence for the predicative nature of particles. In Diessel and Tomasello’s data (p. 96), the general purpose verbs put and take are the two most frequent verbs that occur in early VPCs.

Learners thus first use non-verbal predicates on their own, without any accompanying verb; the earlier emergence of the particles is probably helped by their prosodic prominence as stressed and separable monosyllables. It is only later that these can be identified as particles, namely when they begin to be combined with verbs, which at first are predominantly light verbs: do, make, get, go, i.e., general-purpose verbs which express an activity or action (Clark 1993: 29–30). VPCs with an idiomatic, non-transparent, non-compositional meaning are acquired last.

Dutch learners, too, first use particles as independent predicates. Table 2.1 (taken from Bennis et al. 1995: 76), shows that the seven Dutch children being investigated acquire particles earlier than SCVs. It is therefore
Table 2.1. Age of acquisition of particles and SCVs by Dutch children

<table>
<thead>
<tr>
<th>Child</th>
<th>Age of first Prt</th>
<th>Age of first Prt + V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diederik</td>
<td>1;10.18</td>
<td>2;0.19</td>
</tr>
<tr>
<td>Katelijne</td>
<td>1;8.29</td>
<td>1;11.27</td>
</tr>
<tr>
<td>Gijs</td>
<td>1;8.29</td>
<td>1;10.29</td>
</tr>
<tr>
<td>Joost</td>
<td>1;8.29</td>
<td>2;0.12</td>
</tr>
<tr>
<td>Jasmijn</td>
<td>1;3.30</td>
<td>1;6.1</td>
</tr>
<tr>
<td>Laura</td>
<td>1;9.26</td>
<td>1;11.22</td>
</tr>
<tr>
<td>Sarah</td>
<td>1;7.8</td>
<td>1;11.9</td>
</tr>
</tbody>
</table>

plausible to grant the particle full predicate status in constructions such as (16).

2.3.1 Predicate status, transparency of meaning and constituent status

The argument for predicate status of the particle is closely interrelated with transparency of meaning as noted above, and with constituent status. In cases where the meaning of the particle is transparent, it appears to be possible to move the particle to first position in the root clause (i.e. a main clause which is not embedded), indicating that it acts as a constituent:

(18) a. Áf maakte hij het boek niet.
    off made he the book not
    ‘He did not finish the book.’

b. Òp at hij zijn avondeten niet.
    up ate he his dinner not
    ‘He did not finish his dinner.’

The possibility of topicalization of the particle in (18) would seem to suggest a syntactic difference between SCVs with a compositional meaning, and those with a non-compositional meaning: there is a contrast in this respect between opeten ‘eat up’ on the one hand, as in (18b), and e.g. opbellen ‘call up’ as in (19) on the other hand:

(19) *Óp belde hij zijn moeder niet.
    up phoned he his mother not
    ‘He did not phone up his mother.’

It has been claimed that topicalization is only possible for particles with a resultative meaning (Webelhuth and Ackerman 1999). We note, however, in
The paradox of particle verbs

line with section 2.1, that not all resultative particles can be topicalized. This was shown for the particle *op* ‘accessible’ in (9), which is resultative but does not allow topicalization. The same holds for the particle *op* ‘up(wards)’ in (20), which does not allow topicalization either.

(20) *Maar op is het water niet ge-borreld.*
but up is the water not pref-bubbled
‘But the water did not bubble up.’

We conclude therefore that even if topicalization only seems possible with resultatives, the reverse (i.e. that all resultatives should allow topicalization) does not necessarily have to be the case. Other factors could well be involved in explaining the felicitousness of particle topicalization. The factor resultativity, then, cannot by itself explain the topicalization data satisfactorily.

Others have argued that topicalization is only possible for particle verbs whose meaning is compositional (i.e. is composed of the literal meanings of verb and particle) (e.g. Wurmbrand 2000; see also Cappelle 2002). This has led people to claim that particle verbs such as *opzoeken*/*look up* and *look up* are compositional, and the same holds for *opborrelen*/*bubble up*, in the sense that their meaning is distributed among their parts. They are, in fact, compositional idioms in the sense of Nunberg, Sag and Wasow (1994), who demonstrate that idioms are not necessarily non-compositional. Compositional idioms are both compositional (their meaning is distributed among the constituting parts) and idiomatic (their meaning is construction-specific).

Zeller (2001a: 95–6) explains the general non-acceptability of topicalizing particles by claiming that construction-specific meanings are lost if the particle undergoes topicalization. However, unlike particles, parts of constructions other than particle verbs that also have construction-specific meanings do allow topicalization. This is the case, for instance, with the parts of compositional idioms such as *pull strings* ‘exert influence’, in which the idiom’s meaning is distributed among its constituting parts. The possibility of topicalizing a part of this idiom is illustrated in (21a). A German example (from Zeller 2001a: 187–8) to illustrate the same point is given in (21b).

(21) a. Those strings he wouldn’t pull for you.
   b. Den Garaus hat man ihm nicht ge-macht.
      the garaus has one him not pref-made
      ‘They did not finish him off.’
One could argue that the acceptability difference between (19)–(21) is due to the fact that the topicalized elements in (19)–(20) (that is, the particles) do not have a modifier: in order for an element to allow topicalization, it must be heavy in information-structural terms, and heaviness can be brought about by modification. However, topicalization of *af* in (18a) and *den Garaus* in (21b), which do not contain a modifier either, is fine, which means that it is not the absence of the modifiers in itself that causes the unacceptability of (19)–(20). Similarly, even if we try to interpret, for instance, *hoog* ‘high’ in an example like (22a) as a modifier of the particle, we cannot topicalize the particle and this modifier, as shown in (22b).

(22) a. . . . dat hij de bal hoog op-gooid.  
   that he the ball high up-threw  
   ‘. . . that he threw the ball high up.’

b. ‘Maar hoog *op* heeft hij de bal niet ge-gooid.
   but high up has he the ball not PREF-thrown
   ‘But he did not throw the ball high up.’

Conversely, an adverbial phrase such as *omhoog* ‘up(wards), on high’ can be topicalized without any problems, as illustrated in (23).

(23) Maar omhoog heeft hij de bal niet ge-gooid.
   but up/on high has he the ball not PREF-thrown
   ‘But he did not throw the ball up.’

If topicalizing parts of constructions does not generally lead to the loss of construction-specific meanings, we would expect *op* in *opzoeken* to allow topicalization, just like other XPs with a construction-specific meaning. This means that the failure of so many particles to topicalize must be due to some other factor.

One plausible factor in this respect is a semantic/pragmatic restriction on topicalization: a topicalized XP must allow a contrastive reading. This would mean that there must be at least one other particle forming a particle verb with the same base verb before topicalization can be expected to be acceptable (see, among others, Hoeksema 1991a; Zeller 2001a: 93–5, 2003). The often-cited example of Hoeksema (1991a: 19) to illustrate this point, contrasting *uitvoeren* ‘lit. out-carry, to export’ with *invoeren* ‘lit. in-carry, import’, is given in (24) (the context clause is a translation of Zeller’s example; Zeller 2003: 184).

   Angola carries many goods in. Out carries the country only coffee
   ‘Angola imports a lot of goods. The country exports only coffee.’
If the condition of contrastive reading is a valid one, this would explain why topicalization is not possible for the particle *op/up* in *opzoeken/look up*: there is no particle verb with *zoeken/look* and a particle that semantically contrasts with *op/up* `accessible`. McIntyre (2002) and Zeller (2003), however, illustrate that the presence of a contrastive reading for the particle cannot be a sufficient condition for particle topicalization: there are particle verbs with particles that may have a contrastive reading, but nevertheless resist topicalization. The German topicalization constructions in (25), for example, are not acceptable (Zeller 2001a: 95).

  on has he the sweater pref-pulled  
  ‘He put on the sweater.’

b. *Aus hat er den Pullover ge-zogen.*  
  out has he the sweater pref-pulled  
  ‘He took off the sweater.’

The contrastive meaning cannot be the only factor that is of influence here, which is also illustrated by the German examples given in Zeller (2003: 188, 191), here given as (26), where we have two contrasting particles in SCVs with the same base verb: *auftreten* `lit. up-step, appear’ and *abtreten* `lit. off-step, leave’.

(26)  a. Der König *trat* (im blauen Anzug) nicht *auf*, sondern *ab*.  
  the king stepped in-the blue suit not up, but off  
  ‘The king did not appear in the blue suit, but left (in the blue suit).’

b. *Auf tritt* im blauen Anzug der König.  
  up steps in-the blue suit the king  
  ‘The king appears in the blue suit.’

The example in (26) shows that particles that may bear contrastive focus in situ (as in (26a)) may nevertheless be unable to undergo topicalization (as in (26b)) (see also the examples (30a–b) in Zeller 2001a: 190). Zeller (2003) claims that this suggests that not only semantic, but also structural properties of SCVs have an effect on the acceptability of particle movement. We will argue in chapter 3 that the structural property that plays a role here is that particles optionally project a phrase.

The examples in (25)–(26) illustrate that the presence of a contrastive reading for the particle cannot be a sufficient condition for particle topicalization. For its usual formulation, namely that a particle may be topicalized if it contrasts with another particle combining with the same verb, it can easily be shown that it cannot be a necessary condition either: if it were, *af* in (18a), repeated here
for convenience, would be expected to resist topicalization, as there is no SCV with \textit{maken} ‘to make’ and another particle that semantically contrasts with \textit{af} ‘finished’. The same holds for \textit{op} ‘used up, gone’ in (18b): there is no SCV with \textit{eten} ‘to eat’ and another particle that semantically contrasts with \textit{op} ‘used up, gone’.

(18) a. Áf \textit{maakte} hij het boek niet. \\
off made he the book not \\
‘He did not finish the book.’ \\
b. \textit{Op} \textit{at} hij zijn eten niet. \\
up ate he his dinner not \\
‘He did not finish his dinner.’

The possible contrast evoked in context by the examples in (18) is not with another particle, but rather with a reading of ‘not quite Prt’, in contrast to the strong resultative and telic reading. Thus, the context of (18a) might be something like: ‘he didn’t quite finish the book, he only got to \textit{chapter 4’}, and for (18b): ‘he didn’t quite finish his dinner, he left the vegetables on his plate’.

In contrastive constructions with SCVs it is often the whole SCV or the VP rather than the particle that bears contrastive focus. As Zeller (2003: 187–8) argues, XPs in the VP can generally be topicalized in order to establish VP-focus, in non-idiomatic as well as in idiomatic constructions. An XP analysis of particles would predict that this is also possible for particles, but particle topicalization appears to be highly restricted. In general, constructions in which the whole SCV is topicalized seem to be preferred to constructions in which the particle is topicalized to express SCV-focus or VP-focus. This is shown in (27)–(28) (see Müller 2002: 278; Zeller 2001a: 97–8).

(27) a. *Maar \textit{op} heeft hij de boeken niet \textit{ge-zocht}. \\
but up has he the books not \textit{PREF}-searched \\
‘But he did not look up the books.’ \\
b. Maar \textit{op-gezocht} heeft hij de boeken niet. \\
but up-searched has he the books not \\
‘But he did not look up the books.’

(28) a. *Maar \textit{op} heeft hij de bal niet \textit{ge-gooid}. \\
but up has he the ball not \textit{PREF}-thrown \\
‘But he did not throw up the ball.’ \\
b. Maar \textit{op-ge-gooid} heeft hij de bal niet. \\
but up-\textit{PREF}-thrown has he the ball not \\
‘But he did not throw up the ball.’

We will argue in \textit{chapter 3} for an analysis of Dutch particles as optionally projecting words, and for an analysis of the SCV as the minimal verbal phrase in
The paradox of particle verbs

This yields a more satisfactory explanation for the restrictions on particle topicalization: topicalization generally applies to phrases (contra Hoeksema 1991a, 1991b, but in line with most other proposals, such as Bennis 1991; Lüdeling 2001; Müller 2002; Neeleman 1994; Neeleman and Weerman 1993; Zeller 2001a). Particles in Dutch can project, but the option is not widely used.

A purely semantic explanation of the restricted topicalization possibilities of particles (which supposes that particles are XPs) furthermore predicts that particle topicalization data would be more frequent than they are: compared to topicalization of semantically similar XPs (resultative PPs and APs), particle topicalization is infrequent (Zeller 2003: 189; see also Müller 2002: 277, who notices that examples of particle topicalization in performance data are not very frequent). Moreover, the attested cases of particle topicalization are not found acceptable by all native speakers. In this respect, particles contrast with topicalized PPs (Zeller 2003: 189). Another difference between particles and PPs is that PPs allow so-called long topicalization, whereby an element is moved across a clause boundary, and scrambling, but constructions in which particles have undergone either of these movement operations are generally judged unacceptable (pp. 191–7). German examples of long topicalization of a PP and long topicalization of a particle are given in (29) (from pp. 191–2).

(29)  a. Über dich versuche ich zu lachen.
     about you try I to laugh
     ‘I try to laugh about you.’

     b. *An versuche ich dich zu lachen.
     PRT try I you to laugh
     ‘I’m trying to smile at you.’

This suggests that there is a structural restriction on particle movement that does not hold for PP movement.

In sum, if particles were always XPs, we would expect particle topicalization to be less restricted than it is, particularly in Dutch and German, where the general inability of particles to undergo topicalization applies to compositional SCVs across the board, both those with conventionalized meanings and those with predictable meanings. English particle topicalization appears to be somewhat less restricted (Cappelle 2002). The fact that the conditions on particle topicalization also appear to be semantic/pragmatic in nature makes it even more difficult to gauge the significance of topicalization as a syntactic test for phrasal status.
2.3.2 Constituent status and modification

In this section, we discuss a further argument concerning the constituent status particles, that of modification. If particles are always constituents, and thus always project phrases, they should have enough structure to always accommodate premodifiers. For English, it is generally accepted that particles can only be modified if their meanings are literal/spatial, and if they are in the predicate order (as in (2b) above and in (30a)); the particle order (as in (2a)), does not allow premodification (witness the unacceptability of (30b)); the examples are from Elenbaas (2007: 83):

(30) a. Pinocchio blurted the lie right out.
   b. *Pinocchio blurted right out the lie.

In Dutch, modification is restricted to a small number of particles and only when they are immediately preverbal and maintain their literal meaning (this is discussed in more detail in chapter 3). This includes the particles af ‘off’ and op ‘up’, which can also be topicalized as in (18) above, and a very few other ones such as uit ‘out’ (see also, e.g., Bennis 1991; Neeleman 2002). This is exemplified for op ‘up’ in (31):

(31) a. Hij at zijn boterham helemaal op.
   he ate his sandwich completely up
   ‘He finished his sandwich completely.’
   b. *Hij belde zijn moeder helemaal op.
   he called his mother completely up
   ‘He called his mother completely (up).’

The modification facts for Dutch as in (31a) versus (31b) show that some particles in some contexts must be taken to project a phrase when modified. The option is lexically and contextually severely restricted, however, as may be expected in an analysis in which particles only project when there is clear evidence for it. We thus account for the strong restrictions on particle topicalization in Dutch by analysing particles as optionally projecting words. Topicalization applies to phrases (see Booij 2002a: 214) and is only possible when the context implies a contrast. This is possible in Dutch with some particles, specifically with the particle af ‘off’ and op ‘up’ as discussed above, but in other cases, the particle is a non-projecting head.

2.4 Particle order and predicate order

Particles in both English and Dutch are associated with two possible word orders: one in which the verb and particle are adjacent (the particle order),
The paradox of particle verbs

and one in which they are separated (the predicate order). In English, the verb
and particle can be separated by the object and/or a modifier, in Dutch by a
number of grammatical markers (the infinitival marker te, the participial marker
ge- and, most notably, auxiliaries in verb raising (V-raising)). In English, the
particle order (as in (2a), here repeated as (32a)) and the predicate order (as
in (2b), here repeated as (32b)) appear both in main clauses and subclauses.
When the object is a pronoun, only the predicate order is possible, witness the
ungrammaticality of the particle order in (32d); the latter order is only possible
if the pronoun is heavily stressed:

(32)  a. He threw away the remains of his dinner.
     b. He threw the remains of his dinner away.
     c. He threw them away.
     d. *He threw away them.
     e. If you force your confidence upon me, Mr. Headstone, I’ll give up every
word of it. Mind! Take notice. I’ll give it up, and I’ll give up you. I will!
(Dickens, Our Mutual Friend)

The two orders are mirrored by those of a syntactic construction, the complex
predicate, but there the particle order is only acceptable with long, heavy
objects, as demonstrated by the ungrammaticality of (33b). This shows that for
predicates, the particle order is a derived order (by extraposition):

(33)  a. He threw the documents into the dustbin.
     b. *He threw into the dustbin the documents.
     c. He threw all the documents containing incriminating evidence into the
dustbin.
     d. He threw into the dustbin all the documents containing incriminating
evidence.

The main difference between the VPC and complex predicate constructions in
(32) and (33) is the fact that for secondary predicates generally, the particle
order as in (33d) is a marked one, and most probably the result of heavy NP
shift. Biber et al. (1999: 930) note that (33c), with the predicate following the
object (the predicate order), is the regular order for syntactic predicates. Biber
et al. conclude that the alternative order, the particle order (with the object
clause-finally as in (33d)), is triggered by considerations of endweight; note
that (33d), with its long NP, is acceptable, whereas (33b) is not. In the case of
particles, however, it is the particle order that is the most frequent one (p. 933).
We will refer to alternations such as (32a–b), where endweight is not a trigger,
as particle syntax. Biber et al. (1999) note that in the case of particles there
is no single factor that governs the selection of one particular order over the
other: endweight is one, but there are others. They note that the particle order
is linked with a high degree of idiomaticity of the combination, as in (34a), whereas the predicate order tends to occur primarily with particles with literal, spatial meanings, as in (34b) (both examples from p. 933):

(34)  

a. Now carry out the instructions.  
b. The Germans carried the corpse out.

They note that in the second example (34b) “the result of the action is that ‘the corpse is out’, while it certainly is not true that ‘the instructions are out’ as a result of the action” in the idiomatic first example (34a) (p. 933). It is tempting to conclude that literal/spatial particles will occur more frequently in the predicate order because the endposition is informationally prominent, and therefore particularly compatible with meaningful, semantically independent elements. Non-literal meanings are not barred from accented end-focus position (carry my instructions out is grammatical); it is just that they are less compatible with informationally prominent clausal positions. For the moment, the main conclusion is that both orders are made available for particles in the syntax, and that neither order is marked (in the sense in which the order (33d) is marked in the case of predicates). At the same time, we may note that the order of (33d) probably lost its marked status for particles precisely because of the semantic bleaching that accompanies grammaticalization (of an XP predicate into a non-projecting head): this allows the object to become the more prominent of the two constituents (object and predicate/particle) in information-structural terms, facilitating its compatibility with end-position. We will discuss the interaction between Information Structure and syntax in more detail in section 2.6.

Particle syntax thus makes sense in an analysis in which particles are grammaticalized predicates and can in fact be regarded as a diagnostic for grammaticalization. This means that those predicates that allow it without the syntactic restriction (of length/heaviness), as in (35), can be argued to have been grammaticalized:

(35)  

Yesterday I decided to take apart my laptop.

For similar observations in the literature, see also Fraser (1965: 82ff), Bolinger (1971: 37ff), Quirk et al. (1985: 734, 1167), Claridge (2000: 66–70, 153) and Denison (1981: 36–7).

Dutch, too, has a special particle order that distinguishes particles from predicates. Both particles and predicates may be separated from the verb by auxiliaries in V-raising constructions, as in (36a–c) for particles and (37a–c) for predicates:
(36) a. . . . dat Jan zijn moeder op probeert te bellen.
that John his mother up tries to phone
‘. . . that John tries to phone up his mother.’
b. . . . dat Jan zijn moeder op heeft ge-beld.
that John his mother up has PREP-phoned
‘. . . that John has phoned up his mother.’
c. . . . dat Jan zijn moeder op zal bellen.
that John his mother up will phone
‘. . . that John wants to phone up his mother.’

(37) a. . . . dat Jan de deur groen probeert te verven.
that John the door green tries to paint
‘. . . that John tries to paint the door green.’
b. . . . dat Jan de deur groen heeft ge-verfd.
that John the door green has PREP-painted
‘. . . that John has painted the door green.’
c. . . . dat Jan de deur groen wil verven.
that John the door green wants paint
‘. . . that John wants to paint the door green.’

There are, however, some additional particle positions from which predicates are barred: particles may form part of the verb cluster in V-raising constructions such as (38a–b), unlike resultative predicates as in (39a–b) which are only allowed similarly close to the verb in the non-finite verb–finite verb order as in (40a–b):

(38) a. . . . dat Jan zijn moeder heeft op-ge-beld.
that John his mother has up-PREP-phoned
‘. . . that John has phoned his mother up.’
b. . . . dat Jan zijn moeder morgen zal op-bellen.
that John his mother tomorrow will up-phone
‘. . . that John will phone up his mother tomorrow.’

(39) a. * . . . dat Jan de deur heeft groen ge-verfd.
that John the door has green PREP-painted
‘. . . that John has painted the door green.’
b. * . . . dat Jan de deur zal groen verven.
that John the door will green paint
‘. . . that John will paint the door green.’

(40) a. . . . dat Jan de deur groen ge-verfd heeft.
that John the door green PREP-painted has
‘. . . that John has painted the door green.’
b. . . . dat Jan de deur groen verven wil.
that John the door green paint wants
‘. . . that John wants to paint the door green.’
Particle order and predicate order

Particle and predicate orders can also be found in main clauses with more than one auxiliary, because this still leaves an auxiliary in the verbal cluster to separate particle and verb (in the predicate order) after the finite auxiliary has moved to the second position. The particle order is shown in (41a), and the predicate order in (41b):

(41) a. Hij zou kunnen mee-gaan.
    he would can with-go
    ‘He could come along.’

b. Hij zou mee kunnen gaan.
    he would with can go
    ‘He would be able to come along.’

The separation of verb and particle by V2 follows naturally from our hypothesis that particles are grammaticalized predicates, as other predicates are also stranded by V-movement in the root clause. Compare the position of the stranded predicate groen ‘green’ in (42a) with that of the stranded particle op ‘up’ in (42b):

(42) a. Jan verft de deur groen.
    John paints the door green
    ‘John paints the door green.’

b. Jan belt zijn moeder op.
    John phones his mother up
    ‘John phones his mother up.’

As in English, there are verb–predicate combinations that have been grammaticalized to such an extent that they allow the particle order, as we saw above for English in (35). A Dutch example is (43):

(43) Hij vond dat Jan het plan moest goed-keuren.
    he felt that John the plan should good-judge
    ‘He felt that John should approve of the plan.’

Such predicates are either APs, as in (44) for English and (45) for Dutch, or PPs, as in (46) for English and (47) for Dutch:

(44) break/blow/blast/cut/fling/push/rake/whisk open, cut/stop short, bleach white, blow/keep/make/sift clear, put straight, let/set free, think fit, cast/let/pry/shake/wrestle loose, strip naked, etc.

The paradox of particle verbs

(46) bring to light, put in execution, take in hand, call to mind, call in question, take into consideration

(47) teloor-gaan ‘lit. to loss go, be lost’, te gronde richten ‘lit. to ground force, ruin’, tewerk-stellen ‘lit. to work put, employ’, tegemoet-komen ‘lit. to meet come, go to meet’, tekeer-gaan ‘rave, storm, wreak havoc’ (orig. ‘parry blows, attack’ from the Middle Dutch (MD) noun keer ‘turn, parry’), terecht-stellen ‘lit. to justice put, execute’

Both in English and Dutch, some of these PPs have been lexicalized into an AP or a particle. In English, such PPs tend to have the original prefix on- which has been reduced to a-:

(48) carry aloft (< on loft), set alight (< on light), take apart (< on part), put awry (< on wry), carry around (< on round), keep asunder (< on sunder), set afoot (< on foot), away (< on weg)

The Dutch APs that have undergone such further lexicalization (from PPs) tend to have te-, which is part of the word and no longer felt to be a preposition:

(49) tegemoet ‘to meet, towards’, tevreden ‘content’, tegoed ‘owing’, terecht ‘found’, terug ‘back’, tevergeefs ‘in vain’

An adjectival or adverbial element of the sets in (44) and (45) cannot appear in the particle order if it has any modification, i.e. it has to be a bare head (A). Claridge (2000: 68, 157) offers some historical examples of APs and PPs that increasingly resist modification as they lexicalize. The need for bare heads may also account for the univerbation of the PP as a single word as in the examples in (48)–(49). Finally, as with Dutch opbelbaar ‘phone-up-able’, English VPCs may also be input to derivational processes that do not build on phrases, as in come-at-able, get-at-able or lookers-on (all from the OED).

All this points to a close historical association between particle and predicate status. We claim that particles are grammaticalized predicates, which entails grammaticalization and reanalysis from a phrasal XP to an optionally projecting head X(P), according to the grammaticalization cline (18) in chapter 1, repeated here for convenience.

(18) projecting preverb > optionally projecting preverb > non-projecting preverb > prefix > (zero)

It is this reanalysis (accompanied by incorporation and/or subsequent lexicalization) which allows the VPC to serve as input for word formation on a par with simplex verbs, and to behave as a word with respect to V-raising in Dutch, as in (38). The reanalysis, however, did not lead to any loss in phrasal behaviour of the particle verb: in Dutch, separation by V2, by infinitival te ‘to’, and by inflectional ge- remained, as did the prominent stress on the particle;
in English, the predicate order, with the object intervening between verb and particle, remained available. The reanalysis led to the rise of a new category 'particle', which comes with its own package of syntactic behaviour on the one hand, inherited from its earlier predicate status, and morphological behaviour on the other hand.

### 2.5 The analysis of particles in the literature

#### 2.5.1 Introduction

The existence of two word orders for the particle verbs, and the desirability of deriving both from one basic order, has sparked an intense debate in the literature. The core questions are which of the two orders is basic, and how the alternative order can be plausibly derived from that basic order. We will review some of these treatments in this section, and discuss further implications and questions that they raise. The analyses tend to concentrate on English VPCs: the difference between the two orders is more marked in that language because it involves the object and appears to be truly optional, also in root clauses, unlike Dutch SCVs where the predicate order is forced in root clauses by V2, and where a special particle syntax reveals itself in the subclause only in V-raising constructions.

#### 2.5.2 Particle order as default

The paradoxical word order evidence presented in section 2.4 has prompted a number of analyses in the literature. Most analyses prefer to label one of the two possible orders as the basic one, and motivate an analysis for how the other order is derived from it by some syntactic operation(s). Analyses that take the particle order to be the basic order from which the predicate order is derived usually imply an analysis of VPCs as morphological words. Such analyses tend to run afoul of the Lexical Integrity Principle (LIP, DiSciullo and Williams 1987), according to which morphological words cannot be split up by a syntactic operation. The typical solution is to posit additional structure for the verb and to stipulate that syntactic rules may apply to the top layer only (as in Dehé 2002: 251; see also Johnson 1991). Stiebels and Wunderlich (1994) circumvent the LIP problem by resorting to a lexical feature [+max], which forces syntactic visibility of the particle throughout all morphological operations. Neeleman’s (1994) solution is to analyse VPCs as complex predicates: syntactic, not morphological, constructs that take the object as their complement. These accounts do justice to three properties of particle verbs: their word-like behaviour, the fact that they tend to have non-transparent, idiomatic meanings, and the fact that particles have been grammaticalized away from their predicate origins, as
demonstrated by the existence of a distinct particle syntax as we saw in section 2.4. When the particle order is taken to be basic, the predicate order is the derived order. Various triggers that have been proposed reflect the theoretical assumptions of the time: in Johnson (1991) the trigger is Case, in Dehé (2002) the trigger is a focus feature [+F]. Neelamman’s (1994) account also makes use of Case, but ultimately the trigger is the particle itself: if the particle does not project a phrase, it will remain adjacent to the verb, resulting in the particle order; if it does project a phrase, it will move out of the complex verb, resulting in the predicate order.

2.5.3 Predicate order as default

We now turn to proposals that take the predicate order as the basic one; particle and object together constitute a SC, which is in turn the complement of the verb. This analysis owes much to Hoekstra’s (1988) work on SCs (see also Stowell 1983; Kayne 1985; Hoekstra and Mulder 1990; den Dikken 1995). The SC analysis captures the diachrony of the particle verb (see chapters 4 and 6) and offers a straightforward account for the particle quirks that have been observed in the literature and which we identified as predicate traits in section 2.4: changes in argument structure and the phenomenon of the unselected object, for instance, fall out naturally because it is the particle, not the verb, that selects the object as discussed above; in that sense, all objects of particle verbs are unselected objects.5

The fact that object and particle fail all tests for constituency is problematic for the SC analysis, but is in line with the more general failure of objects and secondary predicates to do so. Semantically, the analysis captures the intuition that particle verbs represent complex events. If the predicate order is taken as basic, the particle order is derived by the same operation that derives the V-predicate-NP order in English root clauses as in (33d) above, i.e. heavy NP shift or extraposition. (33) is repeated here for convenience:

(33) a. He threw the documents into the dustbin.
b. *He threw into the dustbin the documents.
c. He threw all the documents containing incriminating evidence into the dustbin.
d. He threw into the dustbin all the documents containing incriminating evidence.

Apart from the fact that rightward movement is problematic in a Kaynian antisymmetry account (Kayne 1994), an account in terms of extraposition or heavy NP shift faces the problem that, unlike the objects in a complex predicate
construction, objects of particle verbs are not subject to such heaviness restrictions for rightward movement. The triggers proposed for rightward movement reflect the theoretical assumptions of the time: Case (den Dikken 1995; Haegeman and Guéron 1999) or checking of some other feature (Svenonius 1996). SC accounts for the predicative nature of particles make use of the notion that particles project structure optionally (as discussed above for Neeleman’s 1994 complex predicate analysis), assuming the optional presence or absence of extra functional structure above the particle projection (Guéron 1990; den Dikken 1995; Svenonius 1996; Zeller 2001a and others).

2.5.4 The semantics of complex events

The literature discussed so far focuses on offering analyses that primarily attempt to account for the syntactic behaviour of particle verbs. Other recent accounts focus on an account of the particle verb that also represents its semantic structure, i.e. the fact that particle verbs represent complex events.

Goldberg and Jackendoff (2004: 538, 540) distinguish four types of complex predicate along two dimensions: (1) causative versus non-causative; (2) property-resultative (with an adjectival predicate) versus path-resultative (with a prepositional predicate):

(50)  

a. Non-causative property resultative (e.g. *The pond froze solid*)
   Syntax: NP₁ V AP/PP₂
   Semantics: X₁ BECOME Y₂
   MEANS: [VERBAL SUBEVENT]

b. Causative property resultative (e.g. *Willy watered the plants flat*)
   Syntax: NP₁ V NP₂ AP₃
   Semantics: X₁ CAUSE [Y₂ BECOME Z₃]
   MEANS: [VERBAL SUBEVENT, here: Willy watered the plants]

c. Non-causative path resultative (e.g. *The ball rolled down the hill*)
   Syntax: NP₁ GO Path₂
   Semantics: X₁ GO Path₂
   MEANS: [VERBAL SUBEVENT]

d. Causative path resultative (e.g. *Bill rolled the ball down the hill*)
   Syntax: NP₁ V NP₂ PP₃
   Semantics: X₁ CAUSE [Y₂ GO Path₁]
   MEANS: [VERBAL SUBEVENT, here: Bill rolled the ball]

The two causative types of (50b) and (50d) represent the type of complex predicate that has proved to be relevant to the discussion of the status of the particle in sections 2.2 and 2.3: they represent complex events in that there is a causative verbal subevent (*Bill rolled the ball* in (50d)) that leads to a
change of state of the ball: the ball ends up down the hill. They have non-causative counterparts in (50a) and (50c). Goldberg and Jackendoff (2004) demonstrate that the aspect and/or Aktionsart of the complex predicate is determined by that of the causative subevent, which in turn hinges on whether the predicate sets up an endpoint to the event or not. As there are predicates that do not set up an endpoint, resultatives are not necessarily always telic; e.g. John went along the river, where along the river expresses a path without a specific endpoint (p. 543). This means that there are also stative and atelic resultatives, and, after grammaticalization, stative and atelic VPCs (e.g. look on, float by). The types that are particularly relevant to the discussion are the paths (50c–d), expressed by prepositions, rather than the properties expressed by adjectives (solid, flat). One aspect in which particles do differ from predicates, and which must be of primary importance in charting the grammaticalization process they have undergone, is the fact that particles show extensive semantic bleaching compared to adjectival and prepositional predicates. Consider the following Lexical Conceptual Structure (LCS) in (51) as typical of (resultative) predicates (from Spencer and Zaretskaya 1998: 6, in turn based on Jackendoff 1990), where (52) illustrates a predicate construction as in The dog poked me awake, (13a) above:

(51) $[[\text{CAUSE } [\text{ACT}(x)], \text{BECOME}[W(y)], \underset{\text{by}}{V(x)}]]$

(52) $[[\text{CAUSE } [\text{ACT}(\text{the dog})], \text{BECOME}[\text{awake(me)]}, \underset{\text{by}}{\text{poking(the dog)}}]]$

In this LCS, the secondary predicate fills the W-slot, which expresses an end-state or endpoint, and functions as a primary predicate semantically. The by-phrase in this notation equals the verbal subevent in Goldberg and Jackendoff’s (2004) notation in (50a–d), and VPCs fit into this means or manner phrase with varying degrees of acceptability, to a large extent depending on the verb. To illustrate, for non-causative verbs such as unaccusatives, the LCS needs to be pruned because of the absence of an AGENT (cf. Bill rolled the ball down the hill (50d) vs. The ball rolled down the hill (50c) above). In a classification of VPCs on the basis of verb category, as in (i–v) below, we find that the best fit with an LCS like (50c) or (51) is found with verbs expressing manner, particularly the manner of motion unaccusatives in (iii) (Slobin 2005: 316), or instruments, in (iv):

(i) transitives: find (something out); including light verbs: get (someone up), keep (something up), let (someone down), make (up a story), put (the cat out), set (fireworks off)

(ii) unergatives: chop (up some wood), knock (a nail in), laugh (something off), work (something out)
(iii) unaccusatives: come (off), go (up), run (someone down), dash (one’s tears away), rush (a bill through), hurry (someone away)

(iv) denominal verbs, derived from the instrument used in causing the object \( y \) to reach the state \( W \): boot (someone out), bowl (someone over), branch (out), brick (something up), buckle (something up), elbow (someone out), fork (money out), hand (something over), patch (something up)

(v) deadjectival/denominal verbs constituting a conversion of the state \( W \) itself: back (off/away), brazen (it out), cheer (someone up), clear (something up/out/off/away), crack (up), free (up), gloss (over), open (up/out), parcel (out), pretty (up), round (up/off)

Many transitives that express some activity like cooking and poking (see (13) above) fit unproblematically in the manner slot, and the same goes for intransitive unergatives in (ii) above as illustrated in (53) for the verb \( \text{chop} \):

(53)  
\begin{align*}
& a. \text{He chopped the tree down}. \\
& b. \quad [\text{CAUSE } [\text{ACT(he)}], \text{BECOME[down(tree)]}, _{nv}[\text{chopping(he)}]]
\end{align*}

Note, however, that the very use of a VPC seems to force a manner reading on the verb, as a kind of type coercion; the denominal verbs in (iv) above specify manner too, even though they do not have an independent existence outside the VPC, e.g. (54):

(54)  
\begin{align*}
& a. \text{They elbowed me out}. \\
& b. \quad [\text{CAUSE } [\text{ACT (they)}], \text{BECOME[out(me)]}, _{nv}[\text{elbowing(they)}]]
\end{align*}

The same type coercion forces a manner-reading when the verb is a conversion of the state \( W \) itself (the verbs in (v) or a light verb, as in (i)).

The point to note is that the less than perfect fit to LCS (51) of some VPCs also comes to the fore when the same verbs as listed in (i)–(v) appear with adjectival or prepositional predicates, and is due to the contribution of the verb rather than to that of the particle or predicate. Where particles and predicates differ from each other is the degree of explicitness of the endstate \( W \) in the LCS (51). The particle appears to be bleached to a degree that does not seem possible with adjectival or prepositional predicates. Adjectives, expressing properties, are less likely to bleach; but paths, with or without endpoints, may do so very easily. There is a clear link here with productivity: spatial resultatives appear to be quite productive in that any spatial PP that can be construed as a path can be used as a complex predicate (Goldberg and Jackendoff 2004: 558); APs such as free (of NP), clear (of NP), apart, open and shut, i.e. exactly the set of APs that may grammaticalize and may adopt particle syntax as exemplified in (43)–(44) above, are also fairly productive and are argued to be interpreted as “spatial
configurations with some force-dynamic overtones” (p. 558). They do not only represent a property but a spatial configuration “affording free passage between the interior and exterior of the object” (p. 559). This insight, then, allows us to postulate the generalization that only path-predicates will grammaticalize into particles.6

2.5.4.1 Particles as prepositions with implicit Grounds
Apart from the degree of explicitness of the endstate W in the LCS (51), there is another basic semantic difference between predicates and particles, which manifests itself when we compare particles with predicates that are PPs. PPs are the type of predicate most prone to grammaticalization into a particle, as is evident, for instance, from Bolinger’s (1971: 18) list of PDE particles:

\[(55)\] aback, about, above, across, after, again, aground, ahead, along, alongside, aloud, apart, around, aside, askew, astray, astride, asunder, athwart, atop, away, back, before, behind, below, between, by, down, forth, forward, home, in, off, on, out, over, past, round, through, to, together, under, underground, underneath, up

The large majority of these represent lexicalized PPs (e.g. underground, away from OE onweg, down from adown (OE ofdune)) or are homophonous with PDE prepositions (by, in, off, on, over, through, to, under, up) that lack NP complements. Lipka (1972: 17) calls them reduced PPs and gives the following examples:

\[(56)\]
a. He put the kettle on [the fire].
b. He took the ring off [his finger].
c. She took the book out [of the pocket].

We may describe the semantics of prepositional predicates in terms of Figure and Ground, following Svenonius (2003), after Talmy (1978). The Figure refers to a moving or conceptually moving entity and the Ground represents a stationary reference point (see also section 2.5.4.2). From this perspective, the kettle in (56a) is the Figure (the moving entity) and the fire is the Ground. Similarly for (56b–c). Reduced PPs such as (56) can thus be thought of as PPs with implicit Grounds. As prepositions can be argued to share certain characteristics with verbs (notably Case assignment: they are both structural governors; Kayne 1981), the absence of an NP complement has been argued to represent a parallel to Vs that lack internal arguments; Emonds (1972) and Huddleston and Pullum (2002), among others, label particles intransitive prepositions (but see Cappelle 2004). Other scholars have explored the possibility of explaining their special properties by analysing them as unaccusative prepositions (Guéron
or ergative prepositions (den Dikken 1995). What makes them very different from Vs is that their intransitivity is not due to their lexical meaning but seems to be the result of a grammaticalization process which has led to the defocusing of their NP-complements as a result of the preposition’s meaning (McIntyre 2004). In (56b), *He took the ring off his finger*, the object of *off* can be pragmatically reconstructed with ease given our knowledge of rings and fingers; in other cases, the exact identification or reconstruction of the object is either unimportant or infelicitous. This phenomenon could be interpreted as loss of argument structure, on a par with the loss of argument structure that we observe in the grammaticalization of verbs into auxiliaries. There is, however, a caveat here: Vincent (1999) identifies a stage in the development of Latin where prepositions may not have had a syntactic argument but were rather located in the specifier of an NP in the local cases (instrumental, ablative, locative), developing into prepositions (i.e. heads projecting a PP) only later. Particles may well have split off from prepositions when the latter were still in this stage, before they became prepositional heads, and may never have had proper complements: they may have been associated with a particular NP by virtue of occupying its specifier position. Particles like *down, out, off* and *up* may have acquired their prepositional uses only recently: *down* is originally a PP that grammaticalized to a head, while OE *ut* ‘out’ and *up* ‘up’ do not show clear prepositional uses but are usually followed by PPs, suggesting that they were themselves adverbs at that stage. Some of the items from Bolinger’s list in (55) are still possibly more adverbial than prepositional (especially *out*).

Fraser (1965) and Fairclough (1965) use the term ‘particle’ precisely because it is difficult to draw a clear line (see also Lipka 1972: 19). This problem of classification in a way reflects the status of the preposition, or more broadly, the adposition, as a syntactic category: lexical or functional? Adpositions are said to express case realizations (Emonds 1985; Asbury 2008; Lestrade 2010) and as such appear in the extended projection of N rather than in a projection of their own. Adpositions and morphological case would then be expressions of a functional category. Adpositions that represent paths, however, appear to have lexical content, as is further supported by the fact that the object of P can be left implicit so easily; it is the path itself rather than the object that is relevant. It is this defocusing, this loss of the complement (the Ground in semantic terms), that promotes the reanalysis of the particle from XP to X, a typical case of grammaticalization.

Although the syntactic status of some of the NP complements of path-Ps can be disputed, their semantics are clear and can be described in terms of Figure and Ground. The grammaticalization process by which PP-predicates are reanalysed as particles, mediated by the defocusing of the NP complement of the
preposition, can then be rephrased in terms of the absence of the Ground; unlike prepositions, particles combine with a Figure (the subject of the predicative particle) rather than with a Ground, and it is this Figure that becomes the fully affected object of the VPC. Semantically, the Figure traverses the path expressed by the particle.

2.5.4.2 Implicit Figures or implicit Grounds
In addition to the development by which the Figure of the path becomes the object of the VPC, there is another pattern in which it is the Ground that surfaces as the object of the VPC. An example is (57), which was discussed by Denison (2004: 18) as a case of reanalysis: the preposition increasingly attaches itself to the verb, and its former complement (the Ground) becomes the object of the VPC.

(57) My car ran over a bottle (lying in the road).
   a. [VP ran\_intr [PP over [NP a bottle]]]
   b. [VP ran\_trans [Pr over] [NP a bottle]]

This is another resultative predicate pattern, with its unaccusative verb conforming to the LCS in (50c), Goldberg and Jackendoff’s (2004) noncausative path resultative. My car is the Figure here, and starts out as the object of the verb (as the verb is unaccusative). The earliest literature on VPCs mention the phenomenon of object transfer (‘Subjektvertauschung’, ‘Objektvertauschung’: Hundschnurscher 1968: 124ff, quoted in Lipka 1972: 94). Compare the object of the first and second of the following pairs:

(58) a. das Wasser läuft aus/der Eimer läuft aus (Lipka 1972: 94)
   the water runs out/the bucket runs out
   ‘the water runs out/the bucket pours out’
   b. John poured out the water./John poured out the bucket. (cf. McIntyre 2004: 538, 543)
   c. clear out mud (from a river)/clear out a river (by removing mud) (Lipka 1972: 94)
   d. brush the lint off/brush the coat off (Farrell 2005: 110)
   e. het vuil af-spoelen/de borden af-spoelen (Blom 2005: 190)
   the dirt off-rinse the plates off-rinse
   ‘rinse off the dirt/rinse off the plates’

In each of these pairs, the object of the first example is the Figure of the particle, but the object of the second example is the Ground: e.g. in (58a), water runs or pours out of the bucket, and in (58e), one rinses the dirt off the plates. We will return to Figures and Grounds in the discussion of Svenonius’s analysis of the VPC as a complex event.
2.5.4.3 VP shells and complex events

We now turn to analyses that attempt to capture the complex event semantics of the VPC by making it part of the syntactic structure.

The X’-structure first proposed by Chomsky (1970) and further developed by Jackendoff (1977), still very much a part of mainstream formal theory, is a binary-branching general template with positions for the head X of the phrase XP, its complement, and a specifier position. For a V-head, the complement position would be expected to accommodate the verb’s object, and the specifier the verb’s subject, as in (59).

(59) 

\[
\begin{array}{c}
\text{VP} \\
\text{[subject]} \quad \text{V'} \\
\quad \text{V} \quad \text{[object]}
\end{array}
\]

Ditransitive verbs, which have two objects, are difficult to accommodate in such a binary-branching structure, as it allows the verb to have only one complement, i.e. there is only one position available for objects.

Larson’s (1988) split VP hypothesis, later extended by Hale and Keyser (1993) and Chomsky (1995) has been adopted in various VPC analyses. Larson’s complex VP structure consists of two VP shells above V which creates a second complement position in the specifier position of the lower VP, allowing for the accommodation of verbs which have more than one complement, while preserving binary branching. Chomsky (1995), following Hale and Keyser (1993), proposes that the upper VP layer is headed by a light verb v, which introduces the external argument (the subject). The structure in (60) illustrates this.

(60) 

a. John gave a book to Bill.

b. 

\[
\begin{array}{c}
vP \\
\text{DP} \\
\quad \text{v'} \\
\quad \text{v} \\
\quad \text{VP} \\
\quad \text{DP} \\
\quad \text{a book} \\
\quad \text{V'} \\
\quad \text{V} \\
\quad \text{PP} \\
\quad \text{gave} \\
\quad \text{P} \\
\quad \text{DP} \\
\quad \text{to} \\
\quad \text{Bill}
\end{array}
\]
This structure introduces a causer-role: the light verb $v$ licenses the agent argument *John*, which is generated in Spec$v$P. This means that the VP, lower down in the structure, may introduce objects without violating the binary structure: the theme argument *a book* in SpecVP and the PP-argument *to Bill* in the complement position of V.

Ramchand and Svenonius (2002) capitalize on the extended structure in (60) in an analysis cast in Hale and Keyser’s (1993) framework, in which syntactic structures are assumed to directly reflect lexical semantics (*l*-syntax). The meaning of the verb is said to consist of several subevents, which are conceptualized as semantic primitives such as BE, BECOME, CAUSE. The complex event expressed by the verb and the particle consists of as many as three subevents, expressed in the *l*-syntactic decomposition structure in (61) (taken from Ramchand and Svenonius 2002: 392).

\[
(61) \quad \text{(causing subevent)} > [\text{process subevent} > \text{(result state)}] \\
\]

The structure in (62) demonstrates this complex verbal structure with a causing subevent, lexicalized by $v$, a process subevent, lexicalized by V, and an optional result state R. Note that this syntactic structure directly reflects the LCS posited for resultatives in (51) above.

\[
(62) 
\]
The argument in Spec\(vP\) is interpreted as the initiator (AGENT), the DP in Spec\(VP\) is interpreted as the UNDERGOER, and the DP in Spec\(RP\) is the HOLDER of the result state (apparently identical in reference to the UNDERGOER). The part of the structure labelled \(RP\) can be interpreted as a SC structure (cf. PredP in Svenonius 1996, \(pP\) in Svenonius 2007): the VPC object (the Figure) is base-generated in the specifier of the (functional) projection \(RP\) above \(PrtP\); this low position is required because it allows the particle to move across the object to \(R\) in order to derive the particle order. The predicate order is derived by moving the object to Spec\(RP\), while the particle remains in situ. The trigger for this movement is feature-based: \(R\)’s features require checking. The structure reflects the semantics of the complex event, and both orders are derived. Their optionality is accounted for by the assumption that there are two ways in which \(R\)’s features can be checked: movement of the object to Spec\(RP\), with the particle staying in situ (particle order), and movement of the particle to \(R\), with the object staying in situ (predicate order).

A similar analysis is offered by Svenonius (2007) but it identifies \(RP\) as \(pP\), analogous to \(v\) above \(VP\), which reflects earlier attempts to investigate particles as intransitive, unaccusative or ergative Ps as discussed in section 2.5.4.1 above. The Figure, the external argument of the particle, remains base-generated in the specifier of \(pP\) (as with \(RP\) in Ramchand and Svenonius 2002). McIntyre (2004) proposes a more simplified structure, again in the SC mould, with the particle as a predicate whose argument is generated in a functional projection (Change\(P\)) on top of the particle projection.

In this conflation structure, the complex event semantics consisting of an activity and a result, is converted to syntactic projections. The projection INITP corresponds to \(vP\) in other VP-shell type analyses and introduces the INITIATOR (compare AGENT). The head Change of the Change\(P\) projection mediates a
predication relation between its PP complement and SpecChangeP. This struc-
ture also accounts for resultative APs by replacing PP in the structure in (63) 
with AP. Non-resultative particles like away in examples like The novelist was 
typing away do not select an external argument and are therefore intransitive 
(see also McIntyre 2001a).

2.5.5 Optional projection of particles

Zeller (2001a, 2002) proposes that particles are hybrid between head and phrase, 
which putatively explains their paradoxical behaviour. The analysis is cast in 
the Bare Phrase Structure (BPS) theory of projection (Chomsky 1995). In BPS, 
lexical items show properties of minimal and maximal projections without 
intermediate bar-levels. The structure Zeller proposes for English VPCs is 
given in (64).

(64)

\[
V \\
V \quad \text{Prt}
\]

In this structure, the particle can either be interpreted as minimal (X) or 
maximal (XP). If the particle is a head, its minimal state, the topmost V 
represents a complex V and verb and particle form a complex verb. If the 
particle is a phrase, its maximal state, the topmost V represents a V’ and the 
verb and the particle are in a verb–complement relation. The V interpretation 
is made possible by a reanalysis of the structural relationship between verb and 
particle, provided that the particle is structurally adjacent to the verb:

(65) A head X and the head Y of its complement YP are structurally adjacent. 
(Zeller 2001a: 36)

An important element of Zeller’s analysis concerns the status of the complex 
V which is the result of reanalysis. He assumes that it is a quasi-morphological 
object, which, although a syntactic word (i.e. V), is not morphologically well-
formed as it does not obey the RHR (Williams 1981). Zeller further assumes that 
particles, unlike prepositions, lack functional structure and are complements 
of V. The contrast between particles and prepositions, then, is not due to extra 
structure above the particle but to extra structure above the PP. Just as lexical V 
requires a functional vP for structural Case assignment, prepositions require a 
functional projection called FP for structural Case assignment. Particles, with 
their defocused Grounds, do not have a complement, and have no structural 
Case to assign, which is reflected in the structure by the absence of a functional 
projection, as in (66), from Zeller (2001a: 284).
Zeller (2001a: 127) notes a correspondence between the presence of functional structure and referentiality. The fact that particles are non-functional implies that they are non-referential: the use of a VPC focuses on the activity it denotes and does not signal the unexpressed reference object in the context (p. 139). The same applies to adjectival particles in German, which is illustrated in (67) (from p. 147).

(67) Peter hat krank ge-feiert.
    Peter has sick pref-celebrated
    ‘Peter played hooky.’

The adjectival particle *krank* ‘sick’ is non-referential and thus has no functional structure. This is in contrast to resultative constructions, in which a Theme argument gives the adjective a referential interpretation, (68) (Zeller 2001a: 147).

(68) Peter hat seine Nachbarn krank ge-feiert.
    Peter has his neighbours sick pref-celebrated
    ‘Peter had so many parties that his neighbours finally became sick.’

The addition of the internal argument *seine Nachbarn* ‘his neighbours’ yields a resultative interpretation. The referentiality of resultatives leads Zeller to propose that resultative constructions, unlike adjectival particles (cf. (68)), have functional structure. In terms of our claim that particles are grammaticalized predicates, such an analysis captures the grammaticalization process: the development from a predicate to a particle is accompanied by loss of structure, and by an XP becoming an X. However, this solution does lead to a new problem: VPCs often have a resultative interpretation (semantically they result in an endstate W in terms of the LCS in (51), albeit a very abstract W), and are therefore referential, which means they should have functional structure. It may be preferable to capitalize on the degree of abstraction involved in the meaning of the predicate, which is shared by both *krank* in (67) and particles in VPCs.
The paradox of particle verbs

The absence of functional structure in Zeller’s analysis ensures that verb and particle are structurally adjacent: (69) (from Zeller 2001a: 36, 148) is repeated from (65) for convenience.

(69) A head X and the head Y of its complement YP are structurally adjacent.

This local relation between the verb and the particle, both lexical heads, distinguishes VPCs from other verb–complement structures, which involve structural adjacency between a lexical head (the verb) and a functional head (the head of the complement). The structural adjacency between verb and particle expresses their paradoxical nature. They are not words, but at the same time their relation is more local than that of elements forming phrases (e.g. verb and complement forming a VP). The verb and the particle are interpreted as a verb–complement structure when the maximal status of the particle is emphasized, (70a), and as a compound verb when its minimal status is highlighted, (70b).

(70) a. VP P V P b. V P

V PP V

Note that verb and particle are structurally adjacent in both structures, which allows verb and particle to be reanalysed as a morphological construct, explaining the morphological behaviour of particle verbs. The reanalysis is essentially the same in English and German (and Dutch), although it is more restricted in German (and Dutch), e.g. to V-raising contexts only (see the discussion of particle and predicate orders in section 2.4). In English, both orders are available in all contexts (as we saw in section 2.4), where the particle order is accounted for by combining the verb (e.g. drink in (66)) first with the reanalysed particle and then moving it to v. From our perspective, the structural option of reanalysis allows the reanalysed verb and particle to be the input to word formation processes, with the violation of the RHR explained as a leftover from the original order before reanalysis, V-P, an order that is not changed in this operation (as it is only the structure of P itself that changes). Note, however, that here too, the trigger of the reanalysis operation is problematic: it is not clear what it is that determines whether the particle is interpreted as minimal or as maximal. The syntax simply makes the two orders available.

2.6 The role of Information Structure in English

Although assuming one order as default and deriving the other order from it by a syntactic operation makes sense for reasons of economy, the arguments for or
against taking a particular order as default appear to be as evenly balanced as the arguments for or against the particle being a head or a phrase, as discussed earlier. Dehé (2002) argues for the particle order as the underlying order in the case of English for reasons of frequency: the particle order is the most frequent of the two, both in corpus studies and in experimental settings.7

Frequency is in all likelihood an unreliable guide to underlying syntax because surface word order represents the interaction of syntax and Information Structure. The relative autonomy of these two linguistic levels is demonstrated by the workings of language change. The neogrammarians have shown that phonological change is blind to the disruption it causes to other levels, notably the morphology, of a language, and this blindness is straightforwardly explained by the assumption that the various linguistic levels operate autonomously, interacting by means of interfaces rather than by direct access to each other’s content. Syntax and Information Structure show similar blindness in language change: a change in English syntax, i.e. the loss of V2 in the fifteenth century, compromised the level of Information Structure to such an extent that repair structures arose in early Modern English (eModE) in the form of new clefts and new passive structures (even structures that are typologically very marked, such as passivized datives, prepositional passives, passive Exceptional Case-Marking (ECM) constructions with to-infinitives; see Los 2009). The syntactic change apparently ran its course in spite of the havoc caused at the level of Information Structure, which suggests that Information Structure and syntax are independent levels.

If surface word order is influenced by extra-syntactic principles like Information Structure, it follows that underlying structure does not necessarily correlate with the most frequent word order (see also Fanselow 2003). Such conclusions argue against incorporating Information Structure into syntax by trying to explain word order optionality in terms of attraction by focus features to a local specifier (which is basically Dehé’s 2002 solution to the problem of the two orders).

It is clear from Dehé (2002) and Biber et al. (1999: 933) that the two orders in English are triggered by considerations of focus rather than endweight: if the object is in focus, we get the particle order, which ensures that the object ends up in end-focused position; if the particle is in focus, we get the predicate order which ensures that the particle ends up in end-focused position. The high frequency of the particle order, then, is due to considerations of Information Structure: objects are more likely to be new information than particles. As pronouns encode old information by definition, they require the predicate order obligatorily; but they can become acceptable in the particle order as focused
objects if they receive special emphasis, as we saw in (32e) above. It is much less clear what determines particle and predicate order in Dutch: as the particle is closely tied to the verbal cluster in both orders, Information Structure appears to play a far less prominent role. This is reflected in the literature by the fact that the analyses primarily focus on English (witness the analyses discussed in 2.5 above), the language that presents the greatest challenge to an account for particle and predicate orders. It is also reflected in the present study in that the chapters on English inevitably primarily focus on the word order variation whereas the chapters on Dutch focus on the different sources for SCVs in that language.

If the trigger for the different word orders must be sought at the level of Information Structure, and Information Structure is not an integral part of syntax, this means that syntactic analyses (like those discussed in section 2.5) need not incorporate this trigger. It is enough to show that the syntax makes both structures available, with plausible syntactic triggers for movement (Case or other feature-checking).

2.7 Conclusion and outlook

In the chapters that follow, we will further motivate an account in which the grammaticalized particle in a VPC is best analysed as an optionally projecting word (a head rather than a phrase), a natural outcome of a grammaticalization process in which items are analysed as heads by default in language acquisition; a phrasal analysis will only arise if forced by the input. It is therefore interesting that acquisition studies in both languages show that the first particles to emerge in acquisition are used by learners as independent predicates without verbs, indicating that there are apparently clues in the child’s input that force a predicate (i.e. phrasal) reading rather than an analysis in which such particles are an integral part of a complex verb (see the discussion in section 2.3 above).

For Dutch, the particle’s status as word allows it to be separated from the verb by V2 and in V-raising (as in (36) above), which means that no further mechanisms are required to account for the facts; V-raising in the Dutch subclause, where particle and verb may be separated by I-elements such as auxiliaries or by verbal markers like participial ge- or infinitival te ‘to’ will be discussed in greater detail in chapter 7. There is still a phrasal analysis available for particles that appear as syntactic predicates, independent of the accompanying verbs (such as af ‘finished’ in het huiswerk is af ‘the homework is finished’, see (16a) above). The two different analyses for af (phrasal for the predicate as in (16a), and head for the particle) reflect the particle’s grammaticalization trajectory.
The chapters on Dutch will focus on the fact that, unlike in English, there are a number of constructions in that language which are not historically derived from syntactic predicates but from other syntactic sources. Nevertheless, they fully participate in the synchronic syntax of the Dutch SCV, and will further motivate a hitherto unexplored grammaticalization path from SCV to Inseparable Complex Verb (ICV), leading to the new ICV prefixes door, over and om. The fact that these patterns (both SCV and ICV) grammaticalized in Dutch, but not in English, is a result of the fact that Dutch historically maintained its SOV order, so that the particle was always immediately left-adjacent to the verb, which facilitated reanalysis.

For English, we will argue that particles must be analysed as optionally projecting, i.e. as ambiguous: heads in some cases, and phrases in others. There is ample evidence for the same grammaticalization trajectory: particles appear to be phrases rather than heads in OE, and even though they are very dominantly preverbal, there is no clear evidence for non-projection or incorporation. Furthermore, their meaning is quite generally transparent and literal, which supports the idea that they are less grammaticalized than in later historical stages of English. The evidence for phrasal status decreases in Middle English (ME): the particle was increasingly found in a position right-adjacent to the verb (corresponding to the particle order in PDE, with corresponding head status of the particle). On the other hand, as the option of the predicate order in postverbal position was maintained in an increasingly SVO syntax, this called for maintaining the option of phrasal projection. The hybrid nature of the particle in all contexts from ME onward calls for a unified analysis of particles at the level of phrase structure; this is achieved by motivating a lexical decomposition analysis (chapter 5).

The very different outcomes in both languages with respect to the relative position of particle, verb and object are argued to be due to the loss, in English, of the same mechanism that was responsible for the occurrence of SOV orders in earlier English (pied piping of the VP), as a result of which preverbal particle orders were lost. Although particles were increasingly analysed as heads, the option of projecting a phrase was maintained as it was critical for the analysis of the predicate order.
3 The synchronic analysis of Dutch SCVs

3.1 Introduction

This chapter will first further motivate our analysis of particles in SCVs as optionally projecting words, and this analysis will be brought to bear on a range of SCVs in Dutch, including SCVs in which the non-verbal part is not a particle. The empirical focus of the chapter will thus be on Dutch. The SCV system in Dutch presents a picture that is strikingly different from its English counterpart. The most striking of these differences is the wider semantic range of the particles featuring in SCVs: whereas the particle in an English SCV is almost exclusively resultative, or clearly related to a resultative meaning, Dutch particles may be resultative, but they may also be modifiers, relators, or have an Aktionsart meaning. This wider range of Dutch and German particle functions reveals that in these languages, the mapping between syntax and semantics is more complex than in English: although there is a wider range of semantic functions for particles, all SCVs follow the same syntactic pattern: they are without exception embedded in an SOV grammar in which they are on the immediate left of the clause-final verb. They are separated from the verb only by a purely syntactic process that applies to main clauses: Verb Second (V2), in contrast to English where separation is a matter of Information Structure (as discussed in section 2.6).

A further difference between English on the one hand and Dutch and German on the other hand is the presence, in Dutch and German, of a productive system of Inseparable Complex Verbs (ICVs), and there is, consequently, some evidence of (lexical) blocking. ICVs are discussed in more detail in chapter 7.

We will demonstrate in this chapter that it is the status of the particle that is responsible for the singular behaviour of the SCV: the special status of the particle as an optionally projecting word in combination with optional incorporation of the particle into a syntactic verbal compound explains the ambiguous phrasal status of the SCV (word or phrase) in the syntax, and it is the semantics of the particle that accounts for the SCV’s argument structure.
and lexical-aspectual properties. The particle represents a fixed slot in a partly lexicalized phrase, and it is this that enables it to productively form families of SCVs with meanings that are at once compositional and conventionalized.

The chapter is organized as follows: section 3.2 addresses the evidence for the status of particles as optionally projecting words. Section 3.3 discusses in detail the semantic structure of SCVs, distinguishing the various semantic functions of particles, and concluding with the observation that this wider range of semantic functions is nevertheless mapped onto one unified syntax: that presented in section 3.2. Section 3.4 considers the implications of our analysis of Dutch particles for the architecture of grammar. Section 3.5 summarizes and concludes the chapter.

### 3.2 Particles as non-projecting words

We will now first set out our analysis of particles as optionally projecting words. We draw together the observations and discussion presented so far into the proposal that particles are optionally projecting words, further embedding it in a broader dataset from Dutch. The key ingredients of the proposal are:

1. Particles are words that are optionally projecting. If particles do not project a phrase, they have the status of X⁰ (bare head); if they project a phrase (XP), they can be modified and topicalized.
2. Many, indeed most, Dutch particles are standardly non-projecting, that is, they never project a full phrase since they can never be modified or topicalized.

Neeleman (1994, 2002) was the first to treat particles as elements which optionally project (as discussed in chapter 2). Zeller’s (2001a, 2002) account in terms of optional projection for particles is couched in Bare Phrase Structure (BPS) theory (Chomsky 1995); BPS theory aims to simplify phrase structure and dispenses of bar-levels, in the spirit of the Minimalist Program. The BPS view on structural representation entails that an element can be simultaneously minimal and maximal: it is minimal when it does not project any further, but then is also maximal for the very same reason. Toivonen (2002, 2003) provides an account of Swedish particles in terms of Lexical Functional Grammar (LFG), in which they are treated as words which are lexically listed as projecting, non-projecting or both. Toivonen (2003: 63) adopts a phrase structure rule which postulates that non-projecting particles obligatorily head-adjoin to V.

We will further develop the two key elements of the proposal for Dutch in sections 3.2.1 and 3.2.2, later extending the discussion beyond the SCVs
The synchronic analysis of Dutch SCVs

featuring particles, and showing that their special morphosyntactic properties fan out into related constructions as well. This will motivate two additions to (1), which are given in (2):

(2) a. A restricted set of nouns, adjectives and adverbs are optionally projecting. If they do not project a phrase, they form an SCV with a verb.
   b. Non-projecting words optionally incorporate into a syntactic verbal compound of the form \( [\text{vo} \ X^0 \ \text{V}^0] \).

We will assume that the default option is that lexical heads do not project. This follows from an economy principle that is variously motivated in the literature (e.g. Bresnan 2001; van Gelderen 2004; Speas 2006). We formulate this as the Structural Economy Principle in (3), adapted from Elenbaas (2007):

(3) **Structural Economy Principle**
    A lexical head does not project, unless it is required to do so by syntactic factors.

The Structural Economy Principle predicts that particles only project a phrase if robust evidence for it is available to the language user/learner. In the case of particles, this may be syntactic evidence that the particle is moved by topicalization (only full phrases can be moved) or when it is modified (requiring projection of phrase to host the modifier).

An example of a word that is optionally projecting is the particle *af* as in *af-maken* ‘to finish’. It can function as part of an SCV as discussed in chapter 2. However, it can also be modified and topicalized, as illustrated by the following examples:

(4) a. Jan *maakte* zijn huiswerk helemaal *af*.
    ‘John finished his homework completely.’
   b. *Helemaal* *af* is het huiswerk nog niet.
    ‘The homework is not quite finished yet.’
   c. *Af maakte* Jan zijn huiswerk nog niet.
    ‘John has not quite finished his homework yet.’

A similar pattern can be observed for the word *op* in its literal meaning ‘gone’. In its non-literal meaning, however, the word *op* as in the particle verb *op-bellen* ‘to phone up’ cannot be modified or topicalized, as shown in (5):

(5) a. Jan *maakte* zijn huiswerk helemaal *af*.
    ‘John finished his homework completely.’
   b. *Helemaal* *af* is het huiswerk nog niet.
    ‘The homework is not quite finished yet.’
   c. *Af maakte* Jan zijn huiswerk nog niet.
    ‘John has not quite finished his homework yet.’
(5)  a. "Hans belde zijn moeder helemaal op.
   Hans phoned his mother completely up
   ‘Hans phoned his mother completely.’

   b. ‘Op belde Hans zijn moeder niet.
   up phoned Hans his mother not
   ‘Hans did not phone his mother.’

We will treat this use of *op* as non-projecting.

3.2.1 When do particles not project? Word-like properties of Dutch SCVs
Dutch particles show extensive word-like behaviour, although in each case there is also some evidence that may suggest that the phrasal level also plays a role, indicating the complex interrelation between morphology and syntax.

The first piece of evidence for word-like behaviour is that SCVs with particles can be input to word formation processes such as compounding and derivation, as in (6).

(6)  a. SCV: voor-lez-en
    for-read-inf
    ‘to read to someone, to read out (a notice)’

   b. compound: voor-lees-boek
    for-read-book
    ‘a book to read to someone’

   c. derived N: voor-lez-er
    for-read-er
    ‘one who reads to someone else’

   d. derived A: voor-lees-baar
    for-read-able
    ‘being suited to be read to someone’

If we assume a No-Phrase Constraint such as that in Botha (1984), which states that only words or affixes, and not phrases, can feed word formation processes, this would imply that SCVs, being able to do so, are words. It should be noted, however, that this is controversial; as Booij (2002a: 209) points out, syntactic constituents may also feed compounding and derivation, witness the examples in (7) (the adjectival and numeral inflections of the word-internal phrases, indicating their phrasal status, are in italics).

(7)  a. *compounding*
    [oude-mannen]huis ‘old men’s home’,
    [jonge-ondernemers]verbond ‘young entrepreneurs’ union’,
    [kleine-meisjes]fiets ‘little girls’ bike, a bike to be used by little girls’
The synchronic analysis of Dutch SCVs

b. derivation

[vierde-klass]er ‘fourth former, pupil of the fourth form’,
[achtste-groep]er ‘eighth grouper, pupil of the eighth form’,
[jonge-ondernemers]achtig ‘young entrepreneurs-like’,
[kleine-meisjes]achtig ‘little girls-like’

The examples in (7) are not exceptional; there is some productivity in forming compounds and derivations with phrasal input. There is apparently no absolute No-Phrase Constraint in the sense that phrases can never feed compounding and derivation. This means that the fact that SCVs may feed word formation processes does not constitute conclusive evidence for their word status. Note, however, that compounds and derivations like the ones in (7) have a specific semantic property: when used in compounds or derived words, phrases lose their referential properties and have a non-referential, classificatory generic function. The phrase kleine meisjes ‘little girls’ in (7a–b), for instance, does not refer to specific little girls, but to the class of little girls in general: kleine-meisjes-fiets ‘little girls’ bike, a bike to be used by little girls’, kleine-meisjes-achtig ‘little girl-like, typical of little girls’.

A second word-like property of SCVs is that they may have a non-verbal base, such as the SCVs op-hopen ‘lit. up-pile, to pile up’ and op-hogen ‘lit. up-high, to heighten, to raise’, which contain a nominal and an adjectival base respectively (the verbs *hopen ‘to pile’ and *hogen ‘to heighten’ do not exist). Combining a particle with a noun or adjective may thus bring about category change. As category change is generally assumed to be due to morphological operations, this property of SCVs has once again been claimed to be evidence for their word status. The category change in SCVs differs from that in prefixed verbs, however, in that the erstwhile adjective shows up with verbal inflection, i.e. as a verb in its own right, even when separated from the particle by V2 (Booij 2002a: 211). This is illustrated in (8): (8a–b) feature the SCVs op-hopen ‘pile up’ and op-hogen ‘raise’; as expected, particle and verb are separable by V2. Sentence (8c) has the prefixed verb ver-groten ‘lit. pref-big, to enlarge, to increase’, which is not separable; prefix+V move together to satisfy V2:

(8) a. De problemen hopen zich op.
   the problems pile refl up
   ‘The problems pile up.’

b. De fabrikant hoog-de de prijzen op.
   the manufacturer high-ed the prices up
   ‘The manufacturer raised the prices.’
c. De atleet ver-groot-te zijn voorsprong.
   the athlete pref-big-ed his lead
   ‘The athlete increased his lead.’

Hopen and hoogde in (8a–b) have verbal inflections and show up in second position in main clauses, a position exclusive to finite verbs. This movement obligatorily separates the verb from any non-verbal parts of a complex predicate. It follows from (8a–b) that there is not only a verbal node dominating the combination of particle and the nominal/adjectival base in denominal/deadjectival SCVs, but also the base itself appears to have become verbal. This is indicated in (9a). Denominal/deadjectival SCVs differ from denominal/deadjectival prefixed verbs in this respect; compare (8c)–(9b).

(9)  
   a. SCV: [v op-[V [N hoop]]] ‘lit. up-pile, to pile up’
       [v op-[V [A hoog]]] ‘lit. up-high, to heighten’
   b. ICV: [v ver-[A groot]] ‘lit. pref-big, to enlarge’

Booij, then, claims that these nouns and adjectives represent conversions, and this analysis is further supported by the fact that the usual restrictions on conversion apply: they cannot have complex words as input, for example, witness the ungrammaticality of combinations like *op-vogelkooien ‘lit. up-birdcage, to put into a birdcage’ versus the grammatical op-kooien ‘lit. up-cage, to put into a cage’ (Booij 1990). Booij (2002a: 215, 2002b) adopts a constructional idiom analysis for SCVs according to which nouns and adjectives are converted into verbs when they are inserted into the appropriate slot in an SCV template (see section 3.3.3). The conversion is then dependent on the occurrence of these nouns and adjectives in SCVs with specific particles (which is plausible since conversion of adjectives into verbs is not productive in Dutch and not all particles are productively used in these constructions) and is assumed not to take place before the converted verb is combined with the particle, but simultaneously with the combination of these two elements into an SCV.

The fact that the category change in SCVs with non-verbal bases appears to be different from that in prefixed verbs with non-verbal bases, means that the category-changing data may not be taken as conclusive evidence for the claim that SCVs are similar to prefixed verbs, that is, for the claim that SCVs are words.5

A third word-like property of SCVs is that the addition of a particle may change the syntactic valency of the verb: a particle may transitivize a verbal base, as in (10a); again, much like the prefix of an ICV, cf. be- in (10b).
The synchronic analysis of Dutch SCVs

(10) a. **SCV**
    de schoenen *in-lopen* (‘de schoenen) *lopen* (the shoes) walk
    the shoes in-walk ‘to walk (the shoes)’

    b. **ICV**
    de straat *be-wandelen* (‘de straat) *wandelen* (the street) walk
    the street Pref-walk ‘to walk the street’

According to the Projection Principle (Chomsky 1981), changes in syntactic valency are due to morphological operations, given that syntactic structure is a projection of lexical properties. As a result, the valency change found in SCVs has been taken as evidence for their morphological status. We saw in section 2.3, however, that phrasal combinations may also include objects that are not licensed by the verbal base (so-called unselected objects). The presence of such objects in SCVs therefore suggest that it is the particle that licenses the object and is thus involved in syntactic selection.

A final word-like property of SCVs is that their meanings generally do not follow compositionally from the combined meanings that the particle and the verb have in isolation: SCV meanings are conventionalized. As syntactic combinations are generally assumed to be transparent, this property has been claimed to speak against a syntactic analysis of SCVs. We argued in section 2.2, however, that even fairly abstract particles like *op* ‘up’ as in (8) nevertheless make a distinct semantic contribution to the SCV as a whole, which was described as ‘physically/cognitively/perceptually accessible’:

(11) a. de boeken **op-zoeken**
    the books up-search
    ‘to look up the books’

    b. de informatie **op-vragen**
    the information up-ask
    ‘to ask for the information’

    c. de docent **op-bellen**
    the teacher up-ring
    ‘to call up the teacher’

    d. de chirurg **op-piepen**
    the surgeon up-bleep
    ‘to bleep the surgeon’

The meaning of *de boeken opzoeken*, for example, can be paraphrased as ‘to cause the books to become accessible by searching’. In concrete instantiations of SCVs with *op* ‘accessible’, the meaning ‘accessible’ appears to receive
a more specific interpretation on the basis of the information provided by the combination of the verb and its arguments (e.g. ‘available’ in (11a–b), which have inanimate direct object referents, and ‘contacted’ in (11c–d), which have animate direct object referents). We saw in section 2.2 that although the meaning of *op* is certainly construction-specific and unavailable outside the SCV, this feature is in fact shared by unequivocal syntactic predicates in complex predicates, and not exclusive to morphological units. An example of such a syntactic combination is *Sam joked his way into the meeting*, in which the noun *way* has a metaphorical meaning that it only expresses in this specific construction (Goldberg 1995: chapter 9; Jackendoff 1990: 211–23).

Such construction-specific meanings have been linked to lexicalization: constructions like *Sam joked his way into the meeting* are assumed to be formed on the basis of a VP template like *[to V one’s way PP]*, containing both fixed slots and open slots and having specific semantic properties, thus representing a partly lexicalized phrase (see Booij 2002b and Jackendoff 2002: chapter 6 for further examples of partly lexicalized phrases). Thus, it appears that parts of (lexicalized) phrases may have conventionalized, construction-specific meanings, and this in turn means that the property of having such meanings is not restricted to morphological units (words). The fact, then, that SCVs have conventionalized meanings does not constitute conclusive evidence for their word status.

The conventionalized meaning of *op* ‘accessible’ is present in a whole class of SCVs (cf. (11)), and the same holds for the meanings of most other particles. The particle *in* with the meaning ‘in a certain, desired shape/state’, for instance, is present in SCVs such as *de schoenen in-lopen* ‘lit. the shoes in-walk, to break in the shoes’, *de auto in-rijden* ‘lit. the car in-drive, to run in the car’, and *je in-lezen* ‘lit. oneself in-read, to read up (on)’. Both particle and verb contribute to the meaning of these SCVs. This means that in addition to being conventionalized these SCVs show compositionality. We will show in section 3.3 that conventionalization and compositionality are not mutually exclusive.

The example in (11d), *de chirurg op-piepen* ‘to bleep the surgeon’, illustrates that SCV classes can be productively extended by forming new SCVs in which the particle expresses the same meaning. Indeed, SCV formation is very productive. SCVs, then, have conventionalized properties, which suggests that they are lexicalized, but at the same time show compositionality and even productivity.

To sum up, the word-like properties of Dutch SCVs do not constitute conclusive evidence for a word analysis of SCVs, since these properties can also be found in phrases; with respect to conventionalization, this is true for (partly)
lexicalized phrases. Dutch SCVs, then, could be analysed as (lexicalized) phrases.

3.2.2 When do particles project? Phrase-like properties of Dutch particles

In this section, we discuss the phrase-like properties of Dutch particles. The first phrase-like property of Dutch particles is that they can be separated from the verb due to V2, by which the finite verb is fronted in main clauses, obligatorily stranding the particle in clause-final position. By way of illustration, some examples from chapter 1 are repeated here for convenience:

(12)  

<table>
<thead>
<tr>
<th>Main Clause</th>
<th>Subclause</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Hans belde zijn moeder op.</td>
<td>. . . Hans zijn moeder op-belde</td>
</tr>
<tr>
<td>Hans phoned his mother up</td>
<td>Hans his mother up-phoned</td>
</tr>
<tr>
<td>‘Hans phoned his mother (up).’</td>
<td></td>
</tr>
<tr>
<td>b. De fietser stortte neer.</td>
<td>. . . de fietser neer-stortte</td>
</tr>
<tr>
<td>the cyclist hurtled down</td>
<td>the cyclist down-hurtled</td>
</tr>
<tr>
<td>‘The cyclist hurtled down.’</td>
<td></td>
</tr>
</tbody>
</table>

The fact that in main clauses as in (12), the particle is an independent unit in clause-final position may be taken as evidence for phrasal status. Note, however, that if we assume that lexical heads may be minimal and maximal at the same time, as discussed above, this is unnecessary.

Particles in Dutch can furthermore be optionally separated from the verb in subclauses with V-raising (with auxiliaries, participial ge- or infinitival te ‘to’ optionally intervening between particle and verb). This, too, is repeated here for convenience:

(13)  

<table>
<thead>
<tr>
<th>Main Clause</th>
<th>Subclause</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. dat hij urenlang heeft geprobeerd zijn moeder op te bellen</td>
<td>that he for hours has tried his mother up to call</td>
</tr>
<tr>
<td>‘that he tried for hours to reach his mother by phone’</td>
<td></td>
</tr>
<tr>
<td>b. dat hij zijn moeder gisteravond op-ge-beld heeft</td>
<td>that he his mother last night up-PREF-called has</td>
</tr>
<tr>
<td>‘that he called (up) his mother last night’</td>
<td></td>
</tr>
</tbody>
</table>

The facts in (13) may again suggest that the particle is an independent constituent: morphosyntactic elements such as the infinitival marker te ‘to’ and the perfective prefix ge- intervene between verb and particle.

There are also some syntactic contexts, however, in which it is clear that particles cannot be treated as phrases. We can see this in the contrast between SCVs with a particle and other resultative predicates. We saw in the discussion of the range of phrasal analyses of SCVs in the previous chapter that many of these analyses treat SCV particles as resultative phrases (e.g. Bennis 1991;
den Dikken 1995; Hoekstra, Lansu and Westerduin 1987; Müller 2002; Ramchand and Svenonius 2002). In these analyses, it is claimed that particles are semantically and syntactically similar to resultative secondary predicates such as *oranje* ‘orange’ in (14).

(14)  
a. Jan verft zijn fiets *oranje*.  
John paints his bike orange  
‘John paints his bike orange.’

b. De fiets is *oranje*.  
the bike is orange  
‘It is an orange bike.’

*Oranje* in (14a) specifies the result of the painting event that affects the referent of the direct object *zijn fiets* ‘his bike’: as a result of John’s painting, the bike is orange. This is expressed in the copula construction in (14b).

Parallels such as the one in (14) between resultative constructions and SCVs have inspired resultative (SC) analyses for SCVs. Some particles can indeed occur in the same syntactic positions as resultative predicates, but have, in addition, some special positions of their own from which unequivocally syntactic resultative phrases are barred: unlike other types of resultative secondary predicates, they may be part of the clause-final verb cluster, as shown by the contrasting examples (15a–16a) below; and they may be immediately preverbal in the progressive *aan het*-INF construction, as the contrast between (15b–16b) shows:

(15)  

a. dat Jan de informatie {wilde *op-zoeken/op wilde zoeken}  
that John the information {wanted up-search/up wanted search}  
‘that John wanted to look up the information’

b. Jan is de informatie {aan het *op-zoeken/op aan het zoeken}.  
John is the information {at the up-search/up at the search}  
‘John is looking up the information.’

(16)  

*Resultative phrase*

a. dat Jan zijn fiets {∗wilde *oranje verven/oranje wilde verven}  
that John his bike {wanted orange paint/orange wanted paint}  
‘that John wanted to paint his bike orange’

b. Jan is zijn fiets {∗aan het *oranje verven/oranje aan het verven}.  
John is his bike {at the orange paint/orange at the paint}  
‘John is painting his bike orange.’

The two positions in (15) are available for all particles (see chapter 4) and are not available for resultative phrases, or indeed any phrasal projections in
The synchronic analysis of Dutch SCVs

(standard) Dutch; the examples in (17) illustrate that NPs like *Marie* ‘Mary’ and PPs like *aan Marie* ‘to Mary’ are banned from this position, too.

(17)  
   a. dat Jan *{Marie wilde bellen}/* wilde *Marie bellen*  
        that John *{Marie wanted ring}/* wanted Marie ring  
        ‘that John wanted to phone Mary’
   b. dat Jan het boek *{aan Marie wilde geven}/* wilde *aan Marie geven*  
        that John the book *{to Mary wanted give}/* wanted to Mary give  
        ‘that John wanted to give the book to Mary’

When they are part of the verb cluster as in (15), particles resist modification, which is unexpected on the assumption that they are XPs, as shown in (18):

(18)  
   a. dat Jan zijn huiswerk heeft (‘helemaal) af-*gemaakt*  
        that John his homework has completely off-made  
        ‘that John has finished his homework completely’
   b. dat Jan zijn huiswerk morgen zal (‘helemaal) af-*maken*  
        that John his homework tomorrow will completely off-make  
        ‘that John will finish his homework completely tomorrow’
   c. Jan zou zijn huiswerk kunnen (‘helemaal) af-*maken*.  
        John would his homework can completely off-make  
        ‘John would be able to finish his homework completely.’

Modification is possible for some particles in the preverbal position. Consider *af* ‘off’ and *op* ‘up’ in their literal and telic sense as in (19):

(19)  
   a. Jan heeft zijn huiswerk helemaal *af-*ge*-maakt.  
        John has his homework completely off-*pref*-made  
        ‘John finished his homework completely.’
   b. Jan heeft zijn eten helemaal *op-*ge*-eten.  
        John has his food completely up-*pref*-eaten  
        ‘John finished his food completely.’

The contrast between (18) and (19) shows that in preverbal position, particles like *af* and *op* can be modified, suggesting a phrasal analysis, but when they are part of the verbal cluster as in (18), they must be bare heads. This contrast thus provides clear evidence for optional projection: modification in preverbal position forces projection, while the ungrammaticality of modification when the particle is in the verbal cluster requires non-projection.

The evidence discussed so far also shows that the projection option is severely limited in Dutch: the two particles *af* and *op* as in (19) and a very few others (e.g. some uses of *uit* ‘out’) can be modified when used in their literal meaning, demonstrating that in this use, they project a phrase. It is this same subset of particles that can be topicalized, and be used in a copula paraphrase, as shown
in (20). This possibility, too, is restricted to these particles in their literal sense; it is not available for other readings of the same particles, as shown by (21):

(20) a. Maar af heeft Jan het boek niet ge-maakt.
   but off has John the book not Pref-made
   ‘John didn’t quite finish the book.’

   b. Het boek is af.
   the book is off
   ‘The book is finished.’

   c. Maar op heeft Jan zijn eten niet ge-geten.
   but up has John his food not Pref-eaten
   ‘John didn’t quite finish his food.’

   d. Het eten is op.
   the food is off
   ‘The food is gone.’

   but up has John the word not Pref-searched
   ‘But John did not look up the word.’

   b. *Het woord is op.
   the word is up
   ‘The word is up’

   c. *Maar af heeft Jan de spullen niet ge-leverd.
   but off has John the goods not Pref-delivered
   ‘John didn’t deliver the goods.’

   d. De spullen zijn af.
   the goods are off
   ‘The goods are off.’

The conclusion thus is that Dutch particles can project a phrase, but only a few particles do so and only in their literal sense. The default option of non-projection is very widely used in Dutch.

3.2.2.1 Optional projection beyond SCVs with particles
We now turn to a brief discussion of further cases of optional projection in Dutch, extending the category SCV in Dutch to include SCVs with adjectives and nouns, and addressing the point in (2a) above, which is repeated here for convenience:

(2) a. A restricted set of nouns, adjectives and adverbs are optionally projecting. If they do not project a phrase, they form an SCV with a verb.

We will first discuss SCVs consisting of a verb and an adjective, illustrated in in (22):
The examples in (22) were identified in chapter 2 as secondary predicates other than particles which nevertheless make use of all the syntactic options available to particles, and indeed this is why we would argue that, like particles, they are optionally projecting. It can easily be shown that the A+V combinations in (22) behave like particles. The examples in (23) are variations on the examples in (22a), showing that the adjective can be separated from the verb by V2 (23a); by the infinitive marker te ‘to’ (23b), and by the perfective prefix ge- (23c). Furthermore, it can form part of the verbal cluster (23d), and if it does, it resists modification. On the other hand, it can be modified when it is in preverbal position, as shown by (23e–f). Finally, it can feature in the progressive aan het-INF construction (23g).

(22)  
(a) schoon-maken ‘lit. clean-make, clean’  
(b) goed-keuren ‘lit. good-judge, approve’  
(c) vol-gooien ‘lit. full-throw, fill up’  
(d) los-maken ‘lit. loose-make, loosen’  
(e) leeg-scheppen ‘lit. empty-scoop, empty’  
(f) bloot-staan ‘lit. naked-stand, be exposed to’  
(g) vreemd-gaan ‘lit. foreign-go, have an extra-marital affair’

(23)  
(a) Leo maakte het huis schoon.  
Leo made the house clean  
‘Leo cleaned the house.’

(b) Leo probeert het huis schoon te maken.  
Leo tries the house clean to make  
‘Leo tries to clean the house.’

c. Leo heeft het huis schoon-ge-maakt.  
Leo has the house clean-pref-made  
‘Leo cleaned the house.’

d. Leo zei dat hij vandaag het huis wil schoon-maken.  
Leo said that he today the house wants clean-make  
‘Leo said he wants to clean the house today.’

e. Leo zei dat hij vandaag het huis (helemaal) wil (‘helemaal) schoon-maken.  
Leo make said that he today the house completely wants completely clean-make.  
‘Leo said he wants to clean the house completely today.’

f. Leo zei dat hij het huis vandaag helemaal schoon wil maken.  
Leo said that he the house today completely clean wants make  
‘Leo said he wants to clean the house completely today.’

g. Leo is het huis (schoon) aan het (schoon-)maken.  
Leo is the house clean at the clean-make  
‘Leo is cleaning the house.’
Particles as non-projecting words

The contrast showns up in particular with A+V combinations that are not SCVs, like (16) above with the A+V combination oranje verven ‘lit. orange paint, paint orange’, which cannot be part of the verb cluster, or precede aan het ‘at the’ in the progressive aan het-INF construction. We conclude from this that the option of non-projection is fully applicable to SCVs such as those in (23) as well.

A further and slightly different case is represented by SCVs consisting of a noun and a verb. These are exemplified by (24):

A further and slightly different case is represented by SCVs consisting of a noun and a verb. These are exemplified by (24):

\[(24)\]
\[
\begin{align*}
a. & \text{ adem-halen} & \text{‘lit. breath-take, to take breath’} \\
b. & \text{ deel-nemen} & \text{‘lit. part-take, to take part’} \\
c. & \text{ feest-vieren} & \text{‘lit. party-celebrate, to have a party’} \\
d. & \text{ kaart-lezen} & \text{‘lit. map-read, to read maps’} \\
e. & \text{ koffie-zetten} & \text{‘lit. coffee-make, to make coffee’} \\
f. & \text{ komedie-spelen} & \text{‘lit. comedy-play, to play-act’} \\
g. & \text{ ruzie-maken} & \text{‘lit. quarrel-make, to quarrel’}
\end{align*}
\]

The nominal objects in (24) can be part of an SCV as well: if we apply the above variations to (24a), they show that these N+V combinations behave in the same way as SCVs. The noun can form part of the verbal cluster (25a), and if it does, it resists modification. On the other hand, it can be modified when it is in preverbal position, as shown by (25b–c). Finally, it can feature in the progressive aan het-INF construction (25d).

\[(25)\]
\[
\begin{align*}
a. & \text{ Vera was zo verkouden dat ze niet goed kon adem-halen.} & \text{‘Vera had such a bad cold that she had trouble breathing.’} \\
b. & \text{ Vera was zo verkouden dat ze (diep) moest (‘diep) adem-halen.} & \text{‘Vera had such a bad cold that she had to breathe deeply.’} \\
c. & \text{ Vera was zo verkouden dat ze diep adem moest halen.} & \text{‘Vera had such a bad cold that she had to breathe deeply.’} \\
d. & \text{ Met Vera moet je niet praten, ze is (‘adem) aan het (adem-)halen.} & \text{‘Don’t talk to Vera, she’s too busy breathing.’}
\end{align*}
\]

If we contrast this with a verb and object combination that is not an SCV, such as eten halen ‘get food’, the results clearly show that the object eten ‘food’ cannot be part of the verb cluster, and cannot appear on the right of aan het ‘at the’ in the progressive aan het-INF construction. Here too, then, we conclude that the object is a non-projecting noun that is part of an SCV.
3.2.2.2 Optional incorporation

The SCVs with object nouns as discussed in section 3.2.2.1 raise an interesting problem. If we contrast them with their non-SCV counterparts, e.g. the SCV *adem-halen* ‘lit. breath-take, breathe’ vs. *eten halen* ‘get food’, this raises the question of what the structural distinction is between the SCV and the non-SCV. The assumption that in the SCV variant the noun does not project, does not in and of itself explain why the non-projecting variant can be part of the verb cluster, and the projecting variant cannot. In both cases, we are presumably dealing with a V that selects an object and projects a V'. The fact that the object noun in an SCV is a bare head may be a necessary condition for it to appear in the verb cluster or as part of the progressive *aan het*-INF construction, but given that it still features in the same syntactic structure as a phrasal noun, it remains unclear why the SCV variant can form part of the verb cluster and the other cannot. This suggests that the bond between a verb and a particle, adjective or noun that is incorporated in the verb cluster is structurally tighter than that between a verb and a non-V-raised particle, adjective or noun.

We will formulate this special bond here, following Booij (2010: chapter 4), as quasi-incorporation. Quasi-incorporation forms a syntactic compound, which is represented structurally as $[\text{V}_0 \text{ N}_0 \text{ V}_0]$: it consists of two zero-level categories which fully retain their syntactic properties, but which together behave as one word. They should not be confused with morphological compounds, which are lexically inserted as one word. Booij (2010) argues that the distinction between a regular verb–object combination and an SCV verb–object combination comes with a package of distinct properties, which are given in (26):

(26) a. regular syntax: $[\text{VP} [\text{NP} \ldots \text{N}_0 ] \text{ V}_0]$
   - N occurs before *aan het* in the *aan het*-INF construction;
   - N precedes the complex predicate created by raising of $\text{V}_0$;
   - N can be negated by the negative word *geen*;
   - N can be preceded by an adjectival modifier;
   - N can be stranded in root clauses with V in second position;
   - the past participle is formed by prefixing *ge-* to the stem of the V in $\text{V}_0$.

b. quasi-incorporation (syntactic compounding): $[\text{V}_0 \text{ N}_0 \text{ V}_0]$
   - N occurs after *aan het* in the *aan het*-INF construction;
   - N can be raised with V to form a higher clause complex predicate;
   - N can be preceded by the negative word *niet*;
   - N cannot be preceded by an adjectival modifier;
   - N cannot be stranded in root clauses with V in second position;
   - the past participle is formed by prefixing *ge-* to the stem of the V in $\text{V}_0$.
The idea that $N^0 V^0$ combinations can receive two structural interpretations (regular VP structure or syntactic compound) is also defended for Hindi by Mohanan (1995). Structure (26b) is a structure for non-projecting nouns, that is, nouns that do not project a phrase. The non-projecting nature of the quasi-incorporated nouns of Dutch is confirmed by the observation that they cannot be modified by adjectives. For instance, Dutch does not allow for quasi-compounds like *klassieke piano spelen* ‘to play classical piano’, in which the (inflected) adjective *klassieke* ‘classical’ modifies the noun *piano* (27b). Modification of the noun is possible, however, when the N-V sequence is interpreted as VP, even though it has the semantics of incorporation (27c):

\begin{align*}
(27) & \begin{align*}
& a. \ldots \text{dat Jan klassieke piano speelt.} \\
& \quad \text{that John classical piano plays} \\
& \quad \ldots \text{that John plays classical piano music.}' \\
& b. \text{Jan is } \text{	extit{aan het klassieke piano spel}-en.} \\
& \quad \text{John is at the classical piano play-INF} \\
& \quad \text{‘John is playing classical piano music.’} \\
& c. \text{Jan is klassieke piano } \text{	extit{aan het spel}-en.} \\
& \quad \text{John is classical piano at the play-INF} \\
& \quad \text{‘John is playing classical piano music.’}
\end{align*}
\end{align*}

We can extend this proposal to SCVs more generally. This means that SCVs may have the following syntactic structure:

\begin{align*}
(28) & \begin{align*}
[ V^0 X^0 V^0] & \text{ where } X^0 = P, \text{ Adv, A or N}
\end{align*}
\end{align*}

By assigning a $V^0$-node to SCVs, we represent their phrasal nature, and hence their syntactic separability. The left constituent is a single lexical category and does not project a phrase; it is a bare head. This correctly implies that the left constituent cannot be modified or topicalized. Assigning the same node $V^0$ also implies that the full $V^0$ including the non-verbal part can form part of the verb cluster or follow *aan het* ‘at the’ in the progressive *aan het-INF* construction. In the structure in (28), the verbal position is open and can in principle be filled by any verb. The non-verbal constituent, however, is specified. That is, there are at least as many different SCVs of this kind as there are words that can fill the left position (some particles may occur in more than one SCV because they are polysemous). It is important to realize that the quasi-incorporation expressed in (28) is optional: the non-verbal part of the SCV does not have to be part of the verb cluster or the *aan het-INF* construction. We will thus also have a structure in which an SCV forms a minimal phrase, a $V'$ as in (29):

\begin{align*}
(29) & \begin{align*}
[ V' X^0 V^0] & \text{ where } X^0 = P, \text{ Adv, A or N}
\end{align*}
\end{align*}
(29) reflects a structure in which the non-verbal part is non-projecting (e.g. a particle like *op* in *op-bellen* ‘phone (up)’ as discussed above in its non-literal sense, which cannot be modified or topicalized, whereas at the same time it does not form part of the verb cluster or the *aan het*-INF construction).

There are thus three distinct structural patterns for SCVs, reflecting different levels of syntactic dependence:

\[
\begin{align*}
(30) & \quad a. \ [V^* XP V^0] \text{ where } XP = PP, \text{AdvP, AP or NP} \\
& \quad b. \ [V^* X^0 V^0] \text{ where } X^0 = P, \text{Adv, A or N} \\
& \quad c. \ [V^0 X^0 V^0] \text{ where } X^0 = P, \text{Adv, A or N}
\end{align*}
\]

(30a) represents a regularly productive syntactic option like the resultative *oranje verven* ‘paint orange’ as discussed above, but it is also the structure for the most independent type of particle SCV in which the particle can be topicalized or modified, as in the case of *af, op* and *uit* in their literal sense. (30b) represents the option of optional projection, in which the particle cannot be topicalized or modified, but where it does not form part of the verb cluster or the *aan het*-INF construction. (30c), finally, represents optional incorporation, a prerequisite for incorporation of the particle in the verb cluster and the *aan het*-INF construction.

These three different levels of dependence are thus clearly reflected in the data, and they show just how entrenched SCVs are in the interplay of syntax and morphology: in spite of the range of structures in (30), they fully retain their syntactic valency.

The account presented here does justice to the apparent paradox that SCVs have conventionalized properties, which suggests that they are lexicalized, but at the same time show compositionality and even productivity. The availability of non-projection option and the quasi-incorporation option in (30b–c) goes hand in hand with varying degrees of lexicalization; at the same time, SCVs fully retain their syntactic valency, allowing full productivity.

A final observation here concerns the diachronic picture, in particular our claim that particles represent grammaticalized secondary predicates. In section 1.3, we proposed the following grammaticalization cline for preverbs:

\[
(31) \quad \text{projecting preverb} \quad > \quad \text{optionally projecting preverb} \quad > \quad \text{non-projecting preverb} \quad > \quad \text{prefix} \quad > \quad (\text{zero})
\]

\[
XP \quad > \quad (X)P \quad > \quad X \quad > \quad \text{prefix} \quad > \quad 0
\]

By adding the option of quasi-incorporation, this cline becomes one step more subtly detailed: the option of a non-projecting preverb X now falls into two possible steps: a relatively independent one, and one that undergoes optional
incorporation with the verb. This latter step provides a natural pathway along which preverbs may become prefixes over time. We will come back to the grammaticalization development in chapters 4, 6 and 7.

### 3.3 The semantic structure of SCVs

The resultative Lexical Conceptual Structure (LCS) introduced for SCVs in the previous chapter was found to hold for genuine syntactic predicates, too, which was interpreted as evidence of a diachronic relationship: particles are grammaticalized predicates. We saw that the vast majority of English particles are resultative, or have developed from resultatives. Particles in English VPCs are overwhelmingly resultative, except for a small category of argument-blocking or event-modifier particles (*away* as in ‘Ask away!’; or *on* as in *keep on V-ing*; see also chapter 5, and McIntyre 2001a; Los 2004); these have a different LCS but also a different syntax in the sense that there is no Theme argument.

We will now consider SCVs in Dutch and German in which the semantic contribution of the particle shows a broader range, on the basis of the detailed studies of the various classes of Dutch SCVs in Blom (2005). A list of the semantic functions of Dutch particles is given in (32):

\[
\text{(32) Semantic classification of particles}
\]

- **Resultative particles:**
  - Particles conceptualized as resultative predicates, licensing a Figure participant.
- **Non-resultative particles:**
  - Particles conceptualized as modifiers, not licensing any participant.
  - Particles conceptualized as relators, licensing a Ground participant.
  - Particles conceptualized as pure Aktionsart markers, blocking the presence of participants (other than the Agent).

These functions represent clear-cut categories; particles generally fall unambiguously into exactly one of these categories, even though some particle meanings may be metaphorically extended. We will devote a subsection to each of these types of particle.

### 3.3.1 Resultative particles

Let us first discuss resultative particles, which are very productive in Dutch. The LCS of a Dutch resultative SCV like *opzoeken* ‘to look up’ is represented as in (33c):
The synchronic analysis of Dutch SCVs

(33) a. \[[\text{CAUSE}\text{[ACT (x)]}, \text{BECOME [W(y)]}], \text{BY[V(x)]}\]
   ‘John looks the information up.’

b. Jan zoekt de informatie op.

c. \[[\text{CAUSE}\text{[ACT (Jan)]}, \text{BECOME [op(de informatie)]}], \text{BY[zoeken(Jan)]}\]

This LCS reflects the fact that resultatives have a participant that undergoes a change of state or change of location, with the verb prototypically expressing the manner in which the object y reaches this state or location. The state here is a very abstract one which we have labelled ‘accessible’ in section 3.2.1; it is one of the conventionalized meanings of op in an SCV. Other insightful semantic notions are Figure (for the participant y) and Ground (which anchors the location W). Some examples (from Svenonius 2003: 433) are given in (34):

(34) a. The helicopter flew \{the firefighters\}_\text{Figure} up \{the mountain\}_\text{Ground}.

b. The cook twisted \{the lid\}_\text{Figure} off \{the jar\}_\text{Ground}.

c. The police will fire \{tear gas\}_\text{Figure} in \{the window\}_\text{Ground}.

The Ground (also called locator or landmark) is the entity with respect to which the Figure is located (Svenonius 2003: 432–3, after Talmy 1978; see also Talmy 2000: 184). We saw in chapter 2 that Grounds in resultative SCVs are often left implicit, leaving only the particle as the state or location W in the LCS. It is the particle that licenses a Figure participant; this participant is affected by the change of state/location expressed by the particle; in the syntax it is the direct object, and the affected theme argument. SCVs with resultative particles always have a theme and are hence transitive or unaccusative, never unergative (although the verb that fills the verbal slot in the SCV may itself well be unergative, combining with an unselected object). Unaccusative resultative constructions lack the CAUSE predicate in their LCS; such constructions only express a change of state/location and the manner in which this change of state/location is achieved (cf. McIntyre 2004: 548; Spencer and Zaretskaya 1998: 6). An example from Dutch is (35):

(35) a. De kosten \text{lopen op}.
   ‘The costs are mounting.’

b. \[[\text{BECOME [up (de kosten)]}, \text{BY\{lopen (de kosten)\}}\]

The word up in this LCS refers to the conventionalized meaning of the particle op in this particular SCV, which is ‘on high’.

3.3.2 Modifying particles
Examples of modifying particles are given in (36):
(36) a. de groenten voor-koken
   the vegetables for-cook
   ‘to pre-cook the vegetables’

   b. over de film na-praten
   about the film after/behind-talk
   ‘to discuss the film afterwards’

   c. het lied mee-zingen
   the song with-sing
   ‘to sing the song along’

Particles such as those in (36) function as temporal modifiers, with an LCS that is clearly non-resultative; it is not the case that ‘the vegetables are (be)fore’, or that ‘the film is after(wards)/behind’, or that ‘the song is along’. Instead, the LCS may be described as \([V (x), (y) \{\text{before } E\}]\), ‘to V (NP) before/after/simultaneous with event E’.

Modifying particles are not always temporal. A further type of modifying particle is directional, as illustrated in (37):

(37) a. dat Jan in-ademde
   that John in-breathed
   ‘that John breathed in’

b. dat Jan op-keek (uit het boek)
   that John up-looked from the book
   ‘that John looked up (from the book)’

The particle in (37a) modifies the event expressed by the verb and its subject (that is, the event of John breathing) by indicating the direction of this event. The particle op in (37b) has a similar function.\(^6\)

What modifying particles have in common is that they function as modifiers of the event expressed by the verb and its arguments; crucially, they do not license participant arguments. The general semantic structure for SCVs with such particles is given in (38):

(38) \([V (x), (y) \{\text{prt}\}]\)

This LCS remains valid if temporal modifying particles develop extended meanings; voor in transitive SCVs like voor-zingen/voor-spelen ‘lit. before-sing/before-play’ have developed specialized meanings of ‘sing or play a piece of music to demonstrate how it should be sung or played, i.e. as a model to copy’, extended from ‘sing/play a piece of music beforehand’, i.e. before someone else sings/plays it; the case is similar for the particle na ‘after’ in transitive SCVs like na-fluiten/na-gluren/na-roepen/na-wijzen ‘whistle at/watch narrowly/call at/point at somebody etc. after somebody has passed’. This particle seems to
have acquired this extended meaning from the temporal meaning; and the same
must be true of na ‘after’ in transitive SCVs like na-apen/na-doen/na-zingen
‘ape somebody/act like somebody/sing like somebody’. The productive forma-
tion of such families of SCVs centring around a particular particle meaning
will be discussed in more detail in section 3.4.

3.3.3 Relator particles
Relator particles comprise orienting particles and path particles; examples of
orienting particles are given in (39):

(39) a. de jongen aan-kijken
    the boy on-look
    ‘to look the boy in the eyes’
  b. het publiek toe-spreken
    the audience to-speak
    ‘to address the audience’

These particles, like modifying particles, do not conceptualize change-of-state
predicates that affect participants; neither de jongen ‘the boy’ in (39a), nor
het publiek ‘the audience’ in (39b) undergoes a change of state expressed
by the particle. Rather, the particle expresses the direction towards which
these activities are oriented: the activity of looking is oriented towards the
boy, and the activity of talking is oriented towards the audience. Their LCSs
resemble those of the corresponding prepositions, and the object of the SCV is
in fact the Ground of the preposition: look {at the boy}, talk {to the audience}.
Semantically, then, these particles can be characterized as relators licensing a
Ground participant, with the following semantic representations:

(40) a. \[V\, aan-V^0]:
    \[V (x) \{\text{at} (y)\}\]
    ‘to V at Y’
  b. de jongen aan-kijken
    [kijken (x) \{at (de jongen)\}]
    ‘to look the boy in the eyes’

(41) a. \[V\, toe-V^0]:
    \[V (x) \{to (y)\}\]
    ‘to V to Y’
  b. het publiek toe-spreken
    [spreken (x) \{to (het publiek)\}]
    ‘to address the audience’
Since orienting particles license a participant at LCS (y in (40)–(41)), these particles have a transitivizing effect at the level of syntactic structure, as do resultatives. But unlike the participant licensed by a resultative particle which is the Figure of the particle, the participant licensed by an orienting particle is the Ground. The event (e.g. in (41b), the agent’s talking) is characterized with respect to this entity: the talking is oriented towards the audience.

Two further and related differences between SCVs with resultative particles and SCVs with orienting particles must be mentioned here. The first is that there is a telicity difference that follows from the various particle functions: on the one hand resultative particles, expressing a change of state/location, impose a boundary on the event expressed by the verb and thereby bring about telicity. Orienting particles on the other hand, expressing an orientation, do not have this effect; they do not change the lexical-aspectual structure of the construction. A second difference is that the core eventuality is conceptualized differently. In the LCS of an SCV with an orienting particle, the core eventuality is expressed by the verb, with the orienting particle and its Ground together being conceptualized as a modifier. The LCS of resultative SCVs as in (34a), however, has its core eventuality expressed by the particle and the Figure, with the verb conceptualized as a manner/means modifier.

In Dutch, the syntax of SCVs with resultative particles and that of SCVs with orienting particles is identical, notwithstanding their semantic differences. In German, on the other hand, the NP shows up with a different case: where objects of resultative SCVs uniformly receive accusative case, objects of orienting particles such as those in (42) receive the case selected by the prepositional counterpart of the particle in question; zu as a preposition assigns dative case, and dative case is what we see on the Ground of an SCV with orienting zu:

(42) dem Kind zu-nicken
    the child.DAT to-nod
    ‘to nod to the child’

The case of the Ground in German examples like (42) confirms our suggestion that orienting particles are relators. They resemble postpositions, as we will discuss further below. We will come back to case assignment in chapter 7.

A second relator-particle category is that of path particles. They denote paths through or over the direct object referent of the construction:
Unlike resultative particles, the particle in (43a) does not predicate over the direct object referent at LCS: the result of *dat Jan de sonate door-speelt* ‘that John plays through the sonata’ is not that the sonata is through. What (43a) expresses is the event of John metaphorically moving through the sonata. The particle and the direct object referent, then, express a telic path through this referent that is followed by the subject referent while performing the action denoted by the verb. Similarly, (43b) expresses that John goes through the book by reading, and (43c) expresses that John goes through/over the letter by reading. The telicity of SCVs with path particles, which conceptualize a telic path through/over the direct object referent, is apparent from clauses such as *dat Jan de sonate {in een uur/*urenlang} had door-gespeeld* ‘that John played through the sonata {in an hour/*for hours}’.

At LCS, the referents of the direct objects in (43), being part of path designations such as ‘through the sonata’, are the Ground participants of these particles. In the event expressed in (43a), for instance, the sonata is not the entity that moves or whose site, path or orientation is relevant, but is the stationary entity with respect to which John moves while playing. Path particles thus license a Ground participant. They express, in combination with the NP referring to this Ground participant (which is syntactically realized as the direct object NP of the SCV), the telic path (change of location) of the referent of the subject NP through/over this Ground.

The base verbs of SCVs with path particles are generally transitive (*spelen* ‘to play in *de sonate door-speelen* ‘to play through the sonata’, *lezen* ‘to read’ in *de brief over-lezen* ‘to read over/through the letter’) or unergative (*werken* ‘to work’ in *het hele boek door-werken* ‘to plough through the whole book’, *bladeren* ‘to leaf, to thumb’ in *de catalogus door-bladeren* ‘to leaf through the catalogue’). Since these particles license a Ground participant, with which they form a path expression, they have a transitivizing effect at the level of syntactic structure (cf. *het boek door-werken* ‘to plough through the book’).
We conclude then, that while both path particles and orienting particles license a Ground participant with which they conceptualize a directional expression (‘through the sonata’, ‘to the audience’), the two subclasses of particles differ with respect to the function of that directional expression. We have seen that the directional expression conceptualized in orienting SCVs, which denote (atelic) activities (e.g. *het publiek toe-spreken* ‘to talk to the audience’), indicates the orientation of the activity referred to by the verb (‘to the audience’). Such a directional expression does not involve any dynamic progression along a path. The directional expression conceptualized by a path particle and its Ground (‘through the sonata’), on the other hand, does involve such a dynamic progression, as illustrated above. The telic path along which this progression takes place, which is followed by the subject referent, is incremental: the progression of the event can be measured by looking at the progression of the subject referent along the path (the events in (43) being halfway implies their subject referents being halfway ‘through the sonata’, ‘through the book’, and ‘over the letter’).

SCVs with path particles are semantically similar to postpositions like (44).

(44) dat Jan [pp Azië door] is gereisd
that John Asia through is travelled
‘that John has travelled through Asia’

The postposition construction in (44) expresses the telic path (change of location) of the subject referent (John) through the direct object referent (through Asia), just like constructions with path particles. This conceptual similarity of postposition constructions and path particle SCVs shows that the two types of construction have very similar semantic structures. The semantic structure that we posit for postposition constructions like (44) is given in (45). The BECOME predicate has been replaced by GO in (45) because postposition constructions like (44) invariably refer to a change of location rather than a change of state.

(45) [go [(through/over (y)) (x)], BY{V (x)}]
‘to go through Y by V-ing’

The semantic similarities between postposition constructions such as (44) and SCVs with path particles prompts a semantic structure like (46) for these SCVs. In (47) this structure is applied to the SCVs in (43a) and (43c).

(46) [go [(through/over (y)) (x)], BY{V (x)}]
‘to go through Y by V-ing’
The synchronic analysis of Dutch SCVs

(47) a. dat Jan de sonate door-speelt
   ‘that John plays through the sonata’
   a’. [go [[through (de sonate)) (Jan)], BY {spelen (Jan)}]
   ‘John goes through the sonata by playing’

b. dat Jan de brief over-leest
   ‘that John reads over/through the letter’
   b’. [go [[over (de brief)) (Jan)], BY {lezen (Jan)}]
   ‘John goes over/through the letter by reading’

The semantic structures in (45)–(46) express that the semantic core of such SCVs is change of location, with the verb conceptualized as a manner/means modifier. Although the verb combining with path particles has the same function as that in SCVs with resultative particles (cf. (32a)), the conceptual structures of these two types of SCV are crucially different. Not only do we have a GO predicate rather than a BECOME predicate, but resultative particles are without overt Grounds, and the object of the SCV is the Figure. The path particle in (47a), on the other hand, expresses a change of location in combination with its Ground (‘through the sonata’). This change of location affects the subject referent: John ends up being through the sonata. The direct object referent of an SCV with a path particle (‘the sonata’) is the Ground rather than the Figure. Like orienting particles, path particles are relators.

3.3.4 Aktionsart particles

The final particle category is that of the Aktionsart particle:

(48) a. dat Jan de hele nacht heeft door-gewerkt
   that John the whole night has through-worked
   ‘that John has been working all night long’

b. dat de kinderen urenlang hebben door-gezongen
   that the children hours-long have through-sung
   ‘that the children kept on singing for hours’

c. dat hij uren in de stad heeft rond-gelopen
   that he hours in the city centre has around-walked
   ‘that he walked around in the city centre for hours’

These particles too do not express a change of state that affects a participant at LCS. The event expressed in (48a), for instance, does not imply that John is through/on. The absence of such a predicative relation is immediately clear from the fact that there is no THEME in the constructions in (48): they only contain an AGENT; they are unergative. This is confirmed by the fact that they
select the auxiliary *hebben* ‘have’ and not the auxiliary *zijn* ‘be’ in the perfect (see (48)).

The meaning of the SCVs in (48) can be paraphrased as ‘to continue V-ing’, where V expresses an activity, with the additional semantic component without an intended goal (see below; see also McIntyre 2001a). Continuative SCVs with the particle *door* may express the additional meaning ‘steadily, faster’, present in sentences such as *lees eens een beetje door!* ‘read on a bit!, get on with your reading!’, as an extension of the continuative meaning.

Continuative particles combine with either intransitive or optionally transitive activity verbs. SCVs with a continuative particle and a transitive base verb are incompatible with the direct object licensed by this same base verb (see McIntyre 2001a, 2004: 528): such SCVs are always unergative and atelic.9 This is illustrated in (49).

(49) a. *dat de kinderen het liedje urenlang hebben door-gezongen*  
that the children the song hours-long have through-sang  
‘that the children kept on singing the song for hours’

b. *dat Jan de appel uren door-at*  
that John the apple hours through-ate  
‘that John kept on eating the apple for hours’

This atransitivity effect (as McIntyre 2004 calls it) might at first sight seem to be brought about by a clash between the atelic (unbounded) Aktionsart of these SCVs and the telicity resulting from the presence of a direct object. But such an account would not explain why indefinite plural direct objects are also excluded from continuative SCVs, as shown in (50a). (50b) shows that the presence of such direct objects does not generally result in telicity.10

(50) a. *dat Jan uren appels door-at*  
that John hours apples through-ate  
‘that John kept on eating apples for hours’

b. *dat Jan jarenlang huizen heeft gebouwd*  
that John years-long houses has built  
‘that John built houses for years’

This means that the atransitivity effect cannot be explained by an Aktionsart account appealing to telicity or boundedness, as, e.g., proposed by Stiebels (1996: 64f), but requires an explanation based on directionality or goal-orientedness. This is shown by (51), which has the continuative PP *in het rond* ‘around, about’ and a direct object, and which shows the same kind of unacceptability as (50a) (see McIntyre 2004).
The synchronic analysis of Dutch SCVs

(51) dat Jan maar een beetje ('boeken) in het rond las
that John just a bit (books) in the round read
‘that John just read (‘books) about a bit’
(Context: during the first year of his dissertation project, John always sat in
the library, reading books left and right.)

The atransitivity effect in (51) appears to be related to a semantic clash: ‘just
reading about (left and right)’, and ‘reading books’ are incompatible. This is
because reading books (more generally, reading any object) implies direction-
ality or progression towards a goal (or towards subgoals), which is incompatible
with the non-directional meaning of left and right (‘in an unstructured way’).
Similarly, (50a) expresses an iteration of apple-eating events, each of which
entails progression towards a goal, and this appears to clash with the mean-
ing of the particle door ‘through’, which entails the absence of goal-oriented
progression. These direct objects, then, introduce a directional component
which is incompatible with the non-directional meaning of the continuative
PP/particle.11

The common semantic property of the various types of continuator is that the
event expressed by the construction proceeds continuously and does not evolve
towards a goal. The semantic structure of SCVs with a continuative particle is
given in (52).

(52) [continue V ACTIVITY without intended goal (x) ({for y time})]

Constructions with continuative particles may contain a temporal modifier
referring to the duration of the event, which is represented as optional in (49)
and which may be expressed by adverbial phrases such as urenlang ‘lit. hours-
long, for hours’ or adverbial NPs such as de hele dag ‘all day’, i.e. modifiers
durative events in general; cf. ik heb de hele dag/urenlang gewerkt ‘I have
worked all day/for hours’. The temporal, continuative function of these particles
represents a metaphorical extension of the original spatial meaning.12

Aktionsart particles are clearly semantically different from resultative parti-
cles as they do not license a participant and function as continuators. The SCVs
they form express durative, atelic and non-directional events. Syntactically,
SCVs with continuative particles are always unergative.

Similar properties can be observed for the particle toe ‘to’ in the SCVs in
(53):

(53) a. toe-happen ‘lit. to-bite, bite/snap at something’
b. toe-slaan ‘lit. to-strike, strike’
c. toe-tasten ‘lit. to-grope, seize’
The SCVs in (53), too, appear to be incompatible with direct objects that are licensed by the base verbs in isolation, compare *een stuk uit de koek (toe)happen* ‘to take a bite out of the cake’. There is a semantic difference with *door* in that *toe* does not express the continuation of the event denoted by the verb, but its inception: *dat zij bij dat voorstel meteen toe-hapte* ‘that she immediately snapped/jumped at that proposal’. The examples in (53) demonstrate that this inceptive particle combines with semelfactive verbs, i.e. verbs that express ‘instantaneous activities’ (Smith 1997: 29–30). It forms telic and punctual SCVs, i.e. SCVs representing achievements (cf. Smith 1997: 32), with the following semantic structure:

\[
\text{(54) } [\text{start } V_{\text{SEMELFACTIVE}} (x)]
\]

‘to start V-ing’

The semantic structures for SCVs with continuative particles (52) and with inceptive particles (53) show that the verb is embedded under an Aktionsart marker (*continue*, *start*). These particles, then, function as Aktionsart markers. The semantic embedding of the verb under the Aktionsart marker leads to the arguments of the verb being blocked in SCVs with Aktionsart particles.

### 3.3.5 The mapping between semantics and syntax

In this section we discuss the interesting phenomenon in Dutch that semantic diversity of the SCV in Dutch is not reflected in the syntax: the range of semantic types discussed in sections 3.3.1–3.3.4 is mapped to a unified SCV syntax, and there is thus no one-to-one mapping between syntax and semantics.

We saw in section 2.5.4.3 that many syntactic analyses make use of primitive semantic notions like CAUSE (e.g. Ramchand and Svenonius 2002) or CHANGE (McIntyre 2001a; see also chapter 5) that are directly associated with certain nodes in the syntactic structure, and as such match the LCS. English VPCs are almost exclusively resultative, which may suggest such a direct mapping of syntax and semantics. In Dutch and German, however, the situation is very different: we have seen that there are three distinct categories of non-resultative particle. Some of these particles license a participant as resultatives do, others do not or license a different type of participant; some influence the lexical-aspectual properties of the resulting SCV (making it transitive or unergative, creating accomplishments or achievements), others do not; modifying particles leave the argument structure and the Aktionsart of the verb fully intact. We have seen that the various argument-structural and lexical-aspectual changes are not random and unpredictable, as has been claimed in the
The synchronic analysis of Dutch SCVs literature (Toivonen 2003: 150–5) but follow straightforwardly from the semantic function of the particle and the LCS of the resulting SCV.

The reason that these semantic aspects have generally been ignored seems obvious: despite their semantic differences, all Dutch and German particles (whether resultative or not) behave as a syntactically unified class. We have seen that the properties of this class fall out in an analysis in which projection is optional, and in which furthermore the option of quasi-incorporation is available, yielding the range of syntactic options in (30) above. The SCVs discussed in this section, in which the semantic contribution of the particle is more diverse, conform to these same syntactic options. Where they differ is in their argument structure and their lexical-aspectual properties, but these fall out if we accept that they are predictable from their LCS.

These findings cast a different light on the numerous attempts in the literature to formulate one-to-one mappings between syntactic status and the semantics of SCVs. Recall from chapter 2, for instance, the discussion of the problems of analyses in the literature that attempt to posit a one-to-one mapping between phrasal status of the particle and compositional or transparent semantics (Wurmbrand 2000; Cappelle 2002). Our findings, on the other hand, suggest that we may fruitfully abandon isomorphic mapping between the syntax and the semantics of SCVs, including any attempts to posit different syntactic analyses for transparent or compositional versus idiomatic or conventionalized SCVs as if the former belong to the domain of the syntax, and the latter to that of the lexicon. SCVs are fascinating precisely because they are compositional as well as conventionalized, and further insights are gained in an analysis that teases out the predictable and the unpredictable aspects of meaning in a systematic way. The special behaviour of the SCV pivots around the particle: it is the particle’s morphosyntactic options of non-projection and quasi-incorporation that explain the ambiguous behaviour of the SCV (word or phrase?) in the syntax, and it is the semantic function of the particle that accounts for the SCV’s argument structure and lexical-aspectual properties.

3.4 SCVs as constructional idioms

3.4.1 The compositionality of Dutch SCVs

Syntactic analyses of SCVs in the literature often hinge on the issue of the transparency of the SCV. This is especially true for the case of the English VPC, where the two word orders (the particle order and the predicate order) have been associated with semantic idiomaticity and transparency, respectively.
Some studies propose different syntactic analyses on that basis (e.g. Wurmbrand 2000) or relate syntactic properties like topicalization to compositionality (e.g. Cappelle 2002); see section 2.3. In the case of Dutch, all SCVs appear to exhibit the same syntactic behaviour, irrespective of their semantics or diachrony. We account for this behaviour (obligatory separability in V2, optional separability in V-raising) in an analysis that allows the particle to be an optionally projecting word. What remains to be established is the details of how particle and verb combine into an SCV, and it is here that we need to return once more to the issue of lexicalization.

We noted earlier, in section 2.3, that idiomaticity and transparency, or rather, conventionality and compositionality, are not mutually exclusive. SCVs are both conventionalized and compositional. In this they resemble a special type of idiom that has been studied in detail by Nunberg, Sag and Wasow (1994): the Idiomatically Combining Expression (ICE). Examples of ICEs are pull strings ‘have under control, be in charge’, keep the ball rolling ‘keep the conversation (etc.) going’, hit the hay ‘go to sleep’, and come to blows ‘get into a fight’. ICEs differ from other idiomatic phrases, such as kick the bucket ‘die’ and saw logs ‘snore loudly’ in that they are compositional, their meaning being distributed among their parts; in the case of pull strings, for example, Nunberg, Sag and Wasow (p. 496) claim that “strings can be used metaphorically to refer to personal connections when it is the object of pull, and pull can be used metaphorically to refer to exploitation or exertion when its object is strings”. Both parts, then, express metaphorical or otherwise figurative meanings that are dependent on their occurrence in the ICE. This makes the meaning of an ICE both compositional and motivated, though not fully predictable: in other words, it is conventionalized. Although an idiomatic phrase like kick the bucket can also be said to be motivated in the sense that kick in this idiom and kick ‘strike with the foot’ are not merely accidental homonyms, but the same verb, the meaning of this idiom, unlike an ICE, is not compositional: it is not distributed among its parts kick and the bucket. The compositionality of ICEs allows them to participate in constructions involving passive formation, raising, and topicalization and modification of individual parts of the ICE, unlike idiomatic phrases, which lose their idiomatic meaning in such manipulations: cf. *logs were sawed, *he kicked a slow bucket, and *the bucket, he kicked. Examples like the strings were pulled, the strings seemed to be pulled, pull yet more strings, and those strings, he wouldn’t pull for you show that ICEs retain their idiomatic meanings under such conditions. Their compositionality is further demonstrated by the fact that an ICE’s parts
allow some degree of substitution by semantically compatible elements. This results in families or pairs of idioms, such as *keep/start/get/have/set the ball rolling, hit the hay/sack*, and non-causative/causative pairs like *come/bring to blows*.\(^{17}\)

This behaviour is strongly reminiscent of the SCV. We can recognize similar groupings or pairs of SCVs: the non-causative/causative pairs such as *uit-komen* ‘to come out, be published’ (of a book) vs. *uit-brengen* ‘to bring out, publish’ (a book); see also the non-causative/causative English pairs in section 2.5.4; or groupings of SCVs in which the meaning of a particular particle remains constant while being combined with different verbs, such as *op* ‘accessible’ in *op-zoeken* ‘to look up the words’, *op-vragen* ‘to ask for the information’. In this light, we may also consider the lists of purely syntactic predicates given in Goldberg and Jackendoff (2004: 560–2) as discussed in section 2.3: *stab/bat/put/batter/frighten/crush/scare/burn someone to death* (but not *dead*), or the verb–predicate combinations like *break/blow/blast/cut/fling/push/rake/whisk open, cut/stop short, blow/keep/make/sift clear*. These show some degree of grammaticalization in being able to appear in the particle order in English, as we saw in section 2.4: here, too, the meaning of the predicate remains constant, in combination with a range of verbs. In sum, SCVs are clearly both compositional and conventionalized, like ICEs. They differ from ICEs, however, in two important respects. First, they allow some syntactic manipulation, though not as much as ICEs: although SCVs freely allow passivization (*de boeken werden opgezocht door Jan* ‘the books were looked up by John’) and raising (*hij scheen de boeken te hebben opgezocht* ‘he seemed to have looked up the books’), their particles cannot be modified (*de boeken helemaal opzoeken* ‘to look up the books completely’) or topicalized (*maar op zoek hij de boeken niet* ‘but look up the books, he did not’), as discussed at length in the previous chapter. This difference follows from their morphosyntactic make-up which allows non-projecting word status, rather than from any deep-seated semantic distinction between ICEs and SCVs. This in turn is due to the greater degree of grammaticalization of the particle, and the SCV.

A second and more important difference is that SCVs are a great deal more productive than ICEs. This is again illustrated by *op* ‘accessible’: *op-zoeken* ‘to look up (words)*, *op-vragen* ‘to ask for (information)*, *op-piepen* ‘to bleep (a physician)*: SCV classes may be extended far more productively than ICEs, whose formation of pairs or groupings is considerably more limited. SCVs, then, show conventionalization and compositionality, like ICEs, but less syntactic freedom, and greater productivity.
The productivity of the SCV seems to consist crucially in the fact that a particle with a constant meaning combines with a range of different verbs. We recall here for the reader the structure (28) above:

(28) \[ v^0 X^0 V^0 \] where \( X^0 = P, \text{Adv}, A \text{ or } N \)

In the structure in (28), the verbal position is open and can in principle be filled by any verb. The non-verbal constituent, however, is specified. That is, there are at least as many different SCVs of this kind as there are words that can fill the left position (some particles may occur in more than one SCV because they are polysemous). SCV formation is thus based on a template with an open slot for the verb and a fixed slot for the particle. \( \text{Op-zoeken/\text{op-vragen/\text{op-piepen}} \text{ etc.}} \) are generated in a template \([v^0 \ \text{opX-V}^0]\) ‘to cause NP to become accessible by \( V^0 \)’, where inserting verbs in the verbal slot leads to the creation of new SCVs with \( \text{op} \) ‘accessible’. Such SCV templates represent partly lexicalized phrases (Booij 2002a, 2002b). SCVs, then, are midway in a lexicalization development: they are phrases that are not completely free combinations of verbs and particles, but neither are they completely lexicalized, like an ICE such as \text{pull strings}. This is illustrated in (55).

(55) Lexicalization development of individual phrasal combinations:
- \textit{stage 1} completely free combinations
- \textit{stage 2} partly fixed, partly free combinations
- \textit{stage 3} completely fixed combinations

Examples of completely free phrasal combinations are \textit{de fiets verven} ‘to paint the bike’ and \textit{de fiets oranje verven} ‘to paint the bike orange’. A completely fixed combination is \textit{pull strings} ‘be in charge’. An example of a partly fixed combination is (56):

(56) Sam joked his way into the meeting.

The noun \textit{way} in (56) has a metaphorical meaning that is dependent on its occurrence in this specific construction (\textit{to V one’s way PP}). Note that (56) is a syntactic resultative predicate, as are many of the examples of partly lexicalized phrases given in the literature (see Booij 2002b; Jackendoff 2002: chapter 6; Goldberg and Jackendoff 2004). The crucial difference between partly lexicalized phrases such as (56) and SCVs is that the latter may include a non-projecting word, whereas the constituent structure of the phrase in (56) is similar to that of other phrases. It is this morphosyntactic difference that is responsible for the SCVs distinctive syntactic behaviour, as discussed in section 3.2.
Although most SCVs represent the second stage in the lexicalization development as represented in (55), there are some SCVs that are in either the first or the third stage of this development. For instance, the particle *aan* in the SCV *zich aan-stellen* ‘lit. oneself at-put, to exaggerate or pretend to be hurt, put on airs’, has a function which *aan* has in no other SCV, and we cannot form new SCVs with *aan* in this function. *Aan-stellen*, then, is not part of productive SCV formation, and is completely lexicalized, representing the third stage in (55), like the ICE *pull strings*. Unlike *pull strings*, however, *aan-stellen* does not appear to be compositional: the original motivation for *aan-stellen* is no longer recoverable, and the meaning of this SCV does not seem to be distributed among its parts *aan* and *stellen*. So although both *aan-stellen* and *pull strings* represent the third stage in the lexicalization development in (55), the distinct parts of *pull strings*, unlike those of *aan-stellen*, are individually linked to a part of the semantic structure. *Aan-stellen* is more similar to an idiomatic phrase like *kick the bucket* in this respect than to an ICE.

SCVs that do not show lexicalization, and in which the SCV meaning is straightforwardly composed from the meanings of particle and verb, represent the first stage in (55). Examples of such SCVs are *af-maken* ‘off-make, finish’ and *op-eten* ‘lit. up-eat, to eat completely’. Both particle and verb in such SCVs have the same meaning they have outside the SCV, and as we saw in section 3.2, these particles allow projection (they can be topicalized and modified). Their meanings are thus not construction-specific. We thus arrive at the following lexicalization cline for SCVs:

\[(57) \quad \text{Lexicalization cline of the pattern } [V \ P\text{-}V^0]: \]
\[\text{stage 1 completely free combinations } [V \ X(P)\text{-}V^0] \]
\[\text{e.g. } \text{af-maken} \text{ ‘to finish’} \]
\[\text{stage 2 partly fixed combinations } [V \ op\text{-}V^0] \]
\[\text{e.g. } \text{op-zoeken} \text{ ‘to look up’} \]
\[\text{stage 3 completely fixed combinations } [V \ aan\text{-}stellen] \]
\[\text{e.g. } \text{zich aan-stellen} \text{ ‘to put on airs’} \]

Both completely free and completely lexicalized SCVs appear to constitute only a small minority of SCVs; the vast majority of SCVs show the typical combination of properties discussed above: they are non-projecting, conventionalized, compositional, and may be formed productively.

To conclude, an analysis of SCVs as partly lexicalized phrases that consist of a fixed optionally projecting word and an open slot for the verb provides us with an account of their lexical and distributional properties. Such an analysis explains the combination of the properties of compositionality, conventionality and productivity that we see in SCVs without treating them as
(morphologically complex) words, with which we typically associate this combination of properties. This analysis accounts for the fact that SCVs have both the phrasal property of being separable and certain properties that are generally assumed to be atypical of phrasal combinations. The fact that all SCVs conform to the same syntactic options, irrespective of their degree of lexicalization, their meaning or their origin (as a postposition, a resultative predicate, etc.) means that we define the category of particles structurally, as expressed in (30), repeated here for convenience:

(30)  

\[
\begin{align*}
\text{a. } & [v \ \text{XP} \ v^0] \text{ where } \text{XP} = \text{PP, AdvP, AP or NP} \\
\text{b. } & [v \ \text{X}^0 \ v^0] \text{ where } \text{X}^0 = \text{P, Adv, A or N} \\
\text{c. } & [v^0 \ \text{X}^0 \ v^0] \text{ where } \text{X}^0 = \text{P, Adv, A or N}
\end{align*}
\]

3.4.2 Lexical versus morphological properties

The analysis of particles as non-projecting words introduces a new type in our morphosyntactic inventory, and our analysis of SCVs introduces a special category of phrases: partly lexicalized phrases that consist of a non-projecting word and a verb. Much of the literature on SCVs interprets lexicalization as evidence of morphological status, and we hope to have shown in sections 3.2–3.3 that the two notions are not identical: the term ‘lexical’ (as in ‘lexical properties’ and ‘lexical item’) exclusively refers to the property of being stored in the lexicon, and implies no morphological status: words, phrases or entire constructions may be stored. Morphological unit and word, on the other hand, refer to elements with specific structural status, namely X^0-status (cf. Jackendoff 2002: 153). The two should be kept distinct. What sets SCVs apart as a class is their morphosyntactic status of being optionally projecting and optionally incorporating words, rather than their lexical properties: SCVs exhibit varying degrees of lexicalization, and, conversely, similar degrees of lexicalization are found in other constructions, as we saw in our discussion of ICEs in section 3.4.1.

The analysis we propose for the majority of SCVs is that of constructional idioms: productive multi-word combinations that have specific idiosyncratic properties; they are represented as lexical templates with both fixed and variable positions, and as such feed into productive syntactic behaviour. The fact that constructional idioms show various idiosyncrasies as well as productivity amounts to saying that their productivity is restricted or partial. This property is generally attributed to word formation patterns (morphological patterns), which typically do not qualify as 100 per cent working rules, but are subregular, showing idiosyncrasies of various kinds. With respect to the notion of productivity, then, SCV formation is similar to word formation (cf. Booij
Lexical properties such as restricted productivity can thus be found for words (morphological units) as well as lexical phrases (non-morphological lexical units). The result of this is that lexical properties are sometimes mistakenly viewed as morphological properties, so that phrasal lexical units are mistakenly regarded as morphological units. The fact that the meanings of (most) SCVs do not follow straightforwardly from the meanings of their parts has, for instance, been mistaken as evidence for word status (on the basis of the assumption that syntactic constructions, as opposed to words, do not generally exhibit such idiosyncrasies). We have seen, however, that these idiosyncrasies are morphosyntactic rather than lexical properties: they apply to lexical units which are part of a productive syntax.

Teasing apart lexical and morphological properties has consequences for the Lexical Integrity Principle, which states that syntactic rules cannot refer to parts of words; we saw in chapter 2 that SCVs cannot be words because they are syntactically separable and words are not separable in general; they are islands for the rules of syntax. It follows from our definition of lexical here that the principle should be renamed as the Word Integrity Principle or the Morphological Integrity Principle: it is not lexical units in general that exhibit this island behaviour, but only a subtype of lexical units, namely morphological units (words) (cf., among others, Ackerman and LeSourd 1997; Ackerman and Webelhuth 1997, 1998: 18–19; Mohanan 1997).

The analysis we propose also accounts for the properties of SCVs that have previously been claimed as evidence for their word status, such as the fact that they may be built on an adjectival or nominal base, and may serve as the input for derivational morphology. As for the latter property, we saw in chapter 2 that derivational affixes are not restricted to words, but may also attach to (certain kinds of) phrases. Nouns and adjectives derived from SCVs have the structure in (58).

```
(58) \[SCV\] derivation

\[a.\] op-roep-en [op-roep]-baar
  up-call-INF up-call-able
  ‘to call up’ ‘callable’

\[b.\] in-schrijv-en [in-schrijv]-ing
  in-write-INF in-write-ing
  ‘to subscribe’ ‘subscription’
```

Support for the structure in (58) is motivated by the semantics: the conventionalized meanings of the SCVs are present in the derivations. The noun
in-schrijv-ing ‘registration, subscription’, for instance, has the meaning that follows from combining the base in-schrijv- ‘subscribe’ with the derivational suffix -ing, rather than the meaning that follows from combining in ‘in’ with a (non-attested) noun *schrijving ‘writing’, which is posited, for instance, under Stiebels and Wunderlich’s (1994) analysis. Deriving adjectives and nouns from SCVs as in (58) has the further advantage that it does not lead to any bracketing paradoxes.

The upshot of the discussion is that we propose an analysis of the majority of SCVs as instantiations of phrasal lexical templates like the one in (59):

(59) \[
\v' \ op-V^0
\]

SCV templates such as (59) are associated with a unitary meaning, for instance ‘to cause to become accessible by V-ing’, to which the meaning of the verb is added in a consistent way. These templates are derived from existing SCVs and are used to form new SCVs, such as \(\text{op-piepen} \) ‘to bleep’. We have already seen that the lexicalization properties of SCVs are entirely independent of their syntactic structure: SCVs may have different lexicalization properties, representing different stages in the lexicalization development in (57) (they may be completely free combinations, or partly fixed, or completely fixed), but they all conform to templates as in (59) with a non-projecting word as particle. The phenomenon of such constructional idioms demonstrates that both lexicalized phrases and morphological structures may express lexical information.

SCV templates such as (59) are not listed in isolation in the mental lexicon, but are related to other templates in a hierarchy in which more specific templates can be seen as instantiations of the more general templates that dominate them and from which they inherit all the properties that they both share, i.e. the predictable and hence redundant properties of the specific templates. This means that a template such as (59) contains more information than it in fact expresses: the information it shares with, and therefore inherits, from the more general template. This means that it only needs to express idiosyncratic properties that it does not share with the more general template of which it is a subset. A specific template, then, does not contain much independent information. The template (59) formulates what all \(\text{op} \) ‘accessible’ SCVs have in common, i.e. ‘to cause \(Y\) to become accessible by V-ing’. It is the existence of this template that accounts for the compositionality of SCVs such as \(\text{op-zoeken} \) ‘to look up’, \(\text{op-piepen} \) ‘to bleep’, etc.: the individual meanings of each of these SCVs still require them to be listed as individual lexical entries to account for their unpredictable properties (cf. Booij 2004, 2005b; Jackendoff 2002: chapter 6; Riehemann 1998).
In sum, SCV templates are phrasal lexical items of the form \([V^X V^0]\) that are linked to a specific meaning. The different SCV templates are interrelated as well as related to other lexical items in an inheritance hierarchy. Generalizations are stated at different levels in this hierarchy and the lower levels inherit properties from the dominating levels. The result of this is that not all properties have to be specified at each level; this is strictly speaking only necessary for the properties that cannot be predicted from the inheritance hierarchy (for more on SCV templates and their interrelationships, see Blom 2005: 308–15).

3.4.3 Synchronic SCV formation

We saw in section 3.4.1 that SCVs are significantly more productive than other compositional and conventionalized idioms (ICEs): SCVs form large families. Templates such as (59) not only express generalizations about existing SCVs, but also specify how new SCVs can be formed. The SCV \textit{op-piepen} ‘to bleep’, for instance, seems to be a relatively new formation in the template \([V^X op-V^0]\) ‘to cause \(Y\) to become accessible by \(V\)-ing’, a template that is itself formed because of the existence of an \textit{op} ‘accessible’ family containing members of long standing like \textit{op-zoeken} ‘look up’, \textit{op-roepen} ‘call up’ and \textit{op-vragen} ‘call up, ask for (information)’. Language users are apparently able to derive such templates, and to form new SCVs with it, because they recognize the compositionality in this SCV family and are able to formulate some abstract meaning ‘accessible’ for \textit{op}. It thus appears that a comparison of the formal and semantic properties of existing SCVs with a specific particle (as in (60a)) leads to the derivation of an SCV template with a fixed particle slot (a paradigmatic analysis, as in (60b)) that is used to form new SCVs with this particular particle (a syntagmatic analysis, as in (60c)). What we see, then, in synchronic SCV formation, is an interplay of paradigmatic and syntagmatic analyses.\(^{18}\)

(60) a. (i) de boeken \textit{op-zoeken}  
the books up-search  
‘to look up the books, to cause the books to become accessible (available) by searching’

(ii) de informatie \textit{op-vragen}  
the information up-ask  
‘to ask for the information, to cause the information to become accessible (available) by asking’

(iii) de kinderen \textit{op-bellen}  
the children up-phone  
‘to phone up the children, to cause the children to become accessible (contacted) by phoning’
b. \([v' \, \text{op-}V^0]\)
   ‘to cause Y to become accessible by V-ing’

c. de chirurg \text{op-piepen}
   the surgeon up-bleep
   ‘to bleep the surgeon, to cause the surgeon to become accessible
   (contacted) by bleeping’

These examples illustrate that particles may receive a more specific interpretation in concrete instantiations of SCV templates on the basis of the information provided by the verb and its arguments. The meaning ‘physically/cognitively/perceptually accessible’ in (60b) may, for instance, be interpreted as ‘available’ in constructions with inanimate direct object referents (e.g. \(\text{de boeken op-zoeken} \) ‘to look up the books’), whereas it may be interpreted as ‘contacted’ in constructions with animate direct object referents (e.g. \(\text{de kinderen op-bellen} \) ‘to phone up the children’). SCV formation is apparently particle-driven: templates such as (60b) are derived from existing SCVs in which a particular particle expresses a particular meaning and are applied to form new SCVs in which the particle in question expresses the same meaning.

SCVs may also be formed by inserting a converted adjective or noun into the verbal slot in the SCV template, resulting in the formation of SCVs on a nominal or adjectival base. Some examples of such SCVs are given in (61).

(61) a. SCVs with A-base
   op-frissen ‘lit. up-fresh, to freshen up’
   in-dikken ‘lit. in-thick, to thicken’
   uit-diepen ‘lit. out-deep, to deepen’

b. SCVs with N-base
   op-hopen ‘lit. up-pile, to pile up’
   af-beelden ‘lit. off-image, to represent’
   in-polderen ‘lit. in-polder, to drain, to make into a polder’

A template of SCVs with adjectival and nominal bases is given in (62a), with (62b) as a point of comparison with the template for prefixed verbs like \(\text{vergroten} \) ‘lit. pref-big, to enlarge, to increase’ and \(\text{bedijken} \) ‘lit. be-dike, to put a dike round’:

(62) a. \([v' \, \text{op}[^{\text{A, fris}}]]\), \([v' \, \text{op}[^{\text{A, hoop}}]]\)

b. \([v' \, \text{ver}[^{\text{A, groot}}]]\), \([v' \, \text{be}[^{\text{A, dijk}}]]\)

In the SCV structure of (62a), the adjective/noun itself is turned into a verb. The structure for deadjectival and denominal prefixed verbs in (62b) can be less complex: a single verbal node on top of the prefix and the adjective or noun is enough, as prefix and verb are not separated by V2, unlike the particle and the
verb in an SCV. This leads to the following templates for the formation of the
deadjectival SCVs of (61a):

\begin{align*}
(63) \quad & \text{a. } [\nu^{'\prime} \text{op}-[\nu^0 A]] \\
& \text{b. } [\nu^{'\prime} \text{in}-[\nu^0 A]] \\
& \text{c. } [\nu^{'\prime} \text{uit}-[\nu^0 A]]
\end{align*}

These structures indicate that adjectives can be converted into verbs by inserting
them into the correct slot in the SCV templates of (63). This implies that the
conversion of A to V is dependent on their occurrence in SCVs, which is indeed
the case: outside the SCV, A to V conversion is not productive. The templates
in (63) also demonstrate that the existence of SCVs with adjectival and nominal
bases does not force a word analysis of SCVs; such SCVs can also be analysed
as instantiations of phrasal lexical templates.

In conclusion, synchronic SCV formation is based on phrasal lexical tem-
plates with a fixed particle slot, an open slot for the verb, and a specific meaning.
These templates generalize over classes of existing SCVs in which the particle
in question expresses the relevant meaning.

\subsection*{3.5 Summary}

We propose an analysis of Dutch SCVs as partly lexicalized phrases, with
generally a fixed particle slot, representing a non-projecting word, and an
open slot for the verbal head ([\nu^{'\prime} X-V^0]). Assuming the existence of non-
projecting words introduces a new morphosyntactic category: a morpheme
that, although free and not bound, has less structure than an ordinary word.
As such, it is crucially not the preserve of any particular syntactic function,
as the same function may be instantiated by items of varying morphosyntactic
status. This analysis accounts for both the phrasal properties of SCVs, and the
properties of SCVs that have previously been claimed as evidence for their word
status.

SCVs can be formed productively and are compositional, but also have con-
ventionalized properties that do not follow straightforwardly from the properties
of the particle and the verb. Productivity and conventionality are not mutually
exclusive if we crucially distinguish lexical from morphosyntactic properties,
and accept that lexicalization, i.e. the development of conventional, unpre-
dictable meanings, is not the exclusive domain of words: phrases, too, may
become lexicalized. Analysing SCVs as instantiations of phrasal lexical tem-
plates, that is, a template in which the particle is fixed but the verbal slot is open,
allows us to account for the conventionalized meaning because the particle in the
template is linked to a specific meaning which all SCVs built on that template will share; at the same time, there is compositionality because the fixed particle and the open verb both have a perceptual contribution to make and are analysed as such by speakers, who, once they have derived the template from existing instantiations, are able to form new SCVs from it: hence the SCV’s productivity.
4 The diachronic analysis of Dutch SCVs

4.1 Introduction: the grammaticalization of SCVs

The synchronic semantic and syntactic similarities between particles and resultative predicates suggest a diachronic relationship, as discussed in chapter 2. The implication of this perspective is that particles developed from phrases into optionally projecting or non-projecting words by a process of grammaticalization, following the grammaticalization cline in section 1.2. We will explore this perspective further in the present chapter, focusing on the history of Dutch. The hypothesis that SCVs are grammaticalized resultative phrases has been proposed in the literature before by, e.g., Booij (1998, 2002a: section 6.4) and Neeleman and Weerman (1992). Grammaticalization refers to “that subset of linguistic changes whereby a lexical item or construction in certain uses takes on grammatical characteristics, or through which a grammatical item becomes more grammatical” (Hopper and Traugott 2003: 2). Grammaticalization is accompanied (or, according to some linguists, even driven) by semantic change. It often involves fusion (univerbation) of linguistic items with other items in their morphosyntactic context; examples of such univerbation are PPs grammaticalizing into single words (English particles like away and back from Old English (OE) on weg ‘on way’ and on bæc ‘on back, aback’), or adverbs or prepositions becoming verbal prefixes. Examples of this are the Inseparable Complex Verbs (ICVs) in Dutch, German and OE as discussed in chapter 1. Present-Day English (PDE) has some relics of this system, verbs like bewitch or forgo. The relationship between particle and verb in an SCV as discussed so far similarly suggests a process of univerbation, as a stage in a grammaticalization pattern as in (1); this pattern represents the development of a particle that projects a phrase (XP) into a particle (optionally projecting word) and ultimately a prefix (van der Auwera 1999; Booij 2002a, section 6.4; van Loey 1976). A further intermediate stage may be a quasi-incorporated particle as discussed in chapter 3. If we spell this out as a structural cline, we arrive at (1).
Introduction: the grammaticalization of SCVs

(1) Preverb cline

a. stage 1 \([V \ldots -XP_{res} V^0]\) head of a full phrase
stage 2 \([V \ldots [X(P) V^0]\) optionally projecting word
stage 3 \([V \ldots [X V^0]\) non-projecting word
stage 4 \([V_0 \ldots [X V^0]\) quasi-incorporated word
stage 3 \([V_0 \ldots [prefix-V]\) prefix

b. phrase XP \(\rangle\) particle X(P) \(\rangle\) particle X \(\rangle\) incorporated particle X \(\rangle\) prefix

The final stage of grammaticalization into prefixes will be discussed in chapter 7.

The diachronic relation between resultative phrases and particles is further supported by the synchronic similarities between the two. As discussed in chapter 2, some of the syntactic behaviour of particles is shared by resultative phrases: separation from the verb by V2 in Dutch and German, and by the object in English. Semantically, they share the same Lexical Conceptual Structure (LCS). As we saw in chapter 3, however, not all particles are resultative. Dutch and German in particular have a range of particle types, each with their own distinct semantics and lexical-aspectual structure, although they all participate in the same syntactic patterns.

An example of a Dutch SCV that could have developed along this grammaticalization cline is *over-brengen* ‘to carry over’, as shown in (2):

(2) a. dat Jan de boodschap over brengt \(\rangle\) dat Jan de boodschap [*over-brengt*]
that John the message across brings
‘that John communicates the message’

b. NP-NP-XP-V0 \(\rangle\) NP-NP-[V\(\prime\)X-V0]

The cline in (1) seems to presuppose adjacency of the adposition *over* and the verb *brengen* as a necessary condition for the grammaticalization process. It is in SOV languages like Dutch, German and Old English that verb and resultative phrase are adjacent in many configurations: this is particularly true for subclauses such as (2a) in which there is no auxiliary to separate XP from V, and in those main clauses in which the verb in the SCV is non-finite as in (3).

(3) Jan wil de boodschap zo snel mogelijk over-brengen.
John wants the message as soon possible across-bring
‘John wants to communicate the message as soon as possible.’

Since the finite verb *wil* ‘wants’ in (3) is subject to the V2 constraint, the entire SCV remains in situ. Adjacency of verb and particle facilitates an interpretation of the two elements as a unit, which in turn may lead to a reanalysis of the two as a syntactic unit, possibly accompanied by semantic change whereby
The adpositional element acquires a more abstract meaning. For instance, *over* ‘across’ functions as a resultative particle in many Present-Day Dutch (PDD) SCVs, and its meaning has indeed become more abstract (‘to the other side’): cf. *de bal over-spelen* ‘lit. the ball over-play, to pass the ball on’, *het geld over-boeken* ‘lit. the money over-book, to transfer the money’, and *zich over-geven* ‘lit. oneself over-give, to surrender’.

The effect of this reanalysis is loss of structure: the preverbal element no longer (obligatorily) projects its own phrase. In the cline in (1) this is represented as a reanalysis from XP to optionally projecting X to non-projecting X. Once structure is lost, it cannot be regained; grammaticalization developments as in (1) are assumed to be unidirectional, which means that we do not expect to find patterns of SCVs systematically developing into syntactic constructions with resultative and non-resultative phrases. One further thing to note about the cline in (1) is that it does not necessarily entail that every SCV starts out as a combination of a phrase and a verb which then grammaticalizes into particle and verb: as we saw in chapter 3, Dutch SCVs have come to be constructed synchronically on the basis of lexico-syntactic templates. There are broad families of particles which share the same abstract semantics, but within these broad families there is room for smaller subgroups in which particles have developed more specialized or extended meanings. Newly coined SCVs are more likely to be based on these templates than on phrases grammaticalizing into particles.

The cline in (1) reflects a unified morphosyntactic development of XP–V > X(P)–V > X–V > prefix for resultative and non-resultative particles alike. The semantic development, and hence the semantic correspondence between various types, is more diverse: the cline in (1), for instance, was first suggested by the fact that resultative particles are semantically similar to resultative phrases; this synchronic semantic similarity may then be due to a diachronic development by which constructions with resultative particles developed out of constructions with resultative phrases. This generalized cline subsumes the semantic similarity between modifying particles and phrasal modifiers, that between relator particles and phrasal elements that function as relators (prepositions and postpositions), and that between continuative particles and phrasal continuators. The various synchronic correspondences are set out in (4):

1. **resultative phrases**
   - *geld [Res over] boeken* ‘to transfer money’ > *geld [SCV over-boeken]*
2. **phrasal modifiers**
   - *[PP de groenten voor] koken* ‘to precook the vegetables’ > *de groenten [SCV voor-koken]*

The various synchronic correspondences are set out in (4):
c. postpositions
   \[\text{[PP het publiek toe] spreken}\]
   ‘to address the audience’
   $\rightarrow$ het publiek \[\text{[SCV toe-spreken]}\]

   relator particle: orienting

d. postpositions
   \[\text{[PP de sonate door] spelen}\]
   ‘to play through the sonata’
   $\rightarrow$ de sonate \[\text{[PP door-spelen]}\]

   relator particle: path

e. phrasal continuators
   \[\text{[PP uren door] lezen}\]
   ‘to continue reading for hours’
   $\rightarrow$ uren \[\text{[SCV door-lezen]}\]

   continuative particles

The cline in (1) thus implies a claim about the reanalysis of each of these particle types from semantically corresponding phrases to optionally projecting heads. If such reanalysis indeed took place, i.e. if cline (1) is valid, synchronic semantic correspondences alone are not sufficient evidence. What we need to know is whether the phrase and the verb were adjacent in enough contexts to trigger reanalysis. Section 4.2 will investigate this for historical data.

4.2 Adjacency

4.2.1 Adjacency as a necessary condition for structural reanalysis in an SOV language

One of the conditions for the grammaticalization of XP to X(P) to X as in (1) to be activated is structural adjacency, in line with the general assumption that reanalysis may take place between elements that are adjacent in certain contexts (see Harris and Campbell 1995; Hopper and Traugott 2003). The question that needs to be answered, then, is whether phrase and verb are indeed adjacent in the historical sources for all the different types of particle. The earliest period for which texts become available in quantities that are large enough to allow syntactic generalizations is Middle Dutch (c. 1200–1600); there is hardly any Old Dutch (also known as Old Low Franconian) running text that is not dependent on a Latin Vorlage or on an earlier text from another dialect (Old Saxon or Old High German) (see Quak and van der Horst 2002 for an inventory). The Middle Dutch (MD) data in sections 4.2.1–4.2.7 are examples of dialects spoken in the Low Countries (currently the Netherlands and the Belgian region called Flanders) between roughly 1200 and 1600; they are taken from Blom (2005: chapter 7), supplemented by additional data from the CD-ROM Middelnederlands (see Appendix).

It was noted above that the adjacency of verb and particle in Dutch hinges crucially on the assumption that Dutch is an SOV language. Let us first establish that this is also true for earlier stages of Dutch. MD is similar to PDD in that it
can be characterized as an SOV language (see also Blom 2002, 2005: 261–3). Although MD has SVO constructions that are unacceptable in PDD, e.g. SVO constructions in subordinate clauses and vVO constructions in main clauses (van den Berg 1980; Neeleman and Weerman 1992), Blom (2002, 2005: 261–3) demonstrates that such SVO orders in MD are marked in the sense that they are the result of extraposition of the object under certain systematic information-structural conditions, i.e. with focal direct objects, or direct objects that contain a relative clause. This is exemplified in (5) (from Blom 2005: 17):

(5)  a. ende dat lant es gheeten gillus roden hofstede
    and the land is called Gillis Roden’s farmstead
    ‘and the land is called Gillis Roden’s farmstead’ (0051–10)

b. dat si segghen souden die beste wareit, diese kinden van dien dat
    that they say would the best truth, which-they knew from that that
    wouters recht ware te duffel
    Wouter’s right were at Duffel
    ‘that they would tell the best truth they knew concerning the question
    what Wouter’s rights in Duffel would be’ (0120–37)

SOV order, on the other hand, does not seem to be constrained by such specific conditions, indicating that the unmarked order in MD is SOV, just as it is in PDD.

4.2.2 Resultative particles

We do find adjacency for resultative phrases. This is illustrated in (6), with the resultative phrase *magtig* ‘powerful’ in the idiomatic phrase *magtig maken* ‘empower, authorize’:

(6) Wij Bouwen Jansz. Schout . . . doen cont allen Luyden, dat wij
    We, Bouwen Janszoon Schout, do knowledge to all people, that we
    magtig gemaakt hebben . . . mits desen Aernt Jansz. Vos, omme uyt
    powerful made have . . . on condition that this Aernt Jansz. Vos, to in
    onse name ende van onsen ‘t wegen te compareren voor den Hoeve van
    our name and on our behalf to represent before the court of
    Holland
    Holland
    ‘We Bouwen Jansz. Schout announce to all the people that we have
    authorized hereby Aernt Jansz. Vos, to represent us in the Court of Holland in
    our name and on our behalf’ (v. Leeuwe, *Handv. Rijnl*. 246, Ald., 280; 1553)

Resultative phrases are still left-adjacent to the verb in PDD, even more strictly than in earlier stages because of the more rigid SOV word order of PDD; the position of resultative predicates parallels that of objects, and, like objects,
resultative phrases could be extraposed in MD for information-structural reasons (Cloutier 2006). The left-adjacent position makes a reanalysis along the lines of the cline in (1) plausible for resultative particles.

Turning to non-resultative particles, we find adjacency in all cases in the historical data, even in the case of orienting particles, where there is no adjacency in the corresponding phrasal construction synchronically.

4.2.3 Modifying particles

The phrasal equivalent of modifying particles are adverbial modifiers such as MD voer/vore ‘beforehand’. A number of examples are given in (7):

(7) a. Ic gruete u vrouwen ( . . . ) die waert maghet voer ende na.
   ‘I greet you lady ( . . . ) who were virgin before and after’ (Marialegenden en -exempelen, 2–176, 1500)

b. Ende als de wonde genayt es. so stroyt opten naet dit pulver dat
gi vore gemaect selt hebben.
   ‘And when the wound has been sewed, then sprinkle at the suture this powder that
you fore made shall have
   ‘And when the wound has been sewed, then sprinkle at the suture this powder that you will have made beforehand.’ (Cyrurgie, 1, cap. 5–15, 1351)

c. Siet, ic sende minen inghel vore dijn ansichte, die vore bereiden sal
dinen wech vore di.
   ‘See, I send my angel in your sight, who will prepare your way for you.’
   (De vier evangeliën – Marcus, 42, 1380–1400)

The unmarked position for modifying adverbials is to the left of the VP, with Adverbial–Object–Verb being the unmarked order. This means that any predicates or objects of the verb will separate such modifiers from the verb; the adjacency of adverbial modifier and verb in (7a–c) have all been achieved by moving out the predicate or object by various means. In (7a), both the predicate maghet ‘virgin’ and the adverbial modifiers appear to have been extraposed; in (7b), the object is missing because it has been relativized ((7b) is a relative clause); the result is adjacency. In (7c), vore ‘for’ itself appears to be in the unmarked pre-VP position, but the object dinen wech ‘your way’ has been extraposed, again with the result that vore ‘for’ and the verb are adjacent. Although extraposition of objects is severely restricted in PDD, definite objects like dinen wech ‘your way’ can still scramble to the left, leaving the modifier vore ‘for’ and the verb once more adjacent; the orderings with the phrasal
modifier *van tevoren* ‘beforehand’ that are possible in PDD are given in (8a–b), the PDD equivalent of (7c):

(8)  
   a. die *van tevoren* uw weg bereiden zal  
       who beforehand your way prepare will  
   b. die uw weg *van tevoren* bereiden zal  
       who your way beforehand prepare will  
       ‘who will prepare your way beforehand’

All in all, adverbial modifiers, though not adjacent to the verb in their unmarked position, still often end up in that position because objects (and predicates, but to a lesser extent) can be moved out of the VP. The constructions in (7b–c), then, have the potential for the reanalysis given in (9).

(9)  
    (denen wech vore bereiden > denen wech [vore-bereiden])  
    NP-XP<sub>ADV</sub>-V<sup>0</sup> > NP-[V′ X-V<sup>0</sup>]

The pattern in (9) demonstrates that the phrasal modifier *vore* is reanalysed with the verb as a syntactic unit, thereby losing structure (XP > X), and the direct object NP is reinterpreted as the direct object of this syntactic unit (that is, of the SCV). *Voer* in (7a) is clearly a phrasal modifier, but in (7b–c) it is ambiguous between a phrasal modifier and a modifying particle; *voor-maken* and *voor-bereiden* are plausibly SCVs, and the latter is unequivocally an SCV in PDD. The former is not, although a verb *vore-maken* appears as a lemma in the *Middelnederlands Woordenboek* (MNW, Middle Dutch Dictionary).

Neither the claim that certain particles function as modifiers, nor the claim that such particles are historically related to phrasal modifiers is entirely new. Lüdeling (2001: 156), for instance, argues that certain particles function as modifiers (adverbs or functors of the verb in her terminology), and Booij (2002a: 218) argues that certain SCVs have developed out of constructions with modifier phrases. The hypothesis for the historical development represented by (8b) is not very controversial then. The same cannot be said about the diachronic origins of the remaining two particle types, the relator and continuative particles, which have not been investigated earlier. We now turn to discussion of these types.

4.2.4 Relator particles 1: path particles  
SCVs with path particles (*de sonate door-spelen* ‘to play through the sonata’, see (4d)) express the telic path of the subject referent through/over the direct object referent, as discussed in chapter 3. The most likely source for such SCVs would seem to be postposition constructions with motion verbs, in
which the postposition forms a telic PP with the participant it selects. This telic PP denotes the path of the subject referent. Both SCVs with path particles and constructions with postpositions, then, express directional paths. If we are correct in taking this semantic similarity between the two constructions to indicate a diachronic reanalysis, we need to establish adjacency in earlier stages of Dutch of postposition and verb, and this is indeed what we find:

(10) Doen seyde dye knape. Eerwaerdighe vrouwe believet u ick en sal niet rusten voor dat ick hem ghevonden hebbe al soudick alle de werelt door loopen.

‘Then the boy said: Honoured lady, please believe I shall not rest until I have found him, even if I have to walk the whole world over.’ (Malegijs 156, 1556)

As with the modifying particles, it is not always clear if we are dealing with the postposition construction or the reanalysed SCV; (11a–b) are clearly postpositions, but (11c) may be ambiguous between a postposition and an SCV:

(11) a. Ende si stroeyden hen alle die stat dore

And they distributed themselves all the town through ‘And they distributed themselves all over the city’ (Bijbelvertaling 1360, 1 Macab., 9–16, 3–368, 1460)

b. Dat sijn ( . . . ) die vij geeste Goods, die gesint sijn al erterike dore

‘Those are ( . . . ) the seven spirits of God, who have been sent all over the earth’ (Vanden gheestelijken tabernakel, 2, 116–1, 1380)

c. Ende hi voer alle d=lannt dore

And he drove all the=land through ‘And he drove through the whole country’ (Bijbelvertaling 1360, 4 Kon., 12–25, 1–498, 1460)

We propose the following reanalysis for these path particles:

(12) a. dat Jan [Azië door] reist > dat Jan Azië [door-reist]

‘that John travels through Asia’

b. [PP NP-P]-V0 > NP-[V' X(P)-V0]

Although SCVs with path particles strongly resemble postposition constructions with respect to their semantic and lexical-aspectual properties, there is an important difference with respect to perfect auxiliary selection: postpositional
constructions with motion verbs are unaccusative and hence select the perfect auxiliary zijn ‘be’, whereas SCVs with path particles are transitive, selecting the perfect auxiliary hebben ‘have’. This is illustrated in (13):

(13) a. **SCV with path particle**
    
    dat Jan de sonate \( [v \ 	ext{door-gespeeld}] \) heeft
    
    that John the sonata through-played has
    ‘that John has played through the sonata’

    b. **postposition construction**
    
    dat Jan \([pp \text{Asia door}]\) gereisd is
    
    that John Asia through travelled is
    ‘that John has travelled through Asia’

We will come back to this difference in auxiliary selection in section 4.3.

4.2.5 **Relator particles 2: orienting particles**

SCVs with orienting particles are semantically more similar to prepositional than to postpositional constructions. Like prepositions, orienting particles license a participant with which they form a PP that expresses the direction towards which the event is oriented, and like preposition constructions with atelic verbs, orienting SCVs with atelic bases denote atelic events (see (4c) above, and cf. section 3.3.3). With respect to adjacency, we find that prepositions licensing Ground participants are not left-adjacent to the verb, neither in SOV nor in SVO contexts. It is therefore not clear how preposition and verb could have been reanalysed as a unit:

(14) a. \( \text{dat Jan } [pp \text{ tot het publiek}] \text{ sprak} \)
    
    that John to the audience spoke
    ‘that John talked to the audience’

    b. Jan \( \text{sprak } [pp \text{ tot het publiek}] \).
    
    John spoke to the audience
    ‘John talked to the audience.’

The relevant structural patterns show that the preposition is either separated from the verb by the Ground, the complement NP of the P, or is right-adjacent rather than left-adjacent to V:

(15) a. \( [\text{tot het publiek}] \text{ spreken } / \text{het publiek } \text{toe-spreken} \)
    
    ‘address the audience’
    \([pp \text{ P-NP}-V^0 / \text{NP-}[v X-V^0]]\)

    b. \( \text{spreken } [\text{tot het publiek}] / \text{het publiek } \text{toe-spreken} \)
    
    ‘address the audience’
    \( V^0-[pp \text{ P-NP}] / \text{NP-}[v X-V^0]\)
A clue to the possible source for reanalysis is offered by the fact that the orienting particle *toe* ‘to’ formally resembles the postpositional (and predicative) form *toe* rather than the prepositional form *tot* of this element. As postpositions are left-adjacent to the verb, and therefore plausible diachronic sources for particles, the sources of these orienting particles could perhaps be argued to be postpositions. The problem is that constructions with the PDD postposition *toe* expresses telic path PPs, as in (16):

(16)  dat Jan [pp naar de man toe] loopt  
that John to the man to walks  
‘that John walks up to the man’

The circumpositional PP *naar de man toe* expresses the telic path of the subject *Jan* (cf.: ‘John walked up to the man {in a minute/"for hours"}') rather than the direction towards which the event is oriented. These different semantic and lexical-aspectual properties make it unlikely that the orienting particle *toe* developed out of existing postposition constructions. Tracing the orienting SCV in MD, however, reveals that there were postpositional orienting constructions that were lost at a later stage, but not before they had given rise to the orienting particle by reanalysis. Blom (2005) searched MD texts for the combinations *toe*/*to segghen* ‘to say to’ and *toe*/*to spreken* ‘to speak to’. These data show that there is a postpositional source for orienting particles that was later lost; examples are set out in (17). The labels refer to syntactic functions, with *pobj* as shorthand for pre/postpositional objects.

(17) a. Altehant als dese coninck deze woorde desen goutsmet toe ghe-
As soon as this king *subj* these *words* *obj* this goldsmith *pobj* to *pref-
seyt* hadde, . . .  
spoken had, . . .  
‘As soon as the king had spoken these words to the goldsmith, . . . ’  
(*Schaecspel*, 41d, 1479)

b. Haddes=tu dit enen anderen toe gheseyt, die dijn lose dasen niet  
had=you *subj* this *obj* an other *pobj* to said, who your silly tricks not  
en kende, dan . . .  
NEG knew, then . . .  
‘If you had said this to another person, who did not know your silly  
tricks, in that case . . . ’  
(*Reynaert*, 146, 1479)

c. Doe hi sach dat si hem voir bi ghinc Ende sulke woorden hem toe seide,  
when he saw that she him for by went and such *words* *obj* him to said,  
wert hi seer drovich.  
became he very sad  
‘When he saw that she passed him and said such words to him, he was  
quite sad.’  
(*Marialegenden en –exempelen*, 2–258, 1500)
These data reveal two differences between the MD combination *toe segghen* and its PDD SCV counterpart *toe-spreken* in (18):

\[(18) \text{ dat hij het publiek (} \text{de volgende woorden)} \text{ toe-sprak} \]
\[\text{that he the audience the following words to-spoke} \]
\[\text{‘that he spoke/talked (‘the following words) to the audience’}\]

The first difference is that the MD examples in (17) have two object NPs (a direct object NP, referring to the words spoken, and a P-object NP, referring to the addressee), unlike their PDD counterparts, which may generally have only one object NP, referring to the addressee, cf. (18). The loss of the direct object NP in the structure is probably due to the fact that it encodes information that is pragmatically redundant: the instances of *toe*/*to segghen* ‘to say to’ and *toe*/*to spreken* ‘to speak to’ found in the MD database invariably have as their direct object variations on *deze woorde* in (17a). A second difference is that the NP encoding the addressee is syntactically realized as the object of postpositional *toe* in MD, i.e. it is a prepositional object with dative case, whereas *het publiek* ‘the audience’ (the addressee in the PDD example) is syntactically the direct object of the SCV *toe-spreken*, not a prepositional object. PDD can no longer encode such addressees by postpositional PPs, but only by prepositional PPs, as we saw in (14). This explains our failure to find adjacency in the synchronic data. We will come back to the loss of argument structure and the reanalysis of the prepositional object to direct object in section 4.3.

### 4.2.6 Continuative particles

The last category is that of continuative particles, such as *door* in *uren door-lezen* ‘to continue reading for hours’ and *uren door-werken* ‘to continue working for hours’. These particles appear to be semantically similar to continuative PPs like *in het rond* ‘around, about, left and right’, expressing the non-goal-directed continuation of the event, as in (19).

\[(19) \text{ dat Jan maar een beetje in het rond las} \]
\[\text{that John just a bit in the round read} \]
\[\text{‘that John just read about a bit’}\]

The continuative PP in (19) is related to its spatial counterpart by metaphorical extension, and continuative particles seem to entertain a similar metaphorical relation with their spatial counterparts (cf. McIntyre 2004). A possible historical source of SCVs with the continuative particle *door* is represented by constructions like (20), with a postpositional PP.
Such postpositional PPs express the duration of the event denoted by the verb and its argument(s). Being a postposition, door is left-adjacent to the verb in such constructions, which means that it could in principle be reanalysed with the verb as a unit. However, constructions with door as in (20) may take a direct object, unlike constructions with continuative particles, which show the atransitivity effect (see section 3.3.4). The examples in (20) therefore seem unlikely as correspondences with the diachronic origins of continuative particles. Turning to MD for plausible historical sources, we find examples like (21) with door/doer/dore, the allomorphs of the MD cognate of PDD door:

(21) Ende si beeden al den nacht dore in der vergaderingen
    and they prayed all the night through in the assemblies
    ‘And they prayed all night long in the assemblies’ (Bijbelvertaling 1360,
    Tobias + Judith, 2–133, 1460)

The postpositional PPs in these constructions function as temporal modifiers that express the duration of the event. These constructions are related to the spatial PP constructions that gave rise to path particles (see section 4.2.4) by the metaphorical extension from space to time, although they differ in their lexical-aspectual structure (as we will see in section 4.3). A construction like (21) would show adjacency of postposition and verb in non-V2 contexts, which shows that (21) is indeed a likely diachronic source for continuative particles. With intransitive verbs like bidden ‘to pray’ in (21), adverbials like al den nacht dore would always end up adjacent to the verb in such contexts; recall from section 4.2.2 that adjacency of adverbials and transitive verbs is only achieved by movement of the object out of the VP by scrambling, relativization or extraposition. The reanalysis involved in shown in (22):

(22)  [PP al den nacht dore] beeden > al den nacht [V dore-beeden]
    all the night through prayed
    ‘prayed all night long’

The (optional) adverbial PP al den nacht dore ‘all the night through’ expressing the duration of the activity denoted by the verb has been reinterpreted in this reanalysis as an (optional) adverbial NP al den nacht ‘all the night’ expressing
the duration of the activity denoted by the SCV *door-bidden* ‘lit. through-pray pray on’. This reanalysis is possible because there are other such NPs functioning as temporal modifiers, like, for instance, *de hele dag* ‘the entire day’ in phrases like *de hele dag werken* ‘to work all day’. Note that the slot may also be filled with other temporal modifiers (i.e. other than NPs functioning as such), such as the Adverb Phrase (AdvP) *jaren-lang* ‘lit. years-long, for years’.

4.2.7 Interim conclusions

To sum up, the historical sources postulated for all particles show that a reanalysis from a phrasal construction is plausible in all cases because the necessary condition for reanalysis, adjacency between phrase and verb, is met. We also saw that synchronic similarities found between particles and other constructions are helpful pointers to diachronic origins, but need to be supported by historical material, as the diachronic source of any particular SCV does not always survive to the present day, even if the SCV itself does.

4.3 Reanalysis and argument structure

4.3.1 Reanalysis and constituent structure

Our starting point in this section is the reanalysis into an SCV of a phrase and a verb as in (1) above, which is repeated here for convenience:

\[
(23) \quad [\text{VP} \ldots -\text{XP} - \text{V}^0] \rightarrow [\text{VP} \ldots [\text{V}^0 \text{X} - \text{V}^0]]
\]

Summarizing the findings of section 4.2 concerning the origins of the various particle types, we can distinguish more detailed schemas, one for each particle type:

\[
(24) \begin{align*}
\text{resultative} & : [\text{VP} \text{NP-XP}_{\text{PP}} - \text{V}^0] \rightarrow [\text{VP} \text{NP-}[\text{V}^0 \text{X} - \text{V}^0]] \\
\text{postmodifier} & : [\text{VP} \text{NP-XP}_{\text{ADV}} - \text{V}^0] \rightarrow [\text{VP} \text{NP-}[\text{V}^0 \text{X} - \text{V}^0]] \\
\text{relator: path} & : [\text{VP} \text{NP-}[\text{PP} \text{NP-P}] - \text{V}^0] \rightarrow [\text{VP} \text{NP-}[\text{V}^0 \text{X} - \text{V}^0]] \\
\text{relator: orienting} & : [\text{VP} \text{NP-}[\text{pp} \text{NP-P}] - \text{V}^0] \rightarrow [\text{VP} \text{NP-}[\text{V}^0 \text{X} - \text{V}^0]] \\
\text{continuative} & : [\text{VP} \text{NP-}[\text{PP} \text{NP-P}] - \text{V}^0] \rightarrow [\text{VP} \text{NP-}[\text{V}^0 \text{X} - \text{V}^0]]
\end{align*}
\]

The reanalysis, then, is in fact more varied and more complex than a generalized schema as in (23) would lead us to believe. It is not just that a phrasal constituent grammaticalizes into an optionally projecting word; the PP is ripped apart, the head P is reassigned to the V rather than to its NP complement, and the NP complement becomes the direct object of the SCV combination. Although we saw in chapter 3 that the LCS of resultatives remains constant, irrespective of whether the resultant state is expressed by a phrase or by a non-projecting word, this is not quite true of PPs: although the LCS in terms of Ground
Reanalysis and argument structure

There is a systematic semantic difference between postpositions and prepositions that may well have been developed in interaction with the rise of SCV templates. Direct objects have their own semantics, which is activated when the prepositional object is reanalysed as the object of an SCV. The lexical-aspectual structure of such SCVs will vary accordingly.

### 4.3.2 Direct objects

SCVs with path particles, such as *de sonate door-spelen* ‘to play through the sonata’, express the telic path of the subject referent through the direct object referent; we identified a postposition as in (25a) as the likely source, entailing a reanalysis as in (25b); (25c) is based on example (11c), with non-V2 word order, in which P and V would be adjacent.

(25) a. dat Jan [pp Azië door] reist that John Asia through travels ‘that John travels through Asia’
    > dat Jan Azië [V door-reist]

b. [vp [pp NP-P]-V0] > [vp NP-[V X-V0]]

c. Hi [pp alle d=lant dore] voer He all the=land through went ‘He drove through the whole country’
    > Hij het hele land [V door-reed]

The verb *reizen* ‘travel’ is unaccusative, selecting the perfect auxiliary *zijn* ‘be’, but SCVs with the relator particle *door* (*door-reizen* ‘travel through’, *door-spelen* ‘play through’, etc.) variously select the perfect auxiliary *hebben* ‘have’ or *zijn* ‘be’, as in (26):

(26) a. dat Jan Azië [V door-gereisd] heeft that Jan Asia through-travelled has ‘that Jan has travelled through Asia’
    > dat Jan Azië [V door-reis] heeft

b. dat Jan [pp Azië door] gereisd is that Jan Asia through travelled is ‘that Jan has travelled through Asia’
    > dat Jan [pp Azië door] gereisd is

This would seem to indicate that in (26a), the SCV has undergone the reanalysis and has become transitive, as selection of *hebben* as the perfective auxiliary shows; in (26b), on the other hand, the SCV has not undergone the reanalysis and is unaccusative, as shown by selection of *zijn* as the perfective auxiliary. There is no semantic distinction between (26a) and (26b): the referent of the object NP is still the conceptual Ground of *dore* ‘through’, but its syntactic realization is that of object of the SCV in (26a), whereas it is the object of the postposition in (26b). Further examples of variable selection of *hebben* and *zijn*
as auxiliaries of the perfect of such path SCVs, which is still in a state of flux in PDD, are given in (27).

(27)  

a. Marie is/heeft het hele park *door-*gerend.
  ‘Mary has run through the whole park.’

b. Is/Heeft Jan die drukke straat helemaal alleen *over-*gestoken?
  ‘Did John cross that busy street all alone?’

Interestingly, the auxiliary *zijn* ‘be’ seems to be acceptable in all cases, but for *hebben* ‘have’ judgements vary, which suggests that *door-rennen* and *over-steken* have not acquired SCV status for all speakers. These facts suggest that in PDD the reanalysis has not yet been completed and that the grammaticalization of postpositions into path particles is still an ongoing process. Alternatively, it may suggest that this is an interesting example of layering, showing that the various stages in the grammaticalization process have been frozen.

In MD, examples like (26) and (27) have *zijn* rather than *hebben* as their auxiliary of the perfect, which shows that the reanalysis has not yet taken place:

(28)  

Binnen dese tijt so *zijn* Malegijs ende Vivien al die cameren *ge-*lopen
  ‘During this time Malegijs and Vivien had walked through all the rooms’

(Malegijs, 87, 1556)

The creation of a transitive SCV by means of the structural reanalysis in (24)–(25), then, leads to changes in the selection of the perfect auxiliary because subjects and direct objects have semantic properties of their own. Direct objects are typically affected by the action and they are construed as undergoing the action denoted by the verbal predicate in some sense. And the subject referent, which is the moving entity, may acquire more agentive properties, such as that of initiating and controlling the motion event. It is this interaction between subjects and objects that eventually leads to the selection of the auxiliary *hebben* ‘have’ rather than *zijn* ‘be’. This implies that auxiliary selection, although it is encoded syntactically, is determined semantically (cf. Levin and Rappaport Hovav 1995): subtle changes in the semantic properties of the participants or the predicate of an event may have the drastic consequence of a change in auxiliary selection.

The template [v- door-V] ‘to go through Y by V-ing’ that results from the reanalysis may have been generalized to constructions with non-motion verbs,
leading to the formation of SCVs like *door-lezen* and *door-spelen*, as in *het boek door-lezen* ‘to read through the book’ and *de sonate door-spelen* ‘to play through the sonata’. For constructions expressing actual motion, however, the postposition construction remains an option. The result of this is that (unaccusative) postposition constructions expressing motion can still be formed, although an alternative with an SCV template is also available. Constructions formed on the SCV have slightly different semantic properties (albeit within the same conceptual structure, expressing a path followed by a participant through another participant), which corresponds with different selectional restrictions with respect to the verbs used in the template and the selection of the perfect auxiliary. As is generally the case with grammaticalization, then, old and new structures coexist: there is layering, with some constructions being structurally ambiguous; it is only in the perfect that the selection of the perfect auxiliary disambiguates them.

A similar story can be told for another path particle that was discussed briefly in chapter 3: *over* ‘over’. *Over* may perform the same postposition function and exhibit the same properties as *door* in all relevant respects. The MD construction in (29), for instance, allows for both a postpositional PP analysis (29a) and an SCV analysis (29b). This construction, then, has potential for the reanalysis postulated for SCVs with path particles.

\[(29)\]  
\[
\text{Sijn predicaren sullen } \text{alle die werelt over \textit{wanderen}.}
\]

‘His preachers will wander all over the world.’ (*Tafel vanden Kersten ghelove – Zomerstuk*, 1480, kap. 49, 620)  
a. Sijn predicaren sullen [VP [PP alle die werelt \textit{over} \textit{wanderen}]
b. Sijn predicaren sullen [VP [NP alle die werelt] [V′ \textit{over} \textit{wanderen}]]

*Ouer* in (30), however, is unambiguously part of a postpositional PP, that is, the correct structure is (30a): the NP *desen langen berch* cannot be the direct object of the SCV *over-send* ‘over-send’ as that function is already filled by \(v\) ‘you’.

\[(30)\]  
\[
\text{Ic en segghe hem des genen danc die } v \text{ desen langen berch ouer}
\]

I NEG say him that.GEN no thank who you this long mountain over ghesent heeft.  

‘I do not thank him who sent you over this long mountain for that.’ (*Reynaert*, 16b)  
a. die [VP v [PP desen langen berch \textit{ouer} \textit{ghesent heeft}]
b. *die [VP [NP v] [NP desen langen berch] [V′ \textit{ouer} \textit{ghesent} heeft]}
The diachronic analysis of Dutch SCVs

We can thus distinguish two main disambiguators: auxiliary selection and argument structure.

The origins of the second group of relator particles, orienting particles, turns out to be more difficult to track down, as we saw in section 4.2.5: only prepositional constructions are available as phrasal parallels in PDD, to the exclusion of postpositions. Prepositional constructions do not make plausible sources for SCVs because the necessary condition for reanalysis, adjacency of P and V, is not met. We saw, however, that there were plausible postpositional sources in MD that have not survived into PDD; an example was (17a), here repeated as (31):

(31) Altehant als dese coninck deze woorde desen goutsmet toe
As.soon as this king. SUBJ these words. OBJ this goldsmith. POBJ to
ghe-seyt hadde, . . .
PREF-spoken had
‘As soon as the king had spoken these words to the goldsmith,. . .’
(Schaecspel, 41d, 1479)

A PDD SCV like toe-spreken ‘address’ is monotransitive and in example (31), it takes as its object the person addressed, desen goutsmet ‘this goldsmith’; in the MD example, the person addressed is not the direct object but the complement NP of the postposition toe; the direct object is deze woorde ‘these words’. This means that the reanalysis not only involved detaching the postposition from its complement, and attaching it to V, but also ‘losing’ the direct object:

(32) [VP NP-[pp NP-P]-V0] > [VP Ø-NP-[ V′ X-V0]]

A possible scenario for this may be in four distinct stages:

(33) a. stage 1
(dese coninck) (deze woorde) ([pp desen goutsmet toe]) gheseyt hadde
(SUBJ) (OBJ) (POBJ)

b. stage 2
(dese coninck) (deze woorde) (desen goutsmet) [V′ toe gheseyt] hadde
(SUBJ) (OBJ) (IOBJ)

c. stage 3
(dese coninck) Ø (desen goutsmet) [V′ toe gheseyt] hadde
(SUBJ) (IOBJ)

d. stage 4
(dese coninck) (desen goutsmet) [V′ toe gheseyt] hadde
(SUBJ) (OBJ)

The adjacency of toe and segghen first leads to a reanalysis of these two words as a unit, and as a result toe no longer forms a PP with the NP desen goutsmet;
it forms an SCV with the verb (33a>b). The effect of this could be that the NP *desen goutsmet* was reanalysed as the indirect object (*iobj*) of the complex verb *toe-segghen*. It cannot be reanalysed as its direct object, since there is one already; and the semantic role of *desen goutsmet* is that of addressee, i.e. it is a *recipient/goal*, which means that it is most typically an indirect object. The SCV, then, is at first ditransitive: NP1-NP2-*toe-segghen*. The loss of the direct object (33b>c) may have been motivated as follows: NP1, which refers to the words spoken, was presumably conceptually similar in all constructions with the combination NP1-NP2-*toe-segghen*. In all probability, this NP often also was formally identical, namely ‘this/that’ or ‘these/those/such word(s)’. Such constructions, then, contained a clear potential for reanalysis, and after the reanalysis had taken place, the older analysis remained available. The result of this may have been that NP1 became pragmatically optional and was, eventually, left out. Since (33c) has only one non-subject NP (referring to the addressee), this NP is then reinterpreted as the direct object of the complex verb *toe-segghen*, resulting in (33d). The single object of a monotransitive verb in Dutch is generally a direct object and not an indirect object. (33d) represents the PDD situation. If speakers want to mention the words spoken, they have to resort to the prepositional construction: *speak/say NP to NP* (cf. (14) above).

Reanalysis of postpositional objects as direct objects may leave their effects in word order. Both in MD and in PDD, the combination *toe-segghen/toe-zeggen* has a second meaning ‘to promise’, as exemplified in (34) for MD, and (35) for PDD:

(34) Ende ick heb desen ionghen Aymijn Malegijs neve u *toe gheseyt*,
and I have this boy Aymijn Malegijs’s cousin.OBJ you.IOBJ/POBJ to said in dien dat Malegijs dese twee draken verwinnen can soe sul=di hem
in that that Malegijs these two dragons conquer will so shall=you him trouwen
marry
‘And I have promised you this boy Aymijn, Malegijs’s cousin, if Malegijs will conquer these two dragons, then you will marry him (i.e. Aymijn)’
(VI-234)

(35) dat het bestuur Jan de woning *toe-gezegd* heeft
that the board.SUBJ John.IOBJ the house.OBJ to-said has
‘that the board promised John the house’

Note that MD has direct object–indirect object order, whereas PDD has indirect object–direct object order; this is the canonical order for two objects. The postposition analysis is not available for the PDD example, as *toe* cannot be construed with *woning*. *Jan* can be construed semantically as its Ground, but
Jan and toe are not adjacent as they are separated by the intervening direct object de woning. A further point is that toe has no effect on the realization of the indirect object Jan in this construction, or it would block the prepositional variant of the indirect object, which is not the case: *dat het bestuur aan Jan de woning toe-gezegd heeft* is equally acceptable. The MD example does allow a postpositional analysis: *ick heb desen ionghen (…) [pp u toe] gheseyt*. We here see a reanalysis of a postpositional complement into an indirect object (as in the stage (33a>b) posited for toe-segghen ‘address’), with the order of the objects subsequently converging on the canonical order. Toe-segghen ‘promise’ did not follow toe-segghen ‘address’ in becoming monotransitive. A probable cause for this is that the direct object NP is informationally far more salient than the object of toe-segghen ‘address’, which is conceptually similar and pragmatically redundant (invariably something like ‘these words’ or an anaphor referring to ‘words’); whereas things that are promised will be different in each new case, therefore highly informative and unlikely to be left out. The effect of this is that both the direct object NP and the indirect object NP continued to be realized in such constructions.

The final particle type which we assume to have its origins in a postpositional construction is the continuative particle door, as in uren door-lezen ‘to continue reading for hours’ and door-werken ‘to continue working for hours’. They express the non-goal-oriented continuation of an event. A possible source of the continuative particle door is represented by constructions such as (36), which contain a postpositional PP that expresses the duration of the event denoted by the verb and its argument(s), as in (a), which is reanalysed as an SCV, as in (b).

(36) a. dat Jan [pp het hele jaar *door*] werkt
   ‘that John works all year round’
   that John the whole year through works

b. dat Jan [np het hele jaar] [v′ *door*-werkt]
   ‘that John continues working all year round’
   that John the whole year through-works

There is a subtle semantic difference in that in (36b) the continuity of John’s working receives more focus, which is reflected by the particle receiving stress. However, since the factual meanings of (36a) and (36b) are so similar, reanalysis was possible. This reanalysis can be schematized as (37):

(37) [vp [pp np-p]-v0] > [vp (npadv)-[v′ X-v0]]

These constructions are related to the spatial PP constructions in (25) (the source of path particles) by the metaphorical extension from space to time.
As opposed to intransitive constructions with spatial PPs like (25a), which express a change of location of the subject referent (‘John travels through Asia’), intransitive constructions with temporal PPs like (36a), which express activities with a temporal modifier, are not unaccusative, but unergative. As with the path particles, we find that here, too, the postposition has detached itself from its complement NP and attached to the V instead; the difference is that the complement of the postposition (het hele jaar ‘all year round’ in (36)) has not been reinterpreted as a direct object: its semantics are not those of a typical theme, it is not affected, it is a temporal adverbial and its presence is optional. As adverbials of time may be NPs in form (cf. yesterday, all night, etc.), this NP was reinterpreted as an (optional) adverbial NP expressing the duration of the activity denoted by the SCV. The reanalysis resulted in the SCV template (XP) \[V'_{door-V}\] ‘to continue V-ing (for XP time)’. The durative semantics expressed by constructions formed with this template was already present in the source construction, the temporal PP, denoting a time span whose length is stressed (cf. al den nacht doore ‘all night (long)’, in the MD example (22) above). Certain semantic properties of the source construction have thus been preserved in the new construction, which is usually the case in grammaticalization (see Hopper and Traugott 2003: 17).

There is a difference, however, between the participant-licensing properties of the source postposition construction and the continuative particle construction. Constructions with continuative postpositions may have direct object NPs; the continuative postposition, as a temporal adverbial, does not affect the argument structure of the verb at all:

\[(38)\] dat Jan de vakliteratuur [pp het hele jaar door] heeft bij-gehouden
that John the professional-literature the whole year through has at-kept
‘that John has kept up with professional literature all year round’

SCVs with continuative particles, on the other hand, invariably exhibit the atransitivity effect (see section 3.3.4: uren (*appels) door-eten ‘to continue eating (*apples) for hours’). We hypothesise that this difference is due to the reanalysis involved in the development of continuative postpositions into continuative particles. The NP that is part of the PP in the source construction is reinterpreted as an adverbial NP in this reanalysis, and not as a direct object NP. In the structure resulting from the reanalysis, its slot can only be filled with adverbial phrases (adverbial NPs or AdvPs).

Note that for the word sequence (36) the interpretation as postpositional construction (36a) is still available in PDD, alongside its reanalysed SCV counterpart (36b). That is, (36) is structurally ambiguous (but disambiguation
The diachronic analysis of Dutch SCVs is possible by means of the absence versus presence of stress on the postposition/particle). In a sentence like (39), however, there is no ambiguity: with the adverbial expressed by an adverb rather than by an NP, a postpositional construction is out of the question.

(39) dat Jan lang moet door-werken
that John long must through-work
‘that John will have to keep on working for a long time’

The other Dutch continuative particle, rond ‘around’, seems to have a different historical source (see Blom 2005: 372, note 38). SCV formation with this particle appears to be much less productive than SCV formation with continuative door, compare *urenlang rond-lezen ‘to read around for hours’, *de hele middag rond-spelen ‘to play around the whole afternoon’ with urenlang rond-lopen ‘to walk around for hours’, ergens de hele middag rond-hangen ‘to hang around somewhere the whole afternoon’.

4.3.3 The semantic distinction between postpositions and SCVs
We have seen in section 4.3.2 that the grammaticalization process that creates the basic templates for SCVs with the various types of particle has certain semantic effects. As grammaticalization itself is generally supposed to be triggered by semantic change (see Hopper and Traugott 2003: 11), this means that there are semantic changes both before and after the structural reanalysis (see Blom 2005: section 2.3).

After reanalysis, the new structure may further develop its own semantic characteristics through semantic extension and inference. As a consequence of the changed semantic properties, the new construction may be generalized to inputs that were not available to the source construction, and this is precisely the evidence that change has taken place (see the discussion in Blom 2005: 268–75; compare Hopper and Traugott 2003: 3). The SCV system has semantic properties of its own, which means that the semantics of SCVs differs from those of the source construction.

We saw in chapter 3 that the particle is central to SCV formation. The various particle types all have their own LCS which generally survives the morphosyntactic reanalysis from source construction to SCV. The function of particles in the LCS is largely the same as that of the original postposition or predicate, as are its participant-licensing properties; resultative particles function as resultative predicates, modifier particles function as phrasal modifiers, orienting particles function as orienting postpositions (which, as we saw, have not survived into PDD, although they did exist in MD), and path particles function
as path postpositions. Continuative particles are exceptional here in that they appear to trigger the atransitivity effect: the NP that is part of the PP in the source construction is reinterpreted as an adverbial NP rather than an object, as we saw in section 4.3.2; but here, too, continuative particles have the same durative semantics as their source.

This interaction between postposition constructions and SCVs is probably reinforced by semantic and syntactic similarities. We noted above that postposition constructions and transitive SCVs can be disambiguated by their selection of perfect auxiliary, hebben ‘have’ or zijn ‘be’. The rules governing auxiliary selection are not as hard and fast as we made it appear in section 4.3.2, however. Sorace (2000) demonstrates that the semantic determinants of unaccusativity are gradient, even if its syntactic reflection is discrete (since a choice between be and have must be made in concrete cases). Sorace discusses cross-linguistic data showing that different languages may locate the be/have cut-off point at different points on her auxiliary selection hierarchy. For Dutch, Lieber and Baayen (1997) argue that auxiliary selection is determined by the presence of a specific semantic feature which they call Inferable Eventual Position or State (IEPS), which a verb may possess intrinsically, or obtain compositionally in syntax (if an endpoint of the (motion) event is added). Manner of motion verbs do not have intrinsic endpoints (verbs with meanings like run, jog, lope, sprint, dash, rush, hurry, scurry, scramble, etc.) and select hebben as the perfect auxiliary, but if endpoints are added (to town, to the river, etc.) they select zijn.\(^6\)\footnote{Manner of motion verbs add an endpoint which makes the construction [+IEPS] in Lieber and Baayen’s terms, is always acceptable.}

We may hypothesize that the special particle syntax identified in chapter 2 may be a good diagnostic: only particles may appear left-adjacent to the verb in V-raising constructions, and we would thus not expect to find postpositions there. And indeed, if we consider (40a–b), in which postpositions are part of the verb cluster, we get strongly degraded judgements.

(40)  a. *??dat Jan de baby niet de trap wilde op dragen
dat Jan the baby not the stairs wanted up carry
‘that John did not want to carry the baby up the stairs’

b. *??dat Jan de trap niet kon op lopen
dat Jan the stairs not could up walk
‘that John could not walk up the stairs’
We saw earlier that postpositions make plausible sources for particles because, like particles, they are left-adjacent to the verb. We saw that they may have a similar LCS; this LCS is also shared by their prepositional counterparts (41c):

(41) a. dat Jan [PP de catalogus door] [V bladert]
    b. dat Jan [NP de catalogus] [SCV door-bladert]
    c. dat Jan [PP door de catalogus] [V bladert]
       ‘that John leafs through the catalogue’
       [GO [(THROUGH (de catalogus)) (Jan)], BY {bladeren (Jan)}]

The semantic difference between prepositional and postpositional constructions in Dutch has been discussed extensively in the literature and in fact, (41a) and (41c) are typical examples. Some further examples are (42a–b):

(42) a. dat Jan [PP de sloot in] springt
    ‘that John jumps into the ditch’
    b. dat Jan [NP in de sloot] springt
    ‘that John jumps into the ditch/that John jumps about in the ditch’

Helmantel (2002) and others have argued that the postposition construction denotes a process along a path, and is strongly directional, whereas the preposition construction need not be; John may already be positioned in the ditch and is jumping up and down there. Helmantel distinguishes two types of pre- and postpositions, i.e. point adpositions like in ‘in’, op ‘on/up’ and binnen ‘inside’, and path adpositions, like over ‘over’, door ‘through’ and langs ‘along’, and claims that point adpositions imply that the subject is at that point at the end of the motion: in (42a), John is in the ditch as a result of his jumping. There would be no such implication with path postpositions. Beliën (2008) adds an interesting insight: she argues that point and path postpositions both denote a motion event in which a trajector traverses a landmark so that the result P is achieved: the trajector moves from where it is not P to where it is completely P. The means that the LCSs of pre- and postpositional constructions differ in that the latter should include the notion completely:

(43) a. dat Jan [PP de catalogus door] [V bladert]
    [GO [(COMPLETELY THROUGH (the catalogue)) (Jan)], BY {leafing (Jan)}]
    b. dat Jan [NP de catalogus] [SCV door-bladert]
    [GO [(COMPLETELY THROUGH (the catalogue)) (Jan)], BY {leafing (Jan)}]
    c. dat Jan [PP door de catalogus] [V bladert]
       ‘that John leafs through the catalogue’
       [GO [(THROUGH (the catalogue)) (Jan)], BY {leafing (Jan)}]
Beliën notes that this difference is akin to what Beavers (2006) has suggested for the locative alternation in English (*Jack sprayed the wall with paint* versus *Jack sprayed paint on the walls*): the effect can be described as holistic versus partitive, and co-varies with the semantics of direct objects (affectedness): if *the wall* is direct object, the implication is that the entire wall is sprayed with paint; if *the wall* is the complement of the preposition, there is no such implication.

If the holistic effect (‘completely’) is contributed by the direct object, this means that, once reanalysed, postposition constructions are SCVs: the NP is the direct object of the SCV rather than the complement of a postposition. Beliën’s conclusion is shared by Beeken (1993) and Verkuyl and Zwarts (1992). Paardekooper (1959) and Helmantel (2002) keep the two constructions apart. On the other hand, de Schutter (1974), van Riemsdijk (1978), Hoekstra (1984), Luif (1992), de Haas and Trommelen (1993) and Blom (2005) conclude that there is structural ambiguity: the adposition is essentially a postposition, but language users may reanalyse the structure as an SCV. Constituency tests (topicalization, passivization, pronominalization) tend to be inconclusive as they work better for some particles/postpositions (*binnen* ‘inside’) than for others (*in* ‘in’, *uit* ‘out’) (see particularly Luif 1992), and grammaticality judgements vary. Nor is the selection of *hebben* versus *zijn* an entirely reliable diagnostic, as we saw above. The fact that (43) seems a perfectly acceptable example of a postposition standing alone, independent of the presence of a verb with which it might form an SCV, would seem to suggest that postpositions should be recognized as a separate construction (example (44) is taken from de Schutter 1974):

(44) Vrij ver het bos in vind je dan plots zo’n huis.  
 ‘Fairly far into the wood you then suddenly come upon this house.’

There are indications that postposition constructions have become far more productive over the years. Examples with *in* like (42a) are not attested in historical corpora until well into the nineteenth century (Cloutier 2006); MD uses case to indicate directed motion, much like Present-Day German (PDG) today. The MD examples with *door* in section 4.3.2 are genuine postpositions, but they seem to be restricted to co-occurrence with universal quantifiers (*alle dlant dore* ‘throughout all the land’, *alle die stat dore* ‘throughout the entire city’, *al erterike dore* ‘all over the world’, *al die cameren door* ‘through all the rooms’, etc.). This association with universal quantification may well have been a factor in the reanalysis to (transitive) SCV, as it matches the semantics of total affectedness of direct objects.
To conclude, then, the affinity of postposition constructions and transitive SCVs goes well beyond the linear order of its elements in an SOV syntax and the adjacency of P and V, and even beyond P and particle sharing the general path LCS. They share the semantics of total affectedness, completeness and telicity that is absent from their prepositional counterpart, and it is this that has brought about a large intersection of postposition constructions and SCVs, a grey area of many instances of postposition/SCV structures whose structural ambiguity is simply irrelevant to language users: the semantics of these instances are identical, and the syntactic ambiguity only intrudes in specific contexts, for instance V-raising contexts as in (40).

4.3.4 Interim conclusions

We have argued so far for the following historical sources for the various particle types:

(45)  

<table>
<thead>
<tr>
<th>Particles and their historical sources</th>
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<tbody>
<tr>
<td>a. resultative phrases</td>
</tr>
<tr>
<td>b. modifier phrases</td>
</tr>
<tr>
<td>c. postpositions</td>
</tr>
</tbody>
</table>

There appear to be two formal conditions that elements must satisfy in order to be able to be reanalysed with the verb as an SCV: (a) these elements may not consist of more than one word, and (b) they must have a specific prosodic structure; only elements consisting of one syllable or of two syllables one of which is headed by a schwa may be reanalysed with the verb and become a particle.

The participant-licensing properties (argument structure, lexical-aspectual structure) of the various particle types are inherited from their source constructions. The synchronic result of the grammaticalization developments described in this section, then, is the existence of various PDD SCV templates: a template for SCVs with resultative particles, a template for SCVs with modifying particles, a template for SCVs with orienting particles, a template for SCVs with path particles, and a template for SCVs with continuative particles. A particle instantiating a specific template exhibits the specific participant-licensing properties and other semantic properties linked to the template in question, which are, in turn, linked to the specific argument-structural and lexical-aspectual properties of the SCVs formed with this particle. Together, these different SCV templates make up the SCV system, with its specific SCV syntax as discussed in chapter 3.
4.4 The diachrony of SCVs with nominal and adjectival predicates

We have been concentrating so far on particles with adpositional forms. However, nouns and adjectives may also develop into non-projecting words, and this section briefly outlines the diachrony of the resulting nominal and adjectival particle types. Examples of nominal particle SCVs are *adem-halen* ‘lit. breath-take, to breathe’, *koffie-zetten* ‘lit. coffee-put, to make coffee’; examples of adjectival particle types are *open-snijden* ‘lit. open-cut, to cut open’, and *schoon-maken* ‘lit. clean-make, to clean’. Like other SCVs, these SCVs exhibit the characteristic SCV syntax: they can appear, if incorporated as syntactic compounds, after *aan het* in the progressive *aan het-INF* construction and after auxiliaries and modals in verb clusters (46a–b) and the nominal part of such combinations cannot have a modifier (46c–d), although the SCV as a whole can be modified by the adverb *goed* ‘well’, whereas the nominal particle *adem* ‘breath’ in *adem-halen* ‘to breathe’ cannot be modified by the adjective *veel* ‘much’. Such modification is, on the other hand, possible for the NP *adem* ‘breath’ in the NP-V combination *adem krijgen* ‘to get breath’ (Blom 2005: 115–17).

(46)  

a. De patiënt was de hele dag al onregelmatig aan het *adem-halen*.  
   The patient was the whole day already irregularly at the breath-take  
   ‘The patient had been breathing irregularly all day.’

b. dat Jan niet goed {*adem* kon halen/kon *adem-halen*}  
   that John not good breath could take/could breath-take  
   ‘that John could not breathe well’

c. Marie kon niet {veel/goed} *adem-halen*.  
   Mary could not much/good breath-take  
   ‘Mary could not take much breath/breathe well.’

d. Marie kon niet veel *adem krijgen*.  
   Mary could not much breath get  
   ‘Mary could not get much breath.’

Historically, these N-V combinations can be seen as the result of the structural reanalysis of VPs with a bare noun as direct object, that is, $[V \ [NP \ N] \ V]$, as SCVs with a bare N in preverbal position. Although N-V combinations show the usual particle syntax, they are far less productive than the SCVs with adpositional particles in that most of them do not appear to have open slots: there is, for instance, no template $[V \ *adem-V^0]$ in which other verbs than *halen* can freely appear. Most of them parallel direct object-verb combinations and like other particle verbs they allow for incorporation in which a non-projecting noun forms a syntactic compound with a verb (section 3.2; Booij 2010:...
The diachronic analysis of Dutch SCVs

Chapter 4); hence we get three different potential structures for one and the same N-V sequence:

(47) a. dat Jan [V′ [NP adem] [V0 haalt]]
    that John breath takes
    ‘that John takes breath’

b. dat Jan [V [N0 adem] [V0 haalt]]
    that John breath takes
    ‘that John breathes’

c. dat Jan [V0 [N0 adem] [V0 haalt]]
    that John breath takes
    ‘that John breathes’

Some of them are the product of back formation from N+N compounds, i.e. stof-zuigen ‘lit. dust-suck, to vacuum clean’ obtained by reanalysing [N stof]+[N [V zuig] er] ‘lit. dust-sucker, vacuum cleaner’ as [N [V stof-zuig]+er], and the SCV adem-halen is historically derived from the compound noun adem-hal-ing ‘lit. breath-taking, breathing’. The N-V combination denotes an institutionalized activity and exhibits the distinctive particle syntax.

The synchronic productivity of this pattern is also manifested by the fact that nouns that cannot function as direct objects can nevertheless be incorporated, as illustrated by the SCVs file-rijden ‘lit. traffic jam drive, drive in a traffic jam’ and zee-zeilen ‘lit. sea-sail, sail on sea’ (see Booij 2010: chapter 4 for a more detailed analysis).

SCVs with adjectival particles, such as schoon-maken ‘lit. clean-make, to clean’ also express unitary meanings (denoting institutionalized activities) and similarly exhibit particle syntax:

(48) a. Jan is het huis aan het schoon-maken.
    John is the house at the clean-make
    ‘John is cleaning the house.’

b. dat Marie het huis niet {schoon wil maken/wil schoon-maken}
    that Mary the house not clean wants make/wants clean-make
    ‘that Mary does not want to clean the house’

The historical source for this type of SCV is the structural reanalysis of the same resultative construction that yields resultative particles, with the same LCS:

(49) a. dat Jan het huis schoon maakt > dat Jan het huis [schoon-maakt]
    that John the house clean makes
    ‘that John makes the house clean’

b. NP-AP-V0 > > NP-[V\textbf{X}V0 X-V0]
Table 4.1. *Reanalysis patterns for different XPs grammaticalizing into particles*

<table>
<thead>
<tr>
<th>XP function</th>
<th>particle type</th>
<th>reanalysis pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>resultative</td>
<td>resultative</td>
<td>\ldots-\text{NP-PP-V}^0 &gt; \ldots-\text{NP-[V' P-V}^0]</td>
</tr>
<tr>
<td>spatial PP</td>
<td>orienting/path</td>
<td>\ldots-[\text{PP NP-P}]-V^0 &gt; \ldots-\text{NP-[V' P-V}^0]</td>
</tr>
<tr>
<td>temporal PP</td>
<td>continuative</td>
<td>\ldots-[\text{PP NP-P}]-V^0 &gt; \ldots-\text{NP}_{\text{ADV}}-[V' P-V}^0]</td>
</tr>
<tr>
<td>AdvP</td>
<td>modifying</td>
<td>\ldots-\text{NP}_{\text{ADV}}-V^0 &gt; \ldots-[V' \text{NP-V}^0]</td>
</tr>
<tr>
<td>resultative</td>
<td>resultative</td>
<td>\ldots-\text{NP-AP-V}^0 &gt; \ldots-\text{NP-[V' \text{A-V}^0]}</td>
</tr>
<tr>
<td>NP</td>
<td>nominal</td>
<td>\ldots-\text{NP-V}^0 &gt; \ldots-[V' \text{N-V}^0]</td>
</tr>
</tbody>
</table>

Some of these adjectival particles may be fairly productive, i.e. they form templates with an open slot for the verb (Blom 2005: sections 1.1 and 4.5).

The diachronic sources of adjectival particles are phrases (APs), but such phrases are structurally ambiguous if they consist of single words (i.e. unmodified heads). In that state, there are no formal differences with (other) non-projecting words (i.e. particles), and hence they could be reinterpreted as SCVs.

### 4.5 Conclusions

A comparison of the various reanalysis patterns given in this chapter shows that elements of all major syntactic categories (except verbs, but see Blom 2005: section 10.1) may develop into particles: they may be reanalysed with the verb as an SCV (V'/V^0), as a consequence of which they lose the option of projecting a phrase, thus becoming bare Xs. The relevant reanalysis patterns are given in Table 4.1.

Table 4.1 illustrates that diachronic SCV formation involves the reanalysis of different XPs with a (right-adjacent) verb as syntactic units. The right-most column gives the structures resulting from the various reanalysis patterns, all of which are instantiations of the structure in (50).

\[(50) \quad \ldots-[V'/V^0 X-V^0]\]

The different types of SCV instantiating the structures in the right-most column all show the specific SCV semantics, expressing unitary semantics, and the
specific SCV syntax (particle syntax). Interestingly, the particle syntax holds for all particle types, regardless of their semantics, which follows from the morphosyntactic status of the particle, which is that of an optionally projecting and optionally incorporating word (that is, it may be a non-projecting, bare A, Adv, N or P).

In this chapter, we have shown how the particle types introduced in chapter 3 (resultative, relator, continuator and modifier) have developed from the lexical-conceptual and lexical-aspectual structures of their diachronic sources. A necessary condition for reanalysis was that the particle-element in the source construction should be left-adjacent to the verb in non-V2 contexts, and this was found to be the case in MD, with its SOV syntax. Interestingly, SVO and SOV languages differ as to which types of particle they have, and adjacency can be shown to explain why SVO languages do not exhibit the full particle range, as illustrated in Table 4.1: not all of the phrases listed in the second column would show up adjacent to the verb in older stages of these SVO languages (Blom 2005: chapter 9). This difference among the Germanic languages, then, supports the diachrony of SCVs proposed in this chapter.

The diachronic hypothesis put forward in this chapter implies that the relations in the LCS of the source construction are preserved during the grammaticalization of SCVs and ICVs. That is to say, although the lexical-semantic content of the elements involved may change, the function of the preverbal element in the LCS of the construction remains the same, as well as the participant-licensing properties linked to this function. There is historical support for the changes involved in these developments, as well as for the semantic classification of the particles as proposed in chapter 3.

The creation of (transitive) SCVs involves the reanalysis of an NP as the direct object of the SCV combination, which activates the typical direct object semantics of total affectedness and completeness for such NPs. As total affectedness and completeness are also part of the typical semantics of complements of a postposition, the two patterns (SCVs and postpositional constructions) may well have contributed to each other’s dynamics and productivity, and the result was a large number of instances in the intersection of the two patterns that may have been structurally ambiguous between the two patterns, but semantically uniform.
5 The lexical decomposition of Present-Day English verb particle combinations

5.1 Introduction

In this chapter, we turn our attention to the Verb Particle Combination (VPC) in Present-Day English (PDE), comparing it with its Dutch Separable Complex Verb (SCV) counterpart. We saw in the previous chapters that SCVs in Dutch and VPCs in English exhibit similar idiosyncrasies that straddle syntax and morphology: they are separable in the syntax, but they also take part in productive word formation processes. In Dutch, it is the particle that is responsible for the singular behaviour of the SCV: the particle in Dutch has special morphosyntactic status as an optionally projecting and optionally incorporating word, which accounts for the ambiguous behaviour of the SCV (word or phrase?) in the syntax. It occurs in immediate preverbal position in an SOV syntax, and its semantic function accounts for the SCV’s argument structure and lexical-aspectual properties; its meaning as a fixed slot in a partly lexicalized phrase allows it to productively form families of SCVs with meanings that are at once compositional and conventionalized.

The English VPC differs in a number of important respects from its Dutch SCV counterpart. The first difference is that the trigger of verb–particle separation in English is not syntactic, as it is in Dutch and German where separation is forced by the existence of V2 and results in asymmetric word orders for main clauses and subclauses. In PDE, the VPC has a strictly circumscribed set of fixed word order patterns, which are in principle available to all particles. This calls for a unified analysis of particles at the level of phrase structure, which is achieved in this chapter by motivating a lexical decomposition analysis.

We will argue that the choice between these word order options is a matter of Information Structure (see Dehé 2002). Particle and verb have remained separable in both languages in spite of the fact that the development of idiosyncratic meanings could well have resulted in further grammaticalization, with particles becoming inseparable prefixes. Reasons why such a morphological fusion has been prevented must include, for Dutch, the obligatory separation
of finite verb and particle in main clauses as a result of V2; for PDE, the fact that its verb–object structure would lead to a violation of the Right-hand Head Rule (RHR; Williams 1981). In the SVO syntax of PDE, the particle follows the verb, yielding a left-headed structure in VPC-derivatives (1).

(1) a. a fallout, a break-up, a kick-off, a break-in  
   b. a pull-down menu, a dial-up connection

In the VPC-derived nouns in (1a) and the VPC-derived modifiers in (1b), the verb precedes the particle, reflecting a syntactic order which violates the RHR.

The second difference is that, while in Dutch the particles in an SCV have a wider range of semantic functions, English particles are almost exclusively resultative. For Dutch, this was discussed in chapters 3 and 4, where we made a distinction between four major semantic classes: (i) resultative particles, (ii) modifying particles, (iii) relator particles and (iv) Aktionsart marking particles, with some of these broader categories subdividing into further semantic contrasts. We turn to English here.

5.2 Information Structure and particle order versus predicate order

The English VPC famously exhibits two orderings: the particle order (2a) and the predicate order (2b):

(2) a. She dug up a secret.  
   b. She dug a secret up.  
   c. *She dug up it.  
   d. She dug it up.  
   e. If you force your confidence upon me, Mr. Headstone, I’ll give up every word of it. Mind! Take notice. I’ll give it up, and I’ll give up you. I will!’ (Dickens, Our Mutual Friend)

We referred to the second order as the predicate order in chapter 2 because this is the historically inherited order of complex predicates: particles allow this order because they are secondary predicates in origin. The first order, the particle order, is invariably a sign of grammaticalization; all particles allow it (being grammaticalized predicates), as do some adjectival predicates like open or apart (see again chapter 2 for details). Particle order is also allowed with other types of secondary predicate, but there it is the result of heavy NP shift triggered by the principle of endweight, as again discussed in chapter 2. However, no such condition attaches to particles, which may show this order whether the object is light or heavy. The conditioning factor here appears to be focus: if the object is in focus as in (2a), the particle order is adopted, which
ensures that the object ends up in end-focused position; if the particle is in focus as in (2b) and (2d), we get the predicate order which ensures that the particle ends up in end-focused position (see also Dehé 2002; Biber et al. 1999: 933). The high frequency of the particle order noted in the literature (e.g. Dehé 2002; Biber et al. 1999: 933ff), then, is due to information-structural considerations: objects are more likely to be in focus than particles. As pronouns encode old information by definition, they require the predicate order obligatorily, witness the ungrammaticality of (2c) above. Even pronouns can become acceptable in the particle order as focused objects if they receive special emphasis, as in (2e).

Most investigations into the relationship between Information Structure and particle or predicate order have to concede that the mapping of syntax and focus is a strong tendency rather than an absolute fact (van Dongen 1919; Svenonius 1996; Bolinger 1971). Dehé (2002) takes a stronger stand, arguing that the choice of word order of transitive VPCs is determined to a great extent by information structure and intonation (focus). Gries (2003), who presents a corpus-based, multifactorial approach to the word order alternation of PDE transitive VPCs, connects the notion of end-focus to processing, claiming that focused elements require more processing effort and that end-focus “ultimately serves the purpose of facilitating the processing (of the most important aspects) of messages” (p. 56). Language users prefer the particle order for transitive VPCs with an object requiring a lot of processing effort, and the predicate order for transitive VPCs with an object requiring little processing effort (Processing Hypothesis, p. 48 and elsewhere).

Some VPCs have become idioms adopting one of the two possible orders, and cannot appear in the other order, even if this other order would be expected in particular instances given the information status of the object or particle. This freezing of entire VPC idioms is well-known in the literature (cf. Bolinger 1971; Fraser’s 1976 frozenness hierarchy; Huddleston and Pullum’s 2002 fossilization). The examples in (3) are from Bolinger (1971):

<table>
<thead>
<tr>
<th>particle order</th>
<th>predicate order</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. *let down your hair</td>
<td>a’. let your hair down</td>
</tr>
<tr>
<td>b. blow/let off steam</td>
<td>b’. ‘blow/let steam off</td>
</tr>
<tr>
<td>c. dance up a storm</td>
<td>c’. *dance a storm up</td>
</tr>
<tr>
<td>d. knock off work</td>
<td>d’. *knock work off</td>
</tr>
<tr>
<td>e. take up heart</td>
<td>e’. *take heart up</td>
</tr>
<tr>
<td>f. pull up stakes</td>
<td>f’. *pull stakes up</td>
</tr>
<tr>
<td>g. stir up trouble</td>
<td>g’. *stir trouble up</td>
</tr>
<tr>
<td>h. pluck up courage</td>
<td>h’. *pluck courage up</td>
</tr>
<tr>
<td>i. carry out threats</td>
<td>i’. *carry threats out</td>
</tr>
<tr>
<td>j. put on an act</td>
<td>j’. *put an act on</td>
</tr>
</tbody>
</table>
Bolinger notes that freezing tends to favour the particle order, and this is confirmed by Gries’s (2003) multifactorial results, albeit for written language only. Contrary to Bolinger (1971), Gries found no effect for metaphorical VPCs.

Freezing may also occur with VPCs with (more) open slots for the object. Some examples, from Huddleston and Pullum (2002: 285–6), are:

(4) buy in [food], fork out [money], hold out [prospects], let out [cry], put down [plane: ‘land’], ride out [recession], drum up [support], give forth [sound], knock up [score in sport], pass out [samples], put out [leaf, of plant], start up [conversation], find out [‘discover’], give off [sound], lay out [requirements], pour out [feelings], put up [resistance]

There are also examples of freezing of the predicate order (as with tell off discussed above) (from Huddleston and Pullum 2002: 286):


Note that the object in (5) tends to be animate, unlike the objects in (4), possibly because animate participants tend to be textual themes or discourse topics, and will therefore tend to be encoded by personal pronouns, which trigger the predicate order. Note that have something out invariably turns up in texts as have it out. Although it theoretically refers back to an earlier mention of an argument or conflict, the VPC itself is rapidly approaching idiom status so that the object slot is probably no longer open. If this is correct, the order selected for freezing would be determined primarily by frequency.

This conventionalizing or freezing of a particular order is not found in Dutch and German, only in English, and is of course made possible by the fact that the trigger of verb–particle separation in English is not syntactic, as in Dutch and German, where it is forced by the existence of V2 and results in the asymmetry of word order between main clauses and subclauses; in English, the trigger for separation is a matter of Information Structure and idiomatization. The fact that syntactic orders can freeze in the case of specific English VPCs means that freezing overrides Information Structure, a fact which must be taken into consideration when charting the exact operation of the information-structural trigger by looking at data from large text corpora. Frozen VPCs do not allow the
alternative order, even if the information-structural status of the object would seem to require it.

5.3 The semantics of PDE verb particle combinations

In English as well as in Dutch (as discussed in chapters 2 and 3), many particles are homophonous with prepositions (e.g. English *up*, *out*, *off*, *over*). This is no coincidence: it reflects the intricate and complicated historical origin(s) of particles as well as prepositions. While some particles appear to have their origin in prepositions (e.g. *up*, *out*), others appear to have begun as adverbs (e.g. *back*, *down*). The difference in syntactic behaviour between particles and prepositions is obvious:

\[
\begin{align*}
\text{(6)} & & \text{particle} & & \text{preposition} \\
& a. & \text{She dug up a secret.} & a'. & \text{He cycled up the hill.} \\
& b. & \text{She dug a secret up.} & b'. & *\text{He cycled the hill up.} \\
& c. & *\text{She dug it up.} & c'. & \text{He cycled it up.} \\
& d. & \text{She dug it up.} & d'. & *\text{He cycled it up.}
\end{align*}
\]

Particles can either be preceded or followed by a nominal complement (6a–b), but prepositions can only be followed by a nominal complement (6a′–b′); moreover, an unstressed pronominal complement cannot follow a particle (6c–d), but must follow a preposition (6c′–d′). What this boils down to is that prepositions, but not particles, select an internal argument (*the hill* in (6a′–b′) and *it* in (6c′–d′)), whereas particles select an external argument (*a secret* in (6a–b) and *it* in (6c–d)). This difference in argument structure is reflected by the semantics of particles and prepositions. The argument of a preposition is typically a Ground, an entity expressing “a location with respect to which the Figure is located” (Svenonius 2003: 433, based on Talmy 1978), while the argument of a particle is typically a Figure, expressing “the entity in motion or at rest which is located with respect to the Ground” (Svenonius 2003: 432, again based on Talmy 1978). Prepositions relate an entity (the Figure) to a certain location (the Ground), (7a,c), whereas particles denote the endstate or endpoint of an entity (the Figure), leaving the Ground unexpressed (7b) (examples are from Svenonius 2004: 433).

\[
\begin{align*}
\text{(7)} & & \text{a. The helicopter flew [the firefighters] Figure up [the mountain] Ground.} \\
& & \text{b. The helicopter flew [the firefighters] Figure up.} \\
& & \text{c. The helicopter flew up [the mountain] Ground.}
\end{align*}
\]
The category P, then, can be conceived of as having three subtypes, listed in (8) (from Svenonius 2002: 3).

(8)  

<table>
<thead>
<tr>
<th>Subtype</th>
<th>Diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. PP</td>
<td><img src="image1" alt="Diagram" /></td>
</tr>
<tr>
<td>(Figure)</td>
<td></td>
</tr>
<tr>
<td>P'</td>
<td></td>
</tr>
<tr>
<td>P (Ground)</td>
<td></td>
</tr>
<tr>
<td>b. PP</td>
<td><img src="image2" alt="Diagram" /></td>
</tr>
<tr>
<td>(Figure)</td>
<td></td>
</tr>
<tr>
<td>P'</td>
<td></td>
</tr>
<tr>
<td>P (Ground)</td>
<td></td>
</tr>
<tr>
<td>c. PP</td>
<td><img src="image3" alt="Diagram" /></td>
</tr>
<tr>
<td>P (Ground)</td>
<td></td>
</tr>
</tbody>
</table>

Transitive prepositions have a Figure and a Ground, (8a), intransitive prepositions (i.e., particles) have a Figure, (8b), and unaccusative prepositions have a Ground, (8c). This classification allowed us to distinguish four major semantic categories in Dutch (and German) in chapter 3, repeated here for convenience:

(9)  

**Semantic classification of Dutch particles**

- a. Resultative particles:
  - (i) Particles conceptualized as resultative predicates, licensing a Figure participant.
- b. Non-resultative particles:
  - (i) Particles conceptualized as modifiers, not licensing any participant.
  - (ii) Particles conceptualized as relators, licensing a Ground participant; subcategories: (a) orienting particles, (b) path particles.
  - (iii) Particles conceptualized as pure Aktionsart markers, blocking the presence of participants (other than the agent).

In contrast, particles in an English VPC are almost exclusively resultative, or can be related to a resultative meaning. Spatial VPCs (in the tentative taxonomy offered in Dehé et al. 2002: 13–16) are clearly resultative (e.g. *pull a thread out*), and so are most of the non-spatial uses (e.g. *work off a debt, sleep off a sickness*).

Resultatives license a Figure participant, and normally leave their Ground participant implicit, but there are particle examples in which the Ground is expressed, and the Figure is left implicit:

(10)  

<table>
<thead>
<tr>
<th>Example</th>
<th>Diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. He wiped off [his brow]_{Ground}</td>
<td></td>
</tr>
<tr>
<td>b. He wiped [his brow]_{Ground} off</td>
<td></td>
</tr>
</tbody>
</table>

According to Svenonius (2003: 433), the Ground in examples like (10) is often the *theme* argument of the VPC, e.g. *He wiped his brow*. He also notes that the suppressed Figure often denotes something that is removed from the Ground (e.g. *sweat in (10))*.

McIntyre (2003: 130) observes that VPCs with an explicit Ground (reference object in McIntyre’s terminology) have a strong holistic
effect. *Pour the bucket out*, for example, has the interpretation that the bucket is emptied completely. All such instances are still resultative.

Some non-spatial uses of particles, however, may have developed idiomatic meanings that are less obviously related to resultative uses. Dehé et al.’s (2002) examples of castigatory uses (e.g. *tell/tick someone off*) have become atelic, witness their compatibility with durative adverbials like *for ten minutes*, and represent an activity rather than an accomplishment or achievement (see Vendler 1957, 1967). The focus has apparently shifted from the actual change of state (which may still be recovered in the VPC *warn someone off* that may have served as the model for the castigatory subfamily) to the process itself. This particular castigatory use is relatively recent (the *OED*’s first attestation of *tell off* dates from 1919 and that of *tick off* from 1915), but there are earlier examples of similar developments from resultative to non-resultative.

The non-resultatives include VPCs that appear to be identical to Dutch SCVs with a relator particle; these relator uses involve *through* and *over*, which are cognates of *door* and *over*, the Dutch relator particles discussed in chapter 3. Examples are (11a–b) (both from Huddleston and Pullum 2002: 283):

(11) a. She *read* the prospectus *through*.

b. She *looked* the letters *over*.

Huddleston and Pullum note that the alternative order (the particle order) is more readily interpretable as V-PP (i.e. prepositional verbs rather than VPCs); the NP is in fact a Ground rather than a Figure, unlike the object of a resultative VPC (see chapter 2). The relator meaning, then, is strongly associated with the predicate order rather than the particle order.

English VPCs, then, do not show the same semantic range as Dutch SCVs, but allow a similar analysis in terms of Grounds and Figures. The greater range of Dutch semantic functions very clearly reveals that semantic function does not straightforwardly map onto the syntax: all Dutch SCVs behave the same in the syntax, irrespective of the semantic function of the particle. For English VPCs, this is less obvious because of the more restricted range of semantic functions, but the existence of examples like (10) and (11) make it clear that here, too, syntax cannot be straightforwardly related to semantics: the two orders (particle order and predicate order) are in principle available to all particle verbs, with the exception of those combinations that have idiomatized or frozen one of the orders, as described in section 5.2. If the trigger for the choice of word order pattern must be sought in Information Structure, this means that syntactic analyses need not incorporate this trigger. It is enough to show that the syntax makes both structures available, with plausible syntactic
triggers for both syntactic options (Case or other feature-checking). We will provide such an analysis in section 5.4. It makes crucial use of the key notion of optional projection which we also adopted in our analysis of Dutch in chapters 3 and 4. We will also show how, in the context of PDE syntax with its rigid SVO structure, the effects of this option differ from those in Dutch (which is SOV). The proposal we make for PDE in this chapter also rests on our core analysis of the diachrony of the particle as involving the grammaticalization of secondary predicates. This will be treated in detail in chapter 6.

5.4 PDE particles as optionally projecting words

We saw in the previous chapters that in our analysis of Dutch SCVs, the notion of optional projection of the particle plays a central role. In Dutch, the option of non-projection is used quite prominently. A plausible analysis of the two orders of English VPCs, on the other hand, shows that both options are used on a large scale.

The paradox between the word-like behaviour of English VPCs on the one hand and their phrase-like behaviour on the other hand has led several linguists to analyse particles as optionally projecting heads. Neeleman (1994, 2002) was the first to treat particles as elements which optionally project (see chapter 2). Zeller’s (2001a, 2002) account in terms of optional projection is couched in Bare Phrase Structure theory (BPS), and proposes that particles are minimal and maximal at the same time (see again chapter 2). In the spirit of the Minimalist Program (Chomsky 1995), BPS aims to simplify phrase structure and disposes of bar-levels. In BPS, an element is minimal when it does not project any further, but is also maximal for the very same reason. Toivonen (2002, 2003) provides a Lexical Functional Grammar (LFG) account of Swedish particles, which treats them as words that are lexically listed as projecting, non-projecting or both. Toivonen (2003: 63) adopts a phrase structure rule which postulates that non-projecting particles obligatorily head-adjoin to V.4

Treating particles as optionally projecting elements plausibly accounts for the grammaticalization of English particles, which can be understood as a development from predominantly projecting element to optionally projecting element, involving an increase in syntactic dependence which is reflected by loss of structure. Particles predominantly project a phrase in OE, but after this period they increasingly fail to project, as we will show in chapter 6.

Although heads always project a phrase under standard X′-theoretic assumptions, we argue that the default option is for particles not to project: this is an innovation resulting from a grammaticalization process triggered by structural
economy as formulated in (12) (adapted from Elenbaas 2007; cf. Bresnan 2001; van Gelderen 2004; Speas 2006; among others).5

(12)  
*Structural Economy Principle*
An element does not project, unless it is required to do so by syntactic factors.

Particles, then, are heads by default according to structural economy and project a phrase only when forced to do so syntactically.

The increasing grammaticalization of predicates into particles has made it possible for Dutch to reanalyse them as non-projecting words in nearly all cases (Dutch syntax in nearly all cases does not force a phrasal analysis, as we saw in chapter 3). The default situation for particles in English is similarly to be a head rather than a phrase, but the data do at times force a phrasal reading in acquisition.6 This analysis of the particle in the two languages leads us to conclude that the English particle is less grammaticalized than its Dutch counterpart. This is in line with the grammaticalization account offered for Dutch SCVs in chapter 4: an important prerequisite for grammaticalization is linear adjacency of particle and verb in an OV order. As English lost OV word order and maintained the predicate order of particles, adjacency for those contexts was no longer obtained.

In English, the position of the object relative to the particle reflects the particle’s syntactic behaviour: the predicate order reflects that of a particle as a phrase and in this order, particles can be modified, as in *The ref held the red card right up*. The particle order on the other hand reflects a non-projected structure in which the particle cannot be modified (*The ref held right up the red card*). This suggests that particles in focus position project a phrase, but do not do so in non-focus position. Dehé (2002: 113–14), who builds on Lambrecht (1994), suggests that there is a correlation between focus and a syntactic phrase: a focus domain represents a syntactic domain which is always phrasal. According to Lambrecht (1994: 215), cited by Dehé (2002: 113–14), this is because Information Structure is “concerned with the ‘pragmatic construal’ of the relation between entities and states of affairs in given discourse situations” and “[i]n the syntax, entities and states of affairs are expressed by phrasal categories, not by lexical items”. Basing ourselves on Lambrecht (1994), we formulate the following Syntax–Information Structure interface constraint:

(13)  
*Syntax–Information Structure interface constraint*
Focus maps onto a syntactic phrase.
It follows from this that particles project a phrase in focus position (following the verb and the object).

The structure for VPCs we propose is presented in (14b).

(14)  
\[ \text{a. She cut (off) her hair (off).} \]
\[ \text{b.} \]
\[ \text{\begin{tikzpicture}
  \node (DP) at (0,0) {DP};
  \node (v) at (1,1) {$v$};
  \node (v') at (2,2) {$v'$};
  \node (She) at (1,3) {She};
  \node (VP) at (3,3) {VP};
  \node (CAUSE) at (4,4) {CAUSE};
  \node (DP') at (5,5) {DP'
  \node (V) at (6,6) {$V$};
  \node (V') at (7,7) {$V'$};
  \node (her hair) at (6,8) {her hair};
  \node (AP) at (7,9) {AP};
  \node (BECOME) at (8,10) {BECOME};
  \node (A) at (9,11) {A};
  \node (Prt(P)) at (10,12) {Prt(P)};
  \node (CUT) at (9,11) {CUT};
  \node (off) at (10,12) {off};
  \draw (DP) -- (v); 
  \draw (v) -- (v'); 
  \draw (v') -- (She); 
  \draw (She) -- (VP); 
  \draw (VP) -- (CAUSE); 
  \draw (CAUSE) -- (DP'); 
  \draw (DP') -- (V'); 
  \draw (V') -- (her hair); 
  \draw (her hair) -- (V); 
  \draw (V) -- (AP); 
  \draw (AP) -- (BECOME); 
  \draw (BECOME) -- (A); 
  \draw (A) -- (Prt(P)); 
  \draw (Prt(P)) -- (off); 
\end{tikzpicture}} \]

This analysis is based on the work of Hale and Keyser (1993) and Baker (2003), which in turn makes crucial use of syntactic incorporation by head movement (Baker 1988) and Larson’s (1988) VP shell structure in which a \( vP \) projection is posited above VP, which introduces the external argument (see Chomsky 1995; Kratzer 1996). In (14b), Baker’s (2003) BE operator has been replaced with the operator BECOME and reflects the change-of-state semantics of English VPCs (cf. the resultative LCS in chapter 2). The resultative meaning of the VPC \textit{cut} \textit{off} is syntactically represented by the combination of the abstract adjective \textit{CUT} and the particle \textit{off}. The particle \textit{off} indicates the endstate of the activity denoted by the verb, affecting the participant in the event, \textit{her hair}. The particle optionally projects a phrase, hence the label Prt(P).

The default situation in (14) involves a non-projecting particle, which, being a minimal element and therefore syntactically dependent, is forced to merge with the abstract adjective, forming a complex syntactic head, (15a).

(15)  
\[ \text{a.} \] 
\[ \left[ vP \left[ v \text{ CAUSE} \right]\left[vP \text{ her hair \left[v \text{ BECOME} \right]\left[AP \left[ A \left[ A \text{ CUT} \right]\left[Prt(P)\right]\right]\right]\right]\right]\]

Deriving the complex head by Merge rather than incorporation accounts for the linear ordering, as syntactic incorporation would yield the order \textit{off-cut}. The fact that the complex head is syntactic in nature also implies that it is not subject to the RHR (Williams 1981). The head movement process, conflation in Hale and Keyser’s (1993) terminology, targets the complex syntactic head A-Prt, which moves to \( v \) via \( V \), as in (15b).
The derivation in (15b) reflects the default situation in which the particle does not project, in accordance with the Structural Economy Principle (12). The non-projecting particle merges with the abstract adjective to form a complex syntactic head, which head-moves to \( v \) via \( V \), yielding the particle order.

The predicate order is derived when the particle projects a phrase (triggered by syntactic and/or semantic factors), as in (16).

\[
\begin{align*}
(16) \quad & a. \ [v_P \text{she} [v \text{CAUSE} [v_P \text{her hair} [v \text{BECOME} [A_P [A \text{CUT} [\text{PrtP} [\text{Prt off}]])])]]) \\
& b. \ [v_P \text{she} [v \text{cut} [v_P \text{her hair} [v \text{t} [A_P [A \text{t} [\text{PrtP} [\text{Prt off}]])]])]]
\end{align*}
\]

In this derivation, conflation targets the abstract adjective \( A \) rather than \( A\text{-Prt} \), because the particle projects a phrase and does not merge with the abstract adjective to form a complex syntactic head. The transitive verb \( \text{cut} \) is formed and the derivation yields the predicate order. The fact that particles in this focus position are forced to project a phrase explains why particles can be modified in this position, as in (17).

\[
(17) \quad \text{She cut her hair clean off.}
\]

Lexical decomposition analyses reflect the semantics of a construction fairly directly in the syntax, which is characteristic of the basic tenets of current Minimalism.

Intransitive and/or non-resultative VPCs, including unaccusative verbs as in (18a), or unergatives, as in (18b), require a different analysis, which we will give below.

\[
(18) \quad a. \quad \text{The old tree fell down.} \\
& b. \quad \text{The thieves ran off.}
\]

The unaccusative VPC \( \text{fell down} \) in (18a) takes a \textit{theme} argument (\textit{the old tree}) as its subject. The subject of unaccusative verbs is usually taken to correspond to the direct object in a transitive configuration (e.g. \textit{The forester cut down the old tree}). The \textit{theme} argument surfaces in subject position because unaccusative verbs fail to assign structural Case (cf. Burzio’s Generalization; Burzio 1986). The underlying structure of unaccusative VPCs, then, is the same as that of transitive VPCs, including their resultative semantics. The fact that unaccusative VPCs lack an \textit{agent} argument suggests that their lexical decomposition does not contain a \textit{CAUSE} operator represented by \( v \).
Lexical decomposition of PDE verb particle combinations

A causative (transitive) counterpart of (18a), *The forester cut down the old tree*, has an agent argument (*the forester*) and its syntactic structure therefore includes $v$, which hosts the CAUSE operator.

Unlike *fall down* in (18a), unergative VPCs, such as *run off* in (18b) are durative or continuative rather than resultative in meaning. The subject of unergative VPCs (*the thieves* in (18b)) is an agent and therefore an external argument. Unlike unaccusative VPCs, then, unergative VPCs are true intransitives and this intransitivity corresponds to a lexical decomposition that includes a CAUSE operator and, given their non-resultative semantics, a DO operator (rather than a BE/BECOME operator as in the case of transitive and unaccusative VPCs). Since unergative VPCs lack an internal theme argument, the SpecVP position is left unfilled and is therefore not represented in (20).

This syntactic structure is based on Hale and Keyser’s (1993) analysis of unergative verbs, in which unergative verbs are derived from the corresponding noun by incorporation. There is no AP present, because unergative VPCs are not resultative. Since there is no theme argument, there is no subject for the particle to predicate over. Historically, such particles derive from resultative particles...
(Los 2004), but their meaning has changed from expressing a movement in time (durative event) to a movement in space (telic event) (p. 96).

A lexical decomposition analysis of VPCs inevitably requires a separate analysis for each syntactic/semantic group. It capitalizes on the selectional properties of both verb and particle by combining the two predicates in the resultative AP; verb and particle both contribute their argument structure. The particle is not a primary predicate in the same way as in the constructional idiom analysis proposed for Dutch SCVs in chapter 3, but even in a lexical decomposition analysis an object will only be present if the particle (expressing the result) selects one (even if the verb does not); similarly, the verb’s object will be blocked if the particle does not allow one.

It was noted in chapter 3 that a constructional idiom analysis is also available for English VPCs. The particle would represent a fixed slot in a partly lexicalized phrase which would account for its productivity in forming families of SCVs with meanings that are at once compositional and conventionalized. Such an analysis by itself would, however, be unable to offer an account for the syntactic idiosyncrasy of the coexistence of two syntactic orders that we see in English VPCs. The separate lexical decomposition analyses for each semantic category do allow us to account for these two orders by taking on board the projection of a full phrase as an option.

There are two advantages to this analysis: the first is that the special behaviour of VPCs is seen to reside in the special morphosyntactic status of the particle itself: non-projecting by default, hence the particle order, but projecting a phrase when modified, hence the predicate order. The rigid SVO structure of PDE entails that the syntactic realization of the two patterns always leads to word order differentiation. The choice of word order is clearly influenced by Information Structure: the Syntax–Information Structure interface constraint (see (13) above) holds that focus correlates with a syntactic phrase, which means that focused particles will project a phrase, yielding the predicate order. A second advantage of our analysis is that the grammaticalization of the predicate into a particle is accounted for in an intuitively satisfactory manner, ultimately involving a mechanism in acquisition that prefers a structurally simple analysis if the data allow it. We will investigate some morphological formations in section 5.5.

5.5 PDE verb particle combinations and word formation

We saw in chapter 2 that English VPCs productively take part in word formation processes, as in (21).
Lexical decomposition of PDE verb particle combinations

(21) a. She hates clamps and tow-aways.
b. They were late for kick-off.
c. The audience were mesmerised by the try-out.
d. He attracted a crowd of tarted-up girls.

This productivity is yet another instance that demonstrates how VPCs straddle the boundary between syntax and morphology. The possibility of word formation does not necessarily point to word status for VPCs, given that word formation can target phrases too, e.g. a happy-go-lucky person, over-the-fence gossip, a nine-to-five attitude (see e.g. Booij 2002a).

The position of suffixes in words derived from VPCs presents a mixed picture. Suffixes often attach to the verbal part, (22a), but are also found attached to the particle, i.e. on the right edge of the entire VPC, (22b), and sometimes even on both parts, (22c).

(22) a. a stuffed-up nose, a caster-out of demons, washable-out
b. cast-offs, washoutable, fold-ippable
c. washer-upper, tidier-upper, diner-outer, lookable-uppable, picker-upper

The examples in (22a) support a phrasal analysis of morphologically derived forms of VPCs, whereas the ones in (22b) support a word analysis of morphologically derived forms of VPCs. The examples in (22c) combine the two patterns and “show that even in English there are points of hesitation over the word vs. phrase status of morphologically derived forms of particle verbs” (Wald 2003: 826). There are even instances of retriplication, especially with the agentive nominal suffix -er: sorter-outerer, putter-offerer.

The lexical decomposition analysis allows syntax to be the input to word formation. This accounts for the preservation of syntactic order in VPCs derived from adjectives or nouns (see the examples in (21)). Moreover, the fact that morphologically derived forms of VPCs show word-like as well as phrase-like behaviour reflects the syntactic structure of VPCs, which is phrasal if the particle projects a phrase, and word-like if the particle does not project.

5.6 Other resultative constructions

One of the problems of analyses that treat particles as predicates is accounting for the particle order, and for the fact that this order is not triggered by considerations of endweight (as is the case with fully phrasal predicates) but by focus, as noted in chapter 2. The analysis presented in the present chapter makes use
of structural economy to account for the particle order: elements do not project by default, and non-projecting elements are forced to merge with another element. Particles project optionally as syntactic factors and Information Structure may force projection. Non-particle (e.g. adjectival) resultative constructions by and large do not participate in the particle order (witness (23)), but a small set of adjectives exceptionally do show the particle order: they have developed grammaticalized non-projecting variants as in (24).

(23)  

a. The noise next door drove (*crazy) the pensioners (crazy).

b. The review made (*happy) the novelist (happy).

Adjectival resultatives such as (drive) crazy and (make) happy are apparently always forced to project a phrase, since the only possible word order is V-Obj-Adj; adjectives like open, apart or clear may show the other order, as we saw in chapter 2:

(24)  

Yesterday I decided to take apart my laptop.

More examples of such verb and adjective combinations, repeated from chapter 2, are given in (25):

(25) break/blow/blast/cut/fling/push/rake/whisk open, cut/stop short, bleach white, blow/keep/make/sift clear, put straight, let/set free, think fit, cast/let/pry/shake/wrestle loose, strip naked

Like particles, these adjectives freely allow both orders, again depending on Information Structure as trigger:

(26)  

a. She rinsed (clean) the mug (clean).

b. She tore (open) the parcel (open).

c. He cut (free) the hostages (free).

d. They let (loose) the circus animals (loose).

e. They cut (short) their holiday (short).

According to the Structural Economy Principle, elements do not project by default, so in this sense the facts in (26) are to be expected. Yet, as we saw above (e.g. (23)), most adjectives occur only in the predicate order, which under our analysis must mean that they project a phrase. It seems that the adjectives in (24)–(26) are grammaticalized, witness their semantic content. Like particles, whose content can be said to be underspecified semantically, the set of adjectives in (25) is similarly underspecified.10 Crucially, perhaps, these adjectives are extremely polysemous: clean not only means ‘not dirty’, but can also mean ‘honest’ (a clean fight/contest), ‘moral’ (clean living), ‘not rough’ (a
clean cut), ‘complete’ (a clean break with the past), ‘nothing on’ (a clean sheet of paper). Similarly, open ‘not closed’, free ‘not limited’, loose ‘not fixed’ and short ‘small in length, distance or height’ have acquired less concrete meanings and the development of new meanings may have led to the underspecification of the semantics of these adjectives, and, in turn, to their grammaticalization, non-projection, and hence to a default head analysis along the lines presented above. An insightful suggestion made by Goldberg and Jackendoff (2004: 558–9) is that adjectives such as open, shut, free and clear not only express a property but also a spatial path or configuration. It is precisely these adjectives that show the word order alternation, suggesting that predicates with spatial path semantics are particularly prone to grammaticalization (see also Los 2005: 5).

Entire PPs may also feature in the particle order. Some, like back, away and apart, have grammaticalized into single words over time (< OE on bæc, on weg, on part) but others still appear to be recognizably PPs:

(27) bring to light some salient facts, put in execution this tricky plan, take in hand that difficult young man, call to mind some long-forgotten facts, call in question some generally accepted facts, take into consideration some less obvious conclusions

The impossibility of such PPs to have P-complements other than bare heads (cf. *take into our consideration, *call to one’s mind) seems to demonstrate that some degree of grammaticalization has taken place. Speakers possibly no longer analyse them as phrases but as single words, although they are still separate words in writing (cf. at last, a lot of, etc.).

5.7 Discussion and conclusions

One of the striking conclusions about Dutch in chapter 3 is the range of semantic functions of Dutch SCVs, all centring around the particle: it is the particle that determines the argument structure and the lexical-aspectual structure of the SCV, and SCV syntax appears to be divorced from its semantics in that all SCVs exhibit the same syntax, regardless of the semantics. The many analyses in the literature, as discussed in chapter 2, had to be re-evaluated against this finding. The syntax of the English counterpart of the Dutch SCVs, the VPC, differs from Dutch SCV syntax in that syntactic separation of verb and particle is not forced by a syntactic operation (V2), but by an information-structural trigger: the predicate order surfaces when the particle is in focus, while the particle order surfaces when the object is in focus. One of the implications of
chapters 2 and 3, then, is that any attempt to derive one order from the other, i.e. designate one order as basic and the other as derived, is not tenable. What appears to be the case is that English syntax makes the two orders available: the analysis in this chapter shows that the syntactic properties of the various word order options follow from an analysis in which the particle projects optionally. In the rigid SVO syntax of English, this variability in projection by definition leads to word order differentiation. The choice between the various syntactic options is determined by Information Structure (barring the instances where one of the orders has itself become part of the VPC idiom, as discussed in section 5.2). Unlike Dutch, where the particle is in most cases a non-projecting word, both options are in principle available in English. If we were to extend the constructional idiom analysis for the Dutch SCV to the English VPC, this in and of itself would be unable to offer an account for the syntactic idiosyncracy of the coexistence of two VPC orders, the particle order and the predicate order that is a core characteristic of English VPCs.

The lexicon (in a very abstract sense) plays a crucial role in Minimalism as it is the feature content of the lexical items of a language that drives syntax. This entails a close relationship between syntactic structure and meaning. We have explored this approach by offering a lexical decomposition analysis of English VPCs which directly reflects their complex event meaning in the syntactic structure. This lexical decomposition analysis, combined with our analysis of the particle as optionally projecting, has resulted in an analysis that reflects both the intuitions of complex predicate analyses (VPCs are units) and those of SC analyses (VPCs are separable and are predicates).

The analysis also accounts for the grammaticalization process in a meaningful way by appealing to the Structural Economy Principle, which dictates that particles are non-projecting by default, in which case they combine with the verb to form a unit (yielding the particle order). The particle projects when it is modified or when it is focused: the Syntax–Information Structure interface constraint holds that focus correlates with a syntactic phrase, causing a focused particle to project a phrase, which in turn yields the predicate order. This correlates with the fact that particles allow (emphasizing) modifiers in the predicate order (i.e. when they are focused), but not in the particle order (i.e. when they are in non-focus position, where they do not project a phrase).

In the analysis proposed here, the paradox of English VPCs (word-like and phrase-like) follows from the special morphosyntactic status of the English particle. The fact that it features in a rigid SVO syntax like that of PDE accounts for the word order diversification we see in the VPC. Some of the contrastive
behaviour of Dutch SCVs and English VPCs can therefore be clearly related to their distinct basic word orders. In the next chapter, we will explore this further, and we will consider in more detail the grammaticalization process by which English particles increasingly came to be analysed as heads (the default by economy) rather than phrases. In OE there was considerably more evidence for a phrasal analysis (forcing the particle to project) than in PDE.
6 The diachrony of the English verb particle combination

6.1 Introduction

In this chapter, we discuss in detail the historical development of the Verb Particle Combination (VPC) in English. We will show that English particles are phrasal secondary predicates in origin, undergoing a process of grammaticalization over the Middle English (ME) and early Modern English (eModE) periods. This resulted in optional phrasal projection and increasing semantic dependence between particle and verb, indicating lexicalization of the VPC.

The evidence for the status of the particle is considered in close interaction with the changing morphosyntax of English: Old English (OE) had mixed OV and VO orders; particles were dominantly preverbal and could be separated from the verb by a number of productive morphosyntactic processes including finite verb movement (V-movement). The word orders in which the VPC featured in OE are very similar to those in Present-Day Dutch (PDD), except that there is no clear evidence for non-projection or incorporation of the particle. This may be due to independent differences between PDD and OE. However, apart from the word order evidence, the OE particle is semantically different from that in PDD in that the meaning is always transparent and literal, which appears to sit very well with their less grammaticalized status and which is taken as evidence for their comparative lexical independence and phrasal status.

In the transition to ME and over the ME period, OV order was lost. Particles became very predominantly postverbal. At the same time there is continued evidence for V-movement and thus for the independent syntactic status of particles, which is, however, in the process of drying up by the middle of the seventeenth century. The final effect of the loss of V-movement was that VPC patterns with finite and non-finite verbs became structurally identical. They became the relatively fixed but at the same time very productive morphosyntactic construction which we analysed for Present-Day English (PDE) in chapter 5.
In OE and eME, the particle system coexisted with a system of verb prefixation with which it showed considerable functional overlap. This will be briefly touched upon in this chapter. A more extensive treatment of this system of verb prefixation is given in chapter 7.

The chapter is organized as follows: in section 6.2 we will first give an overview of the general morphosyntactic development of English, setting out, in relation to the particle system, the development of OV word order and its loss over the ME period, and the development of V-movement and its loss in the course of the eModE period. Section 6.3 discusses the status of particles in OE and ME, showing they are secondary predicates and arguing that there was robust evidence for phrasal status of particles in OE, which declined later in history. Section 6.4 focuses in detail on the changes affecting the relation between the particle and a non-finite or finite verb. It is thus concerned with the impact of the loss of OV word order on the particle system (section 6.4.1) and with that of the loss of V-movement (section 6.4.2). Section 6.5 draws together the issues in a discussion and conclusion.

6.2 Old and Middle English word order: OV, VO and finite verb movement

This section first presents some of the main word order characteristics of OE and ME, as a backdrop for the discussion of the status of particles during those same periods, and the changes that affect them. We will consider the changing morphosyntax of English in relation to the developing particle system, abstracting where possible from points of ongoing theoretical debate, referring the reader to further literature where appropriate.

OE has mixed OV and VO word orders.1 OE particles feature in Separable Complex Verbs (SCVs), the precursor of the PDE VPC. The position of particles in the mix of OV and VO word order is relatively clear: they are very dominantly preverbal, as illustrated in (1):2

(1) a. Ðonne Moyses his handa up a-hof, þonne hæfde Israhela folc sige; ‘when Moses raised up his hands, then Israel’s people had victory’ (coexodusP, Exod [Ker]:17.11.63)

b. And seo helle þone deofel ut a-draf
   and the hell the devil out PREF-drove
   ‘And Hell drove out the devil’ (conicodC, Nic [C]:282.274)
The immediately preverbal position of particles in (1) is near-categorical in contexts unaffected by V-movement (i.e. subclauses and some coordinate clauses). In (1a), the SCV up a-hof ‘lifted up’ is a subclause, and the SCV is immediately preceded by the direct object his handa ‘his hands’; (1b) is a coordinate clause whose word order is identical to that in (1a): the direct object fone deofel ‘the devil’ immediately precedes the SCV ut a-draf ‘drove out’.

OE has a complex version of Verb Second (V2) that is such a core characteristic of many of the Germanic languages. In many studies of OE syntax, particles have typically received attention as markers of the position of the finite verb before V-movement (e.g. Koopman 1985, 1990; van Kemenade 1987; Pintzuk 1999; Fischer et al. 2000; following up Koster 1975 who developed these diagnostics for Present-Day Dutch). The exact analysis of these complexities need not concern us here; we refer the reader to an extensive body of literature on the issues involved (e.g. van Kemenade 1987, 1997; Pintzuk 1999; Fischer et al. 2000: chapter 4 and references cited there). What is important to the discussion here is that there is evidence for V-movement in both main clauses and subclauses (targeting different functional head positions, depending on context): all V-movement can strand the particle, and those contexts show the syntactic independence of the particle.

Two V-movement contexts need to be distinguished here: the first is V2 as we find it in PDD and Present-Day German (PDG) and should be characterized as V-to-C movement, since it only occurs in root clauses. Examples of this are given in (2):

(2)  
(a) þa sticode him mon þa eagan ut  
then stuck him someone the eyes out  
‘then his eyes were gouged out’ (coorosiu, Or 4:5.90.13.1822)  
(b) Da wearp se broðor þæt glæsene fæt ut æt ðam ehðyrle uppon ðam  
then threw the brother the glass vessel out through the window upon the  
heardan stane.  
‘Then the brother threw the glass vessel out of the window on the hard  
stone.’ (cocathom2, ÆCHom II, 11:104.425.2228)

In (2a–b), the finite verb (sticode ‘gouge’ in (2a), wearp ‘threw’ in (2b)) has been moved to second position in the clause, stranding the particle ut ‘out’. V-movement is not restricted to V2 contexts in OE. There is also clear evidence for V-movement to a position lower than C, and we will call this V-to-I movement here. An example is given in (3):
The diachrony of the English verb particle combination

Hel oncnæw Crist. þa δa heo for-let hyæ hæftlingas ut þurh δæs hælendes
Hell acknowledged Christ, when it for-let its captives out by the saviour’s
harrowing
‘Hell acknowledged Christ, when it let forth its captives, through the
harrowing of Jesus.’ (cocathom1, ÆCHom I, 15:306.178.2903)

(3) is a subclause, and involves V-movement, stranding the particle.

We will now briefly outline a structural representation for the OE examples
in (2) and (3), which abstracts from issues concerning the internal structure of
the clause: the structure for (2) is given in (4a); that for (3) in (4b).

(4)

a. \begin{math}
[CP XP [C V [IP tI-V … [VP Obj Prt tv]]]]
\end{math}

\begin{math}
\begin{array}{c}
\text{þa} \\
\text{sticode} \\
\text{þa eagan} \\
\text{ut} \\
\text{tv}
\end{array}
\end{math}

V-to-C-movement

b. \begin{math}
[CP XP [c [IP Subj [I V [VP Obj Prt tv]]]]]
\end{math}

\begin{math}
\begin{array}{c}
\text{þa} \\
\text{þa} \\
\text{heo} \\
\text{for-let} \\
\text{hyæ hæftlingas} \\
\text{ut} \\
\text{tv}
\end{array}
\end{math}

The position of the finite verb before V-movement is in clause-final position
in an OV word order, as signalled by the particle in preverbal position. In (4a)
(example (2a)), the finite verb undergoes V-to-C movement. V-to-C movement
is restricted to root clauses with a specific trigger: if the first constituent is
a wh-element, negative ne, or a specific adverb like þa in (2), or if the verb
is imperative, the finite verb is in C and the subject is always postverbal. V-
to-C movement presupposes V-to-I movement, and we will therefore simply
dub this V-to-C movement. In non-root clauses such as (4b) (example (3)),
V-to-C movement is blocked by the presence of a C-element (þa functions as
a complementizer here). The finite verb moves to I, stranding the particle. V-
to-I movement occurs in main clauses and in subclauses. Although we need
to distinguish the two V-movement contexts here, the most important point
for our purposes is that, whatever the ultimate position of the finite verb, its
movement strands the particle, in the same way as it does in Dutch main clauses
as discussed in chapter 3. V-movement thus accounts for the vast majority of
postverbal particles in OE: preverbal particles are near-categorical in contexts
without V-movement. This point becomes even clearer if we consider the
position of the particle with respect to the non-finite verb: since the non-finite
verb is not subject to V-movement, the position of the particle is typically preverbal, as in (5):

(5) þonne ne miht þu þæt mot ut a-teon of ðæs mannes eagan, .
then not could you not the speck out PREP-draw of the man’s eye
‘then you could not draw out the speck from the man’s eye, . . . ’
(coaelhom, ÆHom 14: 153.2086)

As we will see in section 6.4, particles are on the left of the non-finite verb in the vast majority of cases, showing that postverbal position for particles really is mostly due to V-movement.

The transition to ME is marked by a substantial loss of frequency of OV word order. For more discussion, the reader is referred to Kroch and Taylor (2000a) and Pintzuk and Taylor (2006). Particles become dominantly postverbal, as in (6):

(6) a. Ha hackede of his heaued
they cleaved off his head
‘They cleaved off his head’ (cmancririw, II.220.3190)

b. & couered vp þe gaderyng of Abyron.
and covered up the gathering of Abyron
‘and (the earth) covered up Abyron’s gathering.’ (cmearelps, 131.5704)

It is not entirely clear what the structure of examples like (6) is: they presumably involve V-to-I movement but this cannot be conclusively shown since nothing intervenes between verb and particle. Note that the object follows the particle as in the PDE particle order. We will further discuss this issue in section 6.4.

There is also continued evidence in ME for stranding of the particle by V-movement, as in (7):

(7) a. On hwylcen heowe steah he up?
towards which heaven rose he up
‘Towards which heaven did he ascend?’ (cmeentho, 145.290)

b. Strupeð hire steort-naket, and heoueð hire on heh up
Strip her stark-naked, and lift her on high up
‘Strip her naked, and lift her up high’ (cmnarga, 84.471)

c. Ach a nelde pricunge warpeð alpe wint ut
but a needle’s sting casts all the wind out
‘But a needle’s sting casts out all the wind’ (cmancririw, II.207.2975)

The examples in (7a–b) represent V-to-C movement as in (4a), (7a) is a question in which the pronominal subject is postverbal, and (7b) is an imperative, one of the V-to-C contexts. The object pronoun and an adverb intervene between verb and particle. (7c) is a coordinated main clause. In all likelihood, this involves
V-to-I movement as in (4b), but note that it could also be interpreted as a case of the PDE predicate order. We will attempt to disentangle this structural ambiguity as far as possible in section 6.4.

We see, then, that in OE there is a clear asymmetry with respect to the relative position of verb and particle: preverbal position of the particle is the norm in all contexts that are not affected by V-movement, and postverbal position is typical of V-movement contexts. In the transition to ME, this asymmetry was lifted as a result of the loss of OV word order: particles become postverbal in all contexts. Although evidence for V-movement continues to be available, the surface overlap between V-movement contexts and what we might call PDE particle orders is substantial from eME onwards, and further increases over time, as we will see in section 6.4. Against this background, we will now first turn to a discussion of the morphosyntactic status of particles.

6.3 The morphosyntactic status of particles in the history of English

6.3.1 Introduction

Particles are more difficult to identify in OE than in PDE, because their behaviour in OE is often similar to that of adverbs and prepositions, from which they derive historically (Los 2004; van Kemenade and Los 2003). The set of OE particles includes (a)dun ‘down’, onweg/aweg ‘away’, forð ‘forth’, niðer ‘down’, up(p) ‘up’, ut ‘out’, of ‘off’, fram ‘from, forth, out, away’, to ‘towards, in the direction of’, ofer ‘across’. Of these, the particles up(p) ‘up’ and ut ‘out’ are among the most frequent, and both denote a path. Their frequency is partly due to the fact that they combine with a large number of different verbs to form SCVs, some of which are very frequent (e.g. (a)hebban ‘to rise’). The examples given in (1) above, repeated here for convenience, are run of the mill SCVs, (1a) with the particle up ‘up’ and (1b) with the particle ut ‘out’.

(1) a. Ðonne Moyses his handa up a-hof, þonne hæfde Israhela folc sige; when Moses his hands up pref-lifted, then had Israel’s people victory ‘When Moses raised up his hands, then Israel’s people had victory’; (coexodusP, Exod [Ker]: 17.11.63)
b. And seo helle þone deofel ut a-draf and the hell the devil out pref-drove ‘And Hell drove out the devil’ (conicodC, Nic [C]: 282.274)

The OE SCVs coexisted with Inseparable Complex Verbs (ICVs), which are morphologically complex verbs consisting of a prefix such as be- and a verbal base. An example containing an ICV is given in (8).
The morphosyntactic status of particles in the history of English

(8) Witodlice ic dyde þæt þa gewurdon cristene ealle þe in ðam cwarterne
truly I did that they became Christians all who in the prison
be-clysode wæron, . . .
in-shut were
‘Truly, I brought about that those shut up in prison all became Christians, . . . ’
(coaelhom, ÆHom 24:170.3871)

As their names suggest, a key difference between ICVs and SCVs is that the
latter are separable, while the former are not. OE prefixes are bound morphemes
and unlike particles cannot occur as syntactically independent elements. A
further difference between prefixes and particles is that particles carry primary
stress, whereas prefixes are typically unstressed. Evidence for this comes from
verse, in which prefixes occur in unstressed positions, while particles occur in
stressed positions. Example (9) from Beowulf illustrates this.

(9) Bealocwealm hafa ð| féla féorh cynna / fórð on-s´ended!
violent-death has many human-race forth PREF-sent
‘Violent death has sent forth many of the human race!’ (Beowulf, lines
2265–6)

In OE alliterative poetry, each verse line (marked by | in (9)) consists of two
half-lines, which are divided by a pause, the caesura (indicated by / in (9)). Each
half-line has two primary stresses. One or both of the two stressed syllables
in the first half-line alliterates with the first stressed syllable of the second
half-line. In the example in (9), the particle forð ‘forth’ occurs in an alliterating
position and thus carries primary stress. By contrast, the prefix on- in onsended
‘PREF-sent’ occurs in an unstressed position.

Despite these key differences between SCVs and ICVs, there was also a
degree of functional overlap between the two: they share a core change-of-state
semantics, as illustrated by the examples in (10).

(10) a. Ða þry oðre godspelleras a-writon heora godspell be Cristes
the three other evangelists down-wrote their gospel about Christ’s
menniscnysse,
humanity
‘The three other evangelists wrote down their gospel about Christ’s
humanity,’ (coaelhom, ÆHom 1: 17.7)

b. & Ceawlin wæs ut a-drifen
and Ceawlin was out PREF-driven
‘and Ceawlin was expelled’ (cochronA-1, ChronA [Plummer]:
592.1.243)

The prefix a- in a-writon ‘wrote down’ in (10a), although its meaning appears
to be weakened, denotes a resultative change of state. The particle ut ‘out’ in
The diachrony of the English verb particle combination

*ut a-drifen* ‘driven out’ in (10b) clearly expresses a resultative change of state, perhaps reinforcing the meaning no longer clearly expressed by the prefix *a-* in *a-drifen* ‘driven’.

The combination of a particle and an ICV, as in (10b), is frequently attested in OE. Some more examples are given in (11).

(11) a. *Da be-seah se munuc up.*
    then *PREF-looked the monk up*
    ‘Then the monk looked up.’ (cocathom1, ÆCHom I, 23: 369.144.4644)

b. *Hell oncneow Crist. þa ða heo *for-let* hyre hæftlingas *ut þurh ðæs*
    Hell knows Christ when she *PREF-casts her prisoners out through the*
    Saviour’s harrowing
    ‘Hell knows Christ when she releases her prisoners through the Saviour’s*
    harrowing.’ (cocathom1, ÆCHom I, 15: 306.178.2903)

In (11), the prefixes (*be-* and *for-* respectively) do not seem to add much meaning to that of the verb they are prefixed to. The particles (*up* and *ut* respectively) appear to take over from the prefixes and denote a direction (the result of the event expressed by the verb), a meaning no longer clearly expressed by the prefixes.

The doubling data reveal that the decline of the phonologically weak prefixes *a-, be-, for-* had advanced to a stage in which it has so little semantic content left that its role is taken over by particles; see also Hiltunen (1983). This was extended to the entire ICV system. As van Kemenade and Los (2003: 104) point out, “there is clear evidence that prefixes in Old English [. . . ] are in an advanced state of grammaticalization”. Hiltunen (1983: 94) observes that the overall weakening of the prefixes went hand in hand with loss of lexical content. Because of their weakened meaning, prefixes were no longer able to express locative, aspectual (e.g. perfective) and intensifying meanings and were replaced by other (analytic) expressions. According to Hiltunen (p. 101), this ties in with the general tendency of the language towards more analytical constructions and with the loss of OV word order (including the shift from preverbal to postverbal position of particles). Semantic as well as phonological weakness (no stress) and the availability of particles to take over from the prefixes eventually led to the decline of the ICV system. This once productive system had largely been replaced by a system of particle verbs by the beginning of the ME period (with the exception of some lexicalized cases). We will discuss the development of the ICV system from a comparative perspective in chapter 7.
6.3.2 Particles in Old and Middle English: secondary predicates?

While particles often feature in studies on early English syntax as markers of the position of the finite verb before V-movement, little attention has been paid to the syntactic and semantic status of OE and ME particles (notable exceptions being Fischer et al. 2000; van Kemenade and Los 2003; Elenbaas 2006a, 2007). The size of particles (most are monosyllabic) may suggest that they are light elements, but we have already shown with evidence from Beowulf that particles carry primary stress, and we will provide strong evidence for the claim that particles in OE and ME are predominantly phrases functioning as secondary predicates. After the OE period, the evidence for phrasal status decreases, and we will hypothesize that this causes speakers to increasingly adopt the default analysis in which particles do not project a head. This default analysis is captured by the Structural Economy Principle, presented in the previous chapters.

6.3.2.1 Old English particles: phrasal secondary predicates

In OE, particles are separated from the verb by a range of productive morphosyntactic processes, as exemplified in (12).

(12) a. forðæm hio nanne swetne wæsdöm forð ne bringð because she no sweet fruit forth not brings ‘because it does not produce any sweet fruit’ (cocura, CP: 45.341.22.2297)

b. & deofolseocnessa ut to a-drifanne. and demoniacal possession out to Pref-drive ‘and to drive out demoniacal possession.’ (cowsgosp, Mk [WSCp]: 3.15.2351)

c. þæt hi hine ut sceoldon wurpan. that they him out should throw ‘that they should throw him out.’ (coeust, LS 8 [Eust]: 168.173)

d. . . . ealand . . . ðæt we ær ut of gongende wæron . . . island . . . that we before out from going were ‘. . . island . . . from which we had previously put out’ (cobede, Bede 5: 1.384.23.3834)

e. þa sticode him mon þa eagan ut then stuck him someone the eyes out ‘then his eyes were gouged out’ (coorosiu, Or 4: 5.90.13.1822)

As these examples show, OE particles may be separated from the verb by the preverbal negative marker (12a), an infinitive marker (12b), a modal verb (12c), a stranded preposition (12d), or they may be stranded by V2 (12e) (Fischer et al. 2000; Elenbaas 2007). Note that the properties illustrated by (12) include
some that are closely akin to the properties of PDD particles as discussed in chapter 3: Dutch particles may precede a modal that is part of the clause-final verb cluster; they may be separated from the verb by an infinitive marker and by V-movement. (12) shows that OE particles are syntactically independent, which in turn suggests that they project a phrase. Particles are also routinely modified as in (13):

(13) & ærn swa feor up swa næfre ær ne dyde.
    and run as far up as never before not did
    ‘and (he) ran up as far as (he) never did before.’ (ChronE [Plummer]: 1014.28.1906)

In (13), the particle up ‘up’ is modified by the adverb feor ‘far’. We will assume that modifiers as in (13) are generated in the specifier of a Particle Phrase (SpecPrtP).

Additional evidence for the phrasal status of OE particles is that they can be topicalized, as shown in (14).

(14) a. & nyðer ne a-stigað þa ðe on hyre middele synt,
    and down not pref-go those who in their midst are
    ‘and those who are in their midst do not descend,’ (cowsgosp, Lk [WSCp]: 21.21.5380)

b. Niðer he a-hreas
    down he pref-fell
    ‘he fell down’ (cocathom1, ÆCHom I, 11: 270.111.2078)

In (14a), the particle nyðer ‘down’ precedes the negated finite verb ne a-stigað, indicating that it has been topicalized. In (14b), niðer ‘down’ precedes the subject, which is evidence for topicalization. Since topicalization only affects phrases, as discussed in chapter 2, examples like (14) support the claim that OE particles project a phrase.

Having presented this evidence for phrasal status, a note of temperance is also in order: the evidence for phrasal status does not preclude the possibility that particles that are immediately adjacent to the verb in preverbal position may already have been on the way to optionally projecting status under the condition of strict adjacency to the verb, as discussed for Dutch in chapter 4. However, as we will now discuss, the semantics of particles in OE is different from that of Dutch particles: OE particles have transparent and literal meanings. This shows that they are more clearly lexical, and by implication less grammaticalized, than particles in PDD, which further supports our analysis of them as relatively independent lexical items which have phrasal status.
We would now like to make our claim regarding the structural status of OE particles more specific by arguing that as phrasal elements, OE particles function as secondary predicates. This follows up on the diagnostics for predicate status discussed in chapter 2: they have transparent, non-conventionalized semantics, and allow copula paraphrases. The examples in (15) illustrate this:

(15)  

a. & þæt flod *in* fleow.
and the flood in flowed
‘and the flood flowed in.’ (Lk [WSCp]: 6.49.4085)

b. & hine þær *ut* a-spaw.
and him there out PREF-spit
‘and vomited it up there.’ (cocathom1, ÆCHom I, 18: 318.28.3413)

The particles in ‘in’ and ut ‘out’ in (15) both have a transparent meaning, denoting a direction. The meaning of the SCVs is predictable from the meaning of their constituent parts. In OE, transparent particle meanings predominate and systematically correlate with predicative function: OE particles predicate over a subject. Thus, in (15a), the particle in ‘in’ takes þæt flod ‘the flood’ as its subject (note that while þæt flod ‘the flood’ surfaces as the subject, it is the internal argument of the unaccusative verb fleow), as the copula paraphrase ‘the flood is in’ illustrates. In (15b), the particle ut ‘out’ takes hine ‘him’ as its subject, the paraphrase is ‘he is out’ (the context shows that hine was spat out by a whale).

The semantics of OE particles furthermore reveals that they typically denote the endstate of the action expressed by the verb and in many cases this change-of-state semantics is resultative. This observation is contra Hiltunen (1983: 147), who observes that particles do not convey a resultative meaning until the lOE period (and continue to do so into the ME period). Some resultative examples from eOE texts are presented in (16).

(16)  

a. & hu Eþna fyr *upp* a-fleow
and how Etna’s fire up PREF-flew
‘and how Etna’s fire flew up’ (coorosiu, OrHead: 5.4.51)

b. Ðæt is ðonne ðæt mon his wætru *ut*-læte
that is when that man his water out-let
‘That is, when that man let his water out’ (cocura, CP: 48.373.15.2525)

c. & his heafod *of* a-sloh
and his head off PREF-smote
‘and cleaved his head off’ (cobede, Bede 1: 7.40.7.331)

In each of the examples in (16), the particle represents the result of the action denoted by the verb. This can be shown by means of a copula clause paraphrase:
in (16a), the result is that Etna’s fire is up; in (16b), the water is out; in (16c),
his head is off. OE particles invariably express a change of state, resultative or
not.

The OE facts thus provide clear evidence for an analysis of OE particles as
phrases that function as secondary predicates and that express a change-of-state
meaning which is often resultative. Note once again, however, that particles
adjacent to the verb may already have been optionally projecting. This would
not have affected their status as secondary predicates – we saw in chapters 3
and 4 that the various levels of projection of particles that we see in Dutch
find correlates in their morphosyntactic behaviour – and does not affect their
semantic status as the endstate (the predicate W in the resultative LCS).

6.3.2.2 Middle English particles: continued evidence for phrasal
secondary predicates

During the transition from OE to ME, particles come to occupy a postverbal
position quite robustly. This dramatic shift from preverbal to postverbal position
itself provides support for the claim made in section 6.3.2.1 that OE particles are
syntactically independent elements: only syntactically independent elements
can be expected to undergo a change of position. Although their position is
different, ME particles share with their OE precursors the property of being
separable from the verb, as (17) illustrates. (17a) and (17c) are repeated from
(7c) and (7a) respectively.

(17) a. Ach a nelde pricunge warpeð alþe wint ut
   but a needle’s sting casts all the wind out
   ‘But a needle’s sting casts out all the wind’ (cmancriw, II.207.2975)
b. & duste him dun riht to þer eorðe
   and threw him down right to the ground
   ‘and threw him right down to the ground’ (cmmarga, 74.308)
c. On hwylcen heowe steah he up?
   towards which heaven rose he up
   ‘Towards which heaven did he ascend?’ (cmkenth, 145.290)

In (17a), the nominal object alþe wint ‘all the wind’ intervenes between the
verb warpeð ‘casts’ and the particle ut ‘out’. In (17b), a pronominal object,
him ‘him’, intervenes between the verb (duste ‘threw’) and the particle (dun
‘down’). In (17c), the pronominal subject he ‘he’ intervenes between the verb
steah ‘rose’ and the particle up ‘up’, as a result of V-to-C movement. The data
clearly show that ME particles are syntactically independent elements, as in
OE. What is more, the ME data provide evidence that ME particles can project
The morphosyntactic status of particles in the history of English

a phrase. Evidence for this comes from modification facts: ME particles can be modified like their OE precursors, as in (18):

(18) þæt eadie meiden a-hef hire heorte heh up towart heouene
that blessed maiden PREF-lifted her heart high up towards heaven
‘that blessed maiden lifted her heart hight up to heaven’ (cmnarga, 62.111)

In (18), the particle up ‘up’ is modified by the adjective heh ‘high’, which occupies SpecPrtP.

Further evidence suggesting that ME particles can project a phrase comes from examples in which the particle has been topicalized. Particle topicalization is infrequent in ME: there is one example from the M1 period, (19a), none from the M2 period, four inconclusive examples from the M3 period, and three from the M4 period, from Malory’s *Morte Darthur*, one of which is given as (19b).8

(19) a. Forr þeþenn ut we comenn.
   because thence out we come
   ‘Because we come out from there.’ (cmorm, I,259.2099)
   b. that downe he felle in a sowghe to the grounde.
   that down he fell in a swoon to the ground
   ‘that he fell down to the ground in a swoon.’ (cmmalory, 206.3390)

Example (19a) is from a verse text, the *Ormulum*, which means that the fronted position of the particle could be forced by the iambic metre of the text (*Forr þeþenn út we cómenn*). In (19b), the subject intervenes between the fronted particle and the verb, indicating topicalization.9 Though low in number, the examples in (19) are indicative of the status of particles in ME grammar. The fact that they are topicalized shows that they can project a phrase, as topicalization targets phrases.

So far, then, we have established that ME particles are syntactically independent elements, like their OE precursors. We also found evidence for the economically marked option of phrasal projection in ME. For OE particles, we made the additional claim that they are change-of-state predicates, whose semantics are often resultative. The first non-transparent meanings of particles are attested in the ME period, but, in the remainder of this section we will show that this development did not affect the status of particles as change-of-state predicates.

Particles in ME can have a transparent meaning, (20a), or a non-transparent meaning, (20b–c).
The diachrony of the English verb particle combination

(20) a. Ha hackede of his heaued.
    they cleaved off his head
    ‘They cleaved off his head.’ (cmancriw, II.220.3190)

b. þen schalt þou with suche a pouder hele up þe wonde.
    then shall you with such a powder heal up the wound
    ‘Then, with such a powder you shall heal up the wound.’ (cmhorses, 125.394)

c. And þe peple, resynge and crienge, breck up þe hous þere þe Iewes
    and the people shaking and crying broke up the house where the Jews
    were i-flowe for drede, . . .
    were fled for fear
    ‘And the people, shaking and crying, broke up (=open) the house
    whereto the Jews had fled for fear, . . .’ (cmpolych, VIII.85.3546)

The particle of ‘off’ in (20a) denotes the end of a path expressed by the verb hackede ‘cleaved’. The particles in (20b–c) have a non-transparent meaning, yet express the endstate of the action denoted by the verb. Despite this difference in semantics, both transparent and non-transparent particles have a predicative function: just as of in (20a) predicates over his heaued ‘his head’, the particle up in (20b–c) predicates over þe wonde ‘the wound’ (20b), þe hous ‘the house’ (20c). They both function as primary predicates semantically, and as secondary predicates syntactically. This semantic development of non-transparent meanings continues into modern times: in PDE, VPCs often express non-transparent meanings.

Particles in ME thus show every evidence of being change-of-state predicates, as they do in OE, and this analysis extends to the new use of particles with a non-transparent meaning. This new use indicates that the particle comes to form a closer semantic unit with the verb in the ME period (a trend that continues into PDE). We attribute this increase to the rise of the optionality of projection for particles: particles are increasingly analysed as heads, following from our Structural Economy Principle, whose effect is that non-projection is preferred. This is in line with our analysis of particles as grammaticalized predicates. This development goes hand in hand with semantic weakening in the sense that there is an increasing semantic bond between verb and particle as well. Note, however, that the added option of non-projection does not affect their status as secondary predicates. We saw a similar situation for PDD in chapter 3: non-projecting particles or even quasi-incorporating particles retain the secondary predicate status.

It is interesting to note that the first clear cases of non-transparent meanings are found in the new postverbal particle pattern, the dominant order being the
adjacent V-Prt one. A precise correlation (if there is one at all) is difficult to establish on the basis of the available data.

6.4 The role of particles in the syntax of Old and Middle English

A brief outline of the major morphosyntactic developments affecting particles during the OE and ME periods was given in section 6.2. Recall that, in OE, there is a clear asymmetry with respect to the position of particles between clauses with and without V-movement: in clauses with V-movement, particles are typically postverbal as they are stranded by V-movement. In contexts without V-movement, they are typically preverbal. In the transition to ME, much of this asymmetry is lifted, in the sense that particles come to be positioned postverbally in all contexts. This results to an important extent from the substantial loss of OV word order. The clearest indication for this comes from contexts where the SCV is non-finite: this is a context unaffected by V-movement so that the position of the particle yields a clearer view of the developments affecting the position of object and particle with respect to the verb. We will therefore first consider, in section 6.4.1, the effects of the loss of OV word order, focusing on contexts where the SCV is non-finite.

Throughout the ME period and beyond, V-movement continues to be a factor in the placement of particles, even though in many contexts, its effects cannot be conclusively demonstrated. In section 6.4.2, we focus on the evidence for particle stranding by V-movement, which disappeared as V-to-I movement was lost (Roberts 1985; Kroch 1989; Warner 1993, 2006; among others).

The case studies presented in this section take Elenbaas’s (2007) work on OE and eME as their starting point. Elenbaas (2007) provides a detailed study of the syntax of SCVs in lOE and eME, drawing for lOE on the O3 texts included in the York–Toronto–Helsinki Parsed Corpus of Old English Prose (YCOE; Taylor et al. 2003). The O3 period (950–1050) was selected because it is the largest subcorpus, and because its texts contain more reliable data than those from the O4 period (1050–1150), for which there are no original texts. What is available for the O4 period are largely translations and adaptations of earlier texts and is therefore not representative of the syntax of the rest of the OE period (cf. Allen 1995: 18–19, who excludes texts from the late eleventh and early twelfth centuries for precisely this reason). For ME, we present results for all time periods included in the second edition of the Penn–Helsinki Parsed Corpus of Middle English (PPCME2; Kroch and Taylor 2000b), based on Elenbaas’s results for M1, M2 and M3 and supplementing these with results
The diachrony of the English verb particle combination

Table 6.1. The position of the particle with respect to the non-finite verb in the O3 period

<table>
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<th></th>
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</thead>
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<td>Vnf-Prt</td>
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<tr>
<td>sub</td>
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<td>3</td>
<td>1.7</td>
</tr>
<tr>
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<td>237</td>
<td>81.7</td>
<td>3</td>
<td>1.0</td>
</tr>
</tbody>
</table>

for M4. In addition, we present results for all eModE time periods (E1, E2 and E3) included in the Penn–Helsinki Parsed Corpus of Early Modern English (PPCEME; Kroch, Santorini and Delfs 2004).12

6.4.1 The position of particles with respect to the non-finite verb: OV/VO order

In the broad outline of morphosyntactic developments given in section 6.2, we saw that the position of particles with respect to the non-finite verb is dominantly preverbal. We now consider this in more detail for OE. Table 6.1 gives the results for the O3 period.

Table 6.1 shows that the particle in this context is immediately preverbal in percentages ranging from 79.3 to 100 per cent between various clause types. By way of illustration, example (5) above, a main clause, is repeated here for convenience:

(5) þonne ne miht þu na þæt mot ut a-teon of ðæs mannes eagan,
then not could you not the speck out PREF-draw of the man’s eye
‘then you could not draw out the speck from the man’s eye,’
(coaelhom,ÆHom 14: 153.2086)

Note that examples such as (5) resemble the situation in PDD and PDG: the particle is a secondary predicate in immediately preverbal position. Its meaning is transparent and resultative, and the particle can thus be plausibly analysed as phrasal, given the fact that particles can also be modified and topicalized. However, both in main clauses and subclauses, postverbal particles are attested. Particles are on the immediate right of the non-finite verb in some 10 per cent of the cases in main clauses and subclauses, and particles can be separated from
the non-finite verb in postverbal position. We thus see that there are some first traces of word orders that look like PDE particle syntax. (21) gives examples of postverbal particles, which in (21a) is on the immediate right of the verb; in (21b), it is separated from the verb by an object, and in (21c) by an object and a PP.

(21) a. Þa het Daria þæt deor him ryman ut,
then ordered Daria the beast make-space out
‘Then Daria bade the beast make way for him out,’ (/ELS(Chrysanthus): 277.7495)

b. Gyf hit þonne mædencild wære þone sceolde heo hi forhæbban fram
if it then maidenchild were then should she herself abstain from
ingange godes huses hundeahtatig daga eac fram hire gebeddan & æfter
entry God’s house eighty days also from her husband and after
þam fyrste mid lace to Godes huse & berað þæt cild forð
that first (period) with gift (go) to God’s house and bring the child forth with the gift:
‘If it should be a girl, then she should refrain from going to church for eighty days and from sexual intercourse, and after that period of time go to church with a gift, and bring the child forth with the gift:’ (/ECHom I, 9: 249.8.1571)

c. Þa wolde seo Sexburh æfter syxtyne gearum don hire swustor ban of
then wanted Sexburh after sixteen years do her sister bones from
ðære byrgene up
the burial-place up
‘After sixteen years Sexburh desired to take up her sister’s bones from their burial place’ (/ELS(Æthelthryth) 73)

It is not easy to see what to make of these examples without making rather a lot of theoretical assumptions about OE clause structure, which exceeds the scope of our treatment here. A few observations that we can make are the following: the status of the particle in (21a) is open to question: it could alternatively be interpreted as an adverb in clause-final position. (21b) is an example in which the full secondary predicate including its subject is in postverbal position, much like the predicate order in PDE. A similar analysis could account for (21c).

Turning to ME, we see that OV word order is substantially in decline. Some examples of OV word order in ME are given in (22).

(22) a. ȝef þu wult mi nome witen; ich am katerine i-cleopet
if you want my name know I am Katherine pref-called
‘and said: “If you want to know my name: I am called Katherine”’
(cmkathe, 26107)
b. Huanne þe kempe heþ his uelaȝe yueld
when the warrior has his fellow paid
‘When the warrior has paid his fellow’ (cmayenbi, 50.875)
c. and made a fest vnto alle his folc þat þo hade him holpen;
and made a feast for all his people that who had him helped
‘and held a feast for all his people who had helped him’ (cmbrut3, 32.991)

The examples in (22), from the first three ME time periods respectively, all have an auxiliary and a non-finite verb, which allows us to see the exact position of the object with respect to the main verb. In the M1 and M2 periods (1150–1250 and 1250–1350), OV orders as in the examples in (22a) and (22b) are still relatively common: Elenbaas and van Kemenade (to appear) show that, during the M1 period, definite NP objects, unlike indefinite NP objects, precede the non-finite verb in 44.8 per cent of the cases, driven by a process of discourse-sensitive scrambling (the objects in question are discourse-given). After 1300, OV orders only appear with quantified objects, negative objects and pronominal objects (see e.g. Foster and van der Wurff 1995; van der Wurff 1997). The example in (22c) illustrates the third context. By the M3 period (1350–1420), OV orders are vastly outnumbered by VO orders in all clause types. Some examples from each of the first three ME time periods; are presented in (23).

(23) a. Ic habbe i-folȝed his iwill eaure to longe;
   I have pref-followed his will ever so long
   ‘I have followed his will ever so long;’ (cmvices1, 93.1103)
b. Lord, y shal seche þy face.
   Lord I shall seek your face
   ‘Lord, I shall seek your face.’ (cmearlps, 30.1236)
c. and ȝe schulen knowe my veniaunce.
   and you shall know my vengeance
   ‘and you shall know my vengeance.’ (cmotest, XIV , 20N.672)

Kroch and Taylor (2000a) show that in eME, texts from the West Midlands are more modern in showing relatively more VO orders, while the South-Eastern texts are conservative and show more OV orders. The demise of OV word order has been shown to be more advanced in some contexts than in others. Foster and van der Wurff (1995) found that OV orders survive longer in verse than in prose texts, which, according to Fischer et al. (2000: 162) is very likely to be due to “the stronger tendency in verse to exploit linguistic resources for the sake of rhyme, metre and emphasis”. Van der Wurff (1997) shows that the decline of OV word orders takes place at a different pace in different type of clauses. Thus, in fifteenth-century English, there are only two
contexts which show surface OV word order, namely constructions with an empty subject (e.g. coordinate and relative clauses) and clauses containing an auxiliary and an object with a negative or quantitative element.

It has often been suggested that the loss of OV order and the shift to postverbal particle position go hand in hand (e.g. Fischer et al. 2000: 82 note the two changes are “probably related”; see also van Kemenade and Los 2003). In the analysis of Kroch and Taylor (2000a), the two are necessarily related: if the position of the particle is taken to be a diagnostic for underlying word order, there must be a one-to-one relationship between the two. It is true that the two changes appear to have taken place at roughly the same time and there is an overall cross-linguistic generalization that SOV languages with a particle/prefix system have preverbal particles, whereas SVO languages have postverbal particles. This generalization follows from the simple fact that particles, being part of the VP, will follow the verb in languages with a head-initial VP and will precede the verb in languages with a head-final VP.

Kroch and Taylor (1994, 2000a) have shown that the change from OV to VO was not as abrupt as earlier (standard) accounts (e.g. Canale 1978; van Kemenade 1987; Lightfoot 1991) have suggested. This, however, contrasts with the relatively abrupt shift in particle position. The preverbal particle pattern ceases to be productive early on in the ME period, whereas OV word order is still quite productive in eME (Kroch and Taylor 1994, 2000a). Thus, while there appears to be a connection between the loss of OV orders and the rise of postverbal particles, the different time span of the two changes indicates that other factors must have been at play in the shift in particle position (see also Elenbaas 2006b). We now turn to the position of particles with respect to the non-finite verb in ME. Table 6.2 shows that the shift to postverbal particle position is sweeping indeed.

In the M1 period, particles are preverbal in 19.5% of the cases, in contrast to a percentage of around 80% in the O3 period. This percentage has further dwindled to 11.1% in the M2 period, and is reduced to 0.9% in the M3 period, and 0.7% in the M4 period (1420–1500). Postverbal particles include both the particle and the predicate orders; an example of each is given in (24):

(24)  
   a. . . & efsones he let him ut þurhc wærse red, to ðat forewarde ðat he  
       and afterwards he let him out on worse advice, to the condition that he  
       suor on halidom & gysles fand þat he alle his castles sculde  
       swore on holy relics and hostages gave that he all his castles should  
       i-iuen up.  
       PREF-give up
The diachrony of the English verb particle combination

Table 6.2. The position of the particle with respect to the non-finite verb in ME

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</tr>
<tr>
<td></td>
<td>Total</td>
<td>1</td>
<td>0.7</td>
<td>114</td>
</tr>
</tbody>
</table>

‘... and soon after, on worse advice, let him out, on condition that he gave hostages and swore on holy relics to yield up all his castles.’
(CMPETERB, 58.571)

b. Ich walde ȝef hit mahte beon. þolien a þusent deaðes to a-rudden him ut
I wished if it might be suffer a thousand deaths to pref-rid him out prof.
thereof
‘I would, if it might be, endure a thousand deaths to release him out thereof.’ (CMSAWLES, 173.96)

Note that in (24a) the particle is immediately postverbal and has a non-transparent meaning: *up* is not directional, in contrast to the many cases of *up* in OE, as discussed above. We interpret such examples as the first signs of a lexicalization development, as part of the larger grammaticalization development.

As Table 6.2 shows, the immediately postverbal position is dominant in all ME periods. Since the figures are for non-finite VPCs only, the effects of V-movement are excluded, and it is likely that the immediately postverbal
The role of particles in the syntax of Old and Middle English

Table 6.3. Postverbal particle patterns with non-finite VPCs in ME

<table>
<thead>
<tr>
<th>ME period</th>
<th>Clause type</th>
<th>V\textsubscript{nf-Prt} N</th>
<th>V\textsubscript{nf-Prt-Obj} N</th>
<th>V\textsubscript{nf-Obj-Prt} N</th>
<th>V\textsubscript{nf-X-Prt} N</th>
<th>Total N</th>
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<tr>
<td></td>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>M1</td>
<td>main</td>
<td>17</td>
<td>70.8</td>
<td>3</td>
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</tr>
<tr>
<td></td>
<td>coord</td>
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<td>0.0</td>
<td>1</td>
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<tr>
<td></td>
<td>sub</td>
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<td>14.3</td>
<td>9</td>
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<tr>
<td></td>
<td>Total</td>
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<td>62.4</td>
<td>12</td>
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<td>11</td>
</tr>
<tr>
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<td>main</td>
<td>15</td>
<td>83.3</td>
<td>2</td>
<td>11.1</td>
<td>1</td>
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<tr>
<td></td>
<td>coord</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
<td>0.0</td>
<td>0</td>
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<tr>
<td></td>
<td>sub</td>
<td>7</td>
<td>70.0</td>
<td>2</td>
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<td>Total</td>
<td>22</td>
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<td>6</td>
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<td>6</td>
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<td></td>
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<td>10.0</td>
<td>2</td>
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<td>63.7</td>
<td>43</td>
<td>24.0</td>
<td>21</td>
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</tbody>
</table>

particle in some of these non-finite VPCs is non-projecting, especially in lME. Table 6.3 provides the figures for all postverbal particle patterns in ME (non-finite VPCs).

Objects, but also non-VP material, may intervene between non-finite verb and particle (V\textsubscript{nf-Obj-Prt} and V\textsubscript{nf-X-Prt} respectively). We give some lME examples illustrating the word order alternation (V\textsubscript{nf-Prt-Obj} and V\textsubscript{nf-Obj-Prt}) in (25):

    she lifting up her hands blessed her
    ‘She, lifting up her hands, blessed her.’ (CMKEMPE, 109.2489)

b. Therwithalle sir Ector assayed to pulle oute the swerd
    therewithal sir Hector tried to pull out the sword
    ‘Therewithal, Sir Hector tried to pull out the sword’ (CMMALORY, 9.257)

c. Neuyr-þe-lesse, he behyte hir þat if he cowd redyn it he wolde copyn it
   nevertheless he promised her that if he could read it he would copy it
   out and write it better with good wylle.
   Nevertheless, he promised her that if he could read it, he would copy it
   out and write it better with good will.’ (CMKEMPE, 4.47)
Table 6.4. *The position of particles with respect to the non-finite verb in eModE*

<table>
<thead>
<tr>
<th>eModE period</th>
<th>Clause type</th>
<th>V\textsubscript{nf}-Prt</th>
<th>V\textsubscript{nf}-Prt-Obj</th>
<th>V\textsubscript{nf}-Obj-Prt</th>
<th>V\textsubscript{nf}-X-Prt</th>
<th>Total</th>
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</thead>
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<td>12 17.1</td>
<td>13 18.6</td>
<td>1 1.4</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>coord</td>
<td>16 61.5</td>
<td>2 7.7</td>
<td>8 30.8</td>
<td>0 0.0</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>sub</td>
<td>165 66.5</td>
<td>64 25.8</td>
<td>19 7.7</td>
<td>0 0.0</td>
<td>248</td>
</tr>
<tr>
<td></td>
<td>Total</td>
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<td>78 22.7</td>
<td>40 11.6</td>
<td>1 0.3</td>
<td>344</td>
</tr>
<tr>
<td>E2</td>
<td>main</td>
<td>77 67.5</td>
<td>14 12.3</td>
<td>23 20.2</td>
<td>0 0.0</td>
<td>114</td>
</tr>
<tr>
<td></td>
<td>coord</td>
<td>14 50.0</td>
<td>4 14.3</td>
<td>8 28.6</td>
<td>2 7.1</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>sub</td>
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<td>94 26.1</td>
<td>45 12.5</td>
<td>5 1.4</td>
<td>360</td>
</tr>
<tr>
<td></td>
<td>Total</td>
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<td>112 22.3</td>
<td>76 15.1</td>
<td>7 1.4</td>
<td>502</td>
</tr>
<tr>
<td>E3</td>
<td>main</td>
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<td>16 19.8</td>
<td>11 13.6</td>
<td>0 0.0</td>
<td>81</td>
</tr>
<tr>
<td></td>
<td>coord</td>
<td>21 72.4</td>
<td>4 10.3</td>
<td>5 17.2</td>
<td>0 0.0</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>sub</td>
<td>190 53.5</td>
<td>106 29.9</td>
<td>54 15.2</td>
<td>5 1.4</td>
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<td>265 57.0</td>
<td>125 26.9</td>
<td>70 15.1</td>
<td>5 1.1</td>
<td>465</td>
</tr>
</tbody>
</table>

d. “Nay, ser,” seyde þe frer, “it fallyth not for a frer to *ledyn* a woman no sir said the friar it falls not for a friar to lead a woman *a-bowtyyn*.”

‘‘No, sir,” said the friar, “it is not fitting for a friar to lead a woman about.’’ (CMKEMPE, 132.3097)

(25a–b) show the immediately postverbal order, in both cases with a transparent meaning.

(25c–d) give the predicate order, where (25c) again shows evidence for a non-transparent meaning. The meaning of the particle in (25d), too, does not seem to be entirely transparent, although we could surmise an implicit Ground here, perhaps ‘about the town’.

Table 6.4 gives the figures for the eModE period. The figures in Table 6.4 are in line with the figures for lME: particles predominantly occur in immediately postverbal position (with or without a following object). This particle order (V-Prt-Obj) is more frequent than the predicate order (V-Obj-Prt). It is important to note that there does not seem to be any development in the frequency of either word order over the lME and eModE periods: both orders are available, and the particle order is clearly preferred. This shows that from the M3 period onward,
the word order characteristics of the VPC seem to be clearly established. Some examples are given in (26):

(26) a. But that husbande that can fynd the meanes to cary oute his donge, . . .
   ‘But the husbandman who can find the means to carry out his dung,...’
   (FITZH-E1-P2, 27.33)

b. and he desireth you to be his gud master and beare him out
   ‘and he wishes you to be his good master, and bear him out’
   (GPOOLE-1500-E1-P2, 180.52)

Here, too, there is some evidence for non-transparent meanings: in (26a), the particle’s meaning is transparent and resultative, but the same cannot be said for (26b), where the VPC bear out means something like ‘to vouchsafe’. This again indicates lexicalization of the VPC. As in the examples quoted for lME, there is no indication that the choice of word order correlates with transparency of meaning. This cannot be in any way conclusive, but it shows that the lexical properties we have discussed for PDE in chapter 5 were already well on the way from the M3 period onward.

6.4.2 Particles and finite verb movement

We will now turn to discussion of the development of the position of the particle with respect to the finite verb. By way of backdrop for the discussion in this section, let us briefly reiterate the relevance of V-movement for particle position. In OE, there is an asymmetry between the position of particles with respect to the non-finite verb on the one hand (where the particle is dominantly preverbal), and with respect to the finite verb on the other hand (where the particle is dominantly postverbal). This is because lexical finite verbs can undergo V-to-I movement, and V-to-C movement, as set out in (4) above. As we will see in this section, this situation continues over the ME and eModE periods, in fact as long as lexical finite verbs can undergo movement to a functional position I or C. The loss of V-to-I movement takes place over the eModE period (as noted above, there is no agreed date in the literature for the loss of V-to-I movement; for discussion, the reader is referred to Kroch 1989; Warner 1993, 2006; inter alia). One important fact about the position of particles with respect to the finite verb is that, although there is no clear development with respect to V-movement over the ME period, its effects are compounded by the loss of OV word order: we saw in section 6.4.1 that from eME onwards, VO word order increasingly predominates, so that particles became postverbal in all contexts, whether induced by V-movement or not. The loss of V-to-I movement effects in the course of the eModE period definitively resulted in
The diarchrony of the English verb particle combination

Table 6.5. The position of the particle with respect to the finite verb in the O3 period

|       | preverbal |           |           | postverbal |           |           |           |           |           |           |           |           |           |           |           |           |           |
|-------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|       | Prt-Vf    | Prt...Vf  | Total     | Vf-Prt     | Vf...Prt  | Total     | Total     | Total     | Total     | Total     | Total     | Total     | Total     | Total     | Total     | Total     | Total     |
| O3    | N | % | N | % | N | % | N | % | N | % | N | % | N | % | N | % | N | % | N | % |
| main  | 180 | 28.2 | 9 | 1.4 | 189 | 29.6 | 182 | 28.5 | 268 | 41.9 | 450 | 70.4 | 639 |        |        |        |        |
| coord | 93 | 45.4 | 1 | 0.5 | 94 | 45.9 | 48 | 23.4 | 63 | 30.7 | 111 | 54.1 | 205 |        |        |        |        |
| sub   | 375 | 81.7 | 10 | 2.2 | 385 | 83.9 | 44 | 9.6 | 30 | 6.5 | 74 | 16.1 | 459 |        |        |        |        |
| Total | 648 | 49.7 | 20 | 1.5 | 668 | 51.3 | 274 | 21.0 | 361 | 27.7 | 635 | 48.7 | 1303 |        |        |        |        |

a situation where the patterns of finite and non-finite VPCs become identical, and this was presumably the final step paving the way towards PDE particle syntax. With this overall development in mind, let us turn to the development of the position of particles with respect to the finite verb.

We start with IOE. Table 6.5 sets out the figures for the O3 period, from Elenbaas (2007: 165). The figures of the distribution of particles with respect to the finite verb in main clauses (Table 6.5) clearly show that the postverbal particle position is dominant, which can be attributed to V-movement.

V-movement thus often yields a postverbal particle in main clauses and, to a lesser extent, in coordinate clauses. Examples of the pattern $V_f \ldots Prt$, where the material intervening between verb and particle is non-VP material, provide the most conclusive evidence for this and some are given in (27).

(27) a. Ða wearp se broðor þæt glæsene fæt ut æt ðam eðyrle uppon ðam then threw the brother the glass vessel out through the window upon the heardan stane. hard stone
   ‘Then the brother threw the glass vessel out of the window on the hard stone.’ (cathom2, ÆCHom II, 11:104.425.2228)

b. & cwæð. Gif ðu Godes sunu sy feal nu adun.
   and spoke if you God’s son are fall now down
   ‘and spoke: “If you are God’s son, fall down.”’ (cathom1, ÆCHom I, 11: 266.16.1992)

c. ic þe a-sende sona forð mid him.
   I you pref-send soon away with him
   ‘I will soon send you away with him.’ (coaelive, ÆLS [Thomas]: 13.7549)
Example (27a) illustrates V-to-C movement: the finite verb is in second position, following the adverb ða ‘then’; the subject se broðor ‘the brother’ follows the verb. In the examples in (27b,c), the intervening adverb (nu ‘now’ in (27b) and sona ‘soon’ in (27c)), are indicative of V-movement. (27b) is an imperative, a V-to-C movement context. (27c) is a V-to-I movement context.

Examples of the pattern V→Prt (the particle order) may also involve V-movement, but they yield no conclusive evidence due to the lack of any intervening (non-VP) material. Some examples are presented in (28).

(28) a. & Aaron a-hefde up hys hand, . . .
   and Aaron pref-raised up his hand
   ‘and Aaron raised up his hand, . . . ’ (cootest, Exod: 8.17.2642)

b. heo a-beah nyðer
   she pref-bowed down
   ‘she bowed down’ (cowsgosp, Jn [WSCp]: 20.11.7396)

We now turn to ME. The transition to ME is marked primarily by the loss of OV word order as discussed in section 6.4.1. Fischer et al. (2000: 130) point out that the decrease in OV orders in ME does not seem to affect the distribution of the finite verb, implying that ME is a SVO language with V-to-I movement as well as V-to-C movement. The data presented in Elenbaas (2007) illustrate particle stranding by V-movement in the M1, M2 and M3 periods.

We have seen that the position of particles serves as a diagnostic for determining the underlying position of the verb in OE (Koopman 1985, 1990; v a n Kemenade 1987; Pintzuk 1999; among many others, all based on Koster’s 1975 tests for Dutch). The same is true of particles in ME: whenever a postverbal particle is separated from the finite verb by non-VP material, we have a diagnostic for V-movement. An eME example is given in (29).

(29) Strupeð hire steort-naket, and heoued hire on heh up
   strip her stark-naked and lift her on high up
   ‘Strip her naked, and lift her up high’ (cmmarga, 84.471)

In (29), the finite verb is imperative and it thus involves V-to-C movement. Furthermore, the PP on heh ‘on high’ intervenes between the verb heoued ‘lift’ and the particle up ‘up’.

Examples like (29) indicate that the particle is still an independent syntactic element in eME, despite the dramatic increase of the V-Prt pattern in this period. Hiltunen (1983) links the rise of the postverbal pattern to the increase in VO word orders, noting that “the postverbal position steadily gains ground along with the decline of the S.O.V. syntax” (p. 125). However, as noted before, Hiltunen does not distinguish between finite and non-finite verbs. Elenbaas (2007) does make this distinction and shows that the shift to postverbal particles
Table 6.6. Particle position and V-movement in main clauses in ME

<table>
<thead>
<tr>
<th>Verb movement</th>
<th>M1</th>
<th>M2</th>
<th>M3</th>
<th>M4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_f$-Prt</td>
<td>7/50 (14.0%)</td>
<td>10/24 (41.7%)</td>
<td>16/104 (15.4%)</td>
<td>2/152 (1.3%)</td>
<td>35/330 (10.6%)</td>
</tr>
<tr>
<td>$V_f$-Prt-Obj</td>
<td>3/19 (15.8%)</td>
<td>5/14 (35.7%)</td>
<td>16/84 (19.0%)</td>
<td>5/77 (6.5%)</td>
<td>29/194 (14.9%)</td>
</tr>
<tr>
<td>$V_f$-Obj-Prt</td>
<td>9/20 (45.0%)</td>
<td>1/4 (25.0%)</td>
<td>4/22 (18.2%)</td>
<td>2/46 (4.3%)</td>
<td>16/92 (17.4%)</td>
</tr>
<tr>
<td>$V_f$-X-Prt</td>
<td>31/35 (88.6%)</td>
<td>3/3 (100%)</td>
<td>24/25 (96.0%)</td>
<td>16/17 (94.1%)</td>
<td>74/80 (92.5%)</td>
</tr>
</tbody>
</table>

was far more abrupt than Hiltunen suggests, occurring at a faster rate than the loss of OV order. Elenbaas (2007) thus uncovers ample evidence for particle stranding by V-movement in the M1, M2 and M3 periods. The figures in Table 6.6 are based on the figures in Elenbaas (2007), which have been extended to include the figures for the M4 period.17

Table 6.6 shows that in ME, 35 out of 330 main clauses displaying the $V_f$-Prt pattern provide evidence for V-movement (10.6%). As such, the $V_f$-Prt pattern does not provide surface evidence for stranding of the particle by V-movement. The 35 examples are all imperatives and V-to-C movement in these examples may involve string vacuous movement of the verb only, stranding the particle, or they may involve movement of the entire VPC (Elenbaas 2007: 246). The same conclusion must be drawn for the 29 (out of 194, 14.9%) $V_f$-Prt-Obj main clauses displaying the pattern $V_f$-Prt-Obj. The 16 (out of 92, 17.4%) $V_f$-Obj-Prt main clauses also contain an imperative verb; here, V-movement clearly only targets the verb. Unambiguous surface evidence for V-movement is typically found in main clauses displaying the $V_f$-X-Prt pattern: there are 74 out of 80 (92.5%) such examples in the ME period. Such examples are fairly robustly present throughout ME, though of course they decrease in number as the decline of V-movement progresses in the course of the ME period.

Some examples of main clauses with particle stranding by V-movement are given in (30).

(30) a. Ne *blawe* ȝe hire naut ut mid maðelinde muðe. wið ȝeoninde tutele.
not blow you her not out with talking mouth with gaping whisper
‘You blow her not out with a talking mouth and with a gaping whisper.’

(cmancriw, II.65.687)
Table 6.7. The position of the particle with respect to the finite verb in ME

<table>
<thead>
<tr>
<th>ME period</th>
<th>Clause type</th>
<th>V₁−Prt</th>
<th>V₁−Prt-Obj</th>
<th>V₁−Obj-Prt</th>
<th>V₁−X-Prt</th>
<th>Total</th>
</tr>
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<td>43.9</td>
<td>152</td>
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<tr>
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<td>152</td>
<td>52.1</td>
<td>77</td>
<td>26.4</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>coord</td>
<td>27</td>
<td>24.5</td>
<td>40</td>
<td>36.4</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>sub</td>
<td>51</td>
<td>70.8</td>
<td>16</td>
<td>22.2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>230</td>
<td>48.5</td>
<td>133</td>
<td>28.1</td>
<td>91</td>
</tr>
</tbody>
</table>

b. whi puttest tou me out?  
why put you me out  
‘Why do you evict me?’ (cmearlps, 52.2243)

c. but he putte hem nouȝt out;  
but he put them not out  
‘but he didn’t evict them;’ (cmpolych, VI, 369.2703)

(30a), from the M1 period, is a V-to-C movement context: the verb blawe ‘blow’ precedes the subject and the particle ut ‘out’ has been stranded. In example (30b), a wh-clause from the M2 period (another V-to-C context), the verb puttest ‘put’ strands the particle out ‘out’. In example (30c), from the M3 period, a pronominal object (hem ‘him’) and the negative marker nouȝt ‘not’ intervene between the verb putte ‘put’ and the particle out ‘out’, showing that this is a context with V-to-I movement.

The bigger picture of the distribution of finite VPCs in ME is provided in Table 6.7, which gives all the postverbal positions of particles in finite VPCs. The figures in Table 6.7 confirm the predominance of the immediately
The diachrony of the English verb particle combination

postverbal particle patterns (see also Table 6.3 for non-finite VPCs). Given the decline of V-movement in the course of the ME period, the question is to what extent there is evidence for particle stranding by V-movement in 1ME (and eModE). In order to find out, let us turn to the V-movement examples in the M4 period (and the eModE period after that).

Texts from the M4 period (1420–1500) show a syntax that is predominantly VO. In M4 texts, particles are always postverbal, predominantly in the particle order (see Table 6.7), but there is still evidence for particle stranding by V-movement: verb and particle can be separated by PPs as well as a range of adverbs, indicating that the finite verb has undergone V-to-I movement, or V-to-C movement. We will discuss the Vf-X-Prt examples below.

In ten out of twenty Vf-X-Prt examples, the intervening element X is the subject, indicating V-to-C movement. This includes eight examples with an unaccusative VPC. Two of these are presented in (31).

(31) a. Thenne *rosse he up* a-gayne
   then rose he up again
   ‘Then he rose up again’ (CMGREGOR, 167.942)

b. . . . /tho *flew* I doun wyth grete sorow . . .
   then flew I down with great sorrow
   ‘. . . then I flew down with great sorrow . . .’ (CMREYNAR, 53.341)

In (31a), we see a V-to-C context with inversion of the pronominal subject. The verb is unaccusative, which means that the subject could be in a VP-internal position, but the fact that the subject is a pronoun makes it likely that it is in the regular subject position. The lower subject position in unaccusative contexts is usually reserved for a focused subject, an option that is unlikely for a pronoun.

In two out of the ten Vf-Subj-Prt examples, the VPC is transitive and the particle is followed by a nominal direct object (32).

(32) a. . . . and there *do* thou *away* the wycked customes!
   and there do thou away the wicked practices
   ‘. . . and there do (you) away the wicked practices!’ (CMMALORY, 647.4181)

b. . . . and seyde, ‘Fayre knyght, why *smote ye doun* my shylde?’
   and said fair knight why struck you down my shield
   ‘. . . and said, “Fair knight, why did you strike down my shield?”’ (CMMALORY, 37.1195)

Both examples are from the Winchester MS (a1470) of Malory’s Morte Darthur (Vinaver 1973) and represent V-to-C movement contexts: (32a) is an imperative clause with an overt (postverbal) subject thou ‘you’; (32b) is a wh-question.
There is one example of a V-to-C context in which the verb–particle string is not only interrupted by the subject, but also by an adverb, as in (33):

(33) . . / thenne *stode* he hastely *vp* / . . 
then stood he hastily up
‘. . . then he stood up hastily’ (CMREYNAR, 52.336)

Like the examples in (31), the verb is unaccusative, but given that the subject is a personal pronoun, we can assume that it is in the regular subject position. Furthermore, the adverb *hastely* ‘hastily’ intervenes between verb and particle. We can take this to be a VP-adverb that adjoins to V′.

In a further example of the pattern Vf-X-Prt, X is a PP, as in (34).

(34) . . . and so *rode* with hym *away* into his castell
and so rode with him away into his castle
‘. . . and so rode away with him into his castle’ (CMMALORY, 182.2491)

In this example, the verb *rode* ‘rode’ is separated from the particle *away* ‘away’ by the PP *with hym* ‘with him’, an option not available in PDE syntax. VPC status in this example is debatable, however. The ‘particle’ *away* is followed by the PP *into his castell* ‘into his castle’ and *away* could well be an adverbial modifier rather than a particle combining with the verb *rode* ‘rode’ to form a VPC.

In another Vf-X-Prt example, the (imperative) verb is separated from the particle by V-to-C movement; with a nominal direct object and an adverbial NP intervening, as in (35).18

(35) *Do* þis plaster iij dayes to, . . .
put this plaster three days on
‘Put on this plaster for three days, . . .’ (CMTHORN, 70.544)

In the remaining seven Vf-X-Prt examples, the intervening element X is an adverb. Two of these are given in (36).

(36) a. And so he *lay* nat *downe*, . . .
and so he lay not down
‘And so he did not lie down, . . .’ (CMMALORY, 660.4629)

b. . . by þe gret myȝt of God þe wattur *stode* styll *vpe* in bothe sydys
by the great power of God the water stood still up on both sides
‘. . . by the great power of God, the water stood up still on both sides’
(CMSIEGE, 70.7)

In (36a), particle and verb are separated by the negative adverb *nat* ‘not’. There is no *do*-support as would be the case in PDE in negative contexts. This supports
an analysis in terms of V-to-I movement. In (36b), the verb *stode* ‘stood’ is separated from the particle *vpe* ‘up’ by the adjective *still* ‘still’ (i.e. not moving). In a further example, it is not clear whether a VPC is involved and two of the seven examples contain the ‘particle’ *to*, whose status (particle or preposition) cannot be conclusively established.

We have thus seen that X in the pattern V_f-X-Prt in the M4 period is either a subject, a PP or an adverb, or a combination of these elements. The total number of examples of the pattern V_f-X-Prt is small (20 out of 474 examples, which represents 4.2%; 17 if we do not count the three dubious to-examples, which gives a percentage of 3.6%). The pattern V_f-Prt is dominant (76.6%), and in those cases in which verb and particle are not immediately adjacent, the most frequent intervening element is a (pro)nominal object: the pattern V_f-Obj-Prt occurs in 91 out of 474 examples, representing a percentage of 19.2%. Note that this pattern too, can be the result of V-to-I movement. Whether these numbers and percentages are high enough for the V-movement pattern to be robust is difficult to establish, but it is clear from the M4 data presented here that there is evidence for particle stranding by V-movement (to I or C). Despite the frequency of the V-Prt pattern, the possibility of particle stranding by V-movement in lME must have constituted sufficient evidence for language users/learners that particles were independent syntactic elements.

We now turn to the eModE period, taking a close look at particle data, with the aim of discovering to what extent they reveal evidence for particle stranding by V-movement and thus for the independent syntactic status of particles. As for ME, we are mainly interested in the diagnostic pattern V_f-X-Prt, which we take to provide evidence for V-movement.

The eModE period is characterized not only by dialect levelling, but also by standardization of spelling and regularization of certain grammatical patterns, notably *do*-support. Although eModE word order already closely resembles that of PDE, the option of V-movement to a higher functional position is still available, albeit on the decline, competing with the rise of *do*-support (see Roberts 1985; Kroch 1989; Warner 1993, 2006; among many others). There is no agreed date for the loss of V-to-I movement in the literature, estimates ranging between the sixteenth and eighteenth centuries. In eModE, then, finite main verbs can still undergo V-to-I movement and V-to-C movement, a grammatical option no longer available in PDE.

Table 6.8 presents the figures for particle patterns found in eModE, revealing that the dominant particle pattern in all eModE periods is the particle order
Table 6.8. The position of the particle with respect to the finite verb in eModE

<table>
<thead>
<tr>
<th>eModE period</th>
<th>Clause type</th>
<th>Vf-Prt</th>
<th>Vf-Prt-Obj</th>
<th>Vf-Obj-Prt</th>
<th>Vf-X-Prt</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>E1 main</td>
<td>79</td>
<td>58.5</td>
<td>28</td>
<td>20.7</td>
<td>16</td>
<td>11.9</td>
</tr>
<tr>
<td>coord</td>
<td>22</td>
<td>34.9</td>
<td>19</td>
<td>30.2</td>
<td>21</td>
<td>33.3</td>
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<td>sub</td>
<td>50</td>
<td>58.1</td>
<td>17</td>
<td>19.8</td>
<td>13</td>
<td>15.1</td>
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<tr>
<td>Total</td>
<td>151</td>
<td>53.2</td>
<td>64</td>
<td>22.5</td>
<td>50</td>
<td>17.6</td>
</tr>
<tr>
<td>E2 main</td>
<td>117</td>
<td>49.2</td>
<td>65</td>
<td>27.3</td>
<td>42</td>
<td>17.6</td>
</tr>
<tr>
<td>coord</td>
<td>31</td>
<td>40.3</td>
<td>22</td>
<td>28.6</td>
<td>21</td>
<td>27.3</td>
</tr>
<tr>
<td>sub</td>
<td>63</td>
<td>64.3</td>
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<td>16.3</td>
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<td>13.3</td>
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<td>Total</td>
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<td>51.1</td>
<td>103</td>
<td>24.9</td>
<td>76</td>
<td>18.4</td>
</tr>
<tr>
<td>E3 main</td>
<td>64</td>
<td>42.7</td>
<td>43</td>
<td>28.7</td>
<td>38</td>
<td>25.3</td>
</tr>
<tr>
<td>coord</td>
<td>20</td>
<td>52.6</td>
<td>9</td>
<td>23.7</td>
<td>9</td>
<td>23.7</td>
</tr>
<tr>
<td>sub</td>
<td>75</td>
<td>62.0</td>
<td>26</td>
<td>21.5</td>
<td>17</td>
<td>14.0</td>
</tr>
<tr>
<td>Total</td>
<td>159</td>
<td>51.5</td>
<td>78</td>
<td>25.2</td>
<td>64</td>
<td>20.7</td>
</tr>
</tbody>
</table>

Vf-Prt(-Obj), as in ME. The object in the pattern Vf-Obj-Prt may be nominal or pronominal. Least frequent is the pattern Vf-X-Prt, our diagnostic pattern for V-movement.

In eModE, the element X in Vf-X-Prt examples represents various (non-VP) elements. One such element is the negative adverb not, as illustrated by the examples from E1 (1500–1569), (37a), E2 (1570–1639), (37b) and E3 (1640–1720), (37c).

(37)        a. Nor another mans wyckednes taketh not awaye the proper honoure frome good folke.
   ‘Nor does another man’s wickedness take away the proper honour from good people.’ (BOETHCO-E1-P2, 96.419)

b. For Christ saith, from him which borroweth, turne not away thy face.
   ‘For Christ says, do not turn away your face from he who borrows.’ (SMITH-E2-P2, D3R.167)

c. And at all times if you have not far to carry the Trees to set them, knock not off the mould from the roots, . . .
   ‘And at all times if you don’t have to carry the trees far to plant them, do not knock off the mould from the roots, . . .’ (LANGF-E3-P2, 57.132)

The examples in (37a–c) have transitive VPCs, whose nominal direct object follows the particle. The verb is separated from the particle by the negative
adverb *not*, indicating V-to-I movement. In (37b), an imperative clause with V-to-C movement, the particle of the transitive VPC *turne away* ‘turn away’ is followed by a nominal direct object, *thy face* ‘your face’. The VPC *knock off* ‘knock off’ in (37c) is also imperative and the example therefore presents evidence for V-to-C movement.

The verb may also be separated from the particle by the negative adverb *not* and further material. There are three such examples in E1, one of which is given in (38a), and two such examples in E2, one of which is presented in (38b). There is no example like this in E3.

(38) a. . . . and in the mornynge, whan he cometh to his folde, *let not his shepe out* anone, but reyse theym vp, and let them stande stylle good season, that they may donge and pysse.  
   ‘. . . and in the morning, when he comes to his fold, do not let his sheep out soon, but raise them up, and let them stand still a good season, so that they may dung and piss.’ (FITZH-E1-P2, 28.54)

b. *Take not your saddle off* sodainly but at leasure, . . .  
   ‘Do not take your saddle off suddenly but at leisure, . . . ’  
   (MARKHAM-E2-P2, 1,85.101)

In (38a–b), we see examples of imperatives with V-to-C movement. Intervening material in (38a) is the negative adverb *not* and the nominal direct object *his shepe* ‘his sheep’. In (38b), the verb *take* is separated from the particle *off* by the negative adverb *not* and by the nominal direct object *your saddle*. The examples in (38) are identical in the sense that the verb is separated from the particle by the negative adverb *not* and a nominal object. In lME and eModE, nominal objects always follow the negative adverb *not*; only pronominal objects can precede it (see Roberts 1995; van der Wurff 1997). For lME, van der Wurff (1997) observes that this situation resembles the modern Mainland Scandinavian object shift, which allows objects to move “across the negator and/or VP-adjuncts, but only if V itself moves and the object is a pronoun” (p. 489).

Besides the negative adverb *not*, other adverbs are also found intervening between the verb and the particle in all three eModE periods. Examples are presented in (39):

(39) a. *Then arose ther vp certayne that were of the secte of the Pharises . . .*  
   ‘Then there arose up certain men who belonged to the sect of the Pharises . . . ’  
   (TYNDNEW-E1-P2, XV,1A.701)

b. . . . and in the swyng the yerd *snapt quyt of* in the myddle . . .  
   ‘. . . and in the swing the yard snapped quite off in the middle . . . ’  
   (MADOX-E2-P2, 157.394)
c. and I did give her a pull by the nose and some ill words, which she provoked me to by something she spoke, that we fell extraordinarily out; ‘and I gave her a pull by the nose and some ill words, which she provoked me to by something she said, that we fell out in an extraordinary way;’ (PEPSY-E3-P2, 8,333.298)

In (39a), the locative adverb ther ‘there’ intervenes between the verb and the particle. This adverb cannot occur between verb and particle in PDE, which allows only adverbs that modify the particle to do so. An example of this is the degree adverb quyt ‘quite’ in (39b), which modifies the particle of ‘off’.

In (39c), we find the VP-adverb extraordinarily in between the verb and the particle, which is not possible in PDE. These examples show that eModE allowed more adverbs to intervene between verb and particle than PDE.

Another element that can intervene between verb and particle in eModE texts is the subject. Examples of this pattern thus involve subject–verb inversion, indicating V-to-C movement. Two examples are given in (40) (from E1 and E2 respectively, there are no such examples in E3):

(40) a. yet put they vp a byll of articles vnto the temporall lordes in the parlyament season . . .
   ‘yet they put up a bill of articles to the temporal Lords in the parliament season . . . ’ (FISHER-E1-P2, 344.177)

b. S. Walt. Heart, if she were so lock’t vp, how got she out?
   ‘(Sir Walter) Heart, if she were so locked up, how did she get out?’
   (MIDDLET-E2-P2, 54.295)

The examples in (40) both represent V-to-C contexts, with inversion of the finite verb and the pronominal subject.

In eModE, pronominal objects obligatorily occur between the verb and the particle (cf. PDE). The (identical) examples in (41) show V-to-C movement, involving subject–verb inversion so that both the subject and a pronominal object intervene between verb and particle.

(41) a. Then called he them in, . . .
   ‘Then he called them in, . . . ’ (TYNDNEW-E1-P2, X,20A.383)

b. Then called he them in, . . .
   ‘Then he called them in, . . . ’ (AUTHNEW-E2-P2, X,20A.528)

We have seen then that the X intervening between finite verb and particle can be a (negative) adverb, a subject, or a combination of one of these and an object. The Vf-not-Prt pattern is more frequent than the Vf-Subj-Prt pattern, as expected given that V-to-I movement persisted longer in negative contexts than in other contexts (see, e.g., Varga 2005).
The eModE data discussed above show that evidence for particle stranding by V-movement can be found as late as the eModE period. The V-movement pattern Vf-X-Prt is of low frequency: the average attested percentage across clause types in Table 6.8 is 6.7% for E1, 5.6% for E2, and 2.6% for E3. This is in line with the ongoing loss of V-to-I movement for lexical finite verbs, which is replaced by *do*-support. It is important to observe, however, that, as long as there was evidence for V-movement, its effects may have combined with the other pattern in which particles are separated from the verb: Vf-Obj-Prt as in Table 6.8. This pattern is considerably more robust than the Vf-X-Prt pattern. A comparison of the frequencies of these two patterns in Table 6.8 shows that the latter pattern may result from a combination of two options: the emerging particle syntax of PDE, which is built on a fixed morphosyntactic template that is not the result of V-movement, and which can also be seen to be at work in non-finite VPCs. The second option is that the Vf-Obj-Prt was (also) produced by V-movement, as long as there was independent evidence for V-movement in the form of the Vf-X-Prt pattern. As this independent evidence dwindled further (cf. Table 6.8), this forced all instances of the Vf-Obj-Prt pattern into an analysis on the part of language users/learners as a fixed morphosyntactic template, i.e. the one that is characteristic of the PDE VPC, regardless of whether the verbal part of the VPC is finite or non-finite.

6.5 Discussion and conclusions

The facts presented here and our analysis are in line with the grammaticalization development of particles proposed in Elenbaas (2007), which involves a loss of syntactic independence and therefore an increase in the syntactic bond between verb and particle, possibly leading to VPCs becoming morphological constructs. In chapter 1, this was formulated as the grammaticalization cline in (42):

\[
\text{projecting preverb} \triangleright \text{optionally projecting preverb} \triangleright \text{non-projecting preverb} \triangleright \text{prefix} \triangleright (\text{zero}) \triangleright \text{XP} \triangleright (X)P \triangleright X \triangleright \text{prefix} \triangleright 0
\]

We have seen clear evidence in this chapter that OE particles are syntactically independent elements functioning as secondary predicates. This is what allowed them to shift to postverbal position so rapidly and pervasively in the transition to ME, as we saw in section 6.4.1. The fact that, from about 1300 onwards, the immediately postverbal position is strongly predominant, in all likelihood indicates that the option of non-projection of the particle was a firm part of
ME grammars, whether the verbal part of the VPC was finite or non-finite. On the other hand, the fact that V-movement could strand the particle provided evidence that particles could still be syntactically autonomous. The loss of V-movement of lexical verbs heralded the final loss of syntactic autonomy of particles: the word order patterns for VPCs became structurally identical as the loss of V-to-I movement proceeded, resulting in the fixed morphosyntactic construction that the English VPC is, as it was analysed in chapter 5.
7 The diachrony of prefixes in West Germanic

7.1 Introduction

The focus in the preceding chapters has been on particle verbs like *op-bellen*/*call up*, *af-zeggen*/*call off*, *weg-bazen*/blow away*, and the various ways in which such combinations appear to straddle the domains of syntax and morphology. Our analysis bridges these two domains by positing a new morphosyntactic category: that of the optionally projecting word, and by formulating a grammaticalization cline for preverbs in which non-projecting words represent a morphosyntactically reduced intermediate stage on this cline. This chapter will focus on the next stage of reduction by grammaticalization: that of a prefix combining with a verb as a bound morpheme: the Inseparable Complex Verb (ICV). The morphological analysis of such prefixed verbs is perhaps more straightforward than that of the SCV, but we will see that its interest lies in its diachrony.

Core examples of verbs with inseparable prefixes are the Dutch verbs *ver-branden* ‘burn’, *be-schrijven* ‘describe’, *ont-moeten* ‘meet’. ICVs are functionally equivalent to SCVs in the sense that they denote complex events involving a change of state in a resultative construction. This functional equivalence reflects their common historical origin. The morphosyntactic differences between the two sets (one with an optionally projecting particle, and one with a bound morpheme) can be traced to different morphosyntactic developments, whilst retaining the semantics of a complex event.

We posited a grammaticalization trajectory in the previous chapters which we repeat here as (1):

(1) Preverb cline

<table>
<thead>
<tr>
<th>Stage</th>
<th>Structure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$[V \ldots \mathit{XPRES} \ V^0]$</td>
<td>head of a full phrase</td>
</tr>
<tr>
<td>2</td>
<td>$[V \ldots [X(P) \ V^0]]$</td>
<td>optionally projecting word</td>
</tr>
<tr>
<td>3</td>
<td>$[V \ldots [X \ V^0]]$</td>
<td>non-projecting word</td>
</tr>
<tr>
<td>4</td>
<td>$[V \ldots [X \ V^0]]$</td>
<td>quasi-incorporated word</td>
</tr>
<tr>
<td>5</td>
<td>$[V \ldots \text{[prefix-V]}]$</td>
<td>prefix</td>
</tr>
</tbody>
</table>
This cline shows several ways in which the complex event denoted by SCVs and ICVs can be encoded morphosyntactically. The stages are assumed to represent a historical sequence: at the first stage, the particle represents a genuine predicate in a secondary predicate construction, and is constructed syntactically as a free morpheme independent from the verb, which projects to phrasal level. At the second stage, the particle is part of an SCV which, though constructed from free morphemes and separable by syntactic processes, operates as a single lexical unit in other respects. These facts call for an analysis in terms of a category in between free morpheme and bound morpheme which we call a non-projecting word. The ambiguous behaviour of particles at this stage is best accounted for by assuming that they are optionally projecting: projecting a syntactic phrase (as in stage 1), or not projecting one, in line with the Structural Economy Principle (as in stage 2). Further intermediate stages may be that of a non-projecting head (we saw in chapter 3 that most Dutch particles never project), and that of a being quasi-incorporated, as discussed in chapter 3. The final stage in (1) is that of a bound morpheme, an inseparable prefix.

These stages are perfectly adequate to account for the various combinations we find in Old English (OE) and in Dutch, where the prefixes in ICVs uniformly occur to the left of the verb without any intervening material; clitic elements on verbs, like infinitival to (in OE) or te (in Dutch), and the negative head ne (in OE) or en (in Middle Dutch (MD)) may split up particle and verb in an SCV but they never split prefix and verb in an ICV. Data from Gothic, however, show that we should distinguish a fourth stage, a stage in between stages 3/4 and 5 in (1), in which the prefix, though a bound morpheme, is separable from the verbal stem by other bound morphemes.

Although the majority of the prefix/particle verb combinations discussed in this book are resultative, we saw in chapters 3–5 that other semantics are also possible (orienting particles, Aktionsart particles, etc.) and that those differences in semantics rarely correlate with morphosyntactic differences; Dutch, which shows the wider range of Lexical Conceptual Structures (LCSs), does not offer any differential mapping between a particular LCS and projection or non-projection of the particle. The single exception is possibly the continuative particle and its atransitivity effect (*appels door-eten ‘lit. apples through-eat, go on eating apples’, *type letters away). Like the SCV system, the ICV system is not restricted to the resultative LCSs alone: some prefixes developed into
aspectual markers (Gothic ga-) and inflectional morphology (e.g. the Dutch perfective prefix ge-). The large majority of prefixes are derivational, however.

Although the natural progression of (1) from a syntactic entity to a bound morpheme conforms to our expectations of what happens in grammaticalization processes (i.e. the increase in boundedness, see Lehmann’s (1995) grammaticalization parameters), not all ICVs have their origins in a trajectory like (1). There are two layers of inseparable prefixes in Dutch: the first is an older system, primarily instantiated by be-, ver-, ont-, which can be traced back to items which were much freer morphologically in earlier Germanic, and which were grammaticalized into bound morphemes because Verb Second (V2) was not yet in place so that they were always immediately adjacent to the verb. The second is of more recent date and arose in MD, with prefixes such as door-, over- and om-. English all but lost the earlier system, presumably as the result of the large-scale reduction and loss of unstressed affixes that took place in the transition from OE to Middle English (ME) and continued over the ME period. Its function was taken over by the highly productive and functionally equivalent system of Verb Particle Combinations (VPCs), and presumably also by an influx of (semi-)productive affixes of French and Latin loan morphology. Extensive contact with other languages has created a multilayered derivational system in Present-Day English (PDE), with Germanic and Latinate stems each having their own set of productive suffixes (e.g. -ness versus -ity). There is a new system of neo-classical productive prefixation with anti-, arch-, auto-, di-, co-, counter-, ex-, hyper-, inter-, mini-, mono-, multi-, neo-, pan-, poly-, post-, pre-, pro-, proto-, pseudo-, re-, semi-, sub-, super-, trans-, tri-, ultra-, uni-, vice-, etc.; unlike the old Germanic prefixes, these new prefixes tend to be lightly stressed, and have transparent semantics, typically not delimiting/resultative. Some of these prefixes approach compound status (Quirk et al. 1972: 980ff). There is also a newer layer of ICVs with out-, down-, over-, under-, up-, which is based on particles, as is the newer system in MD.

This chapter demonstrates, once more, the extreme productivity of the complex predicate construction in creating lexicalized phrases, and the interdependence of lexicon, morphology and syntax in grammaticalization processes.

7.2 Early Germanic prefixes

There are a number of cognate verbal prefixes in German, Dutch and OE which derive historically from prepositions or adjectives (including past participles); the system is almost completely moribund in PDE, with semi-productive examples like be-spectacled, be-cardiganed, and some lexical relics (e.g. be-spoke,
Table 7.1. Prefixes in Germanic

<table>
<thead>
<tr>
<th>OE</th>
<th>Dutch</th>
<th>German</th>
<th>Gothic</th>
<th>Original meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>be</td>
<td>be</td>
<td>be</td>
<td>bi</td>
<td>by, around</td>
</tr>
<tr>
<td>for</td>
<td>ver</td>
<td>ver</td>
<td>fra, fair, faura</td>
<td>before</td>
</tr>
<tr>
<td>full</td>
<td>vol</td>
<td>voll</td>
<td>fulla</td>
<td>full</td>
</tr>
<tr>
<td>ge</td>
<td>ge</td>
<td>ge</td>
<td>ga</td>
<td>with</td>
</tr>
<tr>
<td>mis</td>
<td>mis</td>
<td>mis</td>
<td>missa</td>
<td>changed, turned</td>
</tr>
<tr>
<td>op, on, a</td>
<td>ont</td>
<td>ent</td>
<td>anda</td>
<td>against</td>
</tr>
<tr>
<td>or, a</td>
<td>er</td>
<td>er</td>
<td>uz</td>
<td>out</td>
</tr>
<tr>
<td>to</td>
<td>te</td>
<td>zer</td>
<td>dis/twis</td>
<td>two ways, in two</td>
</tr>
</tbody>
</table>

Many of these prefixed verbs conform to the resultative LCS discussed in the previous chapters, as is shown by their transitivizing effect and their telic Aktionsart. In spite of their morphosyntactic differences, prefixed verbs and particle verbs express similar verbal actions. This is evident from the fact that the ICV examples in Dutch, German and OE discussed throughout this section tend to have VPC translations in English, and prefixed verbs (ICVs) and SCVs with similar meanings can also be found within Dutch and German, at times within the same language ((2) is repeated from chapter 1):

(2)

a. PDG ver-átmén PDD úit-blazen ‘to take a breather’
b. PDD ver-jágen PDD wé-g-jagen ‘to chase off’
c. PDD ver-bánnen PDD úit-bannen ‘to ban’
d. PDD be-lópen PDD áf-lópen ‘to walk down’
e. PDG vol-hárden PDD vól-houden ‘to persist, persevere’
f. PDG er-wáchsen PDG áus-wáchsen ‘to grow up’
g. PDD ont-kíemen PDG áus-/áuf-keimen ‘to germinate’

Table 7.1 presents an overview of these early prefixes and their various cognates: These prefixes combine not only with V but also with N and A bases, and in this, too, they parallel particles (see chapter 2). Examples of this are Dutch ver-korten ‘shorten’, built on the adjective kort ‘short’; and be-bossen ‘afforest’, derived from the noun bos ‘forest’. Further examples are found in (3). In spite of the semantic equivalence of the sets in (2), taking on board (1) as a scenario in which ICVs represent the final stage in a grammaticalization process would lead us to expect some degree of semantic bleaching that sets ICVs apart from SCVs. According to this scenario, we would expect prefixes to have meanings that are typically less concrete, more diffuse than particle meanings. Some support that this is the case can be found in the fact that the
same meanings can be expressed by different prefixes, even within the same language, as is evident from some of the examples in (2); this degree of diffusion appears to have had more impact in earlier stages of West Germanic than in Present-Day Dutch (PDD) and Present-Day German (PDG) (cf. Leopold 1977 [1907] for for/ver; Hoekstra, L ans and Westerduin 1987; Booij 1992; Booij and van Haaf ten 1988; Lieber and Baayen 1993 for Dutch ver-; Pétré 2005 for Old English for-). Some basic resultative meanings in which we find ICVs in both modern and earlier stages are:

(3) (i) **Privative** (mostly reflexes of anda ‘against’ and bi ‘around, about’, with N base):

- PDD ont-hoofden, PDG ent-haupten, OE be-heafdian ‘behead’; PDD ont-wapenen, PDG ent-waffnen, OE be-wæpnian ‘disarm’; PDD be-nemen/ont-nemen, PDG be-nnehmen/ent-nnehmen ‘take away’, OE be-nimian ‘to catch, take away’; OE be-horsian ‘deprive of horses’; OE be-fotian ‘cut off someone’s feet’; OE be-yrfeweardian ‘disinherit’;

(ii) **away**:

- OE be-weallan ‘boil away’; PDD ver-rotten, PDG ver-rotten, OE for-rotian ‘rot away’; PDD ont-komen, PDG ent-kommen ‘escape’;

Reversatives (with N base):

- PDD ont-keten, PDG ent-fesseln ‘unchain, take away chains’;

(iii) **in/to pieces, to bits, away, to ruin, to destruction, mis-**:

- PDD ver-leiden, PDG ver-leiten, OE be-lædan ‘seduce, lead astray’; PDD be-derven, PDG ver-derben, OE ge-deorfan ‘spoil’; PDD ver-kruimelen, PDG zer-krümeln ‘crumble up’; PDD ver-breken, PDG zer-brechen (earlier gi-brechen), OE for-brecaen, to-brecaen ‘break off’; for-britan, to-brytan ‘break in pieces’; PDG zer-bersten ‘burst to bits’; PDD ver-drukken, PDG zer-drücken ‘crush’; OE to-ceorfan ‘cut to pieces’; PDG zer-beißen, OE to-ceowan ‘bite to pieces’; OE to-dreafan ‘scatter, disperse, drive apart’; OE to-dreosan ‘be destroyed, perish, decay’;

(iv) **make A or A-er** (usually inchoative, with adjective base):

- PDD ver-korten, be-korten, PDG ver-kürzen ‘shorten’; PDD ver-kleinen, PDG ver-kleinern, zer-kleinern, OE ge-lytlian ‘make smaller’; OE be-nacodian ‘lay bare’; OE ge-beterian ‘to better, improve’; PDD ver-blinden, PDG er-blinden, OE for-blindian ‘blind’;

(v) **equip or provide with N** (built on N):

- PDD be-bossen, PDG be-walden ‘afforest’; PDD be-bouwen, PDG be-bauen ‘build on’;

Only in participial form without V simplex:

- PDD be-haard (earlier ge-haer), PDG be-haart (earlier ge-har) ‘hairy’, OE ge-feaxe(n) ‘furnished with hair’; PDD ge-laarsd, PDG ge-stiefelt (be-stiefelt) ‘booted’; PDE be-spectacled; be-cardiganed; PDD ge-bloemd, PDG ge-blümt ‘with flowers’;
(vi) 'change N':
PDD ver-haren ‘moult, acquire a new coat of hair’; PDD ver-potten,
PDG ver-pflanzen ‘re-pot [of plants]’; PDD ver-huizen ‘move house’; PDD ver-plaatsen ‘move something’;

(vii) ‘completely, become fully affected’:
PDD vol-doen, PDG er-füllen, be-friedigen ‘satisfy’; PDD vol-brengen, PDG voll-bringen ‘complete, accomplish, achieve’;
PDD vol-harden, PDG be-harren ‘persist, persevere’; PDD vol-maakt, PDG voll-kommen ‘perfect’ (past participle); PDD vol-wassen PDG er-wachsen ‘grown up’ (past participle); PDD vol-tooien, PDG voll-enden ‘complete, finish’; PDD vol-trekken, PDG voll-ziehen ‘accomplish, execute’; PDE ful-fil, PDD ver-vullen, OE ge-fyllan ‘fulfil’;
Many OE verbs with be-, with the sense of ‘thoroughly, soundly’ (OED, be- 2):
be-swingan ‘flog’ versus swingan ‘beat’, PDE be-witch (Petré 2005: 93); this is the transitivizing use of be- in Dutch (Booij 1992) and German (Brinkmann 1997)

Note the wide range of prefixes for every meaning, which makes it impossible to find a systematic correspondence between form and function of base verb and prefixed verb (see also de Vries 1975: 116–29). Many prefixed verbs do not have a corresponding base verb at all, such as Dutch ver-dedigen ‘to defend’ (*dedigen), or ver-tellen ‘to tell’ (*tellen, de Vries 1975: 125–6), a phenomenon which was also noted of particle verbs in chapter 2 (cf. pete out versus *pete).

In contrast, the productive uses of these prefixes in Dutch and German are more circumscribed. For be-, there is the transitivizing effect which has long been noted in the literature (e.g. Hoekstra, Lansu and Westerduin 1987; Haeseryn et al. 1997: 596–7, 600–5; Lieber and Baayen 1993: 54–62; de Vries 1975: 116–29, 169–74); the object is invariably fully affected (Booij 1992: 56; 2002a: 113). A comparison of the prefixed form with its simplex from German is given in (4):

(4) a. Er gießt Wasser auf die Blumen.
   he pours water on the flowers
   ‘He pours water on the flowers.’

   b. Er be-gießt die Blumen mit Wasser.
   he pref-pours the flowers with water
   ‘He waters the flowers.’

This is the equivalent to the locative alternation in English (load hay onto the wagon, load the wagon with hay), which is no longer marked by a prefix. The prefix be- derives from a preposition meaning ‘by, around’, from *ambi-, the same source as the OE prefix/preposition ymb, Dutch om ‘about’. Om is one
of the new prefixes discussed in section 7.3.2, and one of the characteristics of these new prefixes is that they take an object that is their Ground, and we have to assume a similar origin for transitivizing *be*—; in fact, *be* in (4) could easily be replaced by the new prefix *over*— that we will discuss in section 7.3.2, or indeed a PP with *over*:

(5) a. ICV: de rozen (met water) *over-gieten*  
the roses (with water) *PREF-pour*  
‘to suffuse the roses with water’  
b. ICV: de rozen (met water) *be-gieten*  
the roses (with water) *PREF-pour*  
‘to water the roses’  
c. PP: water over de rozen *gieten*  
water over the roses *pour*  
‘to pour water over the roses’

(6) a. ICV: het probleem *be-spreken*  
the problem *PREF-speak*  
‘to talk about (discuss) the problem’  
b. PP: over het probleem *spreken*  
over the problem *speak*  
‘to talk about the problem’

(7) a. ICV: de zandweg *be-wandelen*  
the sandy road *PREF-walk*  
‘to walk (over) the sandy road’  
b. PP: over de zandweg *wandelen*  
over the sandy road *walk*  
‘to walk over the sandy road’

There is the same sense of fully affected object (Blom 2005: 286–7). Petré (2005) distinguishes two sets of basic meanings: PROXIMITY (with Figure or Ground) on the one hand, with examples of *be*— with Figure-objects, e.g. in Dutch *be-zwijken* ‘collapse’, or *zich be-drinken* ‘lit. oneself be-drink, to get drunk’ (in which the Figure is realized as a reflexive pronoun), or Old English *be-stelan* ‘move oneself stealthily by’ (see pp. 74ff) and SURROUNDING and COVERAGE on the other, with Ground-objects as in (5)–(7); Petré’s OE example is *be-sittan* ‘sit completely around OBJECT’ (p. 84). Note that SURROUNDING and COVERAGE meanings are typically exemplified by the prepositions *om* ‘about’ and *over* ‘over’ and that these prepositions have given rise to two of the three new prefixes that we will discuss below. Further parallels between *be*-verbs and other constructions (PPs with e.g. *op* ‘on’ or SCVs with
the particle *vol* ‘full’) are given in (8)–(9): they are all resultatives that license a Figure participant (cf. Hoekstra, Lansu and Westerduin 1987).

(8)  
  a. op de muur plakken  
      on the wall paste  
      ‘to paste (something) on the wall’  
  b. de muur be-plakken  
      the wall pref-paste  
      ‘to cover the wall by pasting’  
  c. de muur vol plakken  
      the wall full paste  
      ‘to cover the wall completely by pasting’

(9)  
  a. op het terrein bouwen  
      on the terrain build  
      ‘to build on the site’  
  b. het terrein be-bouwen  
      the terrain pref-build  
      ‘to build on the site’  
  c. het terrein vol bouwen  
      the site full build  
      ‘to cover the site completely with buildings’

*Be-*prefixed verbs with nominal bases have a productive meaning of ‘to equip with or provide with N’ in Dutch (cf. meaning (3v) above), and this is also the main productive function of PDE *be*-, which is otherwise very limited: *be-spectacl-ed, be-cardigan-ed*. The adjectival base (‘make A or make more A’) is no longer productive for *be-* in Dutch, cf. Haeseryn et al. (1997: 597); the productive prefix in German and Dutch for these predicate conversions is *ver-* for Dutch (*ver-korten* ‘shorten’, *ver-koelen* ‘cool off/down’) and *ver-* or *er-* (from Proto-Germanic (PG) *uz* ‘out’, a cognate of the OE prefix *a*-) in German (*ver-kürzen, er-kalten*, ‘cool off/down’; *er-müden* ‘tire out’, *er-hitzen* ‘heat up’, *er-leuchten* ‘illuminate’, etc.). Some examples from Dutch are given in (10):

(10)  
  ver-armen ‘become impoverished’ (<arm ‘poor’), ver-aangenamen  
       ‘sweeten, make more pleasant’ (<aangenaam ‘pleasant’), ver-dichten  
       ‘become more dense’ (<dicht ‘dense’), ver-moeien ‘tire out’ (<moe ‘tired’),  
       ver-hitten ‘heat up’ (<hitte ‘heat’), ver-hevigen ‘build up, intensify’ (<hevig  
       ‘severe’)

The prefix *for-/ver-* has various origins (*fer-, fra-, fur-), representing ablaut-grades of the same root. When it is built on a verbal rather than adjectival base, its meaning in Dutch or German tends to be that given in (3iii)
above: ‘to rack and ruin’ or ‘away’, as in (11) (see also Leopold 1977 [1907]).

For- has practically disappeared from PDE apart from isolated fossils like for-lorn.

<table>
<thead>
<tr>
<th>(11)</th>
<th>German</th>
<th>Dutch</th>
<th>Old English</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>rotten</td>
<td>rotten</td>
<td>rotian</td>
</tr>
<tr>
<td></td>
<td>ver-rottén</td>
<td>ver-rottén</td>
<td>for-rottian</td>
</tr>
<tr>
<td></td>
<td>lassen</td>
<td>laten</td>
<td>lætan</td>
</tr>
<tr>
<td></td>
<td>ver-lassen</td>
<td>ver-laten</td>
<td>for-lætan</td>
</tr>
<tr>
<td>b.</td>
<td>werfen</td>
<td>werpen</td>
<td>weorpan</td>
</tr>
<tr>
<td></td>
<td>ver-werfen</td>
<td>ver-werpen</td>
<td>for-weorpan</td>
</tr>
</tbody>
</table>

Note that this meaning of for-/ver- is also transitivizing (Booij and van Haaften 1988), and the object is fully affected, as with be-, but the affectedness specifically involves the partial or complete destruction, damaging, or wasting of the participant in question.

The prefix ont-/ent- generally expresses an inchoative, reversative or separative change of state (‘to start V-ing’, ‘to become undone by V-ing’, or ‘to become away from by V-ing’), witness the examples in (3), but none of these uses are productive, cf. Haeseryn et al. (1997: 600). Ont-/ent- prefixed verbs with nominal bases mean ‘to dispose of N’ and those with adjectival bases mean ‘to cause something to be not A’.

The situation parallels our analysis of SCVs in chapter 3 as instantiations of a template in which the particle is fixed and the verbal slot is open: SCVs like op-zoeken ‘to look up’ etc. are generated in a template [V opX-V0]. This allows us to account for the conventionalized meaning (the particle in the template is linked to a specific meaning ‘accessible’ which all SCVs built on that template will share) and, at the same time, for the evident compositionality (the fixed particle and the open verb both have a perceptual contribution to make and are analysed as such by speakers, who, once they have deduced the template from existing instantiations, are able to form new SCVs from it). The difference is that these lexical templates for ICVs are not phrasal: the morphological analysis of prefixes is rather straightforward, and the families of meanings that develop over time are exactly what one would expect for derivational morphology. Derivational affixes will typically have only a few productive types at any one point in time, but the cumulative effect of waxing and waning productivity of the various meanings leads to a family of meanings for any given prefix, with every layer of productivity leaving its marks in the lexicon in the
shape of fossilized (i.e. no longer productive) combinations. Prefixes, then, conform to ordinary derivational processes; what is special about particles is that they behave like derivational affixes without having the same morphological status.¹

7.3 The rise of prefixes

7.3.1 Productive versus non-productive prefixes

There are also prefixes that appear to be newer formations. Their form is immediately recognizable as adpositional in origin (prepositional and/or postpositional): *aan*- ‘on, at, to’, *achter*- ‘behind’, *door*- ‘through’, *om*- ‘around’, *onder*- ‘under’, *over*- ‘over’ and *voor*- ‘for’. Of these, *aan*- ‘on’, *achter*- ‘behind’, *onder*- ‘under’ and *voor*- ‘(be)fore, for’ occur in only a few ICVs: *aan*- occurs in three ICV lemmas in Van Dale (1996) (*aan-bidden* ‘lit. at-pray, worship’, *aan-schouwen* ‘lit. at-look, at-inspect, behold, survey’, *aan-vaarden* ‘lit. at-vaarden, accept’), *achter*- in two (*achter-halen* ‘lit. behind-fetch, recover’ and *achter-volgen* ‘lit. behind-follow, pursue’) and *voor*- in six (*voor-komen* ‘lit. before-come, prevent’, *voor-onderstellen* ‘lit. before-suppose, presuppose’, *voor-voelen* ‘lit. before-feel, sense, have a premonition’, *voor-zeggen* ‘lit. before-say, predict, foretell’, *voor-zien* ‘foresee’, *voor-spellen* ‘foretell, prophesy’). The meaning of these unproductive prefixes in ICVs cannot always be recovered, but where they can be, they are non-resultative: they are orienting (*aan-bidden, aan-schouwen*) or modifying. This is in line with the non-resultative functions established for the corresponding particles in chapter 3. Since the prefixes *aan-*, *achter-* and *voor-* occur in only a few ICVs and new ICVs with these prefixes are not formed productively (cf. Haeseryn et al. 1997: 611–12, 629; de Vries 1975: 151–2), we will not discuss them further. We will focus on the three productive prefixes *door-*, *om-* and *over-* with the aim of uncovering the specific semantics of the ICV system. The productive use of *onder-* correlates with that of *over-* as we will see in section 7.3.2.

7.3.2 The semantics of *door-*, *om-* and *over-*

*Door-*, *om-* and *over-* have fairly consistent and productive meanings and can be traced to specific MD constructions, as we will see in section 7.4. These prefixes mostly express a path in combination with the referent of the direct object NP, as scrutiny of the lists in dictionaries immediately reveals (e.g. Van Dale 1996). This means that these prefixes are semantically similar to the path
The diachrony of prefixes in West Germanic

particles discussed in chapter 3. Some examples of ICVs with path prefixes are given in (12). Their prefix status is clear from their inseparability in V2 environments and their position vis-à-vis verbal clitics like infinitival te, as well as their stress pattern (main stress on the verb, not on the particle as in SCVs).

(12) a. het huis *door-zóeken*
    the house through-search
    ‘to search (through) the house’

b. het kasteel *om-géven*
    the castle around-give
    ‘to surround the castle’

c. het land *over-spóelen*
    the land over-wash
    ‘to wash over the land’

There is no predicative relation between the prefixes and the direct object referents in these ICVs, as illustrated in (13).

(13) a. dat Jan het hele huis *door-zoekt*
    that John the whole house through-searches
    ‘that John searches the whole house’

b. dat de slotgracht het kasteel *om-geeft*
    that the castle-moat the castle around-gives
    ‘that the castle-moat surrounds the castle’

c. dat de rivier het land *over-spoelt*
    that the river the land over-washes
    ‘that the river washes over the land’

The prefixes clearly do not express a change of state affecting the house, the castle or the land but indicate that John moves through the whole house, that the moat is around the castle and that the river comes over the land. The direct object NPs in (13), then, are not the Figures of the prefixes conceptually, but are their Grounds, with the prefixes conceptualized as relators that license a Ground participant and express, in combination with this Ground, the telic path of the subject referent. These prefixes, then, function as path preverbs, with the corresponding LCS in (14).

(14) \[\text{GO } [(\text{through/around/over } (y)) \ (x)], \ \text{by}[V(x)]\]

If we think of ICV prefixes as representing the endstate of a process of grammaticalization as set out in (1), they could be expected to show bleached
The rise of prefixes

meanings, but this is not what we find for door-, om- or over- in these examples. Their spatial meanings in (13) are the same as those of the adpositions they derive from, and generally they do not have less lexical content than SCV particles.

There are differences between the semantics of SCVs with path particles and ICVs with path prefixes in other respects, too. All thirty-one compositional ICVs with door- that are listed in Van Dale (1996) express paths that extend completely through the direct object participant (which is the Ground of the prefix) (see Blom 2005: 210ff). The path in most of these ICVs involves motion, even if the base verb is not a motion verb, examples are zoeken ‘search’ in door-zoeken ‘lit. through-search, search through completely’ in (13a), and zien ‘see’ in door-zien ‘lit. through-see, to see through completely’; cf. Haeseryn et al. (1997: 616); de Vries (1975: 137). Similarly, om- ‘around’ in all of the forty-eight compositional ICVs listed with this prefix expresses a path of the subject referent extending completely around the direct object referent, which is the Ground of om-, cf. om-geven ‘lit. around-give, surround’ in (13b), om-ringen ‘lit. around-ring, to surround completely’, and om-grenzen ‘lit. around-border, to enclose, fence in’; cf. Haeseryn et al. (1997: 622); de Vries (1975: 140).

These ICVs may have a stative reading, or one involving motion. An example of a stative reading is: om-geven ‘lit. around-give, to surround’ in (13b), which does not mean that the moat is working its way around the castle, but that the castle has a moat lying around it. On the other hand, om-stuwen ‘lit. around-push, to crowd around completely’ implies motion. The third prefix over- ‘over, across’ has a path function in most of its compositional ICVs (forty-nine out of sixty-two), expressing the literal/figurative path of the subject referent extending completely over/above the direct object referent, which is, again, the Ground of over- (cf. het land over-spoelen ‘to wash over the land’ in (13c)). Here, too, the path can be concrete, involving motion (as in over-spoelen ‘to wash over something completely’), but also more abstract (het probleem over-denken ‘to think over the problem completely’) (cf. de Vries 1975: 142–3). Again, some of these ICVs have a stative rather than an eventive reading, as in (15).

(15) dat de weg de rivier over-brugt
    that the road the river over-bridges
    ‘that the road bridges the river’

De Vries (1975: 143) notices that the path function of over- is often accompanied by the meaning ‘exceeding y’, where y refers to the Ground participant
that is more or less prominently present (cf. over-bieden ‘to overbid, outbid’, 
over-troeven ‘lit. over-trump, to outdo’). The path of $x$ over $y$ is interpreted as 
involving a comparison between $x$ and $y$, witness (16b).

(16) a. Jans geluk over-staalde zijn vioolspel.
    John’s happiness over-shone his violin play
    ‘John’s happiness shone over his violin play.’
b. Maries roem over-staalt die van haar collega.
    Mary’s fame over-shines that of her colleague
    ‘Mary’s fame outshines that of her colleague.’

The construction in (16a) conceptualizes the (stative, figurative) path of John’s 
luck ($x$) over his violin play ($y$), and that in (16b) conceptualizes the path of 
Mary’s fame ($x$) over that of her colleague ($y$). The interpretation ‘exceeding $y$’, 
then, can be regarded as a concrete instantiation of the general semantic scheme, the effect of a rule of inference (cf. Jackendoff 1990, 1997: 17–18).

The path function of ‘over $y$/exceeding $y$’ has given rise to a second quantificational (or degree) function: ‘more than $y$ can stand, too much for $y$’ (cf. Haeseryn et al. 1997: 625; de Vries 1975: 143):

(17) a. De vloeistof over-prikkelt de zenuwen.
    the liquid over-stimulates the nerves
    ‘The liquid stimulates the nerves more than they can stand.’
b. Jan over-voedt de puppies.
    John over-feeds the puppies
    ‘John feeds the puppies more than they can stand.’

Over- in this quantificational function licenses a Ground participant $y$, but 
instead of conceptualizing, in combination with its Ground, a (literal or 
figurative) path, quantificational over- conceptualizes, in combination with its 
Ground, a modifier, which leads to an LCS much like the one we posited for 
modifying particles voor and na in chapter 3:

(18) $[V (x) \{\text{more than (y) can stand / too much for (y)}\}]$

Such quantificational prefixes license a participant $y$, which is why the resulting 
ICVs are always transitive, as are all thirteen ICVs with this prefix listed in 
Van Dale (1996) (Blom 2005: 212). The Ground participant licensed by the 
prefix may be coreferential with the subject referent, in which case the Ground 
is realized syntactically as a reflexive:
The rise of prefixes

(19) a. dat Jan zich over-eet
    that John himself over-eats
    ‘that John eats more than he can stand’

b. dat Jan zich over-tilt
    that John himself over-lifts
    ‘that John lifts more than he can stand’

c. dat Jan zich over-werkt
    that John himself over-works
    ‘that John works more than he can stand’

The participant that is the Ground of over- must be syntactically realized as the direct object of the ICV; if the base verb is itself transitive, its theme participant cannot be the Ground of over-, resulting in suppression of that theme or its demotion to a PP:

(20) *dat Jan zich appels over-eet
    that John himself apples over-eats
    ‘that John overeats apples’

The two functions of over-, the path-function and the quantificational function, though related, can usually be clearly distinguished in concrete ICV constructs, even if the base verb is the same, as in (21) with spannen ‘stretch’:

(21) a. path function
    De brug over-spant de rivier.
    the bridge over-stretches the river
    ‘The bridge stretches over the river.’
    [GO [(over (the river)) (the bridge)], by {stretch (the bridge)}]

b. quantificational function
    Jan over-spant de boog.
    John over-stretches the bow
    ‘John overstretches the bow.’
    [stretch (John), (the bow) {too much for (the bow)}]

In (21a), over- conceptualizes, in combination with its Ground, the (stative) path of the bridge over the river, whereas in (21b), it conceptualizes, in combination with its Ground, the quantificational modifier too much for the bow or more than the bow can stand. Note that it is the contribution of the properties of the direct object in particular that guide the hearer towards the correct interpretation. Over- as a prefix in PDE is only available for the quantificational meaning; the path meaning requires a PP-complement. The Slavic counterpart of over-, however, shows the same combination of functions in a prefix: a path function and a quantificational function (Filip 2003).
Apart from the thirteen lemmas of ICVs clearly instantiating quantificational over-, there are also six lemmas in which over- performs a similar function, but which, on closer inspection, do not show the behaviour we expect of ICVs: they cannot generally be used finitely in main clauses at all, whether they are separable or inseparable in form (Blom 2005: section 6.3). What they have in common is that they all have over- followed by an unstressed syllable, the old native prefix be- or ver- (see section 7.2), a non-native prefix like Latin com- or a syllable without morphological status, as in óver-waarderen:

(22) óver-belasten ‘to overload’, óver-belichten ‘to overexpose’, óver-bemesten ‘to over-fertilize’, óver-compenseren ‘to overcompensate’, óver-verhitten ‘to overheat’, óver-waarderen ‘to overvalue’

The stress on the prefix over- is unexpected for a prefix in an ICV, and the fact that there is another unstressed prefix between over- and the verbal base is probably the reason for this. These conflicting properties (ICV meanings, but with stress on the prefix) apparently lead to some uncertainty in language use with respect to the separability of these combinations, witness the variable grammaticality judgements for (23) and (24). In (23), the prefix over- is stranded by V2 of the verbal part of the ICV, and in (24) the entire ICV undergoes V2:

(23) a. *?Jan belichtte de foto over.
   John exposed the picture over
   ‘John overexposed the picture.’
   b. *Zij compenseerde het tekort over.
      she compensated the deficit over
      ‘She overcompensated the deficit.’

(24) a. ?Jan over-belichtte de foto.
    John over-exposed the picture
    ‘John overexposed the picture.’
   b. ?Zij over-compenseerde het tekort.
      she over-compensated the deficit
      ‘She overcompensated the deficit.’

This leads to the interesting conclusion that some verbs can apparently not be used as finite forms in main clauses. The restriction does not extend to subclauses, as these have the finite verb in final position when V2 does not operate: Hij beweert dat die fotograaf foto’s altijd over-belicht ‘He claims that that photographer always over-exposes his pictures’. The pattern illustrated by (23)–(24), with similar restrictions on V2 is also found for ICVs with onder-:

some lemmas with onder- ‘under’ show similar behaviour in main clauses:
The rise of prefixes


This may point to a heaviness restriction on V2: note that ICVs with over- and onder- built on a prefixed verb have three syllables preceding the verbal base.

It could be argued that ICVs of the type exemplified in (23)–(24) originated as back formations of nominal and adjectival compounds such as over-belicht ‘over-exposed’ and onder-verhuur ‘sub-let’, which have been reanalysed as verbs (see Blom 2005: 223).

7.3.3 Differences in paths between ICVs and SCVs

Productively used ICV prefixes are generally conceptualized as relators which, in combination with the Ground participant they license, express the telic path followed by the subject referent; this meaning is extended in the case of over- to an additional quantificational meaning: ‘more than y can stand’. These new prefixes, door-, over- and om-, license a Ground participant and form transitive ICVs. The new ICV system is very different from both the old ICV system (with be-, ont-, ver-) and the SCV system in that these tend to have resultative meanings, as we saw in chapters 3 and 5, and in section 7.1. Although new ICVs may express paths, like SCVs, there is a clear and systematic semantic difference: the path expressed by an SCV is unidirectional (to be visualized as a line), whereas the path expressed by a new ICV is multidirectional (extending from one point into multiple directions):

(26) a. SCV: de sonate dóor-spelen
   the sonata through-play
   ‘to play through the sonata’
   ICV: het huis door-zóeken
   the house through-search
   ‘to search the house completely’

b. SCV: de brief óver-lezen
   the letter over-read
   ‘to read over/through the letter’
   ICV: de situatie over-zíen
   the situation over-see
   ‘to survey the situation’

The paths conceptualized by the SCV constructions in (26), i.e. the path of the subject referent through the sonata and over/through the letter, could be visualized as lines over/through these Grounds. The paths conceptualized in the ICVs in (26), however, do not represent such lines, but are multidirectional,
extending completely through the house and over the situation: the subject referents following these paths call at every spot in/on the Grounds, with the ICVs expressing the extension of the paths through/over the whole substance or surface of these Grounds.

Such complete-extension interpretations also distinguish ICVs from constructions with locative PPs, with which ICVs may alternate (thus showing the locative alternation), as illustrated in (27)–(28).

(27)  a. PP: dat Jan water [pp over de rozen] giet
    that John water over the roses pours
    ‘that John pours water over the roses’

   b. ICV: dat Jan de rozen over-gi et met water
    that John the roses over-pours with water
    ‘that John suffuses the roses with water’

(28)  a. PP: dat Jan kleden [pp om het beeld] hangt
    that John garments around the statue hangs
    ‘that John hangs garments around/over the statue’

   b. ICV: dat Jan het beeld om-hangt met kleden
    that John the statue around-hangs with garments
    ‘that John hangs the statue with garments’

The two types of construction express similar events, but show a semantic difference: a difference in terms of the affectedness of the participant that is the Ground of the preverb/preposition (i.e. the roses and the statue). The constructions in (27b)–(28b) have interpretations according to which this participant is in some sense completely affected by the action denoted by the verb, which is not the case for the constructions in (27a)–(28a) (see Booij 1992 on Dutch prefixes; Stiebels 1996: 105 on German prefixes). This complete affectedness of the new ICVs with path prefixes involves the extension of the path (which is followed by the subject referent while performing the action denoted by the verb) through/around/over the whole substance or surface of the Ground, including the over- prefix in its quantificational meaning of (17), (19) and (20) above. ICVs, then, generally have holistic meanings.

Despite this semantic difference the alternating constructions in (27)–(28) describe similar events in that the semantic relation between the referent of a path prefix and the participant it licenses is similar to the semantic relation between the referent of a preposition and that of its complement: this is a relator–Ground relation. In each case, the result of the events is similar: water has come over the roses. This contrasts with the semantic relation of the referent of a resultative prefix or particle and the participant it licenses, which, as we have seen in previous chapters is a predicate–Figure relation. If we compare the particle over in (29) with the preposition over in (27a), or the prefix
The diachrony of prefixes

7.4 The diachrony of prefixes

7.4.1 Grammaticalization paths

The general hypothesis that has been made in the literature with respect to the diachronic development of SCVs and ICVs is that both are grammaticalized resultative phrases (Booij 2002a: section 6.4; Neeleman and Weerman 1992), and that ICVs represent a further historical stage in this grammaticalization development than SCVs (van der Auwera 1999; Booij 2002a; van Loey 1976). This is represented in a simplified version of our grammaticalization cline (1) as in (30):

(30) \[ \text{VP} \ldots \text{-XPRES-V⁰} \] \( \rightarrow \) \[ \text{VP} \ldots \text{[V X(P)-V⁰]} \] \( \rightarrow \) \[ \text{VP} \ldots \text{[V⁰ prefix-V⁰]} \] phrase \( \rightarrow \) optionally projecting word \( \rightarrow \) prefix

We saw in chapter 4 that particles have more diverse origins than just the resultative phrase: the phrase reanalysed into an optionally projecting word (particle) can have a variety of semantic functions.

(31) a. \[ \text{VP NP-XP-V⁰} \] \( \rightarrow \) \[ \text{VP NP-[V X-V⁰]} \] resultative
b. \[ \text{VP NP-XPADV-V⁰} \] \( \rightarrow \) \[ \text{VP NP-[V X-V⁰]} \] modifier
c. \[ \text{VP PP NP-P-V⁰} \] \( \rightarrow \) \[ \text{VP NP-[V P-V⁰]} \] relator: path
d. \[ \text{VP NP-[PP NP-P]-V⁰} \] \( \rightarrow \) \[ \text{VP Ø-NP-[V P-V⁰]} \] relator: orienting
e. \[ \text{VP [PP NP-P]-V⁰} \] \( \rightarrow \) \[ \text{VP (NPADV)-[V P-V⁰]} \] continuative

The grammaticalization of phrase to optionally projecting word (particle), then, is in fact more varied and more complex than a generalized schema as in (30).
would lead us to believe, as discussed in chapter 4. In the case of relator and continuative particles, as in (31c–e), there is a more far-reaching structural reanalysis: PP-constituents are ripped apart, X is reassigned to V rather than to its NP complement, and the NP complement becomes the direct object of the SCV combination. The question we now ask is whether the prefixes we have discussed so far represent a further grammaticalization of these particle trajectories.

If the structural development in (30) represents a grammaticalization cline, we would expect it to be accompanied by a corresponding loss of lexical meaning and the development of more abstract, metaphorical meanings (semantic bleaching; e.g. Hopper and Traugott 2003; Booij 2002a: 218; van der Auwera 1999: 132). This leads to the prediction that such a grammaticalization cline has differential semantic reflexes in the synchronic distinction between particles and prefixes: particles are expected to have more concrete meanings than the corresponding prefixes, and the corresponding prepositions/postpositions in turn more concrete meanings than particles.

The concrete, basic meaning of a preverb (particle or prefix) is generally claimed to be similar to the spatial meaning of the corresponding preposition/postposition: the particle op ‘up(wards), on high’ in the SCV de bal óp-gooien ‘to throw up the ball’ expresses a concrete, spatial meaning, as does the particle door ‘through’ in the SCV het bos dóor-lopen ‘to walk through the forest’. These contrast with the prefix door- in the ICV door-lópen, which may be translated by ‘to pass, to complete (e.g. a course)’, and its meaning has been claimed to be non-spatial (Booij 2002a: 218). Such isolated examples cannot be claimed to represent a trend, however: many particles have figurative, non-spatial meanings (chapters 3 and 5) and many prefixes have spatial meanings, as in (12), here repeated as (32).

(32) a. het huis door-zóeken
   the house through-search
   ‘to search (through) the house’

   b. het kasteel om-géven
   the castle around-give
   ‘to surround the castle’

   c. het land over-spóelen
   the land over-wash
   ‘to wash over the land’

We saw earlier that the new ICVs with door-, om- and over- are not resultative but represent relators that license a Ground participant (and express a path or, in the case of the quantificational prefix over-, a quantificational meaning).
These new ICVs, as discussed in section 7.3, appear to have developed from SCVs with relator particles (whose origin is given in (31c)) and their meanings should be compared specifically to the meanings of these (rather than a general comparison that also involves resultatives). If we make this comparison, there is clear evidence for semantic bleaching: path prefixes in the new ICV system are semantically very similar to the corresponding prepositions and SCVs with particles, in that they function as relators licensing a Ground. There is one important meaning distinction though: the prefixes in the new ICV system express more generalized, holistic meanings. The unidirectional path has become a path that is multidirectional in the sense that it calls at every spot in/on the Ground.

7.4.2 Historical data
Most MD SCVs with *door* and *over* in Blom and Booij’s (2003) corpus correspond to PDD SCVs with the same meaning, and, again like their PDD counterparts, lack holistic meanings. There are four exceptions, however: the combinations *door-leven* ‘lit. through-live, live through’, *over-zien* ‘lit. oversee, survey’, *over-komen* ‘lit. over-come, happen’ and *over-gaan* ‘lit. over-go, happen’ have ICV semantics (holistic) but demonstrate SCV morphosyntax. Tellingly, the first three are ICVs in PDD (*over-gaan* has not survived in this particular meaning).

(33) a. Had een minsche al sijn leven *doer ge-levet* wael ende got liken had a man all his life through *PREF*-lived well and religiously ‘If a man had lived through/spent all his life in a good and religious way’ (Spiegel der Sonden, Traeheit, 180, 1435)

b. Doen Oriande den staet *over* had *ge-sien*, heeft si geseyt (...) when Oriande the situation over had *PREF*-seen, has she said (...) ‘When Oriande had surveyed the situation, she said (...)’ (Malegijs, 203, 1556)

c. mer tis een flaute die hem *over ghe-comen* is but it-is a swoon that him over *PREF*-come is ‘But it is a swoon that came over him’ (Malegijs, 56a, 1556)

d. Eerweerdige vrouwe wat *gaet u over* dat ghi voor hem bidt die u unde respectable lady what goes you over that you for him pray who you and my so veel spijts gedaen heeft (...) me so much sorrow done has (...) ‘Respectable lady, what is the matter with you, that you pray to him who has done so much sorrow to you and me (...)’ (Malegijs, 307a, 1556)
The SCVs in (33) express holistic paths, extending completely through/over the Ground participant (respectively the path through one’s life, over the situation, over ‘him’, and over the respectable lady). It is clear that we are dealing with SCVs rather than ICVs from the fact that particle and verb are separated by the past participle marker ge- in (32a) and (32c), by an auxiliary and ge- (in 33b), and by the subject in (32d). These MD complex verbs apparently have the semantics typically associated with ICVs, but the morphosyntax of SCVs. Either the semantic–syntactic mapping of holistic meanings with ICVs and non-holistic meanings with SCVs was still developing in MD, or these SCVs had already developed holistic meanings but had not yet adjusted their morphosyntactic status. If the latter is the case, this would mean that the development of holistic meanings came first, and preceded the grammaticalization of the morphosyntax. It would also show that the data for separation of particle and verb in the learners’ input did not preclude the reanalysis. In view of the fact that the SCV/ICV system exhibits a high degree of stability, with these four verbs the only ones to show morphosyntactic reanalysis in historic times, the conclusion seems warranted that the grammaticalization is driven by the semantics.

Blom and Booij’s (2003) corpus did not contain any MD ICVs that developed into PDD SCVs, which is in accordance with the unidirectionality hypothesis (Haspelmath 1999). If semantic change precedes (and drives) structural change, a development in which an ICV becomes an SCV would presuppose a semantic change according to which an ICV prefix develops a more independent meaning. Such a semantic development, however, does not occur in any systematic way, and therefore the structural development of ICV prefixes becoming separable would not be expected to occur systematically either.

There are some MD complex verbs that show both SCV and ICV behaviour in that the finite forms of these complex verbs sometimes fail to be separated from the preverb by V2 in main clauses. The resulting variation is not systematic and may for instance occur within one and the same text. Only one of these verbs has a holistic meaning (door-zoeken ‘lit. through-search, to search completely’) which would then account for this variation in terms of a semantically driven development from SCV to ICV along the same lines as the verbs found in (33). Some of the other verbs with variable SCV/ICV behaviour have more than one meaning (e.g. over-lezen ‘to read over/through’ and ‘to read aloud’), and the variation may be due to this polysemy. PDD has paired off the different meanings with different PDD forms (e.g. the SCV over-lezen ‘to read over/through’ vs. the phrasal hardop lezen ‘to read aloud’).
A final important point is the observation that the new ICV pattern itself may well have become productive as a template for the creation of new ICVs in its own right. This would explain why there are no PDD SCVs with the path particle *om* ‘around’ with the meaning ‘to go/come around Y by V-ing’, although there is a productive system of PDD ICVs with *om-* as a path prefix (meaning ‘to go/come completely around Y by V-ing’). Similarly, SCVs with the path particle *over*, meaning ‘to go/come over Y by V-ing’, appear to be much less frequent than ICVs with the corresponding path prefix. This seems to indicate that the new ICV system acquired a dynamics of its own, and provided a template on which new ICVs could be formed productively, without necessarily passing through an SCV stage first.

7.4.3 The loss of ICVs in English

A special puzzle in the history of the West Germanic languages is the almost complete loss in English of the ICV system. We saw in chapter 6 and in section 7.2 that OE had a fully productive old ICV system. This was lost in the course of the ME period, and it is a vexed question as to why this happened. Let us first look at the facts.

The prefixes found in OE (including *a*-, *be*-, *for*-, *ge*-, *of*-, *to*-, *on*-, *þurh*-, *ymb*-) are still found in eME, but at much lower frequencies (Hiltunen 1983: 92). Some examples of ME prefixes are given in (34).

(34) a. for heo is up *a*-hafen ofer ænglene werod
   because she is up PREF-raised over angels host
   ‘because she is raised up by a host of angels’ (cmkentho, 138.133)

b. beo wurðe inʒong to habben oðer beon bi-steken þrute
   be worthy entry to have or be out-shut outside
   ‘be worthy to gain entry or to be shut outside’ (cmsawles, 168.33)

c. for se þet sterft inne diadliche senne so for-liest þe companie of gode
   because he who dies in mortal sin so PREF-loses the company of God
   ‘because he who dies in mortal sin is deprived of God’s company’
   (cmkentse, 219.121)

d. Danne ech of þe ilke zeuen him to-delp ine uele halues
   then each of the same seven him in pieces-deal in many parts
   ‘Then each of the same seven men divided him into many parts’
   (cmayenbi, 16.220)

e. & feole dwild wearen ge-seogen & ge-heord
   and many errors were PREF-seen and PREF-heard
   ‘and many errors were seen and heard’ (cmpeterb, 42.11)
At the beginning of the ME period, the prefix *a-* (34a), has almost completely disappeared. This is in line with the observation in section 6.3 that this prefix was very often doubled by a particle, suggesting its loss of resultative meaning. It has survived into PDE in lexical relics such as *to arise, to awake, to abide*, whose use tends to be restricted to literary contexts. The prefix *be-* often appears as *bi-* in ME, (34b), and has been preserved into PDE in verbs such as *to begin* and *to become*, in which it is no longer recognized as a separate morpheme. The prefix *be-* may to a limited extent (often with humorous intent) still be used productively even in PDE (some examples from the *OED* Online entry for the *be-* prefix are *be-freckled, be-poetised, be-threatened, be-widowed, be-groaned*). The prefix *for-* had a range of meanings in OE (and ME), varying from more literal meanings such as ‘away’ or ‘asunder, apart’ to more abstract meanings, expressing intensive force, i.e. ‘completely’. The latter meaning is illustrated by *for-liest* ‘loses’ in example (34c). The prefix *for-* survives in some PDE verbs, such as *to for-bid, to for-feit*, but is no longer productive. The prefix *to-* is unstressed (like all other prefixes) and must be distinguished from the particle *to*, which carries primary stress (like all other particles). The prefix *ge-* became restricted to being used as a participial marker in ME and was weakened to *y-/i-* before it disappeared from the English language altogether.

The loss of the once productive ICV system in English must to an important extent be attributed to the massive reduction and loss of unstressed affixes that is such a defining characteristic of the transition from OE to ME, and which continued over the ME period. In the context of the functional equivalence between the SCV and ICV systems demonstrated here, we suggest that its loss was facilitated by the presence and productivity of the SCV system: the functions of the ICV systems could very easily be taken over by the SCV system, which was a morphosyntactically robust functional equivalent. Thus, the demise of the ICV system in the ME period meant that particles became further entrenched in the English language.

A further factor that may have promoted the loss of the ICV system and which we will not explore here, is the large-scale influx of French loanwords and loan morphology (for some discussion, the reader is referred to Lass 1999).

7.4.4 Explaining the stability of the SCV/ICV system in Dutch

The historical data from MD show that the SCV system is, on the whole, very stable: although SCVs represent an intermediate stage in the development from syntactic constructions into morphologically complex words and could,
in theory, grammaticalize further, the large majority of MD SCVs still function
as such in PDD, with only a few MD SCVs having developed into PDD ICVs.

One of the reasons that so few SCVs go on to grammaticalize further into
ICVs may be due to the fact that resultative SCVs apparently no longer gram-
maticalize into ICVs, which limits the numbers of potential cases of further
grammaticalization. The old ICV system, exemplified by PDD be-, ont- and
ver-, but including other prefixes that are no longer productive (see Table 7.1
above for the full range), encode various resultative meanings. These include
private meanings, ‘away’, ‘in/to pieces, to bits, away, to ruin, to destruction’,
‘make A or A-er’, ‘equip or provide with N’, ‘change N’ and ‘completely’ (see
(3i–vii) above). This makes it clear that resultatives are not incompatible with
the morphosyntactic status of prefix. New ICV types, however, only develop
from relator (path) SCVs.

There are a few properties associated with resultative predicates (and with
predicates in general) that may point the way to a possible explanation. The
first property is stress. Elements that conceptualize predicates, such as resulta-
tive phrases, are relatively heavily stressed in languages such as Dutch, com-
pared to elements with non-predicative functions, such as phrasal modifiers
and prepositions/postpositions functioning as relators. If this is really a dis-
tinctive property of predicates, it might be that resultative particles, which also
function as predicates, do not develop into prefixes because they cannot lose
their stress (for the assumption of a direct relationship between the separabil-
ity of a preverb and its stress properties, see McIntyre 2001b: 53–60). Since
elements with non-predicative functions do not generally bear heavy stress,
particles with these functions would be more likely to lose their stress and
might, consequently, develop into prefixes. The grammaticalization trajecto-
ries in (31) imply that non-predicative phrases gain stress when they become
particles, whereas their further development into prefixes would entail a loss
of stress again, which is not a very plausible scenario. The alternative is to
assume that the heavily stressed SCV particles we find in PDD represent a
recent development, and that the strong correlation between degrees of stress
and ICV or SCV status that we have today was more variable in earlier times.
This strong correlation may have been fuelled by the increasing productivity
of the resultative SCV template. The more plausible solution, however, is to
follow up the observation at the end of section 7.4.2 that ICVs can apparently
be newly formed on an ICV template without having to go through an SCV
stage first. This means that unstressed predicate phrases may grammatical-
ize into path prefixes without passing through a stressed particle stage at all.
These observations seem to support the hypothesis that resultatives were barred from further grammaticalization into prefixes because of conflicting stress patterns.

Another level at which resultative predicates are more prominent than non-resultative predicates is their LCS. Resultative predicates select a Figure participant with which they express the core event of the construction (section 3.2). Preverbs that are conceptualized as modifiers, however, express secondary information, and preverbs that are conceptualized as relators express relational information (section 3.3). It is, of course, to be expected that prosodic and lexical-conceptual prominence match.

All this adds to the puzzle of the old ICV system of be-, ont- and ver-: they have resultative meanings, but they are unstressed, like new ICVs. The synchronic productivity of these prefixes is explained by the existence of be-, ont- and ver- templates, but the question is how these templates ever came into being. The time depth is a possible factor here: these templates may have arisen at a stage in which resultatives may have been distinguished from non-predicative elements by other properties apart from stress. These may have included case inflections: objects of complex verbs that are Grounds of the particle/prefix would be expected to show the original case assigned by the preposition, and this is borne out by German examples of orienting particles, e.g. an-starren ‘stare at’ and zu-lachen ‘give someone a friendly smile’, which take dative objects. Objects that are the Figure rather than the Ground are more like SC subjects and as such would have appeared with accusative case, the default case of subjects of verbless or non-finite constructions.

We will see in section 7.4.5 that the development of these prefixes shows that there is a distinct clitic stage between particle (optionally projecting word) and prefix, and that the earliest data show that other material could intervene between prefix and verb, which would have affected the stress pattern of these early prefixes.

7.4.5 The history of the early Germanic ICV system
We have so far presented the early Germanic ICV prefixes as representing an older layer of grammaticalization, very much akin to the later particle system (see also Claridge 2000: 87), in which the grammaticalized element has become a bound morpheme, inseparable from the verb. It has frozen in preverbal position because early Germanic was an SOV language which at that stage probably did not have V2 that separates particle and verb in OE, PDD and PDG. This allowed the grammaticalization process to proceed to its logical conclusion:
predicate and verb became a single lexical item (van Kemenade and Los 2003). These verbal prefixes have long been recognized as transitivizing (see, e.g., (4b) above), which is explained in our analysis by the grammaticalization cline of (30): such prefixes are akin to particles and syntactic predicates, and as such can be expected so show the usual particle quirks, which includes licensing unselected objects. Compare for instance OE *hliehan* ‘laugh’ which is an unergative verb but which may occur with the object that is laughed at in the genitive, as in (35), with *be-hliehhan* ‘lit. be-laugh, deride’ which is a transitive verb with an accusative object, as in (36).

(35) ðonne we hliehð gligmonna unnyttes cræftes.
    when we laugh jesters.gen useless.gen tricks.gen
    ‘when we laugh at the useless tricks of jesters’ (CP 34.231.4)

(36) Huru, ic swiðe ne þearf hinsíþ *be-hlehhhan*
    indeed, I much not want departure.acc de-ride
    ‘Indeed, I do not want to laugh at his death’ (Guthlac 87: 1356–7)

*Be*--, though originally meaning ‘by, beside’, seems to have developed the holistic meaning of ‘being totally affected’, probably as an extension of ‘being completely surrounded by’ (see also the discussion of the relation between PROXIMITY meanings and COVERAGE/SURROUNDING meanings in Petré 2005). If the prefix *be*- is a grammaticalized predicate, accusative is the case we would expect; cf. (37), an OE example of a syntactic predicate:

(37) þu ne miht ænne locc gedon hwitne oððe blacne
    you not may one lock.acc make white.acc or black.acc
    Latin: non potes unum capillum album facere aut nigrum
    ‘you cannot turn one hair white or black’ (Mt (WSCp) 5:36)

The LCS of (35) is (38), and the LCS of (36) is (39):

(38) [[CAUSE[ACT (I)], BECOME [be(his departure)]], by [laughing(I)]]

(39) [[CAUSE[ACT (you)], BECOME [white or black (one lock)]], by [making(you)]]

*Be*- in (36) instantiates the predicate W in the LCS (38), on a par with *hwitne oððe blacne* in (37), and *hinsíþ* ‘departure’ is its subject, just as *ænne loc* is the subject of *hwitne oððe blacne*. The subjects of secondary predicates have accusative case, which is the default case of subjects of verbless or non-finite constructions. This case is not mediated by the verb but by the predicate. The transitivizing effect of these prefixes, then, is an inheritance from their predicate origins.
The ICV system in Gothic, the oldest attested Germanic language, is already extremely productive and has the typical characteristics of the resultative LCS: meanings of 'completely' (fully affected objects), 'out', 'away', and formations built on A or N:

<table>
<thead>
<tr>
<th>base</th>
<th>ICV</th>
</tr>
</thead>
<tbody>
<tr>
<td>dumbs ‘dumb’</td>
<td>af-dobnan ‘be silent’</td>
</tr>
<tr>
<td>bairan ‘carry’</td>
<td>fra-bairan ‘lit. forth-carry, tolerate, endure’</td>
</tr>
<tr>
<td>greipan ‘reach for’</td>
<td>und-greipan ‘lit. against-grasp, reach’</td>
</tr>
<tr>
<td>fraþjan ‘think’</td>
<td>fulla-fraþjan ‘be in full possession of one’s faculties’</td>
</tr>
<tr>
<td>hlahjan ‘laugh’</td>
<td>bi-hlahjan ‘laugh to scorn’</td>
</tr>
<tr>
<td>leîpan ‘go’</td>
<td>bi-leîpan ‘leave, leave behind, forsake’</td>
</tr>
<tr>
<td>letan ‘let, leave, permit, suffer’</td>
<td>af-letan ‘dismiss, forsake, put away, let alone, forgive’</td>
</tr>
<tr>
<td>niman ‘take, take away, receive, accept’</td>
<td>af-niman ‘take away’</td>
</tr>
<tr>
<td>maitan ‘cut, hew’</td>
<td>bi-maitan ‘circumcise’</td>
</tr>
<tr>
<td>qiþan ‘say, tell, name, speak’</td>
<td>af-qiþan ‘renounce, forsake’</td>
</tr>
<tr>
<td>satjan ‘set, put, place’</td>
<td>af-satjan ‘divorce’</td>
</tr>
<tr>
<td>sigqan ‘sink’</td>
<td>dis-sigqan ‘sink under’</td>
</tr>
<tr>
<td>sitan ‘sit’</td>
<td>bi-sitan ‘sit about, sit near’</td>
</tr>
<tr>
<td>slahan ‘strike, smite, beat’</td>
<td>af-slahan ‘kill, slay’</td>
</tr>
<tr>
<td>sneiþan ‘cut, reap’</td>
<td>af-sneiþan ‘cut off, kill’</td>
</tr>
<tr>
<td>standan ‘stand, stand firm’</td>
<td>af-standan ‘stand off, depart’</td>
</tr>
<tr>
<td>swairban ‘wipe’</td>
<td>bi-swairban ‘wipe dry’</td>
</tr>
<tr>
<td>tiuhan ‘lead, draw, guide’</td>
<td>bi-tiuhan ‘go about, visit’</td>
</tr>
<tr>
<td>wairpan ‘throw, cast’</td>
<td>af-wairpan ‘throw away, put away’</td>
</tr>
<tr>
<td>wandjan ‘turn, turn round’</td>
<td>bi-wandjan ‘shun’</td>
</tr>
</tbody>
</table>

The preverb fra-, which, like ga-, is no longer attested as a free lexeme, is a cognate of the prefix ver- in West Germanic. Note fra-bairan ‘lit. forth-carry, tolerate, endure’ and fra-letan ‘set free’ (‘lit. away-let’) in the list in (40) with the meaning ‘away’; other examples of that meaning are given in (41a). Gothic fra- also shows the negative meaning that is also evident in West Germanic ver-, witness (41b). It is also attached to verbs that are already negative in meaning (as in (40c)), which makes it difficult to assess its semantic
contribution. Sometimes simplex and fra-forms are both found translating the same Greek form (ἐπολέσσω in L. 9: 56, Mat. 10: 28, etc.).

(41) *simplex form* fra-*form*

a. bugjan ‘buy’ fra-bugjan ‘sell’
dailjan ‘divide’ fra-dailjan ‘divide up’
giban ‘give’ fragiban ‘give away, grant’
letan ‘let’ fra-letan ‘liberate, let free, leave, let down, permit’

b. qiþan ‘say’ fra-qiþan ‘curse’
kunnan ‘know’ fra-kunnan ‘despise’
waurkjan ‘do, work’ fra-waurkjan ‘sin’
wilwan ‘rob’ fra-wilwan ‘take forcibly’

c. lewjan ‘betray’ fra-lewjan ‘betray’
qistjan ‘ruin’ fra-qistan ‘ruin’

The Gothic prefixes differ from their counterparts in the various stages of English, Dutch and German in that they may be separated from the verbal stem by other morphemes. There are some clear examples to show that *ga-* the lexeme which developed into the inflectional past participle prefix *ge-* in PDD and PDG, and which has disappeared altogether in English, can be separated from the verb root by the interrogative particle *u* or *þau* ‘then’ which insist on the second position.

(42) ga-*u-laubais
g-a-INTERROG-believe.2sg
‘do you believe’ (John 9: 35)

(43) ga-*þau-laubidedeip
g-a-then-believe.2pl
‘you then would believe’ (John 5: 46)

As this position can generally be identified as the position after the first word of the clause, this indicates that Gothic prefixes have retained some of their earlier status of full word, even though some of them (*ga-*, *uz-*, *fra-*) are never found as free morphemes. There may be as many as three particles intervening between *ga-* and the verb (as in (44)) and such particles may be clitic pronouns (as in (45)).

(44) gah-*þan-mip-sandedidum imma broþar
g-a-then-with-send.1pl him brother
‘and then we are sending with him a brother’ (II Cor. 8: 18)

(45) ga-*u-hwa-sehwi
g-a-INTERROG-anything-see.3sg.subj
‘did he see anything?’ (Mark 8: 23)
Word-final obstruents are as a rule devoiced in Gothic, and the fact that final obstruents in preverbs are devoiced has been taken as pointing to their word-status: *us* ‘out’, as in *us-gaggan* ‘go out’ is realized as -uz- when there are intervening clitics like interrogative *u* or the sentence connector -uh: e.g. *uz-uh-iddja* ‘he went out’ (John 16: 28). If -u and -uh form a prosodic word with the word which they follow, as suggested in Hopper (1975: 27), this means that the underlying form is uz, devoicing to *us* in *us-gaggan* etc. because preverbs are still words (see also Schmidt 1883; Meillet 1908: 95–7; Eythórsson 1995: 52, 124). The fact that uz-, ga- and fra- are never found as free morphemes but only as clitics, however, means that it is quite possible that they had already been reanalysed and had lost their word status; elaborate clitic systems as in Gothic, with clause-typing clitic particles (interrogative -u, realis -uh) and clitic pronouns, is widely attested across languages. An example is the preverb system of the East Caucasian language Akusha Dargi in which light verbs combine with spatial prefixes, often with resultative semantics, and with the preverbs separable from the verb root by other morphemes. As in Gothic, these combinations are not SCVs because the preverbs cannot occur as free morphemes. An example is (46) (from van den Berg 2002): 7

(46) ka-he-b-ik-ib
down-NEG-NEUT-LIGHT VERB-AORIST3
‘it did not fall’

The clitic orders in such systems are almost invariably inherited from earlier syntactic orders, and the peripheral position of the Gothic or Akusha Dargi preverb in structures such as (42)–(46) is due to their position in the clause when they were still independent words. The devoicing patterns are inherited from these syntactic orders, but it is unlikely that elements like fra-, uz- and ga- were synchronically analysed as independent elements if they only occur as bound forms, and learners cannot encounter evidence for the full word status of such preverbs elsewhere in the grammar. Fra-, uz- and ga- are the forerunners of the West Germanic prefixes ver-, *a- and ge-, and have a morphological status that seems to be intermediate between particle (non-projecting word) and prefix. Long clitic sequences as in (42)–(45) require more complex prosodic rules for stress assignment and preverbs on the left edge of such a clitic string are quite likely to have had some degree of stress, which was lost when the elaborate clitic system was lost and preverbs invariably ended up immediately adjacent to the heavily stressed verb. Dutch resultative prefixes ver- and ont- have retained their stress in nominal formations like vér-koop ‘sale’ (cf. ver-kópen ‘sell’) and ánt-woord ‘answer’ (cf. ont-vángen ont-némen, etc.) and the difference in
stress has been of sufficiently long-standing for ant-/ont- prefixes to develop different vowels. The time depth difference between the old and the new ICV system, then, is quite plausible as an explanation of how resultative prefixes ended up without stress.

Gothic also shows the beginnings of a newer SCV system coexisting with the old early Germanic ICV system. The clearest examples are with inn ‘in’ and ut ‘out’ which are often found doubled up with (often cognate) preverbs, e.g. ut- and us- in (47). If inn and ut as predicates or particles express W in the resultative LCS, this probably means that the preverb us- no longer has this function, at least not in these doublings:

(47) þanuh modags warþ jah ni wilda inn-gaggan, þþ atta is us-gaggands then and angry became and not wished in-go, but father his out-coming ut bad ina out asked him

ώργισεν δὲ καὶ / οὐκ ἠθέλεν εἰσελθεῖν. ὁ δὲ προσήτηρ αὐτοῦ ἐξελθὼν παρεκάλει / αὐτόν.

‘But he was angry and refused to go in. His father, coming out, pleaded with him’ (Luke 15: 28)

Us-gaggan and ut-gaggan are both used to translate Greek ἐξελεύσεται (e.g. Mat. 8: 34, John 10: 9) so there was probably no great difference in meaning. Whenever they both appear on one verb, ut is always on the periphery, so ut-us-V (e.g. ut-us-iddjedun ‘they went out’, Mat. 9: 32), never *us-ut-V. This supports an analysis in which us is a prefix (or clitic preverb) and ut a predicate or particle. We will discuss doublings in West Germanic in section 7.4.6.

The clearest evidence that preverbs like ga-, fra- and uz- are no longer synchronically analysed as independent words is the fact that they are not separated by V2 in Gothic. The evidence of V2 is not as robustly present in the Gothic data as it is in the later West Germanic languages, and many instances of apparent V-movement in fact reflect the Greek Vorlage and cannot be taken as straightforward evidence of V2. There are some instances, however, in which single Greek verb forms require a periphrastic construction in Gothic. As the order of the elements of the periphrasis cannot be prompted by anything in the Vorlage, they probably do reflect authentic Gothic syntax. Meillet (1908) shows that in those cases in which Gothic has to translate a single passive Greek verb form periphrastically with a form of wisan ‘be’ or wairþan ‘become’ followed by a participle, the participle regularly follows the auxiliary in imperatives (suggesting V-movement) but precedes it elsewhere (suggesting SOV syntax). Imperatives, then, may well have spearheaded the development of V2.
The asymmetric behaviour of the particles *inn* and *ut* in root and subclauses also suggest V2: the particle is postverbal in V2-environments (finite forms in root clauses), but preverbal elsewhere (data based on other asymmetries in main and subclause orders do exist; see Delbrück 1910 with additional data in van Kemenade and Los 2003 and Los 2004). The emergence of V2 in Germanic may well have acted as a watershed: it highlighted an existing difference between a syntactically constructed resultative (with predicates or particles like *inn* and *ut*) and an ICV-like preverb system which represents a grammaticalization of an earlier very similar system.

### 7.4.6 Doubling

The doublings we find in Gothic, as in example (46), remain puzzling. If we take the Gothic particles to instantiate W in the resultative LCS, this seems to indicate that the prefix has lost some of its semantics, as it cannot instantiate W too; we cannot assume multiple Ws in the absence of other verbs, as an event can be delimited only once (see Tenny 1994: 78–91 and others). Either the prefix has undergone semantic bleaching to such an extent that it cannot instantiate W and requires a particle to reinforce this meaning, or the particle does not (yet) instantiate W. Prefixes in general (i.e. in non-doubled contexts) still clearly represent W in a resultative LCS, both in the Gothic lists in (40)–(41) as in their West Germanic counterparts (see section 7.2).

Particle-prefix doubling is very frequent in OE, as discussed in chapter 6, particularly the combination of *ut* ‘out’ and *a-* (< uz; Kluge 1901: 476, §283.4, note; Lehmann 1906):

(48) leoran ‘go, depart, vanish, die’
    a-leoran ‘depart, flee away’
    ut-a-leoran ‘(cause to) depart, flee away’

(49) sellan ‘give, furnish, lend; surrender, give up, betray’
    a-sellan ‘give up, hand over; expel, banish’
    ut-a-sellan ‘grant outright’

(50) tynan ‘hedge in, fence, enclose, shut’
    a-tynan ‘shut off, exclude’
    ut-a-tynan ‘exclude’

In Brinton (1988), separable and inseparable prefixes in OE are regarded as functionally equivalent, as we have assumed so far for the particle and prefix system in PDD. The frequency of doublings in OE, as in (48)–(50), is much higher than in Dutch, and doublings in Dutch can be argued to exclude particles and prefixes that both instantiate W in the resultative LCS, as we will see below. As the prefix system was lost sometime after the OE period, this may mean that
the inseparable prefixes were already in an advanced state of grammaticalization in OE, but we need to establish just how problematic doubling of particles and prefixes is before we can regard the OE doublings as evidence of the ICV system losing its distinctive meaning.

The mutual exclusiveness of resultative particles and prefixes has been noted in the literature (Hoekstra, Lansu and Westerduin 1987; Lüdeling 2001; Neeleman 1994: chapter 6; Neeleman and Weerman 1993), and has been claimed to account for the fact that latinate verbs in PDE, which tend to contain a delimiting prefix, are not compatible with native particles (*consume up; see Smollett 2002). One of the explanations in the literature is that particles and resultative phrases have the same syntactic structure (whether SC or complex predicate; see, e.g., Lüdeling 2001; Müller 2002). We have demonstrated in earlier chapters that the distribution of particles and resultative phrases is different, which is why we posit a structural difference between particles and resultative phrases: particles are optionally projecting words.

Interestingly, the mutual exclusiveness does not affect resultative particles and prefixes only, so it is not just a restriction on multiple expressions for W: non-resultative particles, too, cannot co-occur with resultative phrases (cf. Neeleman and Weerman 1993: 449). This is illustrated in (51), which contains the modifying particle *na ‘after’ and the resultative phrase *gaar ‘done’.

(51) *het vlees gaar laten *na-sudder
    the meat done let after-simmer
    ‘to have the meat simmer a bit longer until it is done’

Resultative predicates are syntactically realized more closely to the verb than elements conceptualizing modifiers in Dutch (see the references in Blom 2005: 233), which explains why some combinations of resultative and non-resultative particles and prefixes are not found.

The doublings that are allowed in Dutch are of the following types: for particles and phrases, (i) non-resultative phrases followed by resultative particles, as in (52); (ii) non-resultative phrases followed by non-resultative particles as in (53):

(52) modifier phrase + resultative particle
    a. de schoenen snel in-lopen
       the shoes quickly in-walk
       ‘to break in the shoes quickly’
    b. de borden zorgvuldig af-wassen
       the plates carefully off-wash
       ‘to wash up the plates carefully’
(53) modifier phrase + modifying/orienting particle
a. de groenten snel voor-koken
   ‘to cook the vegetables quickly beforehand’
b. het publiek vriendelijk toe-spreken
   ‘to talk to the audience in a friendly way’

Doublings involving particles and prefixes are only of the modifying or orienting type of particle followed by a resultative old prefix:

(54) a. SCVs with modifying particles
   na-be-spreken ‘lit. after-PREF-speak, to discuss afterwards’
   voor-be-werken ‘lit. for-PREF-work, to pre-treat’
   voor-ver-warmen ‘lit. for-PREF-warm, to pre-heat’

b. SCVs with orienting particles
   toe-be-denken ‘lit. to-PREF-think, to intend for’
   toe-be-horen ‘lit. to-PREF-belong, to belong to’

Van Dale (1996) lists thirty-four SCVs built on old ICVs (for the entire list see Blom 2005: appendix 3b). This number is extremely small in comparison to the total number of SCVs listed in Van Dale for the same particles (1,870) (Blom 2005: 240). Twenty of these thirty-four doublings conform to the combinations as in (54a–b). Of the remaining fourteen doublings, five verbs all involve door ‘through’ as a particle and the meaning of ‘pass something on to someone else’. The particle door here typically expresses a result affecting an entity that follows some other result affecting the same entity, but which is distinct from but compatible with previously attained results. Door-verbinden ‘put (someone) through (on the phone)’, for instance, expresses the event of establishing a further connection for the same person which explains why two resultatives are possible. The remaining nine are listed in (55):

(55) aan-be-landen ‘end up’, aan-be-steden ‘put out to tender’, aan-be-talen ‘pay a deposit’, af-be-stellen ‘cancel (an order)’, af-be-talen ‘pay off’, door-ver-tellen ‘pass on (a secret)’, uit-be-stellen ‘contract a third party (to do the work)’, uit-be-talen ‘pay out’, uit-ver-dedigen ‘play (a match) out’

Note the recurrence of two ICVs as base verbs in this list: be-talen ‘pay’ and be-steden ‘spend’. The parts *talen and *steden no longer occur as independent verbs (if they ever had that status), and neither does *dedigen. The connection (if there is one) with a verb tellen ‘count’ in ver-tellen ‘tell’ or stellen ‘put’ with be-stellen ‘order’ is unlikely to be made synchronically; only landen ‘land’ has some connection with be-landen ‘end up’ or aan-be-landen ‘end up’. The most likely explanation of these doublings is that be- and ver- are no longer
felt to be resultative in these verbs, which is why they allow further combi-
nations with particles. There are clear precedents of these particular prefixes
becoming meaningless in examples like blijven ‘remain’, which historically
derives from be-lijven (cf. OE belifan ‘remain’) and vreten ‘eat like an animal’
which historically derives from ver-eten ‘eat too much’ (cf. OE for-etan ‘eat
too much’). This supports our earlier hypothesis that the frequent doublings
in OE point to a loss of lexical (resultative) meaning in the prefix. It also
reinforces our overall analysis of the SCV and ICV systems in Dutch: there
is a clear distinction between resultative complex verbs and complex verbs of
different semantic types (both SCVs and ICVs). Furthermore, it shows that
a modifying particle can combine with a resultative prefix. What is impossi-
ble is the morphosyntactic combination of two particles, as this would form a
combination of two optionally projecting heads. What is further impossible is
the functional/semantic combination of a resultative particle and a resultative
prefix, as this is excluded by the resultative LCS that underlies both: there is
only one endstate W; an event can be delimited only once.

7.5 Conclusion

This chapter has argued that we need to distinguish two types of ICVs: ICVs
with early Germanic prefixes, a system instantiated by the synchronically still
productive prefixes be-, ver- and ont- in PDD, and ICVs with new prefixes, a
system instantiated by the synchronically productive prefixes door-, om- and
over-.

The findings are that the old system has a long history, and conforms to the
same resultative LCS that has also been much in evidence for the SCV systems
discussed in the preceding chapters of this book. Such ICVs consequently have
much the same meanings as resultative SCVs. This then explains why SCVs
may have ICV synonyms in one and the same language, and why SCV verbs
have ICV translations in other (West Germanic) languages or vice versa. This
may also account for the loss of the ICV system in English: over an extended
period of large-scale reduction and loss of unstressed affixes, the function of
the old ICVs could easily be taken over by the morphosyntactically more robust
SCV system.

The new system is of a much more recent date (witness the fact that some
items still waver between SCV and ICV status in MD) and, unlike the old
system, it is not resultative, but related to the relator (path) particles discussed
in chapter 3. There is a systematic difference between these new ICVs and their
SCV (path) counterparts in that the ICVs instantiate holistic multidirectional
rather than unidirectional paths: there is always a sense that the path travels through every part of the Ground, that is, completely. This meaning difference is expected given the grammaticalization hypothesis that we have posited throughout this book: particles represent grammaticalized syntactic predicates, and prefixes represent a further stage of grammaticalization. The fact that some holistic meanings now expressed by these new ICVs are found as SCVs in MD appears to demonstrate that semantic change precedes morphosyntactic change in grammaticalization processes, which is again in line with standard assumptions.

The fact that the new ICV system seems to be incompatible with resultative meanings has been argued to be the result of the heavy stress of resultative phrases and particles. The fact that resultative meanings are standard for the old ICVs, then, requires some explanation. The most likely explanation is that the resultative prefixes arose at a stage in early Germanic that had an elaborate clitic system, as is still in evidence in Gothic: there were clause-typing clitics and clitic pronouns, which meant that the forerunners of the old prefixes had a slightly different morphosyntactic status, intermediate between particle (non-projecting word) and prefix. We have called them preverbs: they could not appear as independent elements because they did not have word status, but could be separated from the verb by strings of clitics, which indicates that they were not prefixes, either. Their position (invariably at the left-most edge of such a string) suggests that they probably received heavier stress than the prefixes of the West Germanic languages today, which have no string of clitics to separate them from the heavily stressed verbs to which they attach. The loss of stress, then, occurred after they had first come into being, but they retained their resultative meanings. No such trajectory was available at the time of the formation of the new ICVs, which is why the general incompatibility of lack of stress and resultative meaning is evident in these ICVs but not in the older formations.

The grammaticalization trajectory does not mean that each and every ICV derives from an SCV. Once a sufficient number of ICVs are established in a language, ICVs acquire a dynamics of their own; this is what we expect in the case of derivational morphology, and prefix systems are easier to account for in this respect than the SCV systems discussed in the preceding chapters. Derivational ICV templates can build ICVs directly, which explains why both old and new ICV systems have prefixes that are still productive. The fact that we find exactly the same processes operative in SCV systems (with templates building families of SCVs on particular particles) shows that SCVs can be regarded as a form of periphrastic word formation.
This chapter also investigated the restrictions on combinations of particles and prefixes. The restrictions appear to be: (i) morphosyntactic, in that two prefixes or two particles cannot attach to one and the same verb, although combinations of a particle and a prefix are possible, subject to functional/semantic restrictions; (ii) functional/semantic, in that combinations of a particle and a prefix on a verb cannot both instantiate a resultative meaning: an event can be delimited only once (see Tenny 1994: 78–91). The few cases in PDD that seem to violate these restrictions represent old ICVs that are non-compositional and synchronically unrecoverable as having a resultative prefix. In this light, the many doublings of particles and prefixes in OE appear to support the hypothesis that prefixes in the ICV system in that language have lost much of their meanings, which may have contributed to their demise.
In this book we have tried to answer the following questions: what is the proper syntactic and morphological analysis of particle verbs, how can they arise, and how do they relate to complex verbs with prefixes? We answered these questions by looking at two West Germanic languages, Dutch and English. The restriction to two languages of the same language sub-family made it possible to deal with the relevant synchronic and diachronic data in sufficient depth and detail to formulate meaningful answers to questions concerning the nature and the emergence of this type of complex predicate.

Both Dutch and English particle verbs have been shown to be phrasal combinations of words that function as lexical units. Our main conclusion as to the grammatical status of particle words is that a particle is a lexical head that projects optionally. The default option is that the particle does not project, and we formulated an economy principle that accounts for this. If required, the particle may project a phrase. A first conclusion of this book is therefore that the notion of 'non-projecting word' has to play a crucial role in the analysis of both English and Dutch particle verbs. The category 'particle' is hence not an additional lexical category, but a useful term to denote a specific syntactic behaviour of lexical words. The notion of optional projection enabled us to provide proper accounts for the ambivalent morphosyntactic behaviour of particle verbs. A relevant difference between English and Dutch is that a number of particles in Dutch are obligatorily non-projecting.

An obvious implication of the analysis of particle verbs as phrasal constructs is that the lexicon is not restricted to words, but also lists phrasal constructs, as these particle verbs often have an unpredictable, idiosyncratic meaning. The option of non-projection is also at the heart of our account of the relation between particles and prefixes: prefixes may arise through the grammaticalization of particles. The development of particles into prefixes that we discussed for the history of Dutch and English can be represented in terms of the following grammaticalization cline:
Conclusions

The notion that non-projection is the default option for preverbs can be viewed as a driving force behind the grammaticalization development, in which particles may develop into prefixes. Note that this does not imply that all particles tend to develop into prefixes: we showed that the particle verb systems of both Present-Day Dutch (PDD) and Present-Day English (PDE) are remarkably stable systems for the formation of complex predicates. The separation of verb and particle is robust enough in the syntax in each language to maintain the particle verb systems.

English particle verbs are almost exclusively resultative, which is why there have been many proposals to analyse these constructions as cases of regular syntax, for instance, by making use of the concept of (resultative) Small Clause. In Dutch and German, however, such a direct mapping of syntax and semantics is untenable: there are three distinct semantic categories of non-resultative particle, but they all share the same syntactic behaviour. Crucially, all these particle types conform to one single morphosyntactic type: \([V' X(P) V]\). This kind of template, a phrasal constructional schema, accounts for the fact that independent syntactic processes can separate the particle from the verb in certain syntactic environments. We saw that particles may also be incorporated, and form a syntactic compound with their verb, which explains the variation in word order in clause-final verbal clusters with particle verbs in Dutch.

The broader range of semantic categories in Dutch and German show that the special behaviour of the Separable Complex Verb (SCV) pivots around the particle: it is the particle’s morphosyntactic options of non-projection and quasi-incorporation that explain the ambiguous behaviour of the SCV (word or phrase?) in the syntax, and it is the semantic function of the particle that accounts for the SCV’s argument structure and lexical-aspectual properties. Some of these particles license a participant as resultatives do, others do not or license a different type of participant; some influence the lexical-aspectual properties of the resulting SCV (making it transitive or unergative, creating accomplishments or achievements), others do not; modifying particles leave the argument structure and the Aktionsart of the verb fully intact. The various argument-structural and lexical-aspectual changes are not random and unpredictable, but follow straightforwardly from the semantic function of the particle and the Lexical Conceptual Structure (LCS) of the resulting SCV.

We noted in section 2.3 that idiomaticity and transparency, or rather, conventionality and compositionality, are not mutually exclusive. SCVs are both conventionalized and compositional.
SCVs can be formed productively and are compositional, but also have conventionalized properties that do not follow straightforwardly from the properties of the particle and the verb. Productivity and conventionality are not mutually exclusive if we crucially distinguish lexical from morphosyntactic properties, and accept that lexicalization, i.e. the development of conventional, unpredictable meanings, is not the exclusive domain of words: phrases, too, may become lexicalized. Analysing SCVs as instantiations of phrasal lexical templates, that is, a template in which the particle is fixed but the verbal slot is open, allows us to account for the conventionalized meaning because the particle in the template is linked to a specific meaning which all SCVs built on that template will share; at the same time, there is compositionality because the fixed particle and the open verb both have a perceptual contribution to make and are analysed as such by speakers, who, once they have derived the template from existing instantiations, are able to form new SCVs from it: hence the SCV’s productivity.

Dutch particles with a non-resultative meaning can be traced historically to various types of adverbial elements. A variety of non-verbal elements P underwent a process of reanalysis from [XP-V] to [X(P)-V], taking place under a condition of adjacency in an SOV structure. In other words, the immediate preverbal position was essential to this development.

PDE particles, unlike those of PDD, are almost exclusively resultative. The concept of optional projection of the particle appeared to be crucial for an understanding of their behaviour: they systematically allow both options of the template [V-X(P)].

Particles in Old English (OE) featured in a system that was characterized by substantial SOV word order and a form of V-movement similar though not identical to that of PDD and Present-Day German (PDG). As SOV word order was lost, particles became exclusively postverbal, and as V-movement was lost, their word order patterns became further circumscribed to their present-day status. A special feature of the historical development of English to SVO order is that the particle is not systematically adjacent to the verb: projection of the particle therefore became required for any context in which the particle is separated from the verb by a modifier or an object.

In this book we have shown that there is a strong historical relationship between prefixes and particles in West Germanic. Chapter 7 presented a comparative and historical study of this relationship in West Germanic. This chapter showed that one set of prefixes represents an older layer of preverbs found across the West Germanic languages (including early English) whose semantics are identical to that of resultative SCVs, and which we therefore hypothesized to be a further grammaticalized version of a resultative particle. Another set of
prefixes is of more recent date and finds its origin in various types of adverbs (as discussed in chapters 3 and 4). It is very striking that the first type of prefix was highly productive in OE and early Middle English and was subsequently lost, and that the second type never developed in English. This suggests once more that the position of the preverb left-adjacent to the verb, as is characteristic of SOV languages like Dutch and German (and early) English, has been a prerequisite for the grammaticalization of preverbs into inseparable prefixes.

Our findings concerning the nature and history of particle verbs in Dutch and English confirm the idea that syntax is an important historical source of morphology: ‘today’s morphology is yesterday’s syntax.’ At the same time, we have seen how structures that are linearly ordered after each other on a grammaticalization cline, may coexist in a stable fashion in one and the same language system.
Appendix: Historical corpora of English and Dutch

English

(i) The York–Toronto–Helsinki Parsed Corpus of Old English Prose (YCOE)

(ii) The Penn–Helsinki Parsed Corpus of Middle English (second edition, PPCME2)

(iii) The Penn–Helsinki Parsed Corpus of Early Modern English (PPCEME)

The following table provides information about the OE, ME and eModE corpora used in this book:

<table>
<thead>
<tr>
<th>Corpus</th>
<th>Time period</th>
<th>Dates</th>
<th>Word count</th>
</tr>
</thead>
<tbody>
<tr>
<td>YCOE</td>
<td>O1</td>
<td>–850</td>
<td>2,190</td>
</tr>
<tr>
<td></td>
<td>O2</td>
<td>850–950</td>
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<td>O3</td>
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<tr>
<td></td>
<td>O4</td>
<td>1050–1150</td>
<td>67,380</td>
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<tr>
<td>PPCME2</td>
<td>M1</td>
<td>1150–1250</td>
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<tr>
<td></td>
<td>M2</td>
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<tr>
<td></td>
<td>E2</td>
<td>1570–1639</td>
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<tr>
<td></td>
<td>E3</td>
<td>1640–1720</td>
<td>180,924</td>
</tr>
</tbody>
</table>
The three corpora all use the same form of annotation, are accessed by the same search engine, CorpusSearch, and are all based on the Helsinki Corpus (YCOE is also based on the Toronto Corpus of Old English).

CorpusSearch

(iv) Helsinki Corpus

*The Helsinki Corpus of English Texts.* 1991. Department of English, University of Helsinki. Compiled by Matti Rissanen (Project leader), Merja Kytö (Project secretary); Leena Kahlas-Tarkka, Matti Kilpiö (Old English); Saara Nevanlinna, Irma Taavitsainen (Middle English); Terttu Nevalainen, Helena Raumolin-Brunberg (early Modern English)


(v) Toronto Corpus of Old English


The Toronto Corpus was compiled as a preliminary step in the preparation of the *Dictionary of Old English (DOE):* www.doe.utoronto.ca/.

**Dutch**


This CD-ROM contains approximately 250 literary texts from the period 1250–1500. It also contains the *Middelnederlandsch Woordenboek* (Middle Dutch Dictionary) and the *Corpus-Gysseling.*
Notes

1 Separable complex verbs

1 Tmesis is a general term used in the philological and linguistic literature for any positional separation, including artificial poetic ones, as in Greek (especially Pindar) and Latin poetry.

2 The paradox of particle verbs

1 The awkwardness of positioning morphological affixes with respect to the head in such head-initial formations is further demonstrated by formations like looker-upper, chuck-outer, door breaker-downer, and even pointer-outerer, sorter-outerer, fixer-upperer and giver-upperer found especially in spontaneous speech (Elenbaas 2007: 18).

2 It has been noticed, for German at least, that the intonation patterns for particles differ from those for regular adverbs (Lipka 1972: 20, quoting Hundsnurscher 1968: 6ff, who is in turn quoting Admoni 1966: 51–3):

(i) a. Er versuchte mit-zu sprechen. versus b. Er versuchte laut zu sprechen.
   he tried with-to-speak           he tried loudly to speak
   ‘He tried to join in.’          ‘He tried to speak loudly.’

The same point is made in Winkler (1997: 303), who notes that the ambiguity of Bill hat den Laden leer gekauft is resolved by intonation: one reading is Bill bought the shop in an empty condition (depictive) versus Bill bought everything in the shop, so that it was empty (resultative). Winkler finds that SCVs are stressed like resultatives.

3 Their data are taken from the CHILDES database (MacWhinney 2000) and are from two English-speaking children aged 1;6 to 2;3.

4 Zeller claims that the unacceptability of particle topicalization in (25) is due to the construction-specific meaning of ziehen ‘to pull’, but that explanation cannot hold, as we saw in the discussion of (21) above.

5 Levin and Rappaport Hovav (1995) argue that unselected objects are not genuine arguments, as they fail three argumenthood tests proposed by Carrier and Randall (1992). Spencer and Zaretskaya (1998: 9) demonstrate, however, that these tests (nominalization, the adjective-passive test, and the middle-formation test) are not reliable. For discussion, see Elenbaas (2007: 32–3).
6 Possible counterexamples are Dutch SCVs like *huis-houden* ‘lit. to house-keep, wreak havoc’, *mast-klimmen* ‘lit. to mast-climb, climb pole’: here we have a N as particle rather than P or A. *Huis* ‘house’, *mast* ‘pole’ show some reluctance to separate in V2:

(i) a. Zij hield vreselijk huis.
   *she held terribly house* 
   ‘She wreaked terrible havoc.’

   b. Hij klom mast.
   *he climbed mast* 
   ‘He climbed (a) pole.’

*Huis* and *mast* are historically objects of the verb, not predicates: these SCVs are formed by back formation or incorporation of an object, so have arrived at SCV status through a different route.

7 For Dutch, counts of particle and predicate orders in corpora are unreliable as a guide to frequency as the particle order was subject to a prescriptive rule until the seventies, and counts may be skewed for this reason (see, e.g., de Cubber 1973 for a discussion of this phenomenon in the context of a corpus investigation).

3 The synchronic analysis of Dutch SCVs

1 Note that a scalar modifier like *helemaal* requires the VPC and SSV to have a measure of durativity, to be an accomplishment rather than an achievement; in a phoning-action, as in (5a), contact is either achieved or not achieved, and there is no scalability, which in itself may account for the unacceptability of *helemaal* in (5a) and for the awkwardness of *completely* in the English translation. A further complication is that under our analysis there appears to be a mismatch between what a modifier like *right* modifies syntactically and what it modifies semantically. Syntactically, it modifies the particle only (it occupies the specifier position of the particle phrase). Semantically, it appears to modify the entire verb phrase (see, e.g., Dehé 2002: 45).

2 We gloss the particle *voor* ‘(be)fore, for’ as ‘for’ in all examples, although ‘fore’ might seem to be a more appropriate gloss in some cases. The reason for not using ‘fore’ is that in some cases *voor* appears to be ambiguous between being the counterpart to English ‘for’, in other case the counterpart to English ‘fore’.

3 There are, however, restrictions on these processes, especially on phrasal affixation (Booij 2005a: 189).

4 The fact that many derivations of SCVs have idiosyncratic properties (e.g. *uit-zet-ting* ‘lit. out-put-ing, expulsion’ (of refugees), *op-legg-er* ‘lit. on-put-er, semi-trailer’) is not relevant here, since this is a property of the output of word formation processes in general (cf. nominalizations of prefixed verbs such as *ver-warm-ing* ‘lit. pref-warm-ing, radiator’). The relevant point, then, is not whether the derived word has idiosyncratic properties and needs to be listed as a word, but whether the input, i.e. the SCV, has word properties.

5 An alternative morphological analysis treating these SCVs as compounds would also fail, because such an analysis would wrongly predict that the right-hand constituent of these SCVs (e.g. the noun *hoop* ‘pile’) functions as their head and determines their syntactic category.
6 The PP *uit het boek* ‘from the book’ appears to modify the SCV *op-kijken* ‘to look up(wards)’. As indicated, this PP modifier is not obligatory.

7 Orienting *zu* ‘to’ should not be confused with resultative *zu* (and its counterpart *toe* in Dutch), which, like *af* in Dutch, appears to be a resultative predicate rather than a particle, with the meaning ‘closed’: German *die Tür zu-machen* ‘close the door’/*die Tür ist zu* ‘the door is closed’; Dutch: *de deur toe doen* (archaic) *de deur is toe* ‘the door is closed’.

8 The construction with *urenlang* ‘for hours’ is acceptable with a repetitive reading, which supports the claim that it refers to a telic (bounded) event.

9 This is also the case for continuative SCV constructions with the extended meaning of *door* ‘steadily, faster’, which is why this function of the particle *door* is classified as a subtype of continuative *door* and not as a modifier function: particles that are conceptualized as modifiers do not influence the argument structure (and the lexical-aspectual structure) of the base.

10 Direct objects that do not qualify as incremental Themes, whose presence does not generally lead to telicity, are also excluded from SCV constructions with continuative particles. This is illustrated in (i) (cf. McIntyre 2004: 529).

(i) a. *zijn klasgenoot schoppen*
   ‘to kick one’s classmate’

   b. *uren door-schoppen*
   ‘to continue kicking for hours’

   c. *(zijn klasgenoot) uren door-schoppen*
   ‘to continue kicking one’s classmate for hours’

11 Continuative particles are labelled event-modifiers in McIntyre (2001a, 2002) and Los (2004). They block direct objects, and SCVs with these particles are always unergative and atelic, which means that such particles affect the argument structure and the lexical-aspectual structure (i.e. Aktionsart) of the base construction. Because such a profound effect would not be expected to be caused by mere modifiers, we prefer the term ‘continuator’ to refer to the function of such particles.

12 McIntyre (2004) notices that a comparison of the continuative particles in the West Germanic languages (e.g. Dutch *door* ‘on’, *rond* ‘around, about’, English *on, about, around, along*, German *herum* ‘around, about’) shows that all of these forms have both the continuative function and a spatial, goal-oriented function (‘through’ for the Dutch form *door*, ‘around’ for the Dutch form *rond*).

13 Examples of English semelfactive verbs are *blink, cough, knock* and *kick* (the term ‘semelfactive’ is related to the Latin word *semel* ‘once’, cf. Smith 1997: 29–30).

14 There is a different use of the term ‘Aktionsart particle’ in the literature, referring to a subset of the resultative particles, in particular those that express completion of the event (telic particles) and to continuative particles; they are also known collectively as ‘aspectual particles’. See Blom (2005: 63) for problems with this use of the term.

15 For more on the relation between the two types of idiom and possible representational differences, see Nunberg, Sag and Wasow (1994) and Jackendoff (1997: 166–71).
Apart from passive, raising, modification and topicalization constructions, Nunberg, Sag and Wasow (1994) discuss other constructions, and, in addition, acknowledge that various semantic and pragmatic factors may play a role in the availability of these constructions.

Many other classifications of idioms have been given (see Grant and Bauer 2004 for a recent overview). On the basis of a different definition of compositionality (“the meaning of a construction is compositional if it is derived transparently from the meanings of its elements”, p. 44) Grant and Bauer classify expressions such as pull strings as non-compositional. They call these expressions figuratives instead of idioms, reserving the term ‘(core) idiom’ for idiomatic phrases such as kick the bucket. Thus, they too distinguish between these two types of conventionalized phrases, although their terminology is different from that in Nunberg, Sag and Wasow (1994).

Evidence for the role of paradigmatic analysis in word formation is given in Booij (2002a: 6–9). The SCV data suggest that similar facts hold for the formation of non-morphological lexical units.

The diachronic analysis of Dutch SCVs

We will use the labels SOV and SVO in this chapter as convenient shorthand to reflect variation in basic word order patterns, without any theoretical claims as to underlying order, as in e.g. Kayne (1994) and Zwart (1997).

Throughout this chapter, the numbers refer to the lines and/or sections of the text, followed by the date.

They differ in this respect from preposition constructions such as dat Jan (jarenlang) door Azië gereisd heeft, which may have a locative instead of a directional reading: ‘that John has been travelling around in Asia (for years).’

The subject referent of the source construction (e.g. the subject referent of an unaccusative directed motion event) is also assumed to have certain agentive properties (as well as certain properties associated with themes), cf. Spencer and Zaretskaya (1998: 30).

See Blom (2005: 270–2) for more on this change in auxiliary selection and for a comparison between the analysis proposed here and McIntyre’s (2004) analysis.

Slobin (2005, 2006) argues that satellite-framed languages typically have many more types of manner verbs than verb-framed languages; the satellite-framed languages English, Dutch and German are typical examples, and it is quite possible that these languages have acquired more and more of these verbs over time; because manner is so easily encoded in these languages, there is “over time – a predisposition to attend to this domain” (Slobin 2005: 316). The more fine-grained the distinctions become, the more learners are geared to making these fine distinctions, which ultimately leads to impressive lists. The list used here – run, jog, lope, sprint, dash, rush, hurry, scurry, scramble – encodes only one of the many subtypes of manner of motion. Slobin describes this subtype as “types of rapid bipedal motion” (p. 316).
The lexical decomposition of Present-Day English verb particle combinations

1. Huddleston and Pullum (2002: 286) note that locative meanings tend to freeze while motion meanings do not; compare: *She put/kept her hat on* versus *She put/kept on her hat; I took/left the curtains down* but *I took/left down the curtains.*

2. The same effect is noted for similar cases in German by Zeller (2001a). He observes that an object such as *a beer in John had a beer* can refer simultaneously to the THEME *(beer)* or to the CONTAINER holding the beer (a glass, a bottle) (p. 279). This, according to Zeller, causes examples such as (10) to have a strong completive interpretation.

3. This is a plausible reason why accounts that interpret VPCs as a development from prepositional verbs through a process of reanalysis (e.g. Denison 2004; see chapter 2) tend to focus on examples with *over or through.*

4. Toivonen leaves undisussed the fact that the phrase structure rule creates a right-adjoined structure, which is problematic in the light of Kayne’s (1994) antisymmetry theory, which allows left-adjunction only.

5. Our analysis in terms of optional projection differs from Zeller’s account in BPS in that a non-projecting head is considered to be a minimal projection only, whereas it would still count as a maximal projection in Zeller’s BPS terms.

6. The Structural Economy Principle is in line with approaches to first language acquisition that argue that children gradually build up syntactic structures (structure building model, see for example Radford 1995, 1996) and follow a strategy in which they prefer simpler structures to more complex structures. Complex structures are only adopted if the lexical items they acquire cannot be generated by simple structures.

7. The internal structure of AP in (14b) is analogous to Baker’s (2003) structure for resultative constructions.

(i) a. I wiped the table clean.
   b. [v P [v CAUSE] [vPPredP the table [vP BE] [AP [A WIPED] [(A) clean]]]]

The combination of the abstract adjetival head WIPED and the lexical adjective clean expresses the resulting state of the event. Baker (p. 222) points out that the internal structure of the AP represents Levin and Rappaport Hovav’s (1995) observation that the resultative adjective is a further specification of the result already present in the verb. According to Baker, this reflects the semi-productive, semi-lexicalized nature of resultative constructions, since “adjectives cannot be freely combined with plausible verbs” (p. 222). Baker assumes that adjectives can only be predicatd of an NP when it is the complement of a Pred head, which is subsequently disguised on the surface by merging with the verb during conflation.

8. Conflation is a process closely related to incorporation and Hale and Keyser (1993) assume this process takes place in the lexicon (*l*-syntax). Chomsky (1995), on the other hand, considers conflation and incorporation as one and the same process, namely head movement in the syntax. Baker (2003) takes a similar view but assumes that conflation takes place before vocabulary insertion.

9. It is possible to turn non-resultative unergative VPCs into resultative transitive VPCs by adding a reflexive object.
The presence of the reflexive object *themselves* licenses a resultative interpretation (cf. the Direct Object Restriction (DOR), which states that resultative predicates can only be predicated of objects; Levin and Rappaport Hovav 1995).

The idea that the underspecified meaning of particles enables particles to grammaticalize, while adjectives with their full-blown lexical content are less prone to grammaticalize, is supported by a suggestion made by van Kemenade (2000: 55), who notes that “elements that typically undergo grammaticalization seem to have in common that even at the onset of the grammaticalization story their lexical meaning is underspecified, their overall meaning strongly context-dependent”.

6 The diachrony of the English verb particle combination

1 The analysis of this mix is hotly debated. The approaches include an analysis in terms of phrase structure competition between a basic OV and a basic VO grammar (Kroch and Taylor 2000a; Pintzuk and Taylor 2006) in which the position of particles and of pronominal objects feature as diagnostics: a preverbal particle or pronoun reflects an OV grammar; a postverbal particle or pronoun reflects a VO grammar. Other analyses attempt to derive OV/VO variation in a single (universal VO) grammar in terms of a variable form of constituent scrambling (Fischer et al. 2000; Biberauer and Roberts 2005; Elenbaas and van Kemenade to appear). The papers in Taylor and van der Wurff (2005) give a good view of the debate.

2 All OE examples are collected from the *York-Toronto-Helsinki Parsed Corpus of Old English Prose* (YCOE, Taylor et al. 2003); see the Appendix for details.

3 This insight is due to Pintzuk (1999), who shows that there is V-movement stranding a particle that cannot be characterized as V-to-C movement. The exact nature and position of this type of V-movement is subject to debate. Pintzuk (1999) argues that OE is a symmetric V2 language like Icelandic and Yiddish, but van Kemenade (1997) shows that V-movement to a position lower than C does not represent V2 in the sense that it yields XP-Vf-subject orders in main clauses and subclauses; these are restricted to contexts with unaccusative verbs. Van Kemenade (2000) and Fischer et al. (2000) show that there is an intermediate functional position targeted by V-movement, yielding an articulate IP consisting of the heads F, Neg and T. For the sake of exposition, we will abstract from this evidence here, and will adopt the label I for the functional head position below C.

4 The discussion here glosses over a hornet’s nest of debate concerning the headedness of phrases lexical and functional in OE, the distribution of various types of subject, and the position of light elements. The reader is referred to Pintzuk (1999), Fischer et al. (2000), Kroch and Taylor (2000a), van Kemenade (2009), and Elenbaas and van Kemenade (to appear).

5 All ME examples are collected from the second edition of the *Penn-Helsinki Parsed Corpus of Middle English* (PPCME2, Kroch and Taylor 2000b); see the Appendix for details.

6 The OE SCV and ICV systems are broadly similar to the PDD SCV and ICV systems discussed in chapter 3.
7 A similar phenomenon is found in Gothic, which has preverb doubling (van Kemenade and Los 2003).

(i) þanuh modags warþ jah ni wilda inn-gaggan, iþ atta is us-gaggands ut
then and angry became and not wished in-go, but father his out-coming out
bad ina.
asked him
órgişți δὲ καὶ / οὐκ ἐγέλεν εἰςελθεῖν. ὁ δὲ πατήρ αὐτοῦ ἔξελθὼν παρεκάλει
/ αὐτόν.
‘But he was angry and refused to go in. His father, coming out, pleaded with
him.’ (Luke15: 28)

In (i), the particle ut co-occurs with the prefix us-. Van Kemenade and Los (2003: 101)
argue that these doublings are a sign of reinforcement: the particle ut takes over the
(predicate) function of the prefix us-, suggesting that functional equivalence similar
to OE SCVs and ICVs was already found in Gothic.

8 The examples from the M3 period are very similar and are all from Chaucer’s Tale of
Melibee. Two of them are given here:

(i) a. Up roos tho oon of thise olde wise, . . .
up rose then one of these old wise
‘Then one of these old wise men arose, . . .’ (cmctmeli, 219.C1.84)
b. Up stirten thanne the yonge folk atones, . . .
up started then the young people at once
‘Then the young people jumped up at once, . . .’ (cmctmeli, 219.C1.80)

We cannot be certain whether the particles in these examples have been topicalized,
because there is no diagnostic material intervening between the particle and the verb.
Since the verbs in these examples are unaccusative, the postverbal position of the
subject may simply reflect the subject’s underlying VP-internal position rather than
V-to-C movement (and topicalization of the particle) (see also Warner 2007).

9 Example (19b) is from Vinaver’s (1973) edition of Malory’s Morte Darthur, which is
based on the Winchester MS. Caxton’s version of Malory’s Morte Darthur (Sommer’s
(1889) edition) has a postverbal particle in the counterpart of (19b), (i).

(i) and ther with he smote hym on the one syde of the hede that he felle doune
in a swoone to the ground/
‘and therewith he struck him on one side of the head so that he fell down
to the ground in a swoon’ (Malory’s Morte Darthur, Book vi, Capitulum
xv); Sommer 1889: 209)

Two other examples have a topicalized particle in the Winchester MS., (ii), but a
postverbal particle in Caxton’s version, (iii).

(ii) a. . . . but the stroke of kyng Ye Ban downe felle and carve a cantell of the
sheld
‘but the stroke of King Ban fell down and cut a piece off the shield . . .’
(CMMALORY, 26.803–26.806)
b. Wyth that sir Raynolde gan up sterte with his hede all blody . . .
‘with that Sir Reynold suddenly moved up, and with his head all
bloody . . . ’ (CMMALORY, 200.3145–200.3146)
(iii)  a. But the stroke of kynge Ban felle doune and carfe a cantel of the sheld / . . . ‘but the stroke of King Ban fell down and cut a piece off the shield . . .’ (Malory’s *Morte Darthur*, Book i, Capitulum xvj; Sommer *1889*: 58)

b. With that sir Raynold beganne to *starte vp* with his heede al blody / . . . ‘with that Sir Reynold suddenly moved up, with his head all bloody . . .’ (Malory’s *Morte Darthur*, Book vi, Capitulum xij; Sommer *1889*: 203)

We cannot exclude the possibility that some of the features found in *Morte Darthur*, including the position of particles, reflect those of the text on which it is based, the alliterative *Morte Arthure* (cf. Vinaver *1973*). Given that Malory’s “object in adapting it was to rewrite it in a form accessible to contemporary readers” (Vinaver *1973*: lix), the preverbal particle pattern must be assumed to have been intelligible to speakers of ME, even if no longer productive.

10 Denison (*1985*: 44) identifies examples of *give up* ‘yield’, all from the last few entries of the *Peterborough Chronicle*, as “the first unequivocal examples of completive *up***’. Examples are given in (i).

(i) a. & dide ælle in prisun til he *iafen up* here castles. and did all in prison until they gave up their towns ‘and put everyone in prison until they gave up their towns.’ (*cmpeterb*, 55.420)

b. þat he alle his castles sculde *i-iuen up*. that he all his towns should P**R**E**F**-give up ‘that he should give up all his towns.’ (*cmpeterb*, 58.571)

In these examples, the meaning of *geuen up* ‘to give up’ is clearly non-transparent. Its meaning cannot be inferred on the basis of the literal meaning of the verb *geuen*, ‘to provide, offer’, and that of the particle *up*, ‘upwards’. The meaning of the verb and the particle, ‘to yield, stop having’, is unpredictable.

11 This view is not uncontroversial: an alternative view holds that semantic weakening takes place at the end of a grammaticalization process (see for example Traugott and König *1991*). In the case of VPCs, we believe it is unlikely that the semantic development for which we see the onset in eME signals the end of a grammaticalization process by which particles develop from phrases to heads, because of the abundant evidence presented for a phrasal analysis in IOE and eME in sections 6.3.2.1 and 6.3.2.2.

12 The reader is referred to the Appendix for details of the OE, ME and eModE corpora.

13 Discussion of this type would inevitably involve detailed theoretical consideration of OE clause structure. Here, we point once more to the ongoing debate on the analysis of variation in OE word order sketched in footnote 1. The approaches include an analysis in terms of phrase structure competition between a basic OV and a basic VO grammar (Kroch and Taylor *2000a*; Pintzuk and Taylor *2006*) in which the position of particles and of pronominal objects feature as diagnostics: a preverbal particle or pronoun reflects an OV grammar; a postverbal particle or pronoun reflects a VO grammar. Other analyses attempt to derive OV/VO variation in a single (universal VO) grammar in terms of a variable form of constituent scrambling, (*Fischer et al. 2000*; Biberauer and Roberts *2005*; Elenbaas and van Kemenade to appear). Elenbaas and van Kemenade (to appear) show that the details of verb–particle order in the
transition from OE to ME do not fully support the diagnostic status of preverbal particles for underlying OV order, and postverbal particles for underlying VO order.  

14 This could be derived in an OV grammar of the kind advocated by Pintzuk and Taylor (2006) by extrapolation of the full PrtP. Alternatively, in an analysis based on the Universal Base Hypothesis (Kayne 1994), it could be derived by failing to scramble the PrtP to preverbal position.  

15 Hiltunen (1983: chapter 4) also discusses the relative position of particle and verb, giving a general picture of the development from OE to ME. However, he makes no distinction in his data between finite and non-finite verbs. We have seen above that this is crucial in determining whether particles are preverbal/postverbal: postverbal particle order is almost exclusively the result of V-movement in OE.  

16 Elenbaas (2007: 168) notes that *ut* ‘out’ in (27a), as it is followed by a PP ae ðam eðyrle ‘through the window’, could be treated as an adverbial modifier in the PP rather than as a particle in an SCV. She opts for the latter analysis on the basis of other occurrences of the combination *ut-*weorpan without a PP, as in the example in (i).  

(i) & wurp þinne angel ut  
and threw your fish hook out  
‘and throw out your fish hook’ (cowsgosp, Mt [WSCp]: 17.27.1177)  

17 As in OE, V-movement in ME was also attested in subclauses; cf. Elenbaas (2007: 263–4) for more detail on this.  

18 *To* has not survived as a particle into PDE and differs from the bulk of English particles in that it is not resultative. Given its non-resultative meaning and its resemblance to the preposition *to*, it is tempting to analyse *to* in (35) as a preposition rather than as a particle (i).  

(i) Do þis plaster iij dayes [PP [P to] Ø]...  

It should be noted, however, that the dividing line between the class of particles (which lack a complement) and the class of prepositions (which require a complement) is in fact not always clear (cf. PDE *He wiped the sweat off*, where *off* is a particle, vs. *He wiped the sweat off his brow*, where *off* is a preposition). All in all, the categorial status of *to* in (35) is fuzzy, as it shows particle as well as preposition characteristics. Because of this, it should perhaps be excluded from the dataset.  

19 In the PPCEME file, the clause under consideration is coded as a *to*-infinitive clause. Under this interpretation, the verb *let* is non-finite, preceded by a covert infinitival marker *to*. The pattern *to*-*V_{at}-not-direct object* is found in IME as well as eModE (see, e.g., Han and Kroch 2000). Adopting adverb placement as a diagnostic for V-movement, Han and Kroch (2000) conclude from the existence of the pattern *to*-*V_{at}-not-direct object* that “Middle English infinitive verbs also undergo movement” (p. 319). Crucially, both the finite interpretation adopted here and the non-finite interpretation adopted in the PPCEME are compatible with our assumptions regarding evidence for V-movement.  

7 The diachrony of prefixes in West Germanic  

1 As if they are periphrastic derivational morphology; see Riehemann (1998).
Although the prefix *to-* and the particle *to* both derive from prepositions, their etymology is different. The prefix *to-* shares its etymology with Dutch *te-* (obsolete), German *zer-* and Gothic *dis/twis*, meaning ‘two ways, in two’ (Los 2005: 11). The particle *to* shares its etymology with Dutch *toe-* and the Gothic preposition *du* ‘to, towards’. The meaning of the prefix *to-* is ‘in/to pieces, to bits, away, to ruin, to destruction, mis-’ (Los 2005: 12), a meaning that the prefix *for-* could also express. The particle *to* had a meaning of indicating motion, direction. An example is OE *togan* ‘to go away’, as in (i).

(i) & *gangon* δa *vyldestan to*
   *and went the chiefs away*
   ‘and the kings went away’ (cootest, Josh: 10.22.5468)

There are few examples of SCVs with the particle *to*. Clark Hall (1960) mentions *tocweðan* ‘to forbid, interdict, prohibit’, *tobringan* ‘to bring to’, *tocuman* ‘to come, arrive’ and lists several other SCVs with the particle *to*. The clearest cases of *to-* as a particle are those in which *to-* is separated from the verb by the negative marker *ne* or by the participle marker *ge-* or when it is separated from the verb by verb movement, as in (i).

3 According to the *OED* Online (entry for *y-* prefix), the prefix *y-* first disappeared from Northern ME dialects and “its disappearance in the North was assisted by the absence of the prefix in ON [Old Norse]”. Whether or not the loss of *y-* was influenced by ON, fact is that the prefix persisted longer in the Southern dialects than in the Northern dialects.

4 *Ver-* is a reflex of at least three separate prepositions/adverbs, with forms like *fra, fær, faura* in Gothic. Its preverbal cognate is *for-* in OE, but *fær* before adjectives where it functions as an intensifier: *freærde* ‘very fast’, *freafett* ‘very fat’ with no trace of resultativeness (cf. the ‘exceeding y’ meaning of the new ICV-prefix *over-* in PDE and PDD).

5 But also ‘rob’ in Mat. 11: 12, John 10.12 and there used to translate Δραγάζειν, which is translated in John 6:15 by the simplex *wılwan*.

6 The origins of *ga-* are obscure. It has been related (controversially) to Lat. *cum-, con-* ‘with’ (cf. Lehmann 1986).

7 See the special issue of the *Yearbook of Morphology* (Booij and van Marle 2003) for preverb examples from other languages.

8 The different stress pattern (and unexpected vowel in the prefix) in the verb *ántwoorden* ‘answer’ is due to the fact that this verb is a conversion of the corresponding noun.

9 V-movement is apparently not restricted to root clauses: Eythórsson (1995: 105–6) has some remarkable data about V-movement in indirect questions, marked deviations from the Greek *Vorlage*, and also markedly different from the operation of V2 in the modern West Germanic dialects.
References


References


References


References


References


References


References


References


References


References


<table>
<thead>
<tr>
<th>Author</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aarts, F.</td>
<td>18</td>
</tr>
<tr>
<td>Aarts, J.</td>
<td>18</td>
</tr>
<tr>
<td>Ackerman</td>
<td>7, 23, 86</td>
</tr>
<tr>
<td>Admoni</td>
<td>216</td>
</tr>
<tr>
<td>Akimoto</td>
<td>4</td>
</tr>
<tr>
<td>Allen</td>
<td>153</td>
</tr>
<tr>
<td>Anthony</td>
<td>20</td>
</tr>
<tr>
<td>Asbury</td>
<td>41</td>
</tr>
<tr>
<td>Auwera, van der</td>
<td>92, 191, 192</td>
</tr>
<tr>
<td>Baayen</td>
<td>113, 178, 179</td>
</tr>
<tr>
<td>Baker</td>
<td>130, 220</td>
</tr>
<tr>
<td>Baldi</td>
<td>8</td>
</tr>
<tr>
<td>Bauer</td>
<td>219</td>
</tr>
<tr>
<td>Beavers</td>
<td>115</td>
</tr>
<tr>
<td>Beeken</td>
<td>115</td>
</tr>
<tr>
<td>Beekes</td>
<td>8</td>
</tr>
<tr>
<td>Beliën</td>
<td>114, 115</td>
</tr>
<tr>
<td>Bennis</td>
<td>22, 28, 29, 60</td>
</tr>
<tr>
<td>Berg, E. van den</td>
<td>96</td>
</tr>
<tr>
<td>Berg, H. van den</td>
<td>202</td>
</tr>
<tr>
<td>Beths</td>
<td>153, 214, 221</td>
</tr>
<tr>
<td>Biber</td>
<td>18, 22, 30, 49, 123</td>
</tr>
<tr>
<td>Biberauer</td>
<td>221, 223</td>
</tr>
<tr>
<td>Bolinger</td>
<td>20, 31, 40, 41, 123, 124</td>
</tr>
<tr>
<td>Booij</td>
<td>2, 4, 7, 8, 14, 15, 20, 29, 55, 56, 57, 59, 66, 83, 85, 86, 87, 92, 98, 117, 118, 134, 178, 179, 182, 190, 191, 192, 193, 194, 217, 219, 225</td>
</tr>
<tr>
<td>Botha</td>
<td>55</td>
</tr>
<tr>
<td>Bresnan</td>
<td>54, 129</td>
</tr>
<tr>
<td>Brinkman</td>
<td>179</td>
</tr>
<tr>
<td>Brinton</td>
<td>4, 204</td>
</tr>
<tr>
<td>Burzio</td>
<td>131</td>
</tr>
<tr>
<td>Campbell</td>
<td>95</td>
</tr>
<tr>
<td>Canale</td>
<td>157</td>
</tr>
<tr>
<td>Cappelle</td>
<td>24, 28, 40, 80, 81</td>
</tr>
<tr>
<td>Carrier</td>
<td>216</td>
</tr>
<tr>
<td>Chomsky</td>
<td>16, 43, 46, 53, 58, 128, 130, 220</td>
</tr>
<tr>
<td>Claridge</td>
<td>31, 34, 198</td>
</tr>
<tr>
<td>Clark</td>
<td>22</td>
</tr>
<tr>
<td>Clark Hall</td>
<td>225</td>
</tr>
<tr>
<td>Cloutier</td>
<td>97, 115</td>
</tr>
<tr>
<td>Conrad</td>
<td>18, 22, 30, 49, 123</td>
</tr>
<tr>
<td>Cubber, de</td>
<td>217</td>
</tr>
<tr>
<td>Dehé</td>
<td>5, 7, 8, 35, 36, 49, 121, 123, 126, 127, 129, 217</td>
</tr>
<tr>
<td>Delbrück</td>
<td>8, 9, 204</td>
</tr>
<tr>
<td>Delfs</td>
<td>154, 214</td>
</tr>
<tr>
<td>Denison</td>
<td>31, 42, 220, 223</td>
</tr>
<tr>
<td>Dietz</td>
<td>214</td>
</tr>
<tr>
<td>Diessel</td>
<td>22</td>
</tr>
<tr>
<td>Dikken, den</td>
<td>20, 22, 36, 37, 41, 61</td>
</tr>
<tr>
<td>DiPaolo</td>
<td>215</td>
</tr>
<tr>
<td>DiSciullo</td>
<td>35</td>
</tr>
<tr>
<td>Dongen, van</td>
<td>123</td>
</tr>
<tr>
<td>Dufresne</td>
<td>8, 9</td>
</tr>
<tr>
<td>Dupuis</td>
<td>8, 9</td>
</tr>
<tr>
<td>Elenbaas</td>
<td>15, 16, 29, 54, 129, 147, 153, 156, 157, 162, 163, 164, 172, 216, 221, 223, 224</td>
</tr>
<tr>
<td>Emonds</td>
<td>40, 41</td>
</tr>
<tr>
<td>Eythórsson</td>
<td>10, 202, 225</td>
</tr>
<tr>
<td>Fairclough</td>
<td>41</td>
</tr>
<tr>
<td>Fanselow</td>
<td>49</td>
</tr>
<tr>
<td>Farrell</td>
<td>42</td>
</tr>
<tr>
<td>Ferraresi</td>
<td>10</td>
</tr>
<tr>
<td>Filip</td>
<td>187</td>
</tr>
<tr>
<td>Finegan</td>
<td>18, 22, 30, 49, 123</td>
</tr>
</tbody>
</table>
Author index

Fischer 141, 147, 156, 157, 163, 221, 223
Foster 156
Fraser 20, 31, 41, 123

Geerts 179, 181, 182, 183, 185, 186
Gelder, van 54, 129
Goldberg 18, 21, 37, 38, 39, 42, 59, 82, 83, 86, 136
Grant 219
Greenbaum 18, 31, 176
Grewendorf 20
Gries 123, 124
Guéron 37, 40, 41

Haaften, van 178, 182
Haas, de 115
Haegeman 37
Haeseryn 179, 181, 182, 183, 185, 186
Hale 43, 44, 130, 132, 220
Han 224
Harris 7, 95
Haselmath 194
Helmantel 114, 115
Hiltunen 10, 146, 149, 163, 164, 195, 224
Hoeksema 25, 28
Hoekstra 36, 61, 115, 178, 181, 205
Hopper 10, 92, 95, 111, 112, 192, 202
Horst, van der 95
Huddleston 40, 123, 124, 127, 220
Hundschnurscher 42, 216

Jackendoff 8, 18, 21, 37, 38, 39, 42, 43, 59, 82, 83, 85, 86, 87, 126, 127, 136, 186, 218
Johansson 18, 22, 30, 49, 123
Johnson 35, 36
Jordens 22

Kahlas-Tarkka 215
Kayne 36, 40, 219, 220, 223
Kemenade, van 8, 9, 141, 144, 146, 147, 156, 157, 163, 199, 204, 221, 222, 223
Keyser 43, 44, 130, 132, 220
Kilpiö 215
Kluge 204
König 223
Koopman 141, 147, 156, 157, 163, 221, 223
Koster 141, 163
Krätzer 130

Kroch 143, 153, 154, 156, 157, 161, 168, 214, 221, 223, 224
Kuryłowicz 8, 9, 10
Kytö 215

Lambrecht 129
Lansu 61, 178, 179, 181, 205
Larson 43, 130
Lass 196
Leech 18, 22, 30, 31, 49, 123, 176
Legum 20
Lehmann, C. 176
Lehmann, W. H. 204
Lehmann, W. P. 225
Leopold 178, 182
LeSourd 86
Lestrange 41
Levin 19, 106, 216, 220, 221
Lieber 113, 178, 179
Lightfoot 157
Lindner 17
Lipka 16, 40, 41, 42, 116, 216
Loey, van 92, 191
Los 8, 9, 49, 69, 133, 136, 144, 146, 147, 157, 199, 204, 218, 222, 224, 225
Lüdeling 4, 7, 18, 28, 98, 205
Luif 115

MacWhinney 216
Marle, van 225
McIntyre 7, 8, 19, 21, 26, 41, 42, 45, 46, 69, 70, 77, 79, 102, 126, 127, 197, 218, 219
Meillet 202, 203
Miller 7
Mohan 67, 86
Mulder 36
Müller 8, 27, 28, 61, 205

Neeleman 28, 29, 35, 36, 37, 53, 92, 96, 128, 191, 205
Nevalainen 215
Nevanlinna 215
Nichols 18
Nunberg 24, 81, 218, 219

Paardekooper 115
Petré 178, 179, 180, 199
Pinault 9
Pintzuk 141, 143, 153, 163, 214, 221, 223
Powers 22
Pullum 40, 123, 124, 127, 220
Quak 95
Quirk 18, 31, 176
Radford 220
Ramchand 44, 45, 61, 79
Randall, B. 215
Randall, J. 216
Rappaport Hovav 19, 106, 216, 220, 221
Raumolin-Brunberg 215
Riehemann 87, 224
Riemsdijk, van 115
Rissanen 215
Roberts 153, 168, 170, 221, 223
Romijn 179, 181, 182, 183, 185, 186
Rooij, de 179, 181, 182, 183, 185, 186
Rousseau 7
Sag 24, 81, 218, 219
Santorini 154, 214
Sawyer 22
Schmidt 202
Schultze-Berndt 7
Schutter, de 115
Slobin 38, 219
Smith 79, 218
Smollett 205
Sommer 222
Sorace 113
Speas 54, 129
Spencer 7, 17, 19, 38, 70, 216, 219
Stechow, von 20
Stiebels 35, 77, 87, 190
Stowell 36
Svartvik 31, 176
Svenonius 37, 40, 42, 44, 45, 61, 70, 79, 123, 125, 126
Taavitsainen 215
Talmy 40, 70, 125
Taylor 143, 153, 156, 157, 214, 221, 223
Tenny 204, 209
Toivonen 53, 80, 128, 220
Tomasello 22
Toorn, van den 179, 181, 182, 183, 185, 186
Traugott 92, 95, 111, 112, 192, 223
Trommelen 115
Urban 8, 126, 127
Van Dale 183, 185, 186, 206
Varga 171
Vendler 127
Venezky 215
Verkuyl 115
Vinaver 166, 222, 223
Vincent 8, 9, 41
Vinka 22
Vries, de 179, 181, 183, 185, 186
Wald 134
Wanner 7, 8
Warner 153, 161, 168, 214, 221, 222
Wasow 24, 81, 218, 219
Watkins 7, 8, 9
Webelhuth 7, 23, 86
Weerman 28, 92, 96, 191, 205
Weissenborn 22
Westerduin 61, 178, 179, 181, 205
Williams 5, 16, 35, 46, 122, 130
Winkler 216
Wunderlich 35, 87
Wurff, van der 141, 147, 156, 157, 163, 170, 221, 223
Wurmbrand 22, 24, 80, 81
Zaretskaya 17, 19, 38, 70, 216, 219
Zeller 4, 8, 24, 25, 26, 27, 28, 37, 46, 47, 48, 53, 128, 216, 220
Zwart 219
Zwarts 115
Subject index

(a)dun, 144
a-, 145, 195
aan, 84
aan-, 183
aan het construction, 61, 64, 65, 66, 67, 68, 117
-able, 15
accomplishment, 127
achievement, 79, 127
achter-, 183
acquisition, 220. See particle: acquisition
dem-halen, 65, 117
adjective, 18, 56, 63, 89, 176, 178. See also verb: deadjectival
abstract adjective, 220
as particle, 39, 47, 135
diachrony, 117–19
behaves like particle, 64
path adjective prone to grammaticalization, 136
adposition, 2, 3, 7, 41, 183, 185
functional content as case realization, 41
lexical content as path, 41
dun, 10
adverb, 2, 3, 7, 8, 10, 155, 167
as source of preposition, 41
distinction adverb and preposition in OE, 10, 41
adverbial modifier, 97, 98
after, 10
af, 20, 26, 29, 50, 54, 62
afoot, 34
agent, 38, 44, 45, 69, 73, 76, 126, 131, 132
Aktionsart, 4, 6, 38, 52, 77, 79, 177
Akusha Dargi, 202
alight, 34
aloft, 34
antisymmetry (Kayne), 36, 220
apart, 34, 122, 135, 136
argument structure, 52, 79, 108, 111, 125, 133
changes in. See valency
loss of, 41, 102
tests for, 216
argument-blocking, 69, 79, 133
around, 34
asunder, 34
asymmetry main and subclause. See Verb
Second, word order: Old English is lost in Middle English, 153
atransitivity effect, 77, 78, 103, 111, 175
auxiliary selection, 105, 219
determined by semantics, 106
disambiguates constructions, 107
away, 34, 39, 40, 92, 136, 144, 167
aweg, 10
awry, 34
-baar, 15, 55
back, 22, 92, 136
back formation, 118, 189, 217
Balto-Slavic, 9
Bare Phrase Structure (Chomsky), 46, 53, 128
be-, 146, 174, 176, 177, 178
affects valency, 179
source, 179
be- (English)
limited productivity, 196
be- (Old English)
affects valency, 199
be-cardiganed, 176
beforan, 10
be-spectacled, 176
bi-, 196
blocking, 52
bracketing paradox, 87
case
  accusative as default, 199
Case assignment, 46, 50, 73, 198
castigatory use, 127
change of location, 70, 74, 75, 76, 111
change of state, 70, 72, 75, 127, 130, 145, 150
CHILDES database, 216
chucker-outer, 216
circumposition, 101
class-typing particle, 202
clean, 135
clear, 135
clitic order, 202
complex event, 19, 36, 37, 42, 45, 137, 174
  non-causative verbal subevent, 38
  semantics, 37–40
  subevent BE, BECOME, CAUSE as
    semantic primitive, 44, 130
  VP-shell analysis of, 46
  with causative verbal subevent, 37
complex predicate, 7, 8, 11, 16, 18, 37, 50
  as partly lexicalized phrase, 83
  bleaches when expressing path, 39
  causative versus non-causative, 37
  copular relationship with object, 19, 21, 61
  distinct from SCV, 68
  form of, 19, 38
  meaning unique to construction, 21, 59
  productivity, 19, 39
  resembles particle, 59
  semantics differ from particle, 40
  similarities with ICE, 82
  stranded by Verb Second, 57
  with conventionalized meaning, 19, 21
  with resultative meaning, 18, 19, 37, 38, 42
  with resultative meaning but atelic, 38
complex verb, 15, 18, 36, 46, 50, 54
  not separated by Verb Second, 194
compositional idioms, 24
compositional, 59, 68, 80–5, 87, 182
  does not exclude conventionalization, 59, 81
compounding, 4, 16, 55, 118
colligation, 220
constructional idiom, 57, 59, 83, 85, 133, 137
  families of, 82, 88, 94, 133
  families of meanings as a characteristic of
deviation, 182
  inheritance hierarchy, 88
CONTAINER, 220
contrastive focus, 26, 27
conversion, 57, 181, 225
  restrictions on, 57
corpus studies, 49, 123, 124, 154–61, 162–72,
  193–5, 217
declination structure, 44
deel-nemen, 65
defocused Ground. See Ground
derivation, 4, 56
devoiced word-final obstruents as
  morphosyntactic diagnostic, 202
dis/twist-
  source, 224
door, 13, 51, 74, 77, 102, 103, 105
  scenario for reanalysis, 110
  template extended to non-motion verbs,
    106
door-., 176, 183
door-
  semantics, 183–9
door breaker-downer, 216
do-support, 168, 172
doubling, 203, 204–7
  in Dutch, 204, 205–7
  in Old English, 204
down, 22, 40, 41, 144
down-., 176
eyear Modern English, 49, 161,
  168
economy, 54
economy principle, 11
event-modifier, 69, 71
  does not license object, 71
experiments, 49
extraposition, 36, 96, 97, 103
feature checking, 45, 49, 50
feest-vieren, 65
Figure, 40, 41, 42, 45, 70, 126, 180
definition, 125
object of VPC, 42
traverses path expressed by particle, 42
file-rijden, 118
Finno-Ugric, 7
fixer-upperer, 216
focus, 49, 122, 123, 130, 134, 137, 166
and processing, 123
correlates with syntactic phrase, 133
focus domain, 129
for-, 146, 178, 182, 195, 196
affects valency, 182
forth, 144
fossilization, 123, 183
fram, 144
free, 135
freezing, 123, 124
also with open slots, 34
locative versus motion, 220
not possible in Dutch SCVs, 124
overrides Information Structure, 124
role of frequency, 124
French, 8, 176, 196
frozenness hierarchy, 123
ful-, 179
gaa-, 10, 176
separated from verb by particle, 201
gee-, 3, 4, 10, 34, 176, 178, 196
ggee- (Old English), 195
weakened to y-/i-, 196
generic meaning, 56
Georgian, 7
German, 3, 6, 10, 12, 24, 28, 47, 48, 52, 69,
73, 80, 121, 124, 176, 216, 220
Germanic, 9, 10, 176
giver-upperer, 216
Gothic, 10, 175, 200, 202, 222
grammatization, 8, 9, 10, 11, 18, 34, 38,
41, 47, 50, 51, 68, 69, 82, 92, 106, 122,
128, 152, 158, 176, 204
accusative case as diagnostic, 199
cline, 94, 95, 172, 174
cline incorporating non-projecting word, 93,
174
congruece versus abstract meanings, 191–2
definition of, 92
formal analysis, 133

of prepositional phrase, 136. See also
lexicalization
of preverb, 7
parameters (Lehmann), 176
started by semantic change, 194
uni-directionality, 94
Greek, 9
Ground, 40, 41, 42, 70, 72, 105, 109, 126, 180,
184
absence of, 42
definition, 125
defocused, 41, 46, 125
licensed by particle, 73
licensed by path particle, 74
object of the VPC, 42
pragmatically reconstructed, 41, 70

heavy NP shift, 36
Hindi, 67
Hittite, 10
holistic effect, 127
holistic meaning, 190, 193, 199
precedes grammaticalization of ICV, 194

huis-houden, 217

ICE. See Idiomatically Combining Expression
ICV. See Inseparable Complex Verbs
Idiomatically Combining Expression (ICE), 81
and passive formation, 81
and raising, 81
idiomaticity, 17, 80, 81
idiomatization, 14, 124
inchoative, 178
incorporation, 34, 51, 52, 54, 66, 68, 117, 130,
132, 217, 220
difference quasi-incorporation and
compounding, 66
quasi-incorporated non-projecting nouns,
67
quasi-incorporation, 66, 68, 80
is optional, 67
infinitive marker, 3, 4
Information Structure, 25, 49, 50, 52, 96, 97,
121, 123, 124, 129. See also particle
alternation
inheritance hierarchy. See also particle
alternation
Inseparable Complex Verbs
overlap with SCVs/VPCs, 177
Inseparable Complex Verbs (Dutch), 3, 51, 52
adjectival base, 181
Inseparable Complex Verbs (Dutch) (cont.)
as constructional idiom, 182
as part of grammaticalization cline, 92
behaviour of base verb different from SCVs, 57
developed template, 176
diachrony of new ICVs, 191–3
overlap with SCVs, 6, 89, 174
reasons for survival, 196–8
restrictions on finite use, 188–9
semantic difference with SCVs, 189–91
template, 182, 195
with resultative meaning, 178–9
with stative meaning, 185
Inseparable Complex Verbs (English), 6
competition from loan morphology, 176
loss boosted VPC, 196
loss of, 176, 195–6
Inseparable Complex Verbs (Gothic), 204
Inseparable Complex Verbs (Old English), 144
combines with particle, 146
differences with SCVs, 145
overlap with SCVs, 145
reasons for decline, 146
intonation, 123
kaart-lezen, 65
koffie-zetten, 65, 117
komedia-spelen, 65

landmark. See Ground
Latin, 8, 9, 10, 41, 176
Latinate stems in English, 176
layering, 106, 107
LCS. See Lexical Conceptual Structure
Lexical Conceptual Structure, 38, 69
determines SCV properties, 80
directly reflected in syntax, 44
of SCV with Aktionsart particle, 78
of SCV with modifying particle, 71
of SCV with path particle, 74, 75
of SCV with postposition, 75
of SCV with relator particle, 72
resultative, 38, 39, 69, 70, 204
lexical decomposition analysis, 51, 121, 131, 133, 137
allows syntax to be input to word formation, 134
Lexical Functional Grammar, 128
Lexical Integrity Principle, 35, 86
lexicalization, 14, 18, 34, 59, 68, 81, 83, 84, 85, 87, 136, 158, 161
of prepositional phrases, 40
lexicalization cline, 84
lexicon, 85, 220
in Minimalism, 137
light verb, 7, 18, 19, 39, 43, 44, 202
accommodates external argument, 43
acquisition, 22
locative, 10
locative alternation, 179
locator. See Ground
looker-upper, 216
loose, 135
l-syntax, 44
mast-klimmen, 217
maximal phrase. See optional projection
mee, 71
metaphorical extension, 17, 59, 78, 81, 102, 110, 124
metonymy, 17
Middle Dutch, 95, 176, 183, 194
Middle English, 51, 139, 143, 144, 163, 176, 195, 196
middle-formation, 216
minimal phrase. See optional projection
Minimalist Program, 53, 137
mis-, 178
modification. 81. See also particle
of nominal particles, 117
modifier, 103, 104, 111, 117, 122, 148
na, 71
niðer, 10, 144
nominalization, 216
non-projecting nouns. See incorporation
No-Phrase Constraint, 55, 56
noun. See also verb: denominal, incorporation
as particle
diachrony, 117–19
object, 102, 122, 123, 220
definiteness and position, 156
fully affected, 42, 106, 179, 180, 182, 190
loss of, 108, 109
negative and quantified, 156
Subject index

object (cont.)
of pre/postposition, 101, 102
pronominal, 123, 124, 125, 156, 165
redundant, 102
selected by particle. See unselected object
object attribute, 18
object complement, 18
object transfer, 42
of-, 195
ofer, 10, 144
off, 22, 39, 41, 125
Old Dutch, 95
Old English, 51, 128, 139, 140–4, 195, 196
Old High German, 95
Old Irish, 9, 10
Old Low Franconian, 95
Old Norse, 225
Old Saxon, 95
om, 13, 51
om-, 176, 183
semantics, 183–9
source, 179
omhoog, 25
on-, 195
onder-, 183
one’s way construction (Goldberg), 59, 83
ongean, 10
ont-, 174, 176, 178
onweg/aweg, 144
op, 15, 17, 20, 26, 27, 29, 54, 58, 62, 70, 82
open (English), 122, 135
open-snijden, 117
operator, 130, 131, 132
optional projection, 46–8, 50, 51, 52, 53, 62, 68, 80, 81, 128, 174. See also incorporation
and acquisition, 54, 129
evidence for non-projection, 60
in Old English, 150
non-projecting head adjoins to V, 128
non-projection as default, 54, 128, 135, 137
non-projection increases in Middle English, 152
of elements other than particles, 54, 63–5
out, 16, 22, 39, 41, 125, 144
out-, 176
over- (Dutch), 13, 39, 51, 74, 93, 107, 176, 183
potential for reanalysis, 107
quantificational meaning, 187
same function as be-, 180
semantics, 183–9
over (English), 125, 127, 176, 220
semantics compared to over- (Dutch), 187
particle, 3. See also optional projection,
adjunctive: as particle, productivity
abrupt change in position, 157
acquisition, 22, 50, 54
adverbial origin, 144
affects valency, 6, 16, 57, 73, 74
as a bare head, 34, 46, 50, 51, 53, 62, 66.
See also incorporation
as a non-projecting element, 11, 12, 14, 26, 29, 35, 37, 51, 52, 53–4, 62, 68, 80, 85, 87, 117, 128, 133, 137. See also optional projection, incorporation
as a non-projecting word, 83
as a phrase, 27, 46, 50, 51, 53, 60–3, 148, 151
as a reduced prepositional phrase, 40, 126
as fixed slot in constructional idiom, 53, 83, 133
as intransitive element, 40, 46
as intransitive preposition, 45
as modifier, 52, 69, 70–2
as periphrastic derivation, 183, 224
as relator, 52, 72–6, 127
correlates with word order, 127
difference orienting and path, 75
orienting, 72
path, 72, 73, 75
complex predicate analysis, 20
complex predicate characteristics, 20, 36.
See also Small Clause
complex predicate origin, 18, 34, 36, 47, 69, 94, 144, 152
contrasted with prepositional phrase, 28, 46, 125
copular relationship with object, 20, 21, 62, 76, 149
determines behaviour SCV, 52
develops abstract meaning, 17, 38, 39, 94
different semantics OE and Dutch, 148
differs from prefix, 145
expresses endpoint, 38. See also endstate
forces manner reading on the verb, 39
homophonous with preposition, 40, 125
lexical-aspectual properties, 53, 73, 79
particle (cont.)
licenses object, 70, 74. See unselected object
meaning conventionalized in SCV/PVC, 20
meaning same as predicate, 20
meaning unique to SCV/VPC, 17, 21, 59
modification, 25, 29, 34, 53, 54, 62, 65, 148
modification in Middle English, 151
modification restrictions explained by optional projection, 29
morphosyntactic status in Middle English, 150–3
morphosyntactic status in Old English, 147–50
polysemous, 67, 83, 135
position related to SOV/SVO, 157
position related to SOV/SVO word order, 51
postposition origin, 101
postverbal, 139, 142, 144, 152, 153, 155, 161
preverbal, 142, 144, 153, 223
resembles complex predicate, 18, 94
semantic contribution even if abstract, 58, 59
semantics differ from complex predicate, 40
separability as a brake on grammaticalization, 121
separated by auxiliary. See verb raising
separated by auxiliary (Old English), 147
separated by infinitival marker (Dutch), 3, 34, 50, 60, 64
separated by infinitival marker (German), 4
separated by infinitival marker (Old English), 147
separated by negation (Old English), 147
separated by perfective prefix, 3, 34, 50, 60, 64
separated by stranded preposition, 147
separated from verb (English). See particle alternation, particle movement
stranded by verb movement (Middle English), 163, 164, 166
stranded by verb movement (Old English), 142
stranded by Verb Second, 1, 2, 6, 15, 34, 50, 52, 60, 64, 81, 122
stranded by Verb Second (Old English), 147
stranded by Verb Second problematic, 217
stress pattern, 3, 22, 34, 145, 216
violates RHR (English), 5, 16, 122
with Aktionsart meaning, 52, 76–9
with conventionalized abstract meaning, 59, 71, 77, 78, 89
with implicit Figure, 42, 126
with implicit Ground, 42, 125, 126, 160
with non-resultative meaning, 46
with non-transparent meaning in Middle English, 151
with resultative meaning, 46, 47, 69–70
always with object, 70
with resultative semantics, 149
particle alternation, 4, 5, 16, 29–31, 35, 48, 49, 51, 122. See also freezing
and information structure, 122–5
correlates with meaning, 22
does not correlate with transparent meaning, 161
impact of prescriptive rule, 217
in Middle English, 159
no heaviness requirement for object, 37
role of frequency, 49, 122, 160
syntactic analysis V-NP-Prt, 131
syntactic analysis V-Prt-NP, 130–1
triggers, 135
V-NP-Prt as default, 36–7
V-Prt-NP and V-NP-Prt both derived, 45, 137
V-Prt-NP as default, 35–6, 49
particle movement, 26, 45
triggers, 36, 37, 45, 49, 50, 121
particle order. See word order options
Particle Verb Combination (English). See particle
path, 37, 38, 39, 41, 42, 75, 101, 103, 105, 107, 144, 152, 183, 189
more likely to grammaticalize, 40
perfective prefix. See ge-, ga-
phrasal verb. See Verb Particle Combination (English)
pied piping, 51
pointer-outerer, 216
polysemy, 194
postposition, 75, 94, 100, 101, 102, 105, 107, 108, 111, 112–16
as diachronic source for particle, 101
complement reanalysed as indirect object, 110
postposition (cont.)
difference with SCV, 107
similarities with path particle, 75
PPCEME, 154, 214, 224, 232
PPCME2, 153, 214, 221, 233
predicate order. See word order options
prefix, 69, 92, 121, 144. See also Inseparable Complex Verb
adjectival origin, 176
affects valency, 4, 6, 57, 177
as aspect marker, 175
be- versus ver-, 181
be- versus vol-, 181
bleaching of, 146
conflict resultative meaning and stress, 203
contrasted with particle, 175
COVERAGE meaning, 180, 199
develops into inflection, 176
diagnostics for morphological status, 184
differs from particle, 145
eyearly grammaticalization before Verb Second, 176
historical development, 175
historical development in Germanic, 204
historical development in Latin, 9
layers, 176
licenses Figure, 181
licenses Ground, 180, 184
loss of resultative meaning, 146
neoclassical, 176
not separated by Verb Second, 89
path semantics, 183
prepositional origin, 176
productive versus unproductive, 183
PROXIMITY meaning, 180, 199
resembles relator particle, 184
semantic difference path particle/path prefix, 189–91
separated from verb by bound morpheme, 175
stress pattern, 3
SURROUNDING meaning, 180, 199
valency changing property explained by predicate origin, 199
with non-resultative meaning, 183
prefix doubling, 146, 222. See also doubling due to loss of resultative meaning, 196
preposition, 8, 9, 10, 176. See particle adverbia l origin 41
as origin of particle, 102
intransitive, 126
licenses Ground, 100
not adjacent to verb, 100
shares characteristics with verb, 40
three subtypes, 126
transitive, 126
unaccusative, 126
preverb, 2, 7, 8, 202. See also tmesis, adposition, preposition, adverb. See particle
affects valency, 4
aspectual properties, 4, 10, 11
based on adjective, 2, 3
based on noun, 2, 3
develops into bound morpheme, 7
grammaticalization cline, 68
historical development, 8, 13
in Indo-European, 7, 8
independent status of, 9, 10
loses head status, 12
proclitic character of, 9
separated by perfective prefix, 10
stress pattern, 9
privative, 178
Processing Hypothesis, 123
productivity, 11, 17, 39, 53, 56, 59, 68, 82, 85, 133, 176
nominal particle not productive, 117
of adjectives as particles, 119
of VPC in word formation, 134
restrictions on, 57
Projection Principle, 16, 58
pronoun
as enclitic, 9
putter-offerer, 134
quasi-incorporation. See incorporation
reanalysis, 41, 42, 46, 48, 101, 107
as loss of structure, 94, 98
effect on LCS, 105
generalized schema, 104
of adjacent element, 51, 93, 96
of SCVs (Dutch), 104–12
scenario orienting particle, 108
trigger of, 48
referentiality, 47, 56
reflexive, 180, 186, 220
relativization, 103
resultatives, 24, 46, 47, 52, 60, 69, 96, 126, 174, 178, 181, 216, 220. See also
particle, complex predicate

retriplication, 134
reversative, 178, 182
Right-hand Head Rule (RHR), 5, 46, 48, 122
Romance, 9
rond, 112
ruzie-maken, 65

Sanskrit, 8, 9
satellite-framed languages, 219
schoon-maken, 117
scrambling, 28, 97, 103, 221, 223
SCV. See Separable Complex Verbs
secondary predicate, 14, 18, 19, 20, 36, 38, 61, 128, 152
licenses object, 20
semantic bleaching, 177, 184, 193, 204.
   See also particle: develops abstract
   meaning
semelfactives, 79
Separable Complex Verbs (Dutch), 2, 51, 52, 217. See also constructional idiom,
   complex event
acquisition, 22
always transitive or unaccusative, 70
and passivization, 82
and word formation, 4, 15, 55
as compositional idioms, 24
as constructional idioms, 67
as lexical units, 4, 14, 15
as partly lexicalized phrase, 53, 83, 85
as reanalysis of V-PP, 104
as syntactic units, 18, 60
   not invalidated by category-changing
   ability, 56
   not invalidated by idiomatic meanings,
   58, 59
   not invalidated by word formation facts,
   56
characteristic SCV syntax, 117, 118. See
   also aan het construction, particle
   alternation
consisting of noun and verb, 65, 89, 117
consisting of verb and adjective, 63, 89,
118
contrasted with VPC (English), 6, 51, 52,
80, 121, 122, 124, 129
denote institutionalized activity, 118
diachrony, 112
diachrony of Aktionsart (continuative)
   SCVs, 102–4
diachrony of modifier SCVs, 97–8
diachrony of orienting SCVs, 100–2
diachrony of path SCVs, 98–100
diachrony of resultative SCVs, 96–7
formation of, 88
lexical and morphological properties
determined by inheritance, 88
lexicalization cline, 84
mapping syntax and semantics, 79–80
meaning not predictable, 4, 15, 17, 58
more productive than ICEs, 82
paradox of, 4, 5, 14, 18, 68
reanalysed as transitive, 105, 106
reasons for survival, 196–8
SCV formation similar to word formation,
85
similarities with ICE, 82
solution to paradox, 86
syntactic difference with complex predicate,
83
syntactic structure, 67, 68
template, 87, 89, 94, 105
unaccusative, 105
unergative, 76, 77, 78
Separable Complex Verb (Gothic), 10
Separable Complex Verbs (Old English), 144
short, 135
Slavic, 187
Small Clause, 19, 36, 37, 45
sorter-outer, 134, 216
stof-zuigen, 118
stress pattern, 202. See also particle, prefix,
   preverb
   conflicting, 198
   shared by particle and predicate, 20
   structural economy, 129, 135
Structural Economy Principle, 54, 129, 135,
137, 147
Swedish, 22, 53, 128
Syntact-Information Structure interface
   constraint, 129, 137
   te, 3, 34
tegemoet, 34
tegoed, 34
telicity, 4, 20, 38, 62, 73, 74, 77
template. See constructional idiom
terecht, 34
terug, 34
tevergeefs, 34
tevreden, 34
theme, 124, 126, 131, 132, 219, 220
through, 127, 220
þurh-, 195
tidier-upper, 134
tmesis, 7, 8, 9, 216
to, 10, 144, 225
  particle or preposition?, 168
to-, 178, 195, 196
  source, 225
toe, 78, 101, 102
  potential for reanalysis, 108, 109
topic, 124
topicalization, 23, 24, 25, 26, 27, 53, 54, 62, 81, 148, 151
  restrictions accounted for by optional projection, 28
  semantic/pragmatic restriction on, 25
  structural restrictions on, 26
t transparency, 17
type coercion, 39
uit, 29, 62, 82
under-, 176
underspecified meaning, 135, 221
unidirectionality hypothesis (Haspelmath), 194
univerbation, 9, 34, 92
Universal Base Hypothesis (Kayne), 224
unselected object, 16, 20, 21, 36, 58, 77, 133, 199, 216
up, 10, 16, 17, 22, 26, 39, 41, 125, 144, 163, 223
up-, 176
up(p), 144
us-, 222
us-/uz-, 202
ut, 10, 41, 144, 145
valency, 4, 6, 7, 16, 36, 57, 68, 79, 111
ver-, 174, 176, 177, 178, 200
  affects valency, 182
  source, 181
verb. See valency
dejectival, 39, 56, 89, 177, 181
denominal, 39, 56, 89, 177
ditransitive, 43
  expresses instrument, 19, 38
expresses manner, 19, 38, 70
intransitive, 77
manner of motion, 38
no independent existence outside ICV, 179
no independent existence outside VPC, 39
proclitic character of, 9
transitive, 38, 39, 70, 74, 77
unaccusative, 38, 42, 131, 166, 167
unergative, 38, 39, 70, 74, 199
verb cluster. See verb raising
verb movement, 144, 153, 161. See also Verb
  Second
declines in eModE, 139, 168, 169–71
  in Gothic, 225
  intervening material as diagnostic, 163–8, 169–71
  loss of, 139
Verb Particle Combination (English), 2, 42, 46, 47, 48, 50. See also lexical
decomposition analysis, complex event
  acquisition, 22
  and word formation, 15, 34, 48, 122, 133–4
  as a constructional template, 12
  as a partly lexicalized phrase, 133
  as a syntactic unit
    not invalidated by word formation facts, 134
  as constructional idiom, 133
  as lexical unit, 5, 14, 16, 22, 35, 137
  as syntactic unit, 15, 16, 18, 22, 137
  consisting of verb and adjective, 135
  contrasted with Dutch SCVs, 4, 5, 6, 51, 52, 69, 121, 122, 124, 126, 129
diachrony of, 12
  emergence of template, 172
  forces manner reading on the verb, 39
  intransitive, 132
  mapping syntax and semantics, 127–8
  meaning not predictable, 17
  meaning transparent in OE, 51
  non-resultative, 127, 132
  paradox of, 5, 14, 18, 48
  semantics of, 125–8
  solution to paradox, 137
  transitive, 123, 131
  unaccusative, 131
  unergative, 132
verb raising, 7, 34, 35, 48, 50, 60, 61, 62, 65, 66, 67, 81
Subject index

Verb Second, 15, 56, 57, 60, 64, 89, 121, 124, 198, 221, See verb movement, V-to-C
movement V-to-I movement
  as watershed, 204
  in Gothic, 203
  loss of, 2, 6, 12, 49
verbal inflection, 57
verb-framed languages, 219
vol-, 179
voll-, 179
voor, 55, 71
voor-, 183
VP
  head-final, 157
  head-initial, 157
VP shell, 130
VPC. See Verb Particle Combination
VP-focus, 27
VP-shell (Larson), 43
V-to-C movement, 142, 143, 161, 163, 167
V-to-I movement, 142, 143, 144, 153, 165
  loss of, 161, 168

Wackernagel effect, 10
Wackernagel position, 201
washer-upper, 134
West Germanic, 10, 11, 14
word order
  loss of OV order (English), 143
  loss of SOV in Middle English, 153, 155
  of direct and indirect object, 109
  Old English, 144

particle as diagnostic, 157, 163
SOV, 2, 5, 6, 12, 51, 52, 157, 198, 203, 219
SOV to SVO, 51
SOV to SVO gradual development, 157
SOV/SVO in Middle Dutch, 95
SVO, 5, 12, 51, 122, 133, 157, 219
SVO with verb movement, 163
verse versus prose, 156
West-Midlands versus South-East, 156
word order options, 48, 49, 121, 137. See aan
  het construction, verb raising. See also
  particle alternation
  and modification, 34
  correlates with degree grammaticalization
    (Dutch), 31–4
  correlates with degree grammaticalization
    (English), 29–34
  English versus Dutch, 50
  no clear trigger (Dutch), 50
  object stays in situ, 45
  particle stays in situ, 45
  SOV/SVO in Old English, 139

YCOE, 153, 214, 215, 221
ymb-, 195
  source, 179
zze-zeilen, 118
zer-
  source, 225
zu, 4
  particle, 73