

Complex Predicates in Dutch

Synchrony and Diachrony

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VRIJE UNIVERSITEIT

Complex Predicates in Dutch

Synchrony and Diachrony

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door

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geboren te Doetinchem

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Part I

Introduction and background assumptions

Chapter 1

Introduction

1.1 Complex predicates and complex verbs

Klein and Visscher (1996: 83-84) notice in their *Handboek Verzorgd Nederlands* ('Handbook Polished Dutch') that the two parts of the combination *opbellen* 'to call up' are written together, as one word, in a sentence such as (1)a, but that these parts occur separately in a sentence such as (1)b.

- (1) a. Karel zei, dat Jan Marie *opbelde*.
Charles said, that John Mary up-ringed
'Charles said that John called up Mary.'
- b. Jan *belde* Marie *op*.
John ringed Mary up
'John called up Mary.'

Since words are not separable in general, the separability of combinations such as *opbellen* 'to call up', which are usually referred to as words (verbs), represents an intriguing property. Other examples of such separable combinations given by Klein and Visscher are *weg-fietsen* 'lit. away-bike, to bike away', *over-halen* 'lit. over-take, to persuade', and *terug-geven* 'lit. back-give, to give back'. Klein and Visscher note that there are also many cases in which language users might doubt whether or not to write such combinations together. To illustrate this, they give the example in (2).

- (2) a. Marianne vertelde, dat Sander zo mooi kon *piano spelen*.
Marianne told, that Sander so beautifully could piano play
- b. Marianne vertelde, dat Sander zo mooi kon *pianospielen*.
Marianne told, that Sander so beautifully could piano-play
Both meaning 'Marianne told that Sander could play the piano so well.'

Piano and *spelen* are written apart in (2)a, but are written together in (2)b. Morphological units, including compounds, are written together in Dutch (e.g. *huisdeur* 'lit. house-door, front door', *eetkamer* 'lit. eat-room, dining room'), but phrases are not (e.g. *kleine teen* 'lit. little toe, little toe', *zwarte doos* 'lit. black box, flight recorder'). The orthography in (2), then, suggests that *piano* and *spelen* form a phrase in (2)a, but form a word (compound) in (2)b. Semantically, however, the two sentences appear to be identical.

Another property of the combination *piano-spelen* is that it is separable. This is illustrated in (3).

- (3) Sander *speelt zo mooi piano*.
 Sander plays so beautifully piano
 'Sander plays the piano so well.'

The separability of the combination *piano-spelen* suggests that it is a phrase instead of a word. This, in turn, suggests that such combinations should be written apart. But as Klein and Visscher point out, most people will prefer to write the two words *piano* and *spelen* together, as in (2)b. This preference might change, however, for related combinations such as *slagwerk spelen* 'lit. drums-play, to play the drums'. Klein and Visscher (1996: 84) notice that these issues have not been well-determined so far.

The uncertainty regarding combinations such as *piano-spelen* 'to play the piano' does not only affect laymen, but also linguists, the structural status of these combinations having been the subject of a long-standing linguistic debate. The central question in this debate is whether combinations such as *piano-spelen* 'to play the piano', but also combinations such as *op-bellen* 'to call up', are words or phrases. In this study I will shed light on the various issues involved in this debate and provide an answer to this question.

Combinations such as *op-bellen* 'to call up' and *piano-spelen* 'to play the piano' are classified among the "complex predicates" in the linguistic literature. The literature on complex predicates is immense and discusses a bewildering variety of phenomena, occurring in typologically diverging languages (e.g. Ackerman and Webelhuth 1998 on Hungarian and German, Alsina 1996, 1997 on Chicheŵa and Catalan, Butt 1995 on Urdu, Frank 1996 on French and Italian, Harris 2003 on the Caucasian languages Georgian and Udi, Lüdeling 2001 and Zeller 2001 on German, Neeleman 1994 on Dutch, and Schulze-Berndt 2000, 2003 on the Australian language Jaminjung). Phenomena that fall under the notion of "complex predication" include causative constructions, permissive constructions, applicative constructions, serial verb constructions, constructions resulting from object incorporation, and phrasal verb constructions.¹ It is the last of these construction types that I will focus on in this study.

Definitions of the notion "complex predicate" are not easily found in the literature; this notion seems to be supposed to be clear in general. In the literature on non-Germanic languages it often refers to constructions with two or more verbs that share some of their arguments, such as constructions of a causative verb with an embedded lexical verb or constructions of two or more serialised verbs. In Austronesian and Amerindian languages, on the other hand, we see complex predicates with incorporated nouns. These complex predicates do not consist of two verbs, but consist of a verb and a noun, just like Dutch combinations such as *piano-spelen* 'lit. piano-play, to play the piano'. Both types of complex predicate consist of two predicates, but in the latter case only one of these two predicates is verbal. The same holds for Dutch combinations like *op-bellen* 'to call up', *in-lopen* (lit. in-walk)

¹ By "constructions" I do not refer to the specific use of this term in the Construction Grammar framework, but to its general use, that is, to a linguistic item, be it a one-word or a multiword expression. The specific Construction Grammar use will be relevant in chapter 8 of this book.

in *de schoenen inlopen* 'to wear in the shoes', and *uit-klappen* (lit. out-clap) in *het tafeltje uitklappen* 'to fold out the table'. These combinations belong to the most productive class of complex predicates in Germanic; that of the so-called phrasal verbs. Phrasal verbs consist of a verb and a non-verbal predicate both of which bring in their argument(s). As such, phrasal verbs fall under the definition of complex predicates given in Butt (1997: 108), which is copied in (4).

(4) Definition of Complex Predicates:

- The argument structure is complex (two or more semantic heads contribute arguments).
- The grammatical functional structure is that of a simple predicate. It is *flat*: there is only one subject, one object, etc.
- The phrase structure may be either simple or complex (complex predicates may, for instance, be expressed by a single, multimorphemic word or by a phrase, CB). It does not necessarily determine the status of a complex predicate.

The definition in (4) implies that a complex argument structure (projecting a complex semantic structure) may map to the phrase structure in various ways. The different mappings between the argument structure and the phrase structure are nicely illustrated by the two types of causative construction discussed in Alsina (1997). Alsina compares the causative construction in Chicheŵa (a Bantu language) with that in Catalan (a Romance language). Whereas the causative construction in Chicheŵa is expressed by a single verb consisting of a causative affix and a lexical verb stem, that in Catalan is expressed by a combination of two verbs: a causative verb and a lexical verb. This is illustrated in the examples in (5), taken from Alsina (1997: 209, 216, in the glosses of the Chicheŵa examples, the roman numbers refer to gender classes, S = subject marker, PA = past, PR = present, FV = final vowel).

- (5) a. Chicheŵa causative
- | | | | |
|---|------------------------|---------------|-------------------|
| <i>Njõvu</i> | <i>i-na-sék-éts-a</i> | <i>af̥si.</i> | |
| IX elephant | IX S-PA-laugh-CAUS-FV | II hyenas | |
| 'The elephant made the hyenas laugh.' | | | |
| <i>Ml̥imi</i> | <i>a-ku-lémb-éts-a</i> | <i>mkángó</i> | <i>ndakatũlo.</i> |
| I farmer | I S-PR-write-CAUS-FV | III lion | IX poem |
| 'The farmer is making the lion write the poem.' | | | |
- b. Catalan causative
- | | | | |
|--|-------------|-----------------|--------------------|
| <i>L'elefant</i> | <i>fa</i> | <i>riure</i> | <i>les hienes.</i> |
| the elephant | makes laugh | | the hyenas |
| 'The elephant makes the hyenas laugh.' | | | |
| <i>Els pagesos</i> | <i>fan</i> | <i>escriure</i> | <i>un poema</i> |
| the farmers | make write | a poem | to-the elf |
| 'The farmers are making the elf write a poem.' | | | |

Alsina illustrates that both types of causative construction have the same, complex argument structure, expressing a causative predicate and another predicate, but that these constructions differ at the level of phrase structure (constituent structure, c-structure). A comparison of these examples thus shows a non-isomorphic, one-to-many mapping from the argument structure to the constituent structure, which can

be accounted for by assuming that these two levels of representation are (at least partly) independent of one another.

The definition of complex predicates in (4) and the discussion of (5) illustrate that the modifier "complex" in the term "complex predicates" refers to the argument structure of the predicate, which is projected from the (also complex) semantic structure (see section 2.2.1 for more on the interpretation of the term "argument structure" in Butt 1997). Crucially, it does not make any claims about the morphosyntactic structure of the predicate in question, which can be either morphological or phrasal.²

This study will focus on two specific types of complex predicate in Dutch that also occur in other Germanic languages such as German and Frisian: the Separable Complex Verbs (SCVs, also called particle verbs, which can be said to form a subclass of the phrasal verbs) and the Inseparable Complex Verbs (ICVs, forming a subclass of prefixed verbs). Both types of complex predicate may consist of a verb and a non-verbal element that corresponds to a preposition and/or postposition. Both types of complex predicate may furthermore contain two predicative heads that contribute their arguments (the verb and the particle/prefix), but this is not necessarily the case, as I will show shortly.

Examples of the two types of complex predicate are given in (6)-(7), (6) containing an SCV and (7) containing an ICV.³

- (6) a. dat Jan de informatie *opzoekt*
that John the information up-searches
'that John looks up the information'
- b. Jan *zoekt* de informatie *op*.
John searches the information up
'John looks up the information.'
- (7) a. dat Jan het huis *doorzoekt* op wapens
that John the house through-searches on weapons
'that John searches the house for weapons'
- b. Jan *doorzoekt* het huis op wapens.
John through-searches the house on weapons
'John searches the house for weapons.'

The examples in (6)-(7) illustrate that the preverbal element of an SCV (the particle, which is a separable preverb) is separated from the verb by verb second movement ((6)b), but that the preverbal element of an ICV (i.e. the prefix, which is an

² Others, however, use the term "complex predicate" only to refer to multi-morphemic verbal predicates that do not behave as single grammatical words, distinguishing these predicates from "complex verbs", that is, from multi-morphemic verbal predicates that do behave as single grammatical words (e.g. Booij and van Kemenade 2003).

³ Many examples in this book give subordinate clauses (beginning with the complementiser *dat* 'that') in order to show the allegedly 'basic' OV word order of Dutch, in which the particle and the verb appear adjacently in sentence-final position (cf. (6)a). In main clauses, on the other hand, the verb is in second position (V2), the particle here, too, being in sentence-final position (cf. (6)b).

inseparable preverb) is moved along with the verb to the verb second position ((7)b). This difference in separability between SCVs and ICVs corresponds to a difference in their stress patterns: whereas main stress is on the preverb in SCVs, it is on the verb in ICVs. This is illustrated in (8).⁴

- (8) a. SCV: *ópzoeken*
 b. ICV: *doorzóeken*

The correlation between the stress pattern and the separability of these complex predicates with preverbs that correspond to prepositions and/or postpositions is maximal (100%): SCV preverbs always bear stress and ICV preverbs never bear stress (apparent exceptions to this generalisation will be discussed in chapter 6).

In addition to being separated from the verb by verb second movement (V2), SCV preverbs are separated from the verb by the past participle marker *ge-* ((9)a), by the infinitival marker *te* ((9)b), and by auxiliaries such as the perfect auxiliary *hebben* 'have' ((9)a) and the modal auxiliary *willen* 'want' ((9)c). Conversely, none of these elements separates an ICV preverb from the verbal base. This is illustrated in (10).

- (9) a. dat Jan de informatie ...
 that John the information ...
 ... *ópgezocht heeft* / *óp heeft gezocht* / *heeft ópgezocht*
 ... up-ge-searched has / up has ge-searched / has up-ge-searched
 'that John looked up the information'
- b. dat Jan de informatie probeerde *óp te zoeken* / **te ópzoeken*
 John the information tried up to search / to up-search
 'that John tried to look up the information'
- c. dat Jan de informatie ...
 that John the information ...
 ... *ópzoeken wilde* / *óp wilde zoeken* / *wilde ópzoeken*
 ... up-search wanted / up wanted search / wanted up-search
 'that John wanted to look up the information'
- (10) a. dat Jan het huis ...
 that John the house ...
 ... *doorzócht heeft* / **door heeft gezocht* / *heeft doorzócht* ...
 ... through-searched has / through has ge-searched / has through-searched ...
 ... op wapens
 ... on weapons
 'that John searched the house for weapons'
- b. dat Jan het huis probeerde **door te zóeken* / *te doorzóeken* op wapens
 that John the house tried through to search / to through-search on weapons
 'that John tried to search the house for weapons'

⁴ As shown in these examples, I indicate the stress pattern in SCVs and ICVs by putting accents on the stressed syllables. I will continue to do so in the remainder of this book, but only in contexts where this seems necessary in order to avoid confusion with respect to the separability of the predicate in question.

- c. dat Jan het huis ...
 that John the house ...
 ... *doorzöeken wilde* / **door wilde zöeken* / *wilde doorzöeken* ...
 ... through-search wanted / through wanted search / wanted through-search ...
 ... op wapens
 ... on weapons
 'that John wanted to search the house for weapons'

The examples in (7) and (10) illustrate that ICVs have word status; they behave like normally prefixed verbs, and may thus be called complex *verbs*. We will see, however, that the term "complex verb" is actually not quite right to refer to an SCV, since SCVs are not words, but are phrases. The reason for these complex predicates to be called separable complex *verbs* (SCVs) is that they are formally similar to the inseparable complex verbs: both types of complex predicate consist of a non-verbal element corresponding to a preposition/postposition and a verb that are according to Dutch orthography written together (i.e. as one word) when occurring adjacently.

To refer to an SCV, then, the term "complex predicate" seems to be more appropriate than the term "complex verb". I will show, however, that strictly speaking not all SCVs are complex predicates according to the definition of Butt (1997), given in (4). This is because not all particles qualify as predicative heads, that is, not all particles bring in arguments. An example of an SCV construction with a particle that does not bring in any argument is given in (11) (SCV constructions like (11) will be discussed in chapter 5).

- (11) *de groenten voorkoken*
 the vegetables for-cook⁵
 'to cook the vegetables beforehand, to precook the vegetables'

The verb and the direct object NP in (11) together express an event (*de groenten koken* 'to cook the vegetables') that appears to be modified by the referent of the particle *voor* 'before, fore': '[to cook the vegetables] beforehand'. This particle, then, seems to be functionally similar to an adverbial modifier. Like adverbial modifiers, *voor* in *voorkoken* does not license any argument, and this means that it is not a predicative head. The SCV *voorkoken*, then, contains only one predicative head (the verb *koken*), so that strictly speaking this SCV does not count as a complex predicate according to Butt's (1997) definition. Morphosyntactically, however, the SCV *voorkoken* is complex (as is any other SCV); it consists of more than one morpheme. Although not all SCVs contain two predicative heads, I will refer to SCVs in general as complex predicates in contexts where their semantic and argument-structural complexity is not of central concern.

Some ICVs seem to be semantically similar to SCVs like *voorkoken*. The prefix *over-* in the ICV *overvrägen* 'to ask too much', for instance, modifies the event denoted by the verb *vragen* 'to ask', and does not bring in any argument. This ICV, then, is a morphologically complex verb, but does not express a complex

⁵ I gloss the particle *voor* with 'for' in all examples in this book, although in some cases the gloss 'fore' might seem more appropriate. See chapter 5, note 8 for the motivation behind this choice.

predicate in the sense of Butt (1997) either. Nevertheless, I will refer to ICVs, too, as complex predicates in contexts where this will not give rise to confusion.

This book will mainly focus on SCVs with preverbs that formally correspond to prepositions and/or postpositions such as *op* 'up', *in* 'in(to)', and *door* 'through'. There are also some productive categories of SCVs with particles that correspond to an adjective or an adverb. Examples are *openbreken* 'to break open', *openschoppen* 'to kick open', *wegbrengen* 'to take away', and *weggaan* 'to go away'.⁶ Furthermore, there are SCVs with a left part that corresponds to a noun, such as *koffiedrinken* 'to drink coffee' and *ademhalen* 'to breathe'. The nouns in such constructions are structurally and semantically different from direct object NPs, and we will see that these nouns can be analysed as nominal particles (see chapter 4). The formation of SCVs with nominal particles, however, is not productive across the board (Booij 2002a: 221-222).

Apparent SCVs with nominal and adjectival particles are N-V/A-V combinations such as *mastklimmen* 'mast climbing', *zeezeilen* 'sea sailing', and *hardlopen* 'fast-running' (see also Booij 2002a: 222-224). Main stress is on the left-hand part in these combinations, as is the case in SCVs: *mástklimmen*, *zézeilen*, *hárdlopen*. The examples in (12) illustrate that subordinate clauses with the finite forms of these combinations are fine ((12)a), but main clauses in which the finite forms of these combinations are separated by V2 are generally unacceptable ((12)b).

- (12) a. dat hij de laatste tijd veel zeezeilt
 that he the last time much sea-sails
 'that he sea-sails a lot lately'
 b. *Hij zeilt veel zee de laatste tijd.
 he sails much sea the last time
 'He sea-sails a lot lately.'

Despite the fact that the preverbal element in combinations such as *zeezeilen* is stressed, such combinations thus appear to be inseparable. These combinations, then, do not behave like SCVs.

One could hypothesise that combinations such as *zeezeilen* are words, that is, N-V/A-V compounds. A compound analysis would also account for the stress pattern of these combinations, since in compounds stress is generally on the left (i.e. non-head) constituent. There is, however, an important problem for a compound analysis of these combinations: main clauses in which their finite forms are *not* separated are generally also unacceptable (cf. (7)b).⁷ This is illustrated in (12)c.

⁶ The adjectives and adverbs occurring as particles in these examples may also be used as syntactically independent resultative predicates (resultative phrases). We will see that these different uses correspond to different structural and semantic properties, particles being structurally and semantically different from resultative phrases (chapter 3 and chapter 4).

⁷ N-V/A-V combinations belonging to this category may exhibit variation regarding the possibility of occurring finitely in main clauses (be it in separated or non-separated form), both among different combinations and among speakers.

- (12) c. *Hij *zeezeilt* veel de laatste tijd.
 he sea-sails much the last time
 'He sea-sails a lot lately.'

A comparison of (12)a with (12)b-c illustrates that it is the separation/non-separation caused by V2 movement, and not the finiteness, that causes the trouble in (12)b-c. This trouble leads speakers to avoid using finite forms of combinations such as *zeezeilen* in main clauses and to use, for instance, *aan het*-progressives instead. An example of a construction with an *aan het*-progressive is given in (12)d.

- (12) d. Hij is veel aan het *zeezeilen* de laatste tijd.
 he is much at the sea sail the last time
 'He sea-sails a lot lately.'

Combinations such as *zeezeilen*, then, behave exceptionally in both an SCV analysis and an ICV analysis. This is why they will not be discussed any further in this book.

Both SCV preverbs and ICV preverbs may combine with nominal bases, and SCV preverbs may also combine with adjectival bases. Some examples of SCVs and ICVs with nominal and adjectival bases are given in (13).

- (13) a. SCV: *ópleuken* 'lit. up-nice, to liven up, to brighten up'
inpolderen 'lit. in-polder, to drain, to impolder'
 b. ICV: *omlijsten* 'lit. around-frame, to frame'
overbrúggen 'lit. over-bridge, to bridge'

We will see that preverbs perform similar functions in SCVs and ICVs with verbal bases and in SCVs and ICVs with non-verbal bases (see the chapters 5, 6, and 8).

It was noted above that this study focuses on SCVs with preverbs that correspond to prepositions and/or postpositions. The same holds for the ICVs discussed in this study. The term "ICV", then, refers to prefixed verbs with prefixes that correspond to prepositions and/or postpositions, and does in this study not refer to prefixed verbs with the prefixes *be-*, *ver-*, *ont-*, *er-*, *ge-*, *mis-*, *vol-*, and *her-*. Prefixed verbs with the prefixes *be-*, *ver-*, and *ont-* (e.g. *be-lopen* 'lit. *be*-walk, to walk (a road/a distance)', *ont-rollen* 'lit. *ont*-roll, to unroll', *ver-branden* 'lit. *ver*-burn, to burn down/up'), however, will be discussed in chapter 6.

1.2 A synchronic problem and a diachronic answer?

The examples in (7) and (10) above illustrate that Dutch ICVs behave like prefixed verbs, i.e. like morphologically complex words, their structure being [prefix- X^0]_V⁰. SCVs, however, do not behave like words, words not being separable in general. On the other hand, SCVs have many properties that are normally associated with words, such as their ability to participate in deverbal word formation and certain semantic properties (see the chapters 3 and 4). An investigation of the properties of SCVs suggests that they fall in between categories, sharing some of their properties with phrases and other properties with words. Similarly, particles resemble independent

projections (XPs) in some respects, but are more like derivational affixes in other respects.

This hybrid status of SCVs between words and phrases is reflected in the existing synchronic analyses of West-Germanic SCVs: both word analyses and phrasal analyses have been proposed for SCVs in the same languages. A word analysis of Dutch SCVs has been proposed by Neeleman (1994) and Neeleman and Weerman (1993), whereas phrasal analyses of Dutch SCVs have been given by, among others, Booij (1990, 2002a) and Hoekstra, Lansu, and Westerduin (1987). For German SCVs, a word analysis has been proposed by Stiebels (1996) and Stiebels and Wunderlich (1994), but phrasal analyses have been given by Lüdeling (2001), Müller (2002a), Toivonen (2003), and Zeller (2001). English SCVs are generally analysed as phrases (e.g. den Dikken 1995, Neeleman and Weerman 1993, Ramchand and Svenonius 2002).⁸ Toivonen (2003), however, claims that these SCVs form a word when occurring in the word order verb-particle-object (e.g. *to write down the number*) and form a phrase when occurring in the word order verb-object-particle (e.g. *to write the number down*). There are also linguists that have proposed different phrasal analyses for different types of SCV in one and the same language (e.g. Wurmbrand 2000 for German SCVs).

Haiden (*to appear*) shows that linguists using the same diagnostics to assess whether SCVs are words or phrases have come to different conclusions. This is generally a consequence of the fact that different linguists have studied different subsets of data; most linguists focus on only a few SCVs that do not constitute a representative subset.

The risks involved in investigating only a few SCVs appear from the following. Dutch has a small class of particles that may appear in modification, topicalisation, and copula constructions, and have a clearly resultative meaning. This is for instance the case with the particle *op* in *opeten* 'to eat up', which is modified in (14)a, topicalised in (14)b, and used in the copula construction in (14)c.

- (14) a. Hij at de soep helemaal *op*.
 he ate the soup completely up
 'He ate up the soup completely.'
- b. Maar *op* at hij de soep niet.
 but up ate he the soup not
 'But he did not eat up the soup.'
- c. De soep is *op*.
 the soup is up
 'The soup is eaten up/all gone.'

Particles that participate in all three of these constructions, however, appear to be rare. Nevertheless, some linguists have focused almost exclusively on these particles while investigating the properties of SCVs. This has led them to conclude that particles are basically syntactically and semantically identical to resultative phrases

⁸ For the sake of convenience I use the term "SCV" ("Separable Complex Verb") to refer to particle verbs in OV languages such as Dutch and German as well as to particle verbs in VO languages such as English and the Scandinavian languages (see chapter 9). The term "phrasal verb", however, actually seems more appropriate for particle verbs in VO languages.

such as *oranje* in *de fiets oranje verven* 'to paint the bike orange'. But the fact that the vast majority of (compositional) SCVs have particles that are unable to participate in any of the constructions in (14) suggests otherwise (see the chapters 4 and 5).

The foregoing discussion amounts to the question of what is a particle, and what is an SCV. This is what Anke Lüdeling (2001: 1) calls the "delimitation problem"; the problem of how SCVs can be distinguished from similar constructions. Lüdeling's answer to this question is that they cannot: "there is no set of properties that all those constructions that are commonly called particle verbs (i.e. SCVs, CB) possess but not other preverb-verb constructions" (Lüdeling 2001: 115).⁹ Lüdeling, then, claims that there is no distinct class of SCVs. It must be noted, however, that she focuses on a relatively small data set (see chapter 3). I will illustrate in chapter 5 that a more representative data set shows that SCVs exhibit distinctive syntactic behaviour. This suggests that SCVs indeed have a syntax of their own, which is different from that of combinations of a resultative phrase or a modifier phrase (adverbial phrase) and a verb.

The apparent dual status of West-Germanic SCVs provides us with the central research questions about SCVs in this study:

- 1) What is the synchronic morphosyntactic status of Dutch SCVs?
- 2) Can we classify these SCVs into categories with their own semantic and structural properties, and if we can, how should we analyse the semantic and structural properties of the SCVs belonging to these different categories?

The answers that will emerge from this study are the following: there are indeed different SCV types, but these SCV types only differ in terms of their semantic and argument-structural properties, and not in terms of their morphosyntactic structure. That is to say, all SCVs will appear to be phrases with a specific morphosyntactic structure.

We will see that the diachrony of SCVs sheds light on their synchronic properties, providing converging evidence for the synchronic claims made in this study. The central diachronic assumption is that the synchronically hybrid status of SCVs can be related to their diachrony: SCVs are assumed to represent an intermediate stage in the grammaticalisation of 'ordinary' phrases (that is, of combinations of syntactically independent elements) into morphologically complex words (ICVs). This assumption leads to the following diachronic research question:

- 3) What are the possible historical sources of SCVs and ICVs, and which factors play a role in the grammaticalisation of these source constructions into SCVs and ICVs?

It will be illustrated that various syntactically independent elements that may be adjacent to the verb, such as resultative phrases, modifier phrases, and postpositions, may grammaticalise into separable preverbs (particles).

⁹ Lüdeling (2001) uses the term "preverb-verb construction" to refer to XP-V combinations such as combinations of a resultative phrase or a modifier phrase and a verb.

As for ICVs, a discussion of their semantic properties will appear to shed light on their diachrony. I will show that only a subset of the SCVs may grammaticalise further into ICVs, which entails that only a subset of the separable preverbs may develop into inseparable preverbs (prefixes). I will furthermore show that various morphosyntactic, semantic, prosodic, and pragmatic factors play a role in the grammaticalisation of SCVs and ICVs.

In short, this book will discuss the semantics, the morphosyntax, and the diachrony of Dutch SCVs and ICVs.

1.3 Hypotheses, method, and a preview of the results

This section specifies my hypotheses, discusses the research method applied in this study, and presents an overview of the most important results.

Synchrony

The synchronic hypotheses for SCVs and ICVs are two-fold: those about the morphosyntactic structure of SCVs and ICVs and those about their semantic properties.

With regard to the morphosyntactic structure, ICVs can be analysed as words. For SCVs, I will claim that their separability argues for a phrasal analysis, and I will investigate whether such an analysis can also do justice to the other properties of SCVs.

A first glance at SCVs and ICVs suggests that their semantic properties are diverse. The synchronic semantic hypothesis will be that preverbs may perform various functions in the Lexical-Conceptual Structures (LCSs) of SCV/ICV constructions, and that preverbs performing different functions have different participant-licensing properties at LCS. These different participant-licensing properties are, in turn, expected to correspond to different argument-structural properties and different lexical-aspectual properties for the SCV/ICV constructions formed with these preverbs.

In order to verify the synchronic hypotheses I investigated the morphosyntactic and semantic properties of the SCVs and ICVs formed with the thirteen preverbs in (15).

- (15) *aan* 'at, to', *af* 'down, off', *door* 'through, on', *in* 'in(to)', *mee* 'along, with', *na* 'after, behind', *om* 'around, down', *onder* 'under, below', *op* 'up, on high', *over* 'over, across', *toe* 'at, to, closed', *uit* 'out (of)', *voor* '(be)fore, for'

The reasons for choosing this subset of preverbs are the following:

- *Af*, *in*, *op*, and *uit* form the highest number of SCVs.
- *Door*, *over*, and *om* are the only forms that are productively used in both SCVs and ICVs.
- *Aan* and *onder* productively form SCVs and their forms also occur in quite a few ICVs (although they are not productively used in ICVs).

- *Toe* and *mee* have a postpositional form instead of a prepositional form, which asks for a clarification.
- *Na* and *voor* appear to perform functions that are usually not ascribed to SCV preverbs.

The list of preverbs in (15), then, contains the most frequently occurring SCV preverbs, preverbs that occur productively in both SCVs and ICVs, and preverbs that appear to be remarkable in some respect or another. I assume that the SCVs and ICVs formed with these preverbs constitute a representative sample of the Modern Dutch preverb-verb combinations.¹⁰

The only productively used ICV preverbs are *door-* 'through', *om-* 'around', and *over-* 'over'. I investigated all ICVs formed with these prefixes as well as the (small set of) ICVs with the remaining, non-productively used ICV preverbs *aan-* 'at, to', *achter-* 'behind, after', *onder-* 'under, below', and *voor-* '(be)fore, fore'.

The Modern Dutch data are taken from a Dutch dictionary, the *Van Dale Handwoordenboek van Hedendaags Nederlands* ('Van Dale Concise Dictionary of Contemporary Dutch', 1996). The reason for using this dictionary is that it lists relatively many collocations and contexts of the SCV and ICV entries. Although SCVs and ICVs show compositionality and may be formed productively, they also have conventional, collocational, and other idiosyncratic properties, which is why they are listed in dictionaries (see the chapters 4, 5, and 6).

I examined the SCVs/ICVs formed with the thirteen preverbs in (15) for the properties listed in (16)a-h.

- (16) Properties of SCVs/ICVs investigated in this study:
- a. the function performed by the preverb's referent in the LCS of the SCV/ICV construction;
 - b. the participant-licensing properties of the preverb's referent in the LCS of the SCV/ICV construction;
 - c. the argument-structural properties of the SCV/ICV construction;
 - d. the lexical-aspectual properties of the SCV/ICV construction;
 - e. the lexical-semantic content of the preverb;
 - f. the possibility of topicalising the preverb;
 - g. the possibility of modifying the preverb;
 - h. the possibility of using the preverb in the copula construction.

¹⁰ There are four other particles that correspond to an adposition in Dutch: *achter* 'behind', *bij* 'at', *rond* 'around', and *tegen* 'against'. There are, furthermore, thirteen particles that correspond to an adverb, such as *neer* 'down', *terug* 'back', and *weg* 'away', and a few particles that correspond to a noun or an adjective (see 4.5, cf. Haeseryn et al. 1997: 609; Haeseryn et al. list more than thirteen adverbs that may combine with verbs, but these additional adverbs may not appear along with the verb in the verb cluster, which means that they do not qualify as particles, cf. 4.3.5).

Diachrony

The semantic differences between and among particles and prefixes led me to the assumption that semantically different preverbs are diachronically related to different phrases that may be adjacent to the verb. I thus hypothesise that various phrases that could show up left-adjacent to the verb in older stages of Dutch, such as resultative phrases and modifier phrases, have grammaticalised into particles, and that this has resulted in semantically different particle types. This hypothesis is in contrast with the general assumption, found in the literature, that all particles are grammaticalisations of resultative phrases.

The semantic differences between particles and prefixes led me to the hypothesis that only particles belonging to some of these particle types may grammaticalise further and become prefixes. Crucially, I claim that particles functioning as resultative predicates do generally not develop into prefixes, but remain separable. This, too, contrasts with claims found in the literature, according to which resultative phrases, particles, and prefixes represent different stages of one single grammaticalisation development.

In order to check the diachronic hypotheses I collected Middle Dutch data from texts on the *CD-Rom Middelnerlands* (1998). These data studies served to verify the two diachronic hypotheses described above: (1) various phrases that may show up left-adjacent to the verb have grammaticalised into particles, and (2) only a subset of the particles may grammaticalise further into prefixes. These data studies also served to investigate the factors influencing the grammaticalisation process whereby phrases develop into particles and particles develop into prefixes.

The results of the synchronic and diachronic data studies are reported in the chapters 4 through 8. I will now give a short preview of these results.

Synchrony

The particles of Modern Dutch SCVs turn out to be generally excluded from modification, topicalisation, and copula constructions. In this respect, particles differ from phrases that may be adjacent to the verb and may be semantically similar to particles, such as resultative phrases and modifier phrases. Similarly, SCVs appear to differ from combinations of, for instance, a resultative phrase and a verb: SCVs behave as syntactic units in certain respects. On the basis of these data I analyse SCVs as phrases that consist of a non-projecting word (the particle, being structurally smaller than an XP) and a verb. SCVs are thus claimed to be structurally smaller than 'ordinary' VPs or V-bars.

The uniform morphosyntactic properties of SCVs contrast sharply with their divergent semantic properties: particles may perform various functions in the LCS of the SCV construction (e.g. that of a resultative predicate or a modifier), exhibiting various participant-licensing properties, so that different SCV constructions may have different LCSs. These different LCSs correspond to different argument structures and to different lexical-aspectual structures. The divergent argument-structural and lexical-aspectual properties of SCV constructions, then, follow from the semantic properties of their constituent parts, and are not unpredictable.

The lexical-semantic content of a particle is often related to that of the corresponding preposition/postposition by metaphor, metonymy, or some other means of semantic extension. Particles generally express the same extended

meanings across many SCVs, and new SCVs in which particles express these meanings are formed productively. Even so, the meanings of most SCVs are not fully predictable; SCVs are conventionalised. It will be shown that these properties are accounted for by analysing SCVs as instantiations of phrasal lexical templates that generally contain a fixed particle slot and an open slot for the verb.

ICVs represent morphologically complex words. We will see that there is an interesting semantic difference between SCV preverbs and ICV preverbs: productively used ICV preverbs generally perform only one specific function at LCS, and this function is distinct from that of a resultative predicate. I will show that the argument-structural and lexical-aspectual properties of ICVs, too, follow from their semantic properties. I will furthermore show that ICV preverbs that perform the same function as SCV preverbs are clearly different from SCV preverbs in both semantic and structural respects.

On the basis of these results predictions were made about the semantic and structural factors that restrict the cooccurrence of prefixes, particles, and resultative phrases within a single VP. These predictions were verified against the data.

Diachrony

The historical data support the hypothesis that different phrases showing up left-adjacent to the verb in older stages of Dutch have grammaticalised into semantically different Modern Dutch particles. As such, these data provide an account of the divergent semantic properties of these particles. The data also conform to the hypothesis that only particles belonging to one of the semantic classes systematically develop further into prefixes, and contain examples of particles that appear to have undergone this development. This means that both steps in the diachrony of preverbs (that of phrases becoming particles and that of particles becoming prefixes) are attested in the corpus. The data suggest a diachronic picture according to which separate grammaticalisation developments are involved in the diachrony of preverbs, leading to SCVs/ICVs with different semantic, argument-structural, and lexical-aspectual properties.

To conclude, let me point out in what respects my study differs from other studies of West-Germanic SCVs and ICVs.

A large part of this study is devoted to the semantic properties of SCVs and ICVs, in contrast to what is the case in many other approaches. The reason for focusing on the semantics is that an initial glance at the data suggested intriguing differences among SCVs and between SCVs and ICVs in this respect. The morphosyntactic properties of SCVs, on the other hand, appeared to be less divergent and to differ from those of ICVs in a more straightforward way. It seems to me that a sensible choice for either a word analysis or a phrasal analysis of SCVs can only be made on the basis of a complete picture of both their semantic properties and their morphosyntactic properties.

A second difference between this study and most other analyses is that here the diachrony of SCVs and ICVs plays an important role. The reason for including the diachrony in the analysis is that it sheds light on the synchronically ambivalent behaviour of SCVs, which share some of their properties with words and other properties with phrases.

Another distinctive feature of my study is that, in comparison with other studies of SCVs and ICVs, it is based on a relatively large data set. This data set includes Modern Dutch SCVs with thirteen different particles, Modern Dutch ICVs, and Middle Dutch data.

1.4 Overview

This book is divided into three parts. The remainder of Part I discusses additional background issues. Chapter 2 focuses on the theoretical background, laying out my assumptions about the synchrony of the grammar and about grammaticalisation. Chapter 3 presents an overview of the existing analyses of the structural and semantic properties of SCVs in Dutch and other Germanic languages. This chapter also discusses the diachronic claims about SCVs and ICVs that have been made in the literature.

Part II, which consists of the chapters 4 through 8, presents the data and the analysis. Chapter 4 deals with the morphosyntactic and lexical properties of Modern Dutch SCVs, after which chapter 5 discusses their semantic properties. Chapter 6 is divided into two parts, the first of which discusses the semantic properties of Modern Dutch ICVs. The second part of chapter 6 presents additional support for the proposed analysis of the morphosyntactic and semantic properties of Modern Dutch SCVs and ICVs, discussing the possible and impossible cooccurrences of prefixes, particles, and resultative phrases within a single VP. The discussion of the Modern Dutch data in the chapters 4 through 6 leads to a refinement of the hypothesis about the diachrony of SCVs and ICVs. This hypothesis is discussed and checked against historical data in chapter 7. Chapter 8 presents my synchronic analysis of Dutch SCVs and the implications of this analysis for our assumptions about the grammar.

Part III, consisting of the chapters 9 and 10, presents some further implications. Chapter 9 discusses the generalisation of my synchronic analysis of Dutch SCVs to SCVs in other Germanic languages. This discussion leads to a hypothesis about the relationship between the particle types we find across different languages and the word order properties of these languages, for which I present some initial support. The last chapter, chapter 10, discusses some remaining issues and summarises the most important results of the study.

Chapter 2

Theoretical background

2.1 Introduction

This chapter discusses my theoretical assumptions. The first part of the chapter, section 2.2, focuses on the synchrony of language, laying out my assumptions about the architecture of the grammar. Section 2.3 discusses diachronic aspects of language, clarifying my assumptions about the phenomenon of grammaticalisation. The chapter concludes with a summary (section 2.4).

2.2 Synchrony: the architecture of the grammar

2.2.1 *The mapping between structure and function*

It was illustrated at the beginning of the previous chapter that complex predicates with a particular semantic content, such as causative predicates, may cross-linguistically be expressed in different ways. Causative predicates may, for instance, be expressed morphologically (by means of one, morphologically complex word) or syntactically (by means of a phrasal combination). Alsina (1996, 1997) shows that such data can be accounted for in the LFG framework, which posits separate levels of representation whose mapping is not necessarily one-to-one, but which are related to one another by principles of functional correspondence (also called linking principles or mapping principles, cf. Bresnan 2001). Because of these imperfect mappings, 'mismatches' between the different representational levels are expected to occur. Since such mismatches will appear to be relevant to the data discussed in this book, I will briefly illustrate their nature by looking, again, at the two types of causative construction discussed in Alsina (1997). First, however, I will discuss the levels of representation that are posited in LFG, which is the framework adopted in Alsina (1997).

The semantic properties of a construction are represented at s(ematic)-structure in LFG, which generally equals the structure called Lexical-Conceptual Structure (LCS) in other approaches. S-structure maps to a representational level called a(rgument)-structure, which, according to Bresnan (2001: 304), represents the event structure, including the predicate-argument relations between events and participants. A-structure also represents the syntactic type of the arguments and their hierarchical organisation (thematic hierarchy), which is necessary for the mapping to the syntactic structure. For Bresnan, then, a-structure is an interface between the

semantics and the syntax. For other researchers working within LFG, however, the semantic side of a-structure is more prominent, their a-structures approaching Jackendoff's (1990) Conceptual Structure (see below). This is also the case for Butt (1997), from which I took the definition of complex predicates given in chapter 1.

The syntactic properties of constructions are distributed among two levels in LFG: f(unctional)-structure, representing grammatical functions such as subject, object, and predicate (PRED) as well as case and agreement relations, and c(onstituent)-structure, representing (surface) phrase-structural properties such as syntactic category information, dominance relations, and linear precedence as represented in X-bar theory (cf. Bresnan 2001: 46-48, Toivonen 2003: 6-7). The final level is that of phonological structure (p-structure), which stands in correspondence with c-structure.

It was noted above that the representational levels are connected through principles of functional correspondence. The correspondence between a-structure and f-structure, for instance, is regulated by Lexical Mapping Theory (see Bresnan 2001, chapter 14), and that between f-structure and c-structure is regulated by "endocentric c-structure to f-structure mapping principles", which are summarised in Bresnan (2001: 119).

An important aspect of LFG is that the syntactic structures created are surface structures. This means that phenomena such as active/passive pairs and raising constructions are not accounted for derivationally, i.e. by postulating a deep structure, a surface structure, and movement operations that relate them. Instead, such phenomena are accounted for by the lexical properties of the items that make up the construction and by the correspondence principles between the different levels of structure.

Relating the various structural levels of LFG to the two types of causative construction, exemplified in (5) in chapter 1, leads to the following: both the morphological causative in Chicheŵa and the syntactic causative in Catalan have a complex s-structure, and these s-structures map to similar, also complex, a-structures. These a-structures, in turn, map to identical, but simple, f-structures, as the two types of causative construction both represent a simple clause, containing a single subject, a single direct object, and a predicate (PRED in f-structure, see below). The difference between the two types of causative construction is located at c-structure: the Chicheŵa causative is realised as a word (an X^0 -category), but the Catalan causative is realised as a syntactic combination (a phrase). What we see, then, is a one-to-many mapping between f-structure and c-structure.

Constructions may also show a many-to-one mapping between a-structure and f-structure. In both the Catalan causative and the Chicheŵa causative, a complex a-structure, representing two predicates, maps to a simple f-structure, representing a simple clause, with a single subject (Alsina shows convincingly that the causer is the only grammatical subject, and that the causee does not function as such).¹ The same type of f-structure, however, may correspond to a construction expressing a simple event, having a simple a-structure (and a simple s-structure). This means that both a-structures corresponding to simple events and a-structures corresponding to complex

¹ Although the causee is not a subject at f-structure (grammatical subject), it is a subject at a-structure (logical subject), where it is indeed maximally prominent (see also Butt 1998: 82).

events may map to simple f-structures, showing a many-to-one mapping between a-structure and f-structure.

The mapping from s-structure to a-structure is not necessarily isomorphic either: different s-structures may correspond to one and the same a-structure.

A central property of LFG is that it allows for non-isomorphism between structure and function, i.e. between syntax and semantics. Such non-isomorphism is also allowed for in other 'linking' approaches, such as Booij's (1992, 2002a, chapter 6) approach, Jackendoff's (1997a, 2002a) tripartite parallel architecture of the language faculty, and Rappoport Hovav and Levin's (1998) approach. These theories differ from one another with respect to their assumptions about the argument structure, and as these differences will appear to be relevant to the data discussed in this study, I will compare Jackendoff's model with the LFG model on this issue.

Jackendoff (1997a, 2002a) posits that the language faculty consists of three systems that generate structures in parallel. That is, every linguistic item is assumed to have three representations: a Phonological Structure (PS), specifying its phonological properties, a Syntactic Structure (SS), specifying its syntactic properties, and a Conceptual Structure (CS), specifying its conceptual properties (see the scheme in (1) below). The three levels are not mapped directly to one another, but are assumed to be related through interfaces (containing correspondence rules, such as the thematic role hierarchy mediating between CS and SS, Jackendoff 2002a: 143). The result of this is that non-isomorphic mappings between these levels are possible. Evidence for the tripartite parallel architecture is drawn from examples showing non-isomorphism between PS and SS and between SS and CS (Jackendoff 1997a: 25-36).

The three levels distinguished by Jackendoff relate to the LFG levels described above in the following way (illustrated in (1) below).

To begin with, Jackendoff's CS corresponds to s-structure of LFG. In his less recent work, Jackendoff (1990) argues that there is no motivation for positing a separate level of argument structure in addition to the level of CS/LCS. As Bresnan (2001: 305) points out, however, Jackendoff's (1990) CSs are elaborated in the sense that they contain information about the correspondence between the semantic roles and their syntactic representation, so that these CSs are in fact a variant of Bresnan's (2001) a-structures. But in contrast to what is the case in his 1990 book, Jackendoff (2002a) clearly distinguishes CS from argument structure, claiming that the former is a semantic structure and the latter is an aspect of the semantics-syntax interface and refers to "the specification of and relations between a word's semantic and syntactic arguments" (Jackendoff 2002a: 134, cf. (1)). A word's semantic arguments are its thematic roles, so that Jackendoff's semantic argument structure appears to correspond to a-structure in LFG (cf. (1)). A word's syntactic arguments are the corresponding grammatical functions (*ibid.*, 133), which means that Jackendoff's syntactic argument structure appears to overlap with f-structure in LFG (cf. (1), but see below). Jackendoff furthermore shows that the correspondence between the semantic argument structure and the syntactic argument structure is not a one-to-one correspondence.

As indicated in the scheme in (1), Jackendoff's SS corresponds to c-structure in LFG, which specifies the phrase structure properties, and Jackendoff's PS corresponds to p-structure in LFG.

The foregoing discussion illustrates that Jackendoff assumes that the structure that specifies the grammatical functions, which he calls the syntactic argument structure, is located at the semantics-syntax interface, and is not an independent level of structure. Jackendoff discusses the fact that LFG adopts a separate structure for grammatical functions (f-structure) and proposes that such a structure might also, somewhat differently, be incorporated into his theory (Jackendoff 2002a: 151, see also Jackendoff 1997a: 36, note 11). Although the exact properties of such a grammatical-function structure are not fully worked out in Jackendoff (1997a, 2002a), Jackendoff formulates two differences between this structure and f-structure in LFG. The first difference is that the presence of a grammatical-function structure in between the semantic structure and the constituent structure does not prevent those two other structures from retaining some direct connections as well in Jackendoff's model. The second difference is that Jackendoff's grammatical-function structure is assumed to have only a very limited task: "it is not a 'full' level (as in LFG (...)): rather it is a very limited little 'accounting' system that only has to push around a few pieces of structure" (Jackendoff 2002a: 151). The usefulness of positing an independent level of grammatical-function structure will be evaluated with respect to the data discussed in this study (section 8.3.1).

The scheme in (1) illustrates the relationships between the different levels of representation that are posited in Jackendoff (2002a) and in LFG (Bresnan 2001).

- (1) Levels of representation posited in Jackendoff (2002a) and LFG (Bresnan 2001).

<i>component of the grammar</i>	<i>Jackendoff (2002a)</i>	<i>LFG (Bresnan 2001)</i>
semantics	CS	s-structure
semantics-syntax interface	semantic argument structure	a-structure
	syntactic argument structure (overlap with f-structure in LFG)	
syntax	possibly: separate level of f-structure	f-structure
	SS	c-structure
phonology	PS	p-structure

Although Jackendoff (2002a), Bresnan (2001), and the other linking approaches mentioned in this subsection differ in these and other respects, these approaches are similar in that they allow for non-isomorphic structure-function mappings. The basic property of these theories thanks to which they allow for such non-isomorphism lies in the assumption of a structure specifying the predicate-argument relations that is separated from the syntactic structure (i.e. both from the grammatical-function structure and from the phrase-structural realisation, cf. Alsina 1996: 267f). The theories in question differ with respect to the exact properties of the structure that specifies the predicate-argument relations and its precise relationship with the other levels of representation, but in all of these theories it is assumed that this structure is not necessarily directly reflected by the syntax.

With respect to this property the theories discussed above contrast radically with theories in which the predicate-argument relations are assumed to be directly reflected by the syntax, as is, for instance, the case in Chomskyan approaches. It is also the case in some extended VP analyses based on Hale and Keyser's (1993) *lexical syntax* (*l-syntax*). Such analyses posit syntactic projections with semantic content, such as a vP expressing a causing subevent, a VP expressing a process subevent, and an RP expressing a result state (cf. Ramchand and Svenonius 2002). As such, the event structure of a clause is assumed to be directly reflected by the syntax in such analyses. The effect of this is that phenomena involving multiple semantic structures that (appear to) correspond to one and the same syntactic structure (or vice versa) cannot be analysed as instantiating structure-function non-isomorphism in these approaches. This is because such non-isomorphism is excluded; the semantic structure and the syntactic structure are assumed to go necessarily hand in hand. Postulating different semantic structures thus necessarily implies postulating different syntactic structures (e.g. syntactic structures with different heads) in these approaches.

Ramchand and Svenonius (2002), for example, propose different syntactic projections for semantically different particle types. They claim that particles that do not express results (e.g. *John moved the rat poison around for hours*) form a non-telic *l*-syntactic projection SP (called a "path descriptor"). SP is assumed to be in complementary distribution with RP, which is the result phrase that is projected by particles expressing results. Semantically different particle constructions, then, also receive a different syntactic analysis. Notice, however, that the difference between the syntactic representations proposed for these two types of particle construction appears to be a purely semantic one: these syntactic representations contain *semantically* different projections (a result projection vs. a non-telic projection). In any case, approaches of this kind show a more elaborate syntax (containing semantic notions, but also empty elements, overt vs. covert movement operations, etc.) instead of a more elaborate semantics-syntax interface (see 3.3.2 and 8.4.2, see also Jackendoff 1997a: 36, 2002a: 145-149).

It will be illustrated in this study that models such as the LFG model and (to a somewhat lesser extent) Jackendoff's tripartite parallel architecture provide us with possibilities to precisely locate the differences between complex predicates at one of the levels of representation while keeping the other levels constant (cf. Alsina 1997: 243). The correspondence principles posited in these models (formulating mapping constraints and mapping preferences) must be restricted and well-defined, thereby ensuring that the mapping possibilities and the number of possible 'mismatches' between the different representational levels are not unconstrained.

I will assume the following levels of representation in this book (see (2) below): the level of Lexical-Conceptual Structure (LCS, or semantic structure) minimally represents the event structure of the construction, specifying its participants and the predicate-argument relations. I thus assume that predicate-argument relations are represented in the semantics. It is important to note that LCS does not contain any information referring to syntactic notions, unlike Jackendoff's (1990) CS. LCS maps to a representation labelled a(argument)-structure, which is similar to a-structure in LFG and specifies the thematic role information and other information necessary for the mapping to the syntactic structure. This representation

is not purely semantic in nature, but is located at the semantics-syntax interface. With respect to the syntax I will follow the distinction of LFG between f-structure, representing the grammatical functions, and c-structure, representing the constituent structure. I assume that the phonological properties of a construction are represented at p(honological)-structure (cf. (1)).

- (2) Levels of representation posited in this book.

<i>component of the grammar</i>	<i>level of representation</i>
semantics	LCS/semantic structure (s-structure)
semantics-syntax interface	argument structure (a-structure)
syntax	functional structure (f-structure)
	constituent structure (c-structure)
phonology	phonological structure (p-structure)

I will evaluate the merits of positing these different representational levels with respect to the data discussed in this book. Anticipating this discussion, the data will appear to constitute evidence for non-isomorphic mappings in two respects.

The first type of non-isomorphism is the following: particles will appear to perform various functions in the LCS of the SCV construction, instantiating different predicate-argument relations. A particle may, for instance, conceptualise a resultative predicate, but also a modifier (cf. (11) in chapter 1), and other functions will be identified as well (chapter 5). SCVs with these semantically different particles, however, will appear to have the same f-structure, forming the PRED (predicate) of a simple clause, which contains a single subject. These semantically different SCVs will also appear to have the same c-structure: all particles are non-projecting words that form a phrase (V') with the verb (chapter 4). What we see, then, is that multiple semantic structures correspond to one and the same syntactic structure (both f-structure and c-structure). In other words, we see a non-isomorphic mapping between the semantics and the syntax of SCV constructions.

The second type of non-isomorphism is that constructions with phrases (XPs), particles (which will appear to be non-projecting words; Xs), and prefixes, which have different c-structures, may have the same LCS, in which all of these elements express, for instance, a resultative predicate. Constructions with phrases, particles, and prefixes may also have the same f-structure, in which these elements represent together with the verb the predicate of a simple clause (cf. the discussion of the Chicheŵa and Catalan causatives above). This means that there is a non-isomorphic mapping between c-structure and f-structure: constructions with different c-structures may represent the same f-structure (and also the same a-structure and the same LCS).

In theories that do not distinguish between f-structure and c-structure, this second type of non-isomorphism emerges as a structure-function non-isomorphism: the different constructions are semantically identical, but differ at the level of c-structure (SS). This is for instance the case in the basic version of Jackendoff's (2002a) model, which posits only one level of syntactic structure (SS), corresponding to c-structure (see (1) above and Jackendoff 2002a: 125). As noted above, however, Jackendoff (2002a: 151) suggests that his model might be extended

with a grammatical-function structure that is similar (but not identical) to f-structure in LFG in order to describe certain types of non-isomorphism more precisely. Section 8.3.1 will discuss the usefulness of positing a separate structure representing the grammatical functions in relation to the data presented in this study.

The two types of non-isomorphism described above will appear to be central to the discussion in this book. If we disregard for a moment f-structure and a-structure, these two types of non-isomorphism can be formulated as follows: (1) SCVs have a uniform morphosyntactic structure, but have divergent semantic structures, and (2) constructions with different morphosyntactic structures (e.g. constructions with phrases, particles, and prefixes) may have the same semantic structure. These data are insightfully accounted for in approaches in which the semantic structure and the syntactic structure are assumed to be autonomous (but in correspondence). This is because such approaches make it possible to locate differences between certain constructions at one of these representational levels while keeping the other one constant.

The data appear to be accounted for less easily in theories that assume that structure and function necessarily go hand in hand. Semantically different SCV constructions, which have different LCSs, would require different syntactic structures in such theories, the semantics being assumed to be directly reflected by the syntax. However, postulating different syntactic structures for semantically different SCV constructions is not desirable in view of the fact that all SCVs behave exactly the same morphosyntactically (see chapter 4).

2.2.2 Syntax, morphology, and the lexicon

This subsection will be confined to a few very general remarks that are essential to the discussion in the following chapters. More remarks about the relation between syntax, morphology, and the lexicon will be made in chapter 8, which will relate this issue directly to the results emerging from the data chapters.

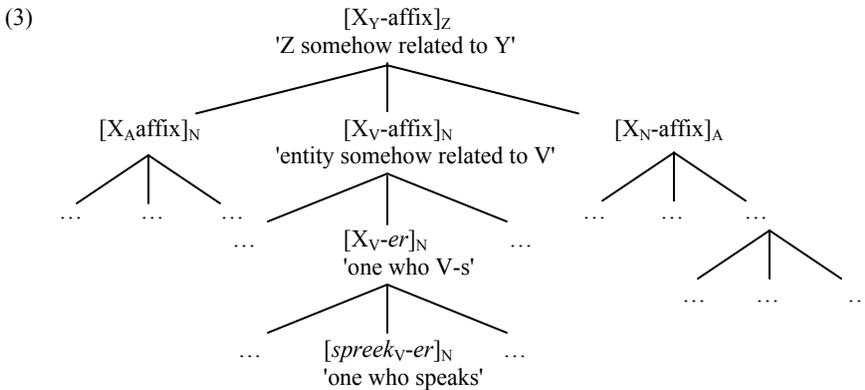
I assume the principle of Lexical Integrity, which says that syntactic rules cannot refer to elements of morphological structure (Booij 2002a: 206, after Bresnan and Mchombo 1995 and Lapointe 1980). Many other formulations of this principle have been given in the literature. Bresnan's (2001: 92) definition, formulated in the LFG framework, reads as follows: "[m]orphologically complete words are leaves of the c-structure tree and each leaf corresponds to one and only one c-structure node", whereas Jackendoff (2002a: 129) states that "most of the structure interior to words is 'invisible' to rules of phrasal syntax" (other formulations have been given by, among others, Ackerman and Webelhuth 1998: 18-19, labelling it "Morphological Integrity" and by Di Sciullo and Williams 1987: 49, labelling it "atomicity"). An illustration of the effect of Lexical Integrity is that in *coloured toothpaste* the adjective *coloured* modifies the whole complex word *toothpaste* and cannot refer to only its left part *tooth* (i.e. *coloured toothpaste* cannot refer to some kind of paste intended for a coloured tooth/coloured teeth).

Lexical Integrity amounts to saying that syntax and morphology are separate domains of the grammar, their structures being of different kinds. In syntax, phrases are built on the basis of phrase structure rules. The resulting phrase structures map to semantic structures through the mediation of correspondence principles, as described

in the previous subsection. In morphology, words are formed on the basis of word formation templates, which may result in morphological structures that are similar (but not identical) to syntactic structures (c-structures), also showing hierarchical relations (cf. Bresnan 2001: 93). These morphological structures, too, map to semantic structures through the mediation of correspondence principles (Jackendoff 1997a: 110-113). Syntactic structures and morphological structures thus show resemblances, but are of different kinds, morphological structures (i.e. structures below the X^0 -level) being subject to principles of hierarchical structure that are somewhat different from those applying to syntactic structures (cf. Jackendoff 2002a: 128, see also Jackendoff 2002a: 158, note 1).

Although syntax and morphology are separate domains of the grammar, these two domains do interact. Booij (2002a: 187) mentions the following phenomena as instantiations of interaction between syntax and morphology: (1) inflected forms are created by morphology but their occurrence may be regulated by the syntax (e.g. structural case assignment and agreement), (2) morphological operations may affect the syntactic valency of the base, and (3) syntax may feed word formation (that is, certain phrases may occur inside compounds and derived words, see 3.2).

The word formation templates creating morphological structures may be more or less specific, the more specific templates being instantiations of the more general (i.e. higher-level) templates and inheriting properties from these more general templates. In addition to the properties inherited from the more general templates, morphological templates may have idiosyncratic properties. The Dutch derived noun *spreker* 'speaker', for instance, inherits certain of its semantic and structural properties from the general template $[X_V\text{-}er]_N$, which derives subject nouns from verbs. This template, in turn, inherits certain semantic and structural properties from the more general template $[X_V\text{-}affix]_N$, which derives different types of noun from verbs. This second template also inherits certain properties from a more general template. The (partial) inheritance hierarchy described here is given in (3).



Strictly speaking, however, *spreker* does not just mean 'one who speaks', as would follow from the inheritance hierarchy; the noun *spreker* usually refers to someone who speaks to an audience (cf. *hij is een goede spreker* 'he is a good platform speaker'). In addition to the properties it inherits, then, this deverbal noun has

idiosyncratic properties, which are specific to this particular instantiation of the template $[X_V\text{-er}]_N$ and do not follow from the inheritance relations. It is this kind of properties, that is, the unpredictable (hence non-redundant) properties, that must in any case be specified in the lexical entry of *spreker*, since all of its other properties are predictable from the inheritance hierarchy (for more on inheritance hierarchies, see, e.g., Jackendoff 2002a: 183-187 and Riehemann 1998).

The lexicon thus contains word formation templates, which are organised in inheritance trees, as well as the lexical items formed on the basis of these templates. At each level of the tree, we find a specification of, in any case, the unpredictable properties of the relevant lexical template/item.

All of the stored items mentioned in the foregoing are words. However, the lexicon contains more than only words; lexical phrases (e.g. idioms such as *kick the bucket* 'die' and *pull strings* 'be in charge') are assumed to be stored as well. Lexical phrases may exhibit all kinds of conventionalised and collocational properties that do not follow from syntactic composition. The assumption that certain phrases are lexically stored is central to the discussion of SCVs in this book. The properties of lexical phrases will be discussed more extensively in chapter 4 (sections 4.2 and 4.4).

2.3 Diachrony: grammaticalisation

This study discusses the grammaticalisation of different types of phrasal combination into SCVs and, further, into ICVs. Before focusing on the specific object of research of this study, I will in this subsection clarify my assumptions about grammaticalisation.

The term grammaticalisation 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). Grammaticalisation, then, is a type of change, and not an approach (Traugott 2003: 645). Two well-known examples of grammaticalisation are given in (4).

- | | | | |
|-----|----|----------------------------------|--|
| (4) | a. | <i>be going to visit Bill</i> | > <i>be gonna visit Bill, be gonna like Bill</i> |
| | | directional V + purposive clause | > futurity |
| | b. | <i>clara mente</i> | > <i>clairement</i> |
| | | 'with a clear mind' | > 'clearly' |

The example in (4)a illustrates the change whereby directional *be going to* in constructions with a purposive clause complement developed into the future marker *be going to*, which at first only cooccurred with eventive verbs and later on with both eventive and stative verbs, and further developed into *be gonna*. Only in the future function, the reduced form *be gonna* is possible, witness the unacceptability of **I am gonna Amsterdam* (< *I am going to Amsterdam*), in which *be going to* can only be interpreted as directional. The example in (4)b illustrates the development of the Latin noun phrase *clara mente*, in the ablative case, into the French adverb *clairement*. The paradigmatic relationships between such adverbs and adjectives

such as *claire* 'clear' led to the development of the productively used French adverbial suffix *-ment* (a similar development can be posited for most other Romance languages).

Grammaticalisation relies on other processes and mechanisms of linguistic change that tend to cooccur cross-linguistically, but exist independently of grammaticalisation (cf. Campbell 2001: 113). Grammaticalisation is, in other words, not an independent process (cf. Campbell 2001, Traugott 2001, and many others). Campbell (2001) argues that these other processes and mechanisms, such as reanalysis, provide the explanations for the phenomena involved in grammaticalisation. However, it is only the interaction of these other processes and mechanisms that can provide an explanation for the specific outcome of the change, which is that lexical items acquire grammatical functions, or that grammatical items acquire new grammatical functions (cf. Heine 2003: 583).

The processes and mechanisms of linguistic change involved in grammaticalisation are semantic change, sound change (in particular phonological reduction), and structural reanalysis (see below). Grammaticalisation also often involves fusion (univerbation). An important mechanism in grammaticalisation is analogy, the effect of which is most prominently present in the generalisation (extension) of the new, reanalysed structure to contexts that were not available to the old structure, which makes the change apparent (cf. Hopper and Traugott 2003: 3). As all of these mechanisms also occur outside grammaticalisation, neither of them can be seen as a diagnostic for grammaticalisation (cf. Campbell 2001).

The change illustrated in (4)a above only takes place in progressive constructions with a directional verb and a purposive complement clause, such as (5)a, and not in, for instance, progressive constructions with a directional verb and a locative adverb, such as (5)b (cf. Hopper and Traugott 2003: 2-3, 68-69).

- (5) a. [I am going_{Verb of Motion} [to visit Bill]]
 (cf. I am leaving/travelling in order to visit Bill)
 b. [I am going_{Verb of Motion} [to Amsterdam]]

This is because the purposive meaning in constructions such as (5)a allows for an inference of futurity, and thereby for the structural reanalysis illustrated in (6).

- (6) [I am going_{Verb of Motion} [to visit Bill]] > [I (am going to)_{FutureTense} [visit Bill]]

The reanalysed structure contains a future auxiliary and an activity main verb.

For the surface string *I am going to visit Bill*, which contains an activity verb, both the old and the new structure are available; this string is structurally ambiguous. This means that as long as only activity verbs were used in this construction, the change was not apparent, since constructions with activity verbs could be interpreted as expressing either purposiveness or future tense. After the reanalysis had taken place, however, the construction was generalised to constructions with stative verbs (analogy). This resulted in constructions such as (7)a, which are not compatible with a purposive meaning and the corresponding structure (cf. (7)b).

- (7) a. [I (am going to)_{FutureTense} [like Bill]] > I am gonna like Bill
 b. *[I am going_{Verb of Motion} [to like Bill]]

The structure was subsequently generalised to other constructions that do not allow for the old structure, such as the one in (8)a, in which the complement clause expresses directed motion (*go to Amsterdam*). Such a complement is incompatible with the older structure (8)b, in which *going* is also a motion verb (and not part of a future marker).

- (8) a. [I (am going to)_{FutureTense} [go_{Verb of Motion} to Amsterdam]]
 > I am gonna go to Amsterdam
 b. *[I am going_{Verb of Motion} [to go_{Verb of Motion} to Amsterdam]]

These generalisations, then, made the reanalysis apparent.

Sound changes and fusion finally caused the three syllables *go-*, *-ing*, and *to* to be fused into *gonna*. This was only possible in constructions instantiating the new structure, as in this structure there is no phrase boundary between *-ing* and *to*, as opposed to what is the case in the old structure (cf. (6) above).

The change illustrated in (4)b involves the structural reanalysis of Latin noun phrases such as [*clara*_{Adj} *mente*_N]_{NP} as morphological units ([*clairement*]_{Adv}). The semantic change taking place is that the concrete meaning 'with mind X' developed into the more abstract meaning 'in manner X'. The formal and semantic relations between the reanalysed unit *clairement* and the adjective *claire* could be generalised to other adjectives, which led to the development of a productive means to form adverbs from adjectives (e.g. *franc*_M, *franche*_M 'frank' > *franchement* 'frankly', cf. Hopper and Traugott 2003: 140-141).

These examples show that the diachrony of a construction may provide an explanation of some of its synchronic properties. The diachrony of the suffix *-ment*, for example, explains why it is the feminine stem which is used in these adverbs in cases where there is a formal difference between the masculine and the feminine stem, although the adverbs do not have anything to do with feminine gender in semantic respects (adjectives: *franc*_M – *franche*_F, adverb: **francment*, *franchement* 'frankly', adjectives: *nouveau*_M, *nouvelle*_F 'new', adverb: **nouveaument*, *nouvellement* 'newly', adjectives: *lent*_M, *lente*_F 'slow', adverb: **lentment*, *lentement* 'slowly'): the Latin noun *mens* 'mind' is feminine, as a consequence of which the adjective in the source construction contained the feminine inflection.

The examples in (4) also illustrate why grammaticalisation is called "grammaticalisation": certain elements become more grammatical in these structures; they adopt grammatical functions. The combination of the main verb (lexical verb) *go* and the directional preposition *to* in the progressive construction, for instance, developed into a construction in which *be going to* functions as a future auxiliary, that is, as a grammatical element. Similarly, the construction with the lexeme *mens* 'mind' developed into constructions with the adverbial suffix *-ment*.

Another aspect that I consider crucial to grammaticalisation is that it typically does not affect lexemes in isolation, but constructions (i.e. morphosyntactic strings, cf. Heine 2003, Traugott 2003). It is, in other words, not the case that a bare lexeme develops a grammatical function, but it is in a specific construction or subset of

constructions that one or more words are reanalysed, as a consequence of which a word or a small group of words develops a new function.² This aspect of grammaticalisation is contained in the definition of Hopper and Traugott (2003: 2), given above, but even more explicit in that of Traugott (2003: 645): "the process whereby lexical material in *highly constrained pragmatic and morphosyntactic contexts* is assigned grammatical function, and, once grammatical, is assigned increasingly grammatical, operator-like function" (italics added, CB).

To illustrate this point, the purposive construction with [*be going* [to X]] was reanalysed into the future construction [[*be going to*] X], which developed into [*be gonna* [X]]. It is not the case that *going* has changed into *gonna* in this example. Instead, *going* and *to*, which were not part of the same phrase in the structure of the source construction, have come to do so after reanalysis, so that they could develop into *gonna* in the new structure. Likewise, it is not the case that the lexeme *mens* 'mind' in isolation developed into the adverbial suffix *-ment*, but the development of this adverbial suffix is the result of changes in a specific noun phrase construction ([Adj_{ABL} N_{ABL}]_{NP-ABL}).

The literature on grammaticalisation appears to be full of controversies, which I will be unable to discuss in their entirety. I will only clarify my assumptions about three issues that are relevant to the data presented in this book and refer to the work by others for more extensive discussion.

1. Grammaticalisation, reanalysis, semantic change, and sound change

Grammaticalisation is a label for a cross-linguistically recurring pattern of change, resulting from the interplay of mechanisms of change such as structural reanalysis, semantic change, and (often) sound change, and leading up to linguistic items developing (more) grammatical functions. Grammaticalisation typically involves reanalysis, reanalysis being the primary mechanism behind grammaticalisation changes, but not all cases of reanalysis are instances of grammaticalisation (e.g. word order changes involve reanalysis, but not grammaticalisation, cf. Hopper and Traugott 2003: 58-63, Campbell 2001: 150). Reanalysis can be defined as follows: "a mechanism which changes the underlying structure of a syntactic pattern and which does not involve any immediate or intrinsic modification of its surface manifestation" (Harris and Campbell 1995: 61).³ Examples of structural properties that may change due to reanalysis are the grammatical relations between the elements of a construction, their constituency, and their category labels.

Reanalysis is only possible if there is a potential for it, which is the case if a certain surface string may be assigned different syntactic structures, thus being structurally ambiguous (cf. the example *I am going to visit Bill* above). As Harris and Campbell (1995: 72) put it, "a subset of tokens of a particular construction type must be open to the possibility of multiple structural analyses, where one potential analysis is the old one (applicable to all tokens) and the other potential analysis is the new one (applicable to a subset)".

² The term "construction" is used in a pre-theoretical way here (cf. note 1 in chapter 1).

³ The term "underlying structure" in this quotation refers to the syntactic structure of a surface string; it has nothing to do with the notion of Deep Structure in the Chomskyan sense.

Grammaticalisation consists of discrete and local steps, such as structural reanalysis (which an individual speaker may apply to a particular construction). However, the generalisation phase by which the new structure spreads through the linguistic system and through the linguistic community is, of course, gradual.

Hopper and Traugott (2003: 46, 49) schematise the introduction of the new structure and the typical subsequent developments with the figure in (9), in which "A" refers to the old structure and "B" refers to the new structure.

$$(9) \quad A > \left\{ \begin{array}{c} B \\ A \end{array} \right\} > B$$

(9) illustrates that the new structure (B) enters the grammar abruptly, but alongside the older form (A). The two structures may subsequently coexist for a shorter or longer period, showing layering (cf. the example of *be going to* discussed above: the purposive construction, the future construction without fusion, and the future construction with fusion, which reflect different stages of the grammaticalisation development, still coexist in present-day English, Hopper and Traugott 2003: 68). Eventually, however, the older structure may get lost, but this does not necessarily happen.⁴

Reanalysis changes the underlying structure of a string, but the result of this step is not yet perceivable. In order to become so, the new structure must be applied to contexts that were not available to the older structure (generalisation, analogy). The result of the generalisation is that surface strings are produced that cannot be based on the older structure. This then points to the existence of a new structure, that is, to a change having taken place (cf. the discussion of the *be going to* example above).

The following remarks can be made with respect to the relative temporal order of semantic change, sound change, and reanalysis. Semantic change may occur before reanalysis, thus making the reanalysis possible (e.g. the semantic extension of purposiveness into futurity, based on inference, in the *be going to* example), but may also take place after reanalysis, so that the new structure further develops its own semantic properties. The same seems to hold for sound change: phonological changes in forms may lead to the surface strings with these forms being structurally ambiguous, thus enabling structural reanalysis, but additional phonological changes (phonological reduction) may take place after reanalysis (cf. Campbell 2001: 157).

Campbell (2001) asks the question whether reanalysis, semantic change, and sound change are necessary components of grammaticalisation. Sound change does not seem to take place in all cases of grammaticalisation, phonological reduction typically taking place in the later stages of the development and these stages not being reached in all cases. Semantic changes, on the other hand, generally take place, but these do not necessarily involve bleaching (i.e. the loss of lexical

⁴ Traugott (2001) points out that layering (i.e. the coexistence of old and new forms) is not specific to grammaticalisation, but is a phenomenon associated with all types of linguistic change: it is simply the principle of variation (which, in the case of semantic change, equals the principle of polysemy).

meaning), in contrast to what is claimed in the older literature on grammaticalisation (cf. the survey in Hopper and Traugott 2003, chapter 2). That is to say, concrete meanings may get lost in grammaticalisation, but this is not necessarily the case. Pragmatic functions may furthermore be strengthened in the course of the development, which in some sense involves a functional gain instead of a functional loss. Although different claims have been made on the exact nature of the semantic changes involved in grammaticalisation, linguists generally agree that semantic changes do take place, the new structure developing its own semantic properties.

It was noted above that reanalysis is generally assumed to be typical of grammaticalisation, resulting in a new structure that develops, through generalisation (analogy) and other subsequent changes, its own semantic, selectional, and structural properties. But although reanalysis and generalisation play a crucial role in grammaticalisation, neither is coextensive with it, as both mechanisms also occur independently of grammaticalisation (Hopper and Traugott 2003: 69).

2. *Unidirectionality*

There has been a vehement debate on whether or not grammaticalisation is or can be claimed to be unidirectional (see, for instance, the discussion in Campbell 2001, Haspelmath 2002, and Hopper and Traugott 2003: 130-138 and the references given in these publications). It is obvious that unidirectionality is built in the definition (and the name) of grammaticalisation: *grammatical*-isation refers to those linguistic changes whereby a linguistic element develops (more) *grammatical* functions. What is relevant, however, is that the imaginable mirror image of this change does occur so much less frequently (if it occurs at all), but such a mirror image would, of course, not be called "grammaticalisation". It is, instead, generally called "degrammaticalisation" (note that this term has been used in different ways in the literature, cf. Heine 2003: 593). Unidirectionality, then, refers to the cross-linguistic tendency of different constructions to develop into one direction but not into the opposite direction, and it is this tendency that asks for an explanation (cf. the references given at the beginning of this paragraph).

It was noted above that grammaticalisation results from the interplay of mechanisms of change such as structural reanalysis, semantic change, and sound change. Explanations of unidirectionality are generally attributed to the directionality in the component mechanisms of grammaticalisation.⁵ That is, the semantic changes and sound changes involved in grammaticalisation are inherently directional (unlike structural reanalysis). These semantic changes often involve metaphor, the mechanism whereby (properties of) concrete objects are transferred to or associated with abstract notions. Metaphor is omnipresent in language, and is directional (concrete > abstract, but semantic changes the other way around are not excluded).⁶ The sound change most typically associated with grammaticalisation is

⁵ In addition to attributing the unidirectionality of grammaticalisation to semantic change (metaphor) and sound change (phonological reduction), Haspelmath (1999b) attributes it to "extravagance". See Traugott (2001: 14) for criticism on this notion.

⁶ Metonymy, which is based on association, is another important semantic mechanism in grammaticalisation, but is not inherently directional.

phonological reduction (*going to* > *gonna*), which is also pervasive in language and directional.⁷

Unidirectionality is a tendency, and counterexamples to it have been brought up in the literature. These counterexamples, however, are very small in number, so that they do not alter the tendency, nor the fact that this tendency asks for an explanation. It is also important to note that not all data that have been presented as constituting counterexamples to unidirectionality do actually count as such. Examples involving the use of a preposition as a verb (e.g. *to up the ante*) have, for instance, been presented as the mirror development of grammaticalisation: instead of a lexical item taking on a grammatical function, the preposition *up*, which is generally analysed as a grammatical (functional) element, comes to function as a verb; as a member of a lexical category. This change does not involve any structural reanalysis in the sense of a shift in word boundaries, any de-fusion, or any semantic change or sound change in the direction opposed to the one we see in grammaticalisation. Instead, the only 'change' taking place is that a preposition is used to form a verb. In other words, this example illustrates word formation, in particular the conversion of a preposition (which is actually, as Haspelmath 1996 points out, an adverb) into a verb (cf. Hopper and Traugott 2003: 58).

There are, however, also some genuine counterexamples to unidirectionality (see Haspelmath 2002, Hopper and Traugott 2003: 130-138, and Traugott 2001 for the acknowledgement of some counterexamples and for criticism on some other (alleged) counterexamples presented in the literature). Nevertheless, there is basically no disagreement among linguists about the overall tendency towards directionality in changes involving grammatical elements (Campbell 2001: 133). The explanation for this tendency seems to lie in the interplay of the changes lying behind grammaticalisation, such as semantic change and sound change.

3. Explanatory power?

Although the literature on grammaticalisation might at first glance lead one to suspect otherwise, most linguists agree that grammaticalisation does not have any theoretical or explanatory value in the sense that it can predict that some change(s) will occur. As Hopper and Traugott (2003: 130-131) state, changes do not have to occur and do not have to go to completion, since change is not deterministic in general (this opinion is shared by Haspelmath, cf. 1999a: 1063). Put differently, "we can never 'explain' change, if by 'explain' we require a deterministic program that can predict precisely what will happen" (Traugott 2001: 3, referring to Lass 1980, see also Campbell 2001, Haspelmath 2002, and Hopper and Traugott 2003: 71). Grammaticalisation, or, more generally, linguistic change, is thus not predictable. Instead of predicting or explaining grammaticalisation, we can motivate it; we can

⁷ Note that the opposite of phonological reduction, say phonological strengthening, is not excluded. The Dutch suffix *-tig*, for instance, which is used in numerals such as *vijftig* 'fifty' and *zestig* 'sixty', has developed into a free morpheme, which is used in, for example, *ik ben daar al tig keer geweest* 'I have been there *tig* (i.e. plenty of) times'. During this development, the string *tig* has acquired more phonological substance, the suffix *-tig* being pronounced with a schwa, but the free morpheme *tig* being pronounced with a full vowel (/ʌ/).

identify motivations or enabling factors of a grammaticalisation development (Hopper and Traugott 2003: 71).

Grammaticalisation is assumed to result from the interplay of structural reanalysis, semantic change, and (in most cases) sound change. In an actual step involved in the grammaticalisation development, however, many other factors also play a role. Grammaticalisation, and linguistic change in general, has its source in variation, and variation may come about through all kinds of influences, such as pragmatic and interpretational factors. Prediction is impossible, as, obviously, the chance that all of the relevant factors will have exactly the same value at some later point in time is virtually zero. Similarly, we cannot predict that a particular development will go to completion, as there may always be unforeseen interactions or unforeseen intermediate changes of factors that only then appear to be relevant, and that may interrupt or change the direction of the development (cf. Campbell 1998: 298, Harris and Campbell 1995: 321-325, Hopper and Traugott 2003: 130f).

The preceding paragraph illustrates that grammaticalisation results from the interaction of language structure and language use. This explains why many of the changes discussed under this label reflect tendencies rather than rules that operate 100 percent of the time: use is usually variable and only occasionally categorical (Hopper and Traugott 2003: 133).

Although grammaticalisation has no predictive value, it is insightful to explore different kinds of changes that consist of the same components and follow similar developmental paths, and to try to assess the enabling factors behind these changes as well as the factors constraining them. This will teach us a lot about the interaction of language structure and language use, even though there is no theory or single independent mechanism involved in grammaticalisation.

In sum, grammaticalisation is a useful label for a cross-linguistically recurring pattern of change, involving the cooccurrence of structural reanalysis, semantic change, and often also sound change. The interaction of these (and possibly also other) mechanisms of change leads up to linguistic items (lexical or grammatical) having (more) grammatical functions and, in many cases, fused forms. I will show in this study that SCVs (particle verbs) and ICVs (prefixed verbs) represent different stages in the grammaticalisation of various kinds of syntactic combinations into words, ICVs representing a stage beyond that of SCVs. I will furthermore show that only a small subset of the SCV types that can be distinguished may grammaticalise further into ICVs, thereby shedding light on the conditions on grammaticalisation.

2.4 Summary

I have argued that an architecture of the grammar that allows for non-isomorphism between the semantics and the syntax accounts for the data presented in this study more straightforwardly than an architecture that does not allow for such non-isomorphism. I have furthermore laid out my assumptions about the phenomenon of grammaticalisation, which I see as a useful label for a subset of changes that tend to cooccur and tend to proceed into one direction only.

Existing analyses of SCVs and ICVs

3.1 Introduction

This chapter presents an overview of the existing synchronic and diachronic analyses of SCVs and ICVs in Dutch and other Germanic languages.¹ As for the synchronic analyses, the focus will be on SCVs, leaving aside the synchrony of ICVs. The reason for doing so is that the synchronic morphosyntactic and semantic properties of ICVs are not very controversial. ICVs are morphologically complex words (V^0 -s) that consist of a prefix and a verbal head (see also 1.1 and 1.2). In semantic, argument-structural, and phonological respects, ICVs behave like other prefixed verbs, such as verbs with the schwa prefixes *be-* (e.g. *be-lopen* 'lit. *be-walk*, to walk') and *ver-* (e.g. *ver-branden* 'lit. *ver-burn*, to burn down/up'), as illustrated in Booij (2002a: 117).² This chapter will thus not discuss the synchronic properties of ICVs, but ICVs will be discussed in the diachronic part of this chapter (section 3.6).

SCVs seem to share properties with both words and phrases, as a consequence of which both word analyses and phrasal analyses have been proposed for SCVs in the Germanic languages. Section 3.2 discusses the alleged word properties of SCVs; properties that have been claimed to point to the word status of these predicates. It will be illustrated that these properties can also be accounted for in a phrasal analysis of SCVs.

Section 3.3 discusses two types of morphosyntactic analysis of SCVs: morphological analyses, according to which SCVs are words (3.3.1), and syntactic analyses, according to which SCVs are phrases (3.3.2). It was noted in chapter 1 that the main phrasal property of SCVs is their separability; words are not separable in general, obeying the principle of Lexical Integrity (Bresnan and Mchombo 1995, Lapointe 1980, see section 2.2.2). I will show in section 3.3.1 how morphological analyses deal with this non-word-like property of SCVs.

¹ As noted in chapter 1 (note 8), I use the term "SCV" ("Separable Complex Verb") to refer to particle verbs in OV languages such as Dutch and German as well as to particle verbs in VO languages such as English and the Scandinavian languages. The term "phrasal verb", however, actually seems more appropriate for particle verbs in VO languages.

² Booij (2005b) points out that ICVs differ from most prefixed verbs in that both of their constituents correspond to lexemes, their left parts being homophonous with prepositions/postpositions (e.g. *doorzóeken* 'lit. through-search, search (completely)'). ICVs (as well as similar prefixed verbs in other languages, such as the French verbs *construire* 'to construct' and *surprendre* 'to surprise') resemble compounds in this respect. Because of the fact that ICVs lack the distinctive compound property of initial stress and also behave like prefixed verbs in semantic and other respects, however, they are generally analysed as derived words, and not as compounds. This is also done in this study.

Section 3.4 discusses existing analyses of the semantics of SCVs, after which section 3.5 summarises the discussion of existing synchronic analyses of SCVs. Section 3.6 discusses existing diachronic analyses of SCVs and ICVs. The last section, section 3.7, presents a summary of the points made in this chapter.

3.2 Alleged word properties of SCVs

This section discusses four properties of SCVs that have been claimed to point to their word status. It will be shown that these properties do not constitute unambiguous evidence for the word status of SCVs; these properties can also be accounted for in a phrasal analysis of SCVs.

The first property is that SCVs may be the input for morphological processes such as compounding and derivation. This is illustrated in (1).

- (1) a. SCV: *voorlez-en*
'lit. for-read-INF, to read to someone, to read out (a notice)³
- b. compound: *voorlees-boek*
'lit. for-read-book, a book that can be read to someone'
- c. derived N: *voorlez-er*
'lit. for-read-er, one who reads to someone else'
- d. derived A: *voorlees-baar*
'lit. for-read-able, the property of being suited to be read to someone'

Assuming a No-Phrase Constraint (Botha 1984), which states that only words or affixes, and not phrases, can feed word formation processes, would imply that SCVs, being able to do so, are words. This assumption, however, is not correct, as Booij (2002a: 209) points out: syntactic constructs may also feed compounding and derivation, witness the examples in (2) (the adjectival and numeral inflections of the word-internal phrases, which indicate their phrasal status, are printed in italics).

- (2) a. compounding:
[oudemannen]huis 'old men's home', [jongeondernemers]verbond 'young entrepreneurs union', [kleinemeisjes]fiets 'little girls bike, a bike to be used by little girls'
- b. derivation:
[vierdeklass]er 'fourth classer, pupil of the fourth class', [achts]egroep]er 'eighth group, pupil of the eighth group', [jongeondernemers]achtig 'young entrepreneur-like', [kleinemeisjes]achtig 'little girls-like'

The examples in (2) are not exceptional; there is some productivity in forming compounds and derivations with phrasal input.⁴

³ I gloss the particle *voor* with 'for' in all examples in this book, although the gloss 'fore' might seem more appropriate in some cases. See chapter 5, note 8 for the motivation behind this choice.

⁴ There are, however, restrictions on these processes, especially on phrasal affixation (Booij 2005a: 189).

Compounds and derivations like the ones in (2) have a specific semantic property: when used in compounds or derived words, phrases lose their referential properties and have a non-referential, classificatory function. The phrase *kleine meisjes* 'little girls' in (2)a-b, for instance, does not refer to specific little girls, but to the class of little girls in general: *kleinemeisjesfiets* 'little girls bike, a bike to be used by little girls', *kleinemeisjesachtig* 'little girls-like, as is typical of little girls'.

Examples such as the ones in (2) show that there is 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.⁵

A second alleged word property of SCVs is that they may have a non-verbal base, such as the SCVs *ophopen* 'lit. up-pile, to pile up' and *ophogen* '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, then, may bring about a category change. As category changes are generally assumed to be due to morphological operations, this property of SCVs has been claimed to point to their word status.

Booij (2002a: 211), however, claims that the category change in SCVs differs from that in prefixed verbs. This is illustrated in (3)a-c ((3)c contains the prefixed verb *vergroten* 'lit. ver-big, to enlarge, to increase').

- (3) a. De problemen *hopen* zich *op*.
the problems pile REFL up
'The problems pile up.'
- b. De fabrikant *hoogde* de prijzen *op*.
the manufacturer high-ed the prices
'The manufacturer raised the prices.'
- c. De atleet *vergrootte* zijn voorsprong.
the athlete ver-big-ed his lead
'The athlete increased his lead.'

Hopen and *hoogde* in (3)a have verbal inflections and show up in the second position in the main clause, which is a position that is exclusive to verbs and involves a separation of verbs from the non-verbal parts of the predicate they form. It follows from (3)a that there is not only a verbal node on top of the combination of the particle and the nominal/adjectival base in denominal/deadjectival SCVs; the base itself appears to have become verbal. This is indicated in (4)a. Denominal/deadjectival SCVs differ from denominal/deadjectival prefixed verbs in this respect; compare (3)b-(4)b.

⁵ The fact that many derivations of SCVs have idiosyncratic properties (e.g. *uitzetting* 'lit. output-ing, expulsion' (of refugees), *oplegger* '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. nominalisations of prefixed verbs such as *verwarming* 'lit. ver-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.

- | | | | | |
|-----|----|----------------|-----------------------|---|
| (4) | a. | SCV: | $[op-[[hoop]_N]_V]_V$ | 'lit. up-pile, to pile up' |
| | | | $[op-[[hoog]_A]_V]_V$ | 'lit. up-high, to heighten' |
| | b. | prefixed verb: | $[ver-[groot]_A]_V$ | 'lit. <i>ver</i> -big, to enlarge, to increase' |

Booij thus claims that these nouns and adjectives are converted into verbs. Restrictions generally applying to conversion, such as the fact that complex words tend to be excluded from feeding it, indeed also apply in these cases (cf. *op-kooien* 'lit. up-cage, to put into a cage' vs. **op-vogelkooien* 'lit. up-birdcage, to put into a birdcage', see Booij 1990).⁶

In sum, the category change in SCVs with non-verbal bases appears to be different from that in prefixed verbs with such bases. This means that the category changing data cannot be taken as conclusive evidence for the claim that SCVs are similar to prefixed verbs, that is, for the claim that SCVs are words.⁷

A third alleged word property of SCVs is that the addition of a particle may change the syntactic valency of the verb. Thus, a particle may transitive a verbal base, as in (5)a, and in this respect the particle in (5)a is similar to the prefix *be-* in (5)b.

- | | | | | |
|-----|----|----------------|------------------------------|---|
| (5) | a. | SCV: | de schoenen <i>in-lopen</i> | 'lit. the shoes in-walk, to wear in the shoes' |
| | | base verb: | (*de schoenen) <i>lopen</i> | 'lit. (the shoes) walk, to walk (the shoes)' |
| | b. | prefixed verb: | de straat <i>be-wandelen</i> | 'lit. the street <i>be</i> -walk, to walk the street' |
| | | base verb: | (*de straat) <i>wandelen</i> | 'lit. (the street) walk, to walk (the street)' |

The Projection Principle states that changes in the syntactic valency are due to morphological operations, syntactic structure being a projection of lexical properties. As a consequence, the valency change found in SCVs has been taken as evidence for their morphological status.

However, phrasal combinations may also contain objects that are not licensed by the verbal base (so-called *unselected objects*). This is shown in (6)a, in which the resultative PP *aan flarden* 'to shreds' licenses the object *de schoenen* 'the shoes', and in (6)b, in which the resultative PP *van de tafel* 'off the table' licenses the object *de krant* 'the newspaper'.

⁶ Booij (2002a: 215, b) adopts a constructional idiom analysis for SCVs according to which nouns and adjectives are converted into verbs when they are inserted into the proper slot in an SCV template (see section 3.3.2). The conversion, then, is dependent on the occurrence of these nouns and adjectives in SCVs with specific particles (since conversion of adjectives into verbs is not productive in Dutch and not all particles are productively used in these constructions, this dependency seems plausible) and is assumed not to take place *before* the converted verb is combined with the particle, but at the same time as these two elements are combined into an SCV.

⁷ 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) a. dat Jan de schoenen *aan flarden* liep
 that John the shoes to shreds walked
 'that John walked the shoes to pieces'
 (cf. *dat Jan de schoenen *liep* 'that John walked the shoes')
- b. dat de wind de krant *van de tafel* blies
 that the wind the newspaper off the table blew
 'that the wind blew the newspaper off the table'
 (cf. *dat de wind de krant *blies* 'that the wind blew the newspaper')

These examples illustrate that unselected objects may also show up in phrasal combinations. This implies that the presence of such objects in SCV constructions does not in itself constitute conclusive evidence for the word status of SCVs (see chapter 4 for structural and semantic differences between resultative phrases and particles).

A final alleged word property of SCVs is that their meanings generally do not follow straightforwardly from the combination of the meanings that the particle and the verb have in isolation: SCV meanings are conventionalised. As syntactic combinations are generally assumed to be transparent, this property has been claimed to speak against a syntactic analysis of SCVs. Examples of SCVs with conventionalised meanings are given in (7).

- (7) a. de boeken *opzoeken* 'lit. up-search, to look up the books'
 b. de informatie *opvragen* 'lit. up-ask, to ask for the information'
 c. de docent *opbellen* 'lit. up-ring, to call up the teacher'
 d. de chirurg *oppiepen* 'lit. up-beep, to beep up the surgeon'

Op means 'physically/cognitively/perceptually accessible' in the SCVs in (7), 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' (cf. Lindner's 1983: 126-127 discussion of the English particle *up*). In concrete instantiations of SCV constructions with *op* 'accessible', the meaning 'accessible' appears to receive a more specific interpretation on the basis of the information provided by the verb and its arguments (e.g. 'available' in (7)a-b, which contain inanimate direct object referents, and 'contacted' in (7)c-d, which contain animate direct object referents).

It is important to note that *op* expresses the meaning 'accessible' only in SCVs; this meaning is unavailable outside the SCV construction. It is, in other words, construction-specific. The meaning 'accessible' appears to be related to the basic, spatial meaning of *op* 'up(wards), on high' by mechanisms of semantic extension (e.g. metaphor and metonymy) according to the chain in (8) (cf. McIntyre 2001b: 16).^{8,9}

⁸ The translations of the examples in (8) show that the CAUSE part may be lacking in the meaning of SCVs with *op* (e.g. *opborrelen* 'to bubble up', *opduiken* 'to turn up'). See also 5.2.

⁹ In addition to the meanings in (8), *op* has meanings that form part of other chains (see 4.2 and 5.5.10).

- (8) A semantic chain for *op* 'up' in SCVs:
- a. to (cause to) move upward: *optillen* 'lit. up-lift, to lift up', *opgooien* 'lit. up-throw, to throw up', *opborrelen* 'lit. up-bubble, to bubble up', *opgraven* 'lit. up-dig, to dig up', *opduiken* 'lit. up-dive, to dive for, to bring to the surface';
 - b. to (cause to) surface: *opborrelen* 'lit. up-bubble, to bubble up', *opgraven* 'lit. up-dig, to dig up', *opduiken* 'lit. up-dive, to dive for, to bring to the surface, to surface';
 - c. to (cause to) appear/become visible: *opduiken* 'lit. up-dive, to turn up', *opdiene* 'lit. up-serve, to serve up', *opvragen* 'lit. up-ask, to ask for', *opzoeken* 'lit. up-search, to look up';
 - d. to (cause to) become physically/perceptually/cognitively accessible (compare Lindner 1983: 126-127): *opvragen* 'lit. up-ask, to ask for', *opzoeken* 'lit. up-search, to look up', *opbellen* 'lit. up-ring, to call up', *oppiepen* 'lit. up-beep, to beep (up)'.

Some SCVs are classified into two or more categories in (8), and those SCVs can be seen as the basis for the semantic extensions. In *opborrelen* 'to bubble up' and *opduiken* 'to dive for, to bring to the surface', for example, something is moving up and this may imply that it simultaneously surfaces. The result of this is that the meaning 'up, on high' may be extended to the meaning 'at the surface'. This extended meaning may in, for instance, *opduiken* 'to dive up' be further extended to 'visible', which may then be generalised to SCVs in which the basic, spatial meaning of *op* 'up, on high' is not available anymore (e.g. *het eten opdienen* 'to serve up dinner'). The last step in the chain in (8) involves the extension of concrete (physical) visibility to abstract visibility, i.e. to accessibility.

The existence of different particle senses can often be motivated by mechanisms of semantic extension, as is illustrated in (8). Note, however, that I do not claim that the semantic relations between these separate particle senses are necessarily available to the language user. That is, the separate senses of a particle are synchronically no longer necessarily connected to one another, but may be conventionalised individually.

It was noted above that the extended meaning of *op* 'accessible' is not available outside the SCV construction. The question that needs to be answered is whether the presence of such construction-specific, conventionalised meanings is evidence for the word status of SCVs, in other words, whether the presence of such meanings is a property that is exclusive to morphological units. This appears not to be the case: conventionalised meanings may also be present in syntactic combinations. In (9)a, for instance, which is an instantiation of the so-called *way*-construction, the noun *way* has a metaphorical meaning that it only expresses in this specific construction (Goldberg 1995, chapter 9, Jackendoff 1990: 211-223).

- (9) a. Sam joked his *way* into the meeting.
 b. [V *one's way* PP]_{VP}

Such construction-specific meanings have been linked to lexicalisation: constructions such as (9)a are assumed to be formed on the basis of a VP template such as (9)b. This template contains both fixed slots and open slots and has specific semantic properties, thus representing a partly lexicalised phrase (see Booij 2002b

and Jackendoff 2002a, chapter 6 for other examples of partly lexicalised phrases). Examples such as (9) illustrate that parts of (lexicalised) phrases may have conventionalised, construction-specific meanings, which means that the property of having such meanings is not exclusive to morphological units (words). The fact, then, that SCVs have conventionalised meanings does not constitute conclusive evidence for their word status.

The conventionalised meaning of *op* 'accessible' is present in a whole class of SCVs (cf. (7)), 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 inlopen* 'lit. in-walk, to wear in the shoes', *de auto inrijden* 'lit. in-drive, to run in the car', and *je inlezen* 'lit. in-read, to read up (on)'. Both the particle and the verb contribute their meaning to these SCVs. This means that in addition to being conventionalised these SCVs show compositionality. I will show in section 4.2 that the cooccurrence of the properties conventionalisation and compositionality is not as exceptional as it might seem to be at first glance.

The example in (7)d, *de chirurg oppiepen* 'to beep/bleep up 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 conventionalised properties, which suggests that they are lexicalised, but at the same time show compositionality and even productivity. We will see in section 4.4 that this combination of properties, too, is not as exceptional as it might seem to be at first glance.

To sum up, the alleged word properties of SCVs do not constitute conclusive evidence for a word analysis of SCVs, since these properties may also be exhibited by phrases, as far as the last property is concerned by (partly) lexicalised phrases. A comparison between SCVs and other (partly) lexicalised phrases will be made in chapter 4 (section 4.4).

The next section discusses existing analyses of the structure of SCVs: morphological analyses, according to which SCVs are words (3.3.1), and syntactic analyses, according to which SCVs are phrases (3.3.2).

3.3 Synchronic analyses of the morphosyntactic structure of SCVs

3.3.1 Morphological analyses of SCVs

Morphological analyses of Dutch and German SCVs have been given by Neeleman (1994, chapter 6), Neeleman and Weerman (1993), Stiebels (1996), Stiebels and Wunderlich (1994), and McIntyre (2001b). I will restrict myself to these authors and discuss some of the core properties of their analyses in this section.

Although morphological analyses provide an account of many of the semantic and argument-structural properties of SCVs (which can, however, also be accounted for by certain phrasal analyses, see 3.2 and the subsequent chapters), these analyses are faced with one important problem: Lexical Integrity (cf. section 2.2.2). The principle of Lexical Integrity (LI) states that syntactic rules cannot refer to parts of morphological objects, i.e. to parts of words. A word analysis of SCVs, then, requires an explanation of their separability. The various morphological analyses of

SCVs show two ways of getting by this principle: either it is completely abandoned, or it is adapted so that SCVs do not fall under its scope.

The first and most radical option is chosen by Neeleman (1994, chapter 6) and Neeleman and Weerman (1993), henceforth subsumed under N(&W). N(&W) propose a complex predicate analysis according to which SCVs are V^0 -s that are formed in morphology by the adjunction of a non-verbal head to a verbal head: $[X^0-V^0]_V^0$. N(&W) claim that the internal, morphological structure of these V^0 -s is visible in syntax, thus abandoning LI.

In order to account for the separability difference between SCVs and ICVs, which also represent V^0 -s, N(&W) need a new principle: the Complexity Constraint (CC). The CC states that the head of an X^0 may not be complex. According to their definition of complexity, SCVs are complex, but ICVs are not. If SCVs are moved to C^0 under Verb Second movement, this results in the CP having a complex head, but if ICVs are moved to C^0 , this is not the case. In this way, the CC would account for the fact that ICVs can be moved to C^0 as a whole, but SCVs cannot. Alternatively, only the verbal base of SCVs (i.e. the non-complex V^0) is moved to C^0 , stranding the particle in sentence-final position.

The CC, however, is problematic in several respects. For one thing, the abandonment of LI implies that the visibility of morphological structure in syntax, and thus the phenomenon of separable words, is the rule rather than the exception (cf. Stiebels and Wunderlich 1994: 918). This does not seem to do justice to the fact that within the realm of morphological structures, this phenomenon seems to be categorically restricted in that it only applies to verbs.

N(&W), on the other hand, argue that the CC also applies to adjectives, thereby ascribing generality to this constraint. But as has been noticed by Stiebels and Wunderlich (1994), the unacceptability of the adjectival examples that N(&W) give to show the effect of the CC can be accounted for by conceptual factors. The unacceptability of the adjectival compound **kleurenstekeblind* 'colour-stone-blind', for instance, which contains the complex head *stekeblind* 'stone-blind', seems to be due to a semantic clash between *stekeblind* 'stone-blind' and *kleurenblind* 'colour-blind'. That is, it does not make sense to say that someone who cannot see anything at all cannot distinguish certain colours from one another. Similarly, **zuurmierzoet* 'sour-cloyingly-sweet' is unacceptable since something cannot at the same time be *zuurzoet* 'sour-sweet' and *mierzoet* 'cloyingly sweet'. N(&W)'s third example, *grijsblauwgroen* 'grey-blue-green' is, in my opinion, not unacceptable, and additional acceptable (German) combinations are given in Stiebels and Wunderlich (1994). The formation of these adjectives, then, does not seem to be constrained by something like the CC, and the same holds for the formation of nouns (Stiebels and Wunderlich 1994: 916). But if there is no CC, it is unclear why SCVs (which N(&W) analyse as V^0 -s) cannot move to C^0 , as pointed out by Zeller (2001: 64; for more problems with the CC, see Lüdeling 2001: 119-126, Stiebels and Wunderlich 1994, and Zeller 2001: 63-64).

Another problem of N(&W)'s analysis is that it cannot account for the different argument-structural effects showing up in SCVs (which N(&W), however, do notice, see Neeleman 1994: 285 and Neeleman and Weerman 1993: 451). They claim that these effects are caused by the optional percolation of the particle's theta role to the complex verb. But since they do not specify under which conditions a

particle does percolate its role and under which it does not do so, this claim does not have much explanatory power.

This deficit in N(&W)'s analysis is related to the fact that N(&W) base their analysis of particles on that of resultative phrases. That is to say, they assume that particles and resultative phrases hold a similar relation with the verb and the direct object NP, also proposing a complex predicate analysis for constructions with resultative phrases such as *de fiets oranje verven* 'to paint the bike orange' (analysing these as *de fiets [oranje verven]v'*).¹⁰ However, not all particles are semantically similar to resultative phrases; some particles function as, for instance, adverbial modifiers (which do not predicate of an NP). These different particle functions correspond to argument-structural differences among SCVs (see chapter 5). An analysis, then, according to which (all) particles are semantically related to the verb and the direct object NP in the same way as resultative phrases are cannot account for the various argument-structural patterns we see in SCV constructions (cf. Stiebels 1996: 250-252).

A different morphological analysis of SCVs is proposed by Stiebels and Wunderlich (1994) and Stiebels (1996), henceforth S(&W). Whereas N(&W) abandon LI completely, thereby eliminating a strict separation between syntax and morphology, S(&W) keep this separation, and modify LI. More specifically, they claim that LI has only scope over *certain* morphological structures, and that SCVs are morphological structures that do not fall under its scope. S(&W), then, distinguish between two types of word: words that fall under the scope of LI (ICVs and most other words) and words that do not do so (SCVs).

The property, now, in which SCVs are claimed to differ from 'other' words, is that they are structurally bigger than those other words, since both the particle and the verb qualify as a "maximal word". A maximal word is a syntactic atom (X^0) and may be in a syntactic head position (Stiebels 1996: 35, Stiebels and Wunderlich 1994: 928). In contrast to SCVs, most morphologically complex words consist of only one maximal word, affixes not being maximal words.

S(&W) then state that, contrary to what LI claims traditionally, syntactic rules can indeed affect parts of *words*, but cannot affect parts of *maximal words*, thus modifying LI (Stiebels and Wunderlich 1994: 941). SCVs are assumed to consist of two maximal words, so that a syntactic rule like V2 can affect the parts of an SCV, SCVs being separable. ICVs, on the other hand, are assumed to consist of only one maximal word, so that their parts cannot be affected by V2, which results in ICVs being inseparable. In other words, S(&W) arrive at an analysis according to which SCVs are words with an exceptional property and LI only applies to words that do not show this exceptional property.¹¹

¹⁰ N(&W) account for the differences between particles and resultative phrases by assuming that a particle is an X^0 combining with the verb in morphology and a resultative phrase is an XP combining with the verb in syntax. Although I agree with this phrase-structural difference between a particle (X^0) and a resultative phrase (XP), which I will discuss in chapter 4, I disagree with other aspects of their analysis, such as their claim that SCVs are formed in morphology.

¹¹ Compound nouns and compound adjectives also consist of two maximal words, but are not affected by syntactic rules. In order to account for this Stiebels and Wunderlich (1994: 919)

S(&W) claim that evidence for a morphological analysis of SCVs is provided by the ability of SCVs to feed derivational morphology and by the non-projecting nature of particles (which is apparent from topicalisation data and Dutch verb cluster data, see 4.3). We have seen, however, that the derivation data do not constitute unambiguous evidence for a morphological analysis of SCVs (section 3.2). I will show that the topicalisation and verb cluster data do not do so either (chapter 4) and that a phrasal analysis of SCVs can account for the full range of their properties straightforwardly (chapter 8).

S(&W)'s analysis furthermore leads to a problematic account of derivations of SCVs, such as *Einführ-ung* 'lit. in-driv-ing, introduction', derived from the SCV *einführen* 'to introduce'. As a consequence of their assumptions about the notion of maximal word and the visibility of maximal words in syntax (cf. Stiebels and Wunderlich 1994: 919), S(&W) are forced to analyse these derivations as compounds: [*Ein* [*führ-ung*]_N]_N.¹² In order to ensure that the combination receives the correct interpretation (i.e. the interpretation that shows that it is related to the SCV *einführen*), S(&W) propose a lexical relatedness principle that states that structures of the form [X[Y-affix]] may be interpreted according to the structure [[X-Y]affix]. This proposal appears to be problematic, since word formation processes, such as German *-ung* suffixation, are sensitive to the (lexical-aspectual and other) properties of the whole SCV and not only to those of the verbal base. This means that *-ung* derivations such as *Einführung* should be analysed as [[*Ein-führ*]*ung*] (see section 8.2.1, see also Groos 1989, Lüdeling 2001: 127-129 and Zeller 2001: 241-242).

McIntyre (2001b) proposes a different morphological analysis. He directly relates the separability difference between SCVs and ICVs to their different stress patterns (cf. example (8) in chapter 1): the stress on particles is hypothesised to trigger their separability (the Stress Hypothesis). This hypothesis implies that the separability of SCVs does not necessarily indicate a lack of structural or semantic unity between the preverb and the verb (McIntyre 2001b: 53). The presence vs. absence of stress, however, cannot account for the full range of data. For one thing, some prefixes are stressed but are nevertheless inseparable, as the examples in (10) show (the complex predicates in (10) will be further discussed in section 6.3).

- (10) a. De bank ?hérwaardeerde de inkomsten /waardeerde de inkomsten her.
 the bank re-appreciated the revenues /appreciated the revenues re
 'The bank reassessed the revenues.'

propose the *particle constraint*: "The structure [Y^{+MAX} X] is only available for X = V". According to this constraint, only verbal compounds can have a non-head constituent that is a maximal word.

¹² S(&W) claim that the structure of *Einführung* cannot be [[*ein-führ*]_V *-ung*]_N, as *ein* is a verbal particle in this structure and thus, in their theory, a maximal word. This would predict that the particles in such nouns are separable, which they never are. The structure [*ein*-*führ-ung*]_N, on the other hand, implies that the verb is nominalised before it combines with *ein*. Since S(&W) assume that only verbal forms can have maximal words as their parts (cf. note 11), *ein* is not a maximal word in this compound and is, thus, not expected to be separable.

- b. Hij ?*ó*verwaardeert haar zangtalent /*waardeert* haar zangtalent *over*.
 he over-appreciates her sing talent /appreciates her sing talent over
 'He over-appreciates her talent as a singer.'

Another problem is that such a phonological condition does not seem to hold for complex verbs with nominal and adjectival particles: verbs such as *stófzuigen* 'lit. dust-suck, to vacuum' and *blinddoeken* 'lit. blind-cloth, to blindfold' are not separable. This shows that morphological factors are also relevant and the condition cannot be of a purely phonological nature. It is, furthermore, unclear why a phonological condition such as stress would prevent a preverb from appearing along with the verb in verb second position, but not from appearing along with the verb in sentence-final position, as Zeller (2001: 66) notices.

There is, however, indeed a strong correlation between preverb stress and preverb separability.¹³ Section 6.3 will illustrate that stress factors may even cause a newly (back-)formed complex verb to become separable, which shows the strength of the correlation. Section 6.3 will also illustrate that most of the combinations in which the correlation does *not* hold and preverb stress and preverb separability do *not* go hand in hand appear not to be formed syntagmatically, but appear to be back formations or conversions. McIntyre's (2001b) Stress Hypothesis, then, indeed seems to shed light on certain properties of complex predicates.

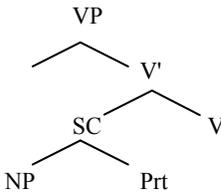
To conclude the discussion of morphological analyses of SCVs, the separability of these predicates appears to remain a problem for such analyses, words generally not being separable (as captured in the principle of Lexical Integrity). To circumvent this problem and to distinguish SCVs from ICVs, special mechanisms and principles such as the Complexity Constraint and the notion of "maximal word" have been proposed in morphological analyses of SCVs. These proposals, however, appear to raise new problems. Support for a morphological analysis of SCVs is generally claimed to be provided by their semantic and argument-structural properties. As has been argued in section 3.2, however, these properties do not constitute unambiguous evidence for the morphological status of SCVs. I will show in part II of this study that the semantic and argument-structural properties of SCVs can also be accounted for by a phrasal analysis.

3.3.2 Syntactic analyses of SCVs

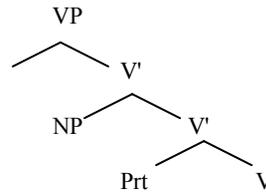
Syntactic analyses of SCVs are of two kinds: Small Clause analyses (SC-analyses) and Complex Predicate analyses. The basic structural differences between the two types of analysis are illustrated in (11) (assuming OV order).

¹³ As noted in chapter 1, this correlation is maximal for SCVs and ICVs with preverbs that correspond to prepositions/postpositions (see 6.3 for apparent counterexamples).

(11) a. Small Clause analysis



b. Complex Predicate analysis



The structures in (11) show that the SC-analysis claims that the direct object NP and the particle are generated as a constituent (SC), whereas the Complex Predicate analysis claims that the particle and the verb are generated as a constituent (V'). As for the selection of the direct object NP, the SC-analysis claims that this NP is selected by the particle, but Complex Predicate analyses generally claim that it is selected by the complex predicate formed by the particle and the verb (V') (see below).

The Small Clause analysis and related proposals

The Small Clause analysis claims that a particle is the predicate of a resultative small clause, and that the direct object NP of an SCV construction is the subject of this predicate. According to this analysis, then, the particle forms a constituent with this NP, as is claimed for resultative phrases like *oranje* 'orange' in *dat Jan zijn fiets oranje verft* 'that John paints his bike orange'. This is illustrated in (12)a-b (examples of SC-analyses of Dutch particles are Bennis 1991, den Dikken 1995, Hoekstra, Lansu, and Westerduin 1987, and Koopman 1995).

- (12) a. dat Jan [het huiswerk *af*]_{SC} *maakt*
 that John the homework off makes
 'that John finishes the homework'
 b. dat Jan [zijn fiets *oranje*]_{SC} *verft*
 that John his bike orange paints
 'that John paints his bike orange'

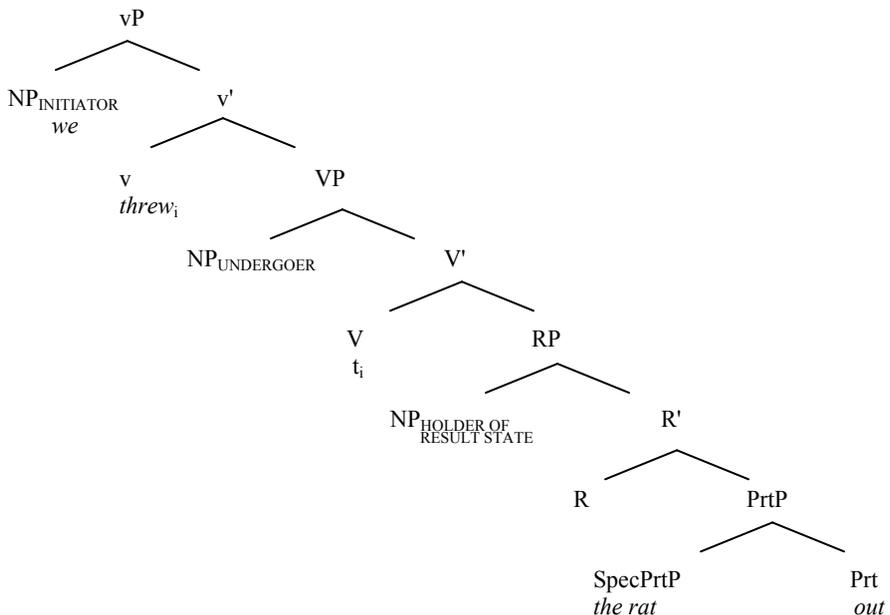
Semantically, particles such as *af* in *afmaken* are resultative: the result of the event expressed in (12)a is that the homework is *af* 'finished', just as the result of the event in (12)b is that the bike is *oranje* 'orange'.

The SC-analysis of SCVs is faced with a general problem, which is that not all particles are semantically similar to resultative phrases. That is to say, not all particles express a result and license a participant that is affected by this result. Particles may also function as, for instance, adverbial modifiers, which do not license any participant (cf. *de groenten voor**koken* 'to cook the vegetables beforehand, to precook the vegetables', briefly mentioned in chapter 1 and discussed more extensively in section 5.3.2). Particles, then, may perform various functions in the Lexical-Conceptual Structure (LCS) of the SCV construction, and SCVs may,

correspondingly, have various argument-structural and lexical-aspectual properties (see chapter 5).¹⁴

The restrictedness of SC-analyses and similar analyses, which only apply to particles that are semantically and syntactically similar to resultative phrases, is acknowledged by Ramchand and Svenonius (2002), who propose a resultative analysis for particles in their version of the Hale and Keyser (1993) *lexical syntax (l-syntax)* framework. Ramchand and Svenonius postulate a VP shell structure that directly reflects a resultative semantic structure (event structure). According to this structure, the particle expresses a result state, predicating of the referent of the direct object NP and forming a syntactic constituent with this NP. This structure is illustrated for the English example *we threw the rat out/we threw out the rat* (with VO order) in (13).

(13) VP shell, Ramchand and Svenonius (2002)



Ramchand and Svenonius suggest that the particle may move to R, resulting in the word order *we threw out the rat*. Alternatively, the argument *the rat* may move to one of the higher NP positions (either the "holder of result state" position or the "undergoer" position), resulting in the word order *we threw the rat out*.

¹⁴ By "lexical-aspectual properties" I refer to properties related to Aktionsart (such as durativity and telicity), and not to properties related to grammatical aspect (such as perfectivity and imperfectivity). See Boogaart (2005) for the distinction between lexical aspect and grammatical aspect (for which he uses, respectively, the labels "Aktionsart" and "aspect").

Ramchand and Svenonius are aware of the fact that their analysis only applies to particles functioning as resultative predicates, which license a participant that is affected by the result such particles express. Since the event structure is directly reflected by their *l*-syntax, SCV constructions with non-resultative particles, which have different event structures, would require a different syntactic structure in this framework. We will see, however, that positing different syntactic structures for SCV constructions with semantically different particles is not desirable, since all SCVs, regardless of their semantic properties, behave the same syntactically (chapter 4). All SCVs should therefore receive the same syntactic analysis.

In order to be able to account for the event-structural differences between SCV constructions as well as for their syntactic uniformity (in other words, in order to be able to account for the semantics-syntax non-isomorphism we see in SCV constructions), the event structure of SCVs should be separated from their syntactic structure (constituent structure). Such a separation, however, appears to be excluded in frameworks such as that of Ramchand and Svenonius (2002) and in the traditional SC-analysis. This is because these approaches assume that semantic relations are directly reflected by the syntax (see also 2.2.1).¹⁵

Besides the (semantic) property that not all particles express results, there is a distributional property of particles that is problematic for analyses such as the SC-analysis: particles, even those that do express results, do not have the same syntactic distribution as resultative phrases such as *oranje* 'orange' in *de fiets oranje verven* 'to paint the bike orange'. A first distributional difference between particles and resultative phrases is illustrated in (14): whereas particles may appear in the verb cluster (14a), this is impossible for resultative phrases (14b).

- (14) a. dat Jan de informatie ...
 that John the information ...
 ... *over* gebracht heeft / heeft *over* gebracht / *over* heeft gebracht
 ... over carried has / has over carried / over has carried
 'that John has carried over the information'
- b. dat Jan zijn fiets ...
 that John his bike ...
 ... *oranje* geverfd heeft / *heeft *oranje* geverfd / *oranje* heeft geverfd
 ... orange painted has / has orange painted / orange has painted
 'that John has painted his bike orange'

As is the case for resultative phrases, noun phrases and modifier phrases (adverbial phrases) cannot appear in the verb cluster in (standard) Dutch, which is illustrated in (15)a-b.

¹⁵ According to Ramchand and Svenonius (2002), there are only a few cases of non-resultative particles, but I will show in chapter 5 that Dutch SCVs with non-resultative particles are not marginal and may be formed productively.

- (15) a. dat Jan ...
 that John ...
 ... *het boek gelezen* heeft / *heeft *het boek gelezen* / *het boek* heeft gelezen
 ... the book read has / has the book read / the book has read
 'that John has read the book'
- b. dat Jan Marie ...
 that John Mary ...
 ... *gisteren gebeld* heeft / *heeft *gisteren gebeld* / *gisteren* heeft gebeld
 ... yesterday called has / has yesterday called / yesterday has called
 'that John called Mary yesterday'

A second distributional difference between particles and resultative phrases is that particles must be adjacent to the verb in the progressive *aan het*-construction, but resultative phrases and other phrases must be separated from the verb in this construction. This is illustrated in (16).¹⁶

- (16) a. dat Jan de informatie ...
 that John the information ...
 ... aan het *over brengen* is / **over* aan het *brengen* is
 ... at the over carrying is / over at the carrying is
 'that John is carrying over the information'
- b. dat Jan zijn fiets *aan het *oranje verven* is / *oranje* aan het *verven* is
 that John his bike at the orange painting is / orange at the painting is
 'that John is painting his bike orange'
- c. dat Jan *aan het *het boek lezen* is / *het boek* aan het *lezen* is
 that John at the the book read is / the book at the read is
 'that John is reading the book'
- d. dat Jan Marie *aan het *toen bellen* was / *toen* aan het *bellen* was
 that John Marie at the then ring was / then at the ring was
 'that John was calling Mary at that moment'

Particles, then, seem to be more 'local' to a verb than resultative phrases and other phrases in the VP.

To account for these distributional differences between resultative phrases and particles, SC-analyses propose a process of optional incorporation of the particle into the verb, which is assumed not to be available to resultative phrases like *oranje* 'orange' in (14)b and (16)b. This incorporation hypothesis is not without problems. To name one problem, additional assumptions have to be made that specify the syntactic contexts in which the particle is incorporated. That is, one has to account for the fact that particles are always incorporated in certain contexts (in the *aan het*-progressive, cf. (16)a, and in morphological processes such as compounding and derivation), are never incorporated in other contexts (main clauses with the verbal part of the SCV in verb second (V2) position), and are optionally incorporated in yet other contexts (verb clusters, cf. (14)a). Put differently, since incorporation results in

¹⁶ Stiebels (1996: 244, 248) shows that this difference is also apparent in German constructions with what she calls the "nominalised infinitive": particles must appear after *am* in this construction (e.g. *er ist den Mantel am ausziehen* / **aus am ziehen* 'he is putting off the jacket'), but resultative phrases may not do so.

the formation of a complex V^0 , the incorporation approach is faced with problems similar to those of the morphological approach discussed above: both approaches incorrectly predict that the whole SCV moves (or may move) in all syntactic contexts, including clauses with V2 and verb clusters. In both approaches, then, these syntactic contexts require an excorporation process violating Lexical Integrity (or other additional assumptions) (cf. Zeller 2001: 68-69).¹⁷

The incorporation analysis is also faced with a theory-internal problem, which is that movement operations are generally assumed to be triggered by conditions that would otherwise be violated. It is not clear how this analysis could account for the fact that particles are not (or not obligatorily) incorporated in all contexts (see Neeleman 1994: 24-25 for more problematic aspects of the incorporation analysis).

Other distributional differences between resultative phrases and particles can be observed in topicalisation and modification data: whereas resultative phrases may be topicalised and modified, both processes are generally unavailable to particles; there are only a few particles that allow both of these processes (see 4.3.1, 4.3.2, and 4.5). Similarly, there are only a few particles that may appear in copula constructions describing the result of the event, such as *de fiets is oranje* 'the bike is orange'. **?De informatie is over* 'the information is over' (from the SCV *de informatie overbrengen* 'to carry over the information'), for instance, appears to be ungrammatical (see 4.3.3; the same point is made for German particles in Stiebels 1996: 244). SC-analyses and related analyses suggest that semantic and pragmatic factors are responsible for these differences between particles and resultative phrases. These factors, however, appear to be unable to account for the full range of data (see chapter 4).

An additional problem for the SC-analysis is that the particle and the direct object NP, which are claimed to form a constituent in this analysis, can generally not be topicalised together (which is also noted by, among others, Lüdeling 2001: 131 and Stiebels 1996: 243). This is illustrated in (17)a. However, this problem of the SC-analysis is not specific to its application to particles, as constructions with resultative phrases such as *oranje* 'orange' in *de fiets oranje verven* 'to paint the bike orange' show the same ungrammaticality, cf. (17)b.¹⁸

- (17) a. *Maar [de informatie over]_{SC} heeft hij niet *gebracht*.
 but the information over has he not carried
 'But he did not carry over the information.'
- b. *Maar [zijn fiets oranje]_{SC} heeft hij niet *geverfd*.
 but his bike orange has he not painted
 'But he did not paint his bike orange.'

It has been claimed that acquisition data provide evidence for an analysis of particles as resultative phrases, such as the SC-analysis, as children often start using particles

¹⁷ One might suggest that Chomsky's (1995) Bare Phrase Structure (BPS) could provide a solution to this problem. I will illustrate in section 4.5 that the BPS approach does not seem to be able to account for the full range of SCV data satisfactorily.

¹⁸ See Neeleman (1994: 51-53) for criticisms on the account of this ungrammaticality that has been proposed within the SC-literature.

as syntactically independent resultative predicates, without the verb. For instance, children typically say *hoedje op* 'hat up' and *schoenen uit* 'shoes off', in which the preverbal elements of *opzetten* 'lit. up-set/put, to put on' and *uittrekken* 'lit. out-pull, to take off' are used in isolation, i.e. without the verbal base. It has been concluded from these data that particles must be analysed as resultative phrases (e.g. Bennis et al. 1995).

But although such acquisition data show that *op* and *uit* in *opzetten* 'to put up' and *uittrekken* 'to pull off' may indeed have the structure of a resultative phrase, and that this structure is, in any case, available for these elements, this does not necessarily mean that particles in general have such a phrasal structure. On the contrary, the number of SCVs from which the particles are used as such by children is, in fact, very small compared to the total number of SCVs that are available in the language (see the sections 4.5 and 5.6). Children would, for example, never say *boekjes op* 'books up' (from the SCV *opruimen* 'lit. up-remove, to put/stow something away, to put something where it belongs') to indicate that they want to put away their books. Nevertheless, the SCV *opruimen* is compositional (the particle *op* performs the same function in many other SCVs, such as *de spullen opbergen* 'lit. up-stow, to stow away the stuff' and *iemand opsluiten* 'lit. up-lock, to lock up someone'). These properties hold for the majority of SCVs. They cannot be accounted for satisfactorily by analysing particles as resultative phrases (see chapter 4 and section 5.6 for more data and for an alternative analysis explaining these properties as well as the acquisition data mentioned above).

In sum, SC-analyses and other analyses according to which particles are syntactically and semantically similar to resultative phrases suffer from both syntactic and semantic inadequacies. A syntactic problem is that particles that express resultativity are distributionally different from resultative phrases such as *oranje* in *de fiets oranje verven* 'to paint the bike orange'. A semantic problem is that there are many particles that productively form SCVs, but are semantically different from resultative phrases in that they do not function as resultative predicates (e.g. *voor* '(be)fore, beforehand' in *de groenten voorkoken* 'to cook the vegetables beforehand, to precook the vegetables'). I will show in chapter 5 that analyses that, like the SC-analysis, claim that all particles perform the same function and all SCVs have the same semantic structure are empirically inadequate, as there is no uniform semantic structure for SCVs (this point is also made in Stiebels 1996: 298).¹⁹

A further problem for SC-analyses and related analyses is that semantically different SCVs (which may exhibit different argument-structural and lexical-aspectual properties) have the same syntactic structure. In order then to be able to account for the SCV data satisfactorily, we must separate their semantic structure from their syntactic structure. This, however, appears to be excluded in analyses

¹⁹ It was noted in section 3.3.1 that Neeleman and Weerman (1993), who argue against an SC-analysis, notice the argument-structural differences among SCVs. They ascribe these differences to the optionality of the percolation of the particle's theta role. Since, however, Neeleman and Weerman do not specify under which circumstances there is theta role percolation and under which circumstances this is not the case, their analysis does not explain the argument-structural effects either.

such as the SC-analysis, which assume an isomorphic mapping between the semantics and the syntax (cf. 2.2.1, see also 5.4 and 8.3.1).

Phrasal Complex Predicate analyses

Several recent analyses of SCVs claim that the particle and the verb combine in syntax, forming a phrasal complex predicate (V', cf. (11)b). These Complex Predicate analyses (CP-analyses) share properties with both the morphological analysis and the SC-analysis. With the morphological analysis they share the property that the particle and the verb are claimed to form a constituent, and with the SC-analysis they share the property that the particle and the verb are *not* claimed to form a word. CP-analyses have been proposed in various frameworks and differ from one another in the structure that is proposed for particles: particles are either claimed to project a phrase or claimed not to do so. These analyses also differ from one another in their claims about the lexicalisation of SCVs. I will discuss some relevant proposals in the remainder of this section.

Lüdeling (2001) discusses a small sample of seven German predicates called "preverb-verb constructions" (PVCs), which are defined as consisting of a one-word preverbal element that is not of the category N or V and a verb (Lüdeling 2001: 18). These seven PVCs are *leer trinken* 'lit. empty drink, to drink empty', *nackt küssen* 'lit. naked kiss, to kiss naked', *abfahren* 'lit. off-drive, to drive off/away', *aufstellen* 'lit. up-put, to put up', *anlesen* 'lit. at-read, to start reading, to read partly', *schnell lesen* 'lit. quickly read, to read quickly', and *hineingehen* 'lit. hin-in-go, to go into' (ibid., 20, note that only three of these PVCs are generally assumed to be SCVs: *abfahren*, *aufstellen*, and *anlesen*). Lüdeling shows that these predicates behave variably with respect to, among other aspects, the possibility of topicalising and modifying the preverbal element (i.e. *leer*, *nackt*, *ab*, *auf*, *an*, *schnell*, and *hinein*), the semantic changes resulting from combining the verb with the preverbal element, and the ability of the PVC to feed derivational morphology. On the basis of these data, Lüdeling concludes that German particles are syntactically and semantically indistinguishable from phrases (XPs) that may show up adjacent to the verb, such as resultative phrases, depictive phrases, and modifier phrases (adverbial phrases). Lüdeling, then, claims that there is no such thing as a class of SCVs.

It should be noted that Lüdeling is not confronted with the distributional difference between SCVs and XP-V combinations in verb clusters (cf. (14)), as German verb clusters always have the first word order in (14) (see also 9.2.1). Even so, she discusses some topicalisation and modification differences between particles and resultative phrases, claiming that these are related to semantic (in)dependence and control properties (Lüdeling 2001: 148-155). We will see, however, that the semantic (in)dependence of the particle is a gradual notion and cannot easily be assessed independently (section 3.4.1). We will furthermore see that a more representative sample of SCVs (Lüdeling's sample containing only three SCVs) provides convincing evidence for the assumption of a separate category of SCVs, which exhibit distinctive syntactic and semantic behaviour (chapter 4 and chapter 5). Such an analysis, which posits a structural difference between particles and resultative phrases, will appear to capture the topicalisation and modification data more straightforwardly.

I thus disagree with Lüdeling's claim that particles are *syntactically* similar to resultative phrases and modifier phrases, but I agree with her claim that particles may be *semantically* similar (though not identical) to resultative phrases and modifier phrases. As will be shown in chapter 5, however, these are not the only phrases to which particles may be semantically similar.

Lüdeling points out that many PVCs are not fully productive, but are not completely lexicalised either. These combinations fall into classes in which a particular preverb combines with different verbs to form PVCs and expresses the same, conventionalised meaning in all of these PVCs. An example of such a PVC class is the class of German SCVs with *an* 'to start V, to V partly', including *anlesen* 'lit. at-read, to start reading, to read partly' and *anschneiden* 'lit. at-cut, to start cutting, to cut partly'. Such semantic patterns among PVCs are not accounted for if we assume that all of these PVCs are (only) listed individually; in that case we seem to miss a generalisation. Instead, these patterns seem to point to the existence of phrasal lexical templates such as $[an-V]_V$, on the basis of which SCVs with *an* can be formed by inserting verbs of a certain semantic class into the verbal slot. Lüdeling (2001: 81-82) calls this type of productivity "type-(b)-productivity".

I will show in the remainder of this book that the vast majority of SCVs exhibit "type-(b)-productivity" and that SCVs also share many other characteristics in which they differ from undisputed XP-V combinations. As opposed to XPs, particles cannot be topicalised and modified, and as opposed to XP-V combinations, SCVs show up in the verbal cluster and after *aan het* in the progressive *aan het*-construction (cf. (14)-(16) above and chapter 4). SCVs, then, behave syntactically differently from XP-V combinations, and this can be accounted for by positing a specific 'SCV syntax'.

The analysis of the peculiarities of the subclass of PVCs formed by SCVs is not the central topic of Lüdeling's book, its main conclusion being that SCVs do *not* form a coherent class of constructions. Lüdeling speculates that the intuition of speakers that there *is* such a class is related to listedness: listed PVCs are usually perceived as SCVs, but productively formed PVCs are usually not perceived as such (Lüdeling 2001: 159, 163). Lüdeling defines listedness as in (18).

- (18) Listedness: a simple or complex linguistic expression is listed if all terminal nodes are associated with phonological material (Lüdeling 2001: 82).

Lüdeling continues by claiming that the situation is more complicated with PVCs showing "type-(b)-productivity", which are often perceived as SCVs, but are not listed according to her definition of listedness. That is, these PVCs are assumed to contain only one fixed terminal node, their verbal slot being open, thanks to which they can be formed productively. As noted above, the specific behaviour of this class of PVCs is not thoroughly dealt with in Lüdeling (2001), and since this class constitutes the vast majority of SCVs, this is a serious shortcoming of the analysis.

I will discuss some more specific problems of Lüdeling's analysis in section 8.4.1, after I will have presented my own analysis.

Müller (2002a, chapter 6, b, 2003) proposes a phrasal Complex Predicate analysis for German SCVs in the HPSG framework, according to which a verb selects a particular particle in syntax. Like Lüdeling, Müller (2002a, chapter 6) argues that particles and resultative phrases behave in exactly the same way and therefore require the same analysis. He claims that particles and resultative phrases may be topicalised, may occupy the same position in the clause, cannot cooccur and cannot be iterated, and may together with the verb serve as the input for word formation. Müller, however, argues forcefully against the listedness hypothesis of Lüdeling (2001), discussed above.

Müller's claims about particle topicalisation contradict earlier claims about German particles, such as that of Zeller (2000: 16), according to which topicalisation of German particles is problematic. Importantly, most of Müller's topicalisation examples contain phrases instead of particles (e.g. *herein* 'there-in', *klar* 'clear', *auseinander* (out-one-other) 'apart', *an* 'on, running, burning, working'; see chapter 4 for diagnostics to distinguish particles from phrases). Müller also gives many examples that contain nominal and adjectival particles, which are often structurally ambiguous between a particle (X) and a phrase (XP) (see 4.5).²⁰ Another problem with Müller's claims is that in most of his examples it is actually the whole SCV (or XP-V combination) instead of the particle (or XP) that has undergone topicalisation (e.g. *aufblickt der Löwe, der im Schlaf gelegen* 'up looked the lion, who has been sleeping' vs. **auf hat der Löwe nicht geblickt* 'lit. up has the lion not looked', Müller 2002a: 274, cf. Zeller 2001: 97, see also 4.3.2).

Section 4.3.2 will illustrate that topicalisation is generally impossible for Dutch particles, unlike what is the case for resultative phrases and other phrases (cf. Booij 2002a: 208, 214, Neeleman 1994: 272). The same observation has been made for German particles by Zeller (2000, see also 2003) and for Swedish particles by Toivonen (2003). We will see that a representative set of Dutch SCVs provides us with data that are difficult to capture in an analysis like Müller's, according to which particles are structurally identical to resultative (or other) phrases, and that we need a specific SCV syntax (see 4.5 and 5.6).

One of Müller's main goals is to account for the alleged bracketing paradoxes in inflected and derived forms of SCVs: inflectional and derivational morphemes may separate the particle from the verb, but have scope over the whole particle-verb combination (cf. the past participle *herumgerennt* 'ran around' and the derived noun *das Herumgerenne* 'the running around'). It will be shown in section 8.2.1 that these facts are also captured in an alternative analysis.

Zeller (2001) also proposes a syntactic analysis of German SCVs, claiming that a particle forms a phrase (V') with the verb (see also Zeller 2003, which I will discuss in section 4.3.2). Zeller's analysis differs from that of Lüdeling (2001) and Müller (2002a, chapter 6, b, 2003) in that he proposes a specific particle structure,

²⁰ Most of these examples do not have well-formed Dutch counterparts (e.g. German *Auto kann er nur selten fahren* vs. Dutch **auto kan hij slechts zelden rijden* 'he can drive only seldom', Müller 2002a: 279), which is also the case with many of the other examples of what Müller calls "particle fronting".

distinguishing particles from resultative phrases and other phrases (XPs), and a specific SCV structure, distinguishing SCVs from XP-V combinations.

Zeller claims that particles project phrases, but that these phrases lack functional structure. Particles, then, are analysed as 'small XPs'. His motivation for this structure, however, seems to contain a contradiction (which is also noticed in Svenonius 2002): Zeller takes the fact that prepositional and adjectival particles may be modified as evidence for the XP status of particles (chapter 2), but he takes the fact that nominal particles may *not* be modified as evidence for the lack of functional structure (chapter 3). I will show in section 4.3.1 that modification is generally impossible for particles, particles being non-projecting words (Xs) instead of XPs.

According to the structure Zeller proposes for particles, a particle is more local to a verb than a fully projecting XP. Zeller uses the term "structural adjacency" to refer to this locality (Zeller 2001: 36). The structural adjacency of the particle and the verb is supposed to account for two properties specific to SCVs: (1) it is supposed to be related to the special, word-like, semantic properties of SCVs (cf. section 3.2), and (2) it may lead to the reanalysis of the particle and the verb as a morphological object; a V^0 . Zeller claims that this reanalysis mechanism accounts for two other properties of SCVs, namely for their ability to feed deverbal word formation and for the unit-like behaviour of SCVs in Dutch verb clusters (cf. *heeft overgebracht* 'has carried over' in (14)a above). As illustrated in section 3.2, however, not only words, but also non-morphological lexical units may feed deverbal word formation. This means that reanalysis is not needed to account for the first property. Zeller's reanalysis mechanism is, furthermore, problematic with respect to Dutch verb cluster data in which the particle and the verb are separated (*over heeft gebracht* 'has carried over'), as Booij (2003) points out. I will illustrate in chapter 4 that an alternative analysis accounts for both word orders of Dutch verb clusters.

Zeller (2001) claims that SCVs are formed by combining the lexical entries of the particle and the verb. The lexical entries of the particles are assumed to be subentries of the corresponding prepositions and to specify the idiosyncratic property of not projecting any functional structure. Zeller also tries to account for the fact that SCVs have, on the one hand, conventionalised properties, but may, on the other hand, be formed productively (see the remarks on *op* 'accessible' in SCVs such as *opzoeken* 'lit. up-search, to look up' and *oppiepen* 'lit. up-beep, to beep up' in 3.2, see also 4.2 and 4.4). He suggests that the subentries for particles contain the subcategorisation information for combining with verbs in this specific structure as well as the semantic information about special particle meanings and the classes of verbs with which the particle may combine. The special meanings are hypothesised to be available only if there is a relation of structural adjacency between the particle and the verb (Zeller 2001: 208), thus accounting for the fact that these meanings are generally not available outside the SCV construction (cf. section 3.2). Zeller's assumptions on the formation of SCVs will be compared to those of a constructional idiom analysis (to be discussed below) in section 8.4.1.

Toivonen (2003) presents a syntactic analysis of Swedish particles and SCVs in the LFG framework. She illustrates that Swedish particles can generally not be topicalised, cannot have a modifier or complement, and are distributionally different from resultative phrases. Toivonen claims that these facts can be accounted for by analysing particles as non-projecting words (i.e. words that do not project a phrase). As for the distributional differences between particles and resultative phrases, Toivonen shows that a resultative PP/AP is positioned behind the direct object (V-NP-PP/AP), whereas a particle appears before it (V-Prt-NP) (Toivonen 2003: 20). These data provide similar evidence as the Dutch verb cluster data: particles show up in a syntactic position adjacent to the verb that is unavailable to semantically similar phrases.

As Toivonen points out, particles do not form a syntactic category of their own, but words belonging to different syntactic categories (P, N, Adj, Adv) may, in addition to their projecting structure, have the constituent structure of a non-projecting word and show up in particle positions. Examples of Dutch SCVs with a nominal, an adjectival, and an adverbial particle are, respectively, *adem-halen* 'lit. breath-take, to breathe', *open-doen* 'lit. open-do, to open', and *weg-gaan* 'lit. away-go, to go away', all three of which may appear as a whole in the verb cluster after the modal verb *willen* 'to want', as illustrated in (19) (cf. (14), see also 4.3.5 and 4.5).

- | | | |
|------|--|-----------------------------------|
| (19) | dat hij <u>wilde</u> <i>ademhalen</i> | 'that he wanted to breathe' |
| | dat hij de deur <u>wilde</u> <i>opendoen</i> | 'that he wanted to open the door' |
| | dat hij <u>wilde</u> <i>weggaan</i> | 'that he wanted to go away' |

Toivonen hypothesises that the ability of adpositions, nouns, adjectives, and adverbs to show up in particle positions is marked in their lexical entry and that SCVs are formed by combining the lexical (sub)entry of the particle with that of the verb (Toivonen's analysis is similar to Zeller's (2001), discussed above, in this respect).²¹ The conventionalised properties of SCVs are assumed to be specified in the lexical entries of the verb and the particle (cf. Toivonen 2003: 156-157). An important question, however, is whether this assumption indeed accounts for the semantic and other dependencies among the particle and the verb in an SCV and for the different degrees of conventionalisation we find among SCVs (see 4.4). An alternative analysis is proposed by Booij (2002a, b), who claims that SCVs are constructional idioms (see below). Section 8.4.1 will compare the analyses of Toivonen (2003) and Zeller (2001) to a constructional idiom analysis with respect to their ability to account for the factors involved in synchronic SCV formation.

Toivonen claims that particles do not perform a uniform function, but may function as either resultative predicates or aspectual markers. I agree with Toivonen that particles are not associated with a single function, but I will show that not all of the aspectual functions distinguished by Toivonen indeed represent separate particle functions (section 3.4.1). I will also show that particles may perform other functions besides that of a resultative predicate and that of an aspectual marker (chapter 5).

²¹ The analyses of Toivonen (2003) and Zeller (2001) differ in the structure they propose for particles: whereas Zeller claims that particles do not project any *functional* structure, Toivonen claims that particles do not project any structure at all.

Toivonen's main conclusion is that the distinctive property of particles is their phrase-structural realisation (c-structure in the LFG framework): particles are non-projecting words (Xs). Their semantic structure and their argument structure, however, are not unique or distinctive, as particles may have various semantic and argument-structural properties (that is, particles either or not function as resultative predicates licensing a participant). Toivonen also notices that phrases (XPs) may exhibit the same semantic and argument-structural properties. This means that a satisfactory analysis of particles requires a separation of their phrase structure, which is the same for all particles, from their semantic structure and their argument structure, which differ among particles. Toivonen argues that the LFG framework posits such a separation and thus allows for an effective analysis of both the uniform structural properties and the divergent semantic properties of SCVs (cf. 2.2.1). I will develop a similar analysis for Dutch SCVs in part II of this book.

Toivonen labels the constituent formed by the particle and the verb as V^0 (Toivonen 2003: 95). Nevertheless, she argues that the particle and the verb form a phrase, and not a word, the particle being adjoined to the verb in syntax (cf. Toivonen 2003: 36-41).

CP-analyses such as Toivonen (2003) and Zeller (2001) claim that SCVs are formed by combining the lexical entries of the particle and the verb. Other CP-analyses, however, posit lexical SCV templates, claiming that SCVs are formed on the basis of phrasal templates in the lexicon.

Ackerman and Webelhuth (1998), for instance, propose an analysis of German SCVs in the HPSG/LFG framework, according to which these SCVs are analytically realised complex predicates that correspond to one lexical entry (and that could, alternatively, have had a synthetic realisation, i.e. a one-word realisation). This lexical entry contains a particle slot and a verbal slot and specifies the semantic content of the whole complex predicate.

The realisation-based approach of Ackerman and Webelhuth is problematic in several respects. As illustrated above, SCVs are separated in some, but not in all morphosyntactic contexts. Ackerman and Webelhuth link the separability of an SCV to its position: an SCV is realised synthetically (non-separated, i.e. as one word) if it appears, for instance, as an infinitive or as a (sentence-final) finite verb in a subordinate clause, but is realised analytically (i.e. separated) if it appears as the finite verb in a main clause. This generalisation, however, fails to account for separated infinitival forms in the Dutch verb cluster, such as *dat ik Jan op wilde bellen* 'that I wanted to call up John' (cf. (14)a above).

Another problem for the analysis of Ackerman and Webelhuth is that they subsume the two forms (the separated form and the non-separated form) under one lexical entry, which contains a disjunction. Müller (2003: 318-319) points out that this amounts to positing two lexical entries for this SCV (and thus for all SCVs), which is unattractive.

Toivonen (2003: 146) mentions a third problem for the analysis of Ackerman and Webelhuth (1998). She claims that this analysis basically treats SCVs as idioms, since all SCVs are completely listed, representing single lexical entries. These lexical entries only specify the semantic content of the whole SCV and do not specify which part of this meaning is associated with the particle form and which

part of it is associated with the verb form (cf. Ackerman and Webelhuth 1998: 335). The result of this is that this analysis appears to be unable to account for the compositionality and productivity in the SCV system (cf. 3.2; SCVs fall into classes in which a particular particle expresses a particular conventionalised meaning and which may be extended productively, see also 4.2).²²

The compositionality and productivity of the SCV system could be accounted for by assuming that SCVs are instantiations of *partly* lexicalised phrases instead of completely lexicalised phrases. This assumption is made for Dutch SCVs in the constructional idiom analysis of Booij (2002a, b). According to this analysis, SCVs are instantiations of phrasal lexical templates that contain a lexically fixed particle slot and an open slot for the verb. It is the open verbal slot in these templates that ensures the productivity of SCVs; the particle slot is filled with a non-projecting word. In combination with the verb this non-projecting word forms a first-level projection (minimal projection), which is structurally smaller than a combination of a verb and a phrase (e.g. a combination of a verb and a direct object NP, modifier phrase, or resultative phrase), but is structurally larger than a word (V^0). This SCV structure is given in (20)a. The structure proposed for SCVs with the particle *door* 'through' is given in (20)b.

- (20) a. $[X-V^0]_V'$
 b. $[door-V^0]_V'$

Inserting verbs into the verbal slot in (20)b results in the formation of SCVs with the particle *door*. Similar structures are posited for other particles that productively form SCVs (cf. Booij 2002a: 215, b, see also 8.2).

It was noted above that many particles express conventionalised meanings. The particle *door* 'through', for instance, may express a continuative meaning, as in *uren doorlopen* 'to continue walking for hours' and *de hele nacht doorlezen* 'to continue reading all night'. However, *door* does not express this continuative meaning when it is used outside the SCV construction. Such conventionalised, construction-specific meanings are assumed to be stored along with the relevant constructional idiom. The lexical template for SCVs with the continuative particle *door*, then, is (20)c (cf. Booij 2002a: 215). The formation of, for example, the SCV *doorlopen* 'to continue walking' involves inserting the verb *lopen* 'to walk' into the verbal slot in (20)c, which leads to (20)d.

- (20) c. $[[door]_P [X]_V]_V'$ 'to continue V-ing'
 d. $[[door]_P [lopen]_V]_V'$ 'to continue walking'

²² However, Ackerman and Webelhuth (1998: 322, note 5) themselves claim that their theory "(...) derives the regular [SCVs] through productive predicate formation patterns (...)". Compare the analysis of Booij (2002a, b), discussed below, who also argues that SCVs are lexical, non-morphological units, but assumes that SCV templates contain an open slot for the verb that corresponds to a slot in their semantic part, thus accounting for the compositionality and the productivity in the SCV system.

An advantage of Booij's analysis is that the notion "particle" has no role outside the SCV construction, so that no separate lexical (sub)entry needs to be posited for, for instance, the continuative particle *door*. Booij's analysis differs from both Toivonen's (2003) and Zeller's (2001), discussed above, in this respect. By contrast, the SCV formed on the basis of a constructional idiom such as (20)c is assumed to be stored in Booij's analysis (see 8.2, see 8.4.1 for a further comparison of the different proposals regarding the storage of SCVs and their subparts).

Another advantage of Booij's analysis is that it accounts for SCV combinations that do not show any productivity, but are unique in that either their particle or their verbal part does not combine with other particles/verbs (e.g. *teleurstellen* 'lit. ?-put, to disappoint', *nabootsen* 'lit. after-?, to imitate'). These SCVs are related to SCVs instantiating productive patterns in a natural way in Booij's analysis: all terminal nodes are fixed in these non-productive SCVs, which means that they do not represent *constructional* idioms, but *fixed* idioms without any open slots. These SCVs, then, are listed individually (cf. Riehemann 1998 for a similar relationship between regular, subregular, and idiomatic patterns in derivational morphology).

Booij's analysis also provides a straightforward account of SCVs with nominal and adjectival bases (e.g. *ophopen* 'lit. up-pile, to pile up' and *ophogen* 'lit. up-high, to heighten, to raise', cf. 3.2). These SCVs are claimed to be formed on the basis of the constructional idioms in (21)a, cf. (21)b.

- (21) a. $[op[[X]_N]_V]_V'$
 $[op[[X]_A]_V]_V'$
 b. $[op[[hoop]_N]_V]_V'$
 $[op[[hoog]_A]_V]_V'$

This analysis makes the conversion of adjectives and nouns not only dependent on their occurrence in SCVs, but also on SCVs with specific particles. As Booij (2002a: 215) points out, both dependencies appear to hold: the conversion of adjectives into verbs is not productive in Dutch and not all particles are used in SCVs with adjectival and nominal bases (see also section 8.2.3).

Jackendoff (2002a: 173) proposes a similar analysis for English SCVs, relating SCV constructions to other verbal constructions that are lexicalised to a greater or lesser extent. He compares SCV constructions to other constructions consisting of a verb, an NP, and another element (AP/PP/particle) and claims that these constructions together form a class of constructional idioms. The constructional idioms belonging to this class vary in the amount of information that is lexically fixed. This is illustrated in (22).

- (22) A class of constructional idioms with the structure [V NP X(P)]_{VP}
 (after Jackendoff 2002a: 172-176):
- a. completely open: *to water the tulips flat, to drive the engine clean*
 - b. NP open: *to take NP to task*
 subclass: prt instead of PP: *to look NP up, to put NP off*
 - c. NP in PP open: *to take unfair advantage of NP*
 - d. V open: *to V one's heart out, to V up a storm*
 - e. V and PP open: *to V one's way (out of the restaurant)*
 - f. V open, NP partly open: *to V (the night/the afternoon/...) away*

Jackendoff claims that SCVs belong to class (22)b, the PP being replaced by a particle (prt): *to look NP up, to screw NP up, to put NP off*.

Jackendoff's (2002a: 172-176) analysis and Booij's (2002a, b) analysis differ in terms of the parts of the SCV construction that are assumed to be lexically fixed. This is illustrated in (23).

- (23) a. Booij (2002a, b):
 construction example
 [*door-V*]_{V'} 'to continue V-ing' *doorlopen* 'to continue walking'
 [*af-V*]_{V'} 'to finish V-ing' *de brief afschrijven* 'to finish writing the letter'
- b. Jackendoff (2002a: 172-176):
 construction example
 [*look NP up*]_{VP} 'to look NP up' *to look up the book*
 [*put NP off*]_{VP} 'to put NP off' *to put off the deadline*

We have seen that there are classes of SCVs in which the same particle expresses the same (conventionalised) meaning in combination with different verbs (cf. 3.2). This seems to speak in favour Booij's analysis: in Jackendoff's analysis, SCVs belonging to such SCV classes seem to be essentially unrelated, the commonality in their meanings being merely accidental (cf. the discussion of Ackerman and Webelhuth 1998 above, see also 8.3.1).

Booij's (2002a, b) constructional idiom analysis appears to incorporate both the advantages of morphological analyses of SCVs and those of syntactic analyses of SCVs. By positing that SCVs are instantiations of *lexical templates*, this analysis accounts for the lexical properties of SCVs (which, as has been illustrated in section 3.2, have often been mistaken for word properties). By positing, furthermore, that these lexical templates are *phrasal*, the analysis accounts for the separability of SCVs. And by positing that these templates are only *partly* lexicalised, the analysis accounts for the (at first sight paradoxical) fact that SCVs with conventionalised properties may be formed productively, which is the crucial property of the analysis. I will work out the precise properties of the constructional idiom analysis in Part II of this book (see chapter 8 for its essential properties), in which I will present extensive support for this analysis.

3.3.3 Summary

The discussion of the synchronic analyses of the morphosyntactic structure of SCVs shows that SCVs are generally analysed as either special words (i.e. separable words) or special phrases (i.e. phrases that are structurally smaller or more lexicalised than most other phrases).

As for the phrasal analyses of SCVs, these come in two types: Small Clause analyses (SC-analyses) and Complex Predicate analyses (CP-analyses). Whereas SC-analyses claim that SCV constructions are not any different from constructions with resultative phrases, many CP-analyses postulate specific structural and/or lexical properties for SCVs. Particles are, for instance, claimed to be structurally smaller than resultative phrases, and SCVs are claimed to be partly or completely lexicalised.

A constructional idiom analysis appears to provide an effective account of the various properties of SCVs. This analysis claims that SCVs are instantiations of partly lexicalised phrasal templates, which, as will be illustrated in the next chapter, must be assumed to be part of the language system for independent reasons anyway.

It has to be noted that the evidence that has been used in order to prove, for example, either a word analysis or an SC-analysis is for a large part based on the same diagnostics. Both types of analysis make, for instance, crucial use of particle topicalisation data in their argumentation, proponents of a word analysis providing unacceptable examples of particle topicalisation and proponents of an SC-analysis providing acceptable examples of (presumed) particle topicalisation. As Haiden (to appear) points out, this inconsistent picture is to a large extent due to the fact that different linguists have focused on different subclasses of SCVs. In order to avoid such a selectional bias, I will take into consideration a representative set of data in investigating the structural and semantic properties of SCVs. This investigation will reveal that SCVs exhibit divergent semantic properties (chapter 5). To provide a background to that discussion, I will now briefly review some existing analyses of the semantic properties of SCVs.

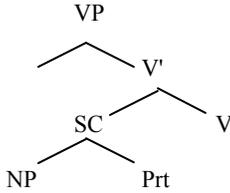
3.4 Synchronic analyses of the semantics of SCVs

3.4.1 *Transparent, idiomatic, and aspectual SCVs*

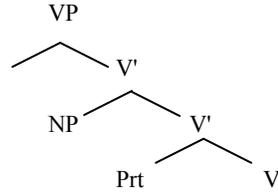
Some linguists have proposed different syntactic structures for semantically different SCVs, distinguishing between transparent and idiomatic SCVs, with sometimes a third category of aspectual SCVs (Hiltunen 1983, Jackendoff 2002b, Toivonen 2003, Wurmbrand 2000). Different linguists, however, often put the same SCVs into different categories in such classifications. This variation is a consequence of the fact that different criteria have been used to diagnose the transparency of SCVs.

In SC-analyses (and related proposals) it has been claimed that constructions with transparent SCVs have the Small Clause structure in (24)a, whereas constructions with idiomatic SCVs have the Complex Predicate structure in (24)b (Wurmbrand 2000, (24) assumes OV order).

(24) a. Small Clause structure



b. Complex Predicate structure



According to such proposals, only those SCVs that contain particles that behave in exactly the same way as resultative phrases are transparent. Transparent SCVs, then, have particles that can be topicalised, can be modified, and can be used in copula constructions such as *the radio is off* (cf. the SCV *to turn off*, see also 4.3.3). SCVs with particles that do not behave like resultative phrases are classified as idiomatic. The structure in (24)b illustrates that the particles of these SCVs are assumed to be more closely connected to the verb.

Within the LFG framework, Toivonen (2003, chapter 5) also proposes different (f-)structures for different particle types: whereas resultative particles are claimed to be complements of V (XCOMP), aspectual particles are claimed to be co-heads of the verb (adjuncts).

Although such dual analyses might seem attractive at first sight, an investigation of SCV data reveals that it is faced with various problems. A first problem is that very few particles appear to behave in exactly the same way as resultative phrases, which means that the class of transparent SCVs would be very small (see the chapters 4 and 5). So if transparent SCVs are defined as SCVs with particles that behave in exactly the same way as resultative phrases, the vast majority of SCVs would be classified as idiomatic. Such a classification, however, cannot account for the semantic systematicity and the productivity that is found among these 'idiomatic' SCVs, i.e. among the SCVs whose particles do not behave in exactly the same way as resultative phrases (see chapter 4). On the other hand, an analysis according to which SCVs have a structure of their own and are both semantically and syntactically distinct from combinations of a resultative (or other) phrase and a verb will appear to do justice to the semantic systematicity and the productivity within the SCV system.

Another problem for the classification of SCVs into transparent, idiomatic, and aspectual ones has to do with the fact that the parts of SCVs often express metaphorical meanings. In some SCVs, the metaphors in question are pretty straightforward and easily recognisable, as a consequence of which linguists tend to classify such SCVs as transparent. In other SCVs, however, the metaphors are less easily recognisable, and these SCVs tend to be classified as non-transparent. This is clearly a gradual matter instead of a discrete one. The gradualness involved in the transparency of SCVs is reflected by the different names that have been given to the category of SCVs that cannot be considered as completely idiomatic, but whose particles nevertheless behave differently from resultative phrases; such SCVs have been called "semi-idiomatic", "semi-transparent", "semi-compositional", etc. The

problems involved in classifying SCVs into transparent, idiomatic, and aspectual SCVs are illustrated by Toivonen's (2003: 144-147) classification of the three Swedish SCVs in (25).

- | | | | |
|------|----|----------------|---|
| (25) | a. | <i>gå bort</i> | 'lit. go away, to pass away' > 'to die' |
| | b. | <i>köra ut</i> | 'lit. drive out, to kick out someone (out of X)' |
| | c. | <i>ta över</i> | 'lit. take over, to take over (something from someone)' |

Toivonen classifies the SCV in (25)a as an idiomatic one, but she claims that the SCVs in (25)b-c are semi-idiomatic, since the separate meanings of the particle and the verb are still recognisable in the meanings of these SCVs. This, however, also seems to hold for *gå bort* 'to pass away, to die' in (25)a, as dying can be thought of as passing (going) away from life/from here (cf. Toivonen 2003: 156). The distinction Toivonen makes here clearly is a very subtle one. Section 4.2 will show that these facts illustrate one of the central properties of SCVs, the meanings of the majority of SCVs being both conventionalised (i.e. not fully predictable, involving semantic extension) and compositional.

The category of aspectual SCVs, which somehow falls in between that of transparent SCVs and that of idiomatic SCVs, also appears to vary from linguist to linguist. Particles that have been put into this category are continuative particles (e.g. *door* 'through' in *uren doorlopen* 'to continue walking for hours'), inceptive particles (e.g. *toe* 'to' in *toehappen* 'to bite/jump at something'), and telic particles (e.g. *op* 'up' in *de taart opeten* 'to eat up the cake') (German, English, and Scandinavian counterparts of these Dutch examples have been mentioned in the literature). Although some of the aspectual categories appear to be useful to distinguish, this is less clear for other categories.

An example of a questionable category is that of the telic particles. Telic particles name the endpoint of an event, thereby expressing its result (which is often a fairly abstract one). However, the particles of SCVs alleged to be transparent also express results: transparent SCVs are generally defined as SCVs with particles that are similar to resultative phrases. The particles of these SCVs, then, also telicise the event expressed by the verb, so that these particles, too, could be called "aspectual". The consequence of this is that SCVs with particles referring to more concrete results tend to be classified as transparent SCVs, whereas SCVs with particles referring to more abstract results tend to be classified as aspectual SCVs. Such a classification, then, suggests the existence of distinct classes, but all there is, is a continuum from particles expressing more concrete results to particles expressing more abstract results; all of these particles add telicity to the event denoted by the verb. This means that the class of telic particles is not a very useful one.

Discussions of the transparency of SCVs often make claims about their argument structures. Toivonen (2003: 150-155), for instance, discusses the divergent effects that the addition of a particle may have on the argument structure of the verb, and claims that these effects are often not predictable. I will show in chapter 5, however, that the argument-structural differences among SCVs follow straightforwardly from their different Lexical-Conceptual Structures (LCSs, which project the argument structures), which, in turn, follow from the different functions particles perform.

3.4.2 McIntyre (2004) and Stiebels (1996)

Two semantic analyses of SCVs that deserve some discussion are McIntyre (2001a, b, 2002, 2003, 2004) and Stiebels (1996).

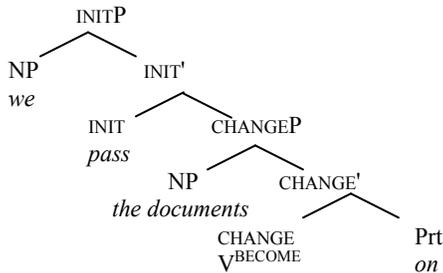
Andrew McIntyre discusses German and English SCVs in various publications and classifies these SCVs according to their semantic and argument-structural properties. The basic assumption implicit in most of his work which is explicitly formulated in McIntyre (2002) is that there is much more compositionality among SCVs than is generally assumed: although SCVs usually exhibit idiosyncrasies (conventionalisation), they also show clear semantic patterns (this issue will be of central concern in Part II of this book).

McIntyre gives the most complete overview of the different particle types he distinguishes in McIntyre (2004), where he claims that many particles express "event paths": paths followed by the event. The continuative particle *on* in *to read on*, for instance, is claimed to express the metaphorical, extended path followed by the event of the Agent's reading through time. Another category of event-path particles is that of particles that license a Ground participant, such as *through* in *to think the problem through* and the German particle *an* in *jemanden anstarren* 'to stare at someone'. In these examples, the event paths are, respectively, the path of the Agent's thinking through the problem and the (stative) path of the Agent's staring at someone. These event path particles contrast with resultative particles, such as *on* in *to pass the documents on*, in which *on* expresses the change of location (path) of its Figure *the documents* instead of the path of the event (for more on the notions Figure and Ground, see section 5.2).

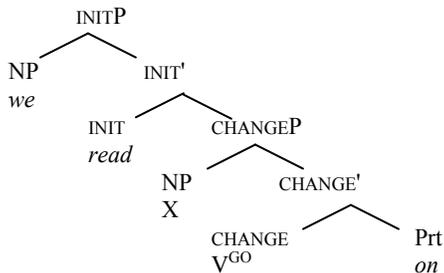
The semantic analysis of SCVs that I will propose in chapter 5 is similar to that of McIntyre (2004) in many respects. The syntactic structures that McIntyre and I propose for semantically different SCVs, however, are radically different. McIntyre proposes an extended VP analysis (cf. 2.2.1 and the discussion of Ramchand and Svenonius 2002 in 3.3.2), positing syntactic structures with semantically specified heads. The syntactic structure of constructions with resultative particles (e.g. *we pass the documents on*) is assumed to contain an INITIATOR projection (hosting the verb and the subject NP) and a CHANGE projection (hosting the particle *on* and the direct object NP). This is illustrated in (26)a. The syntactic structure of constructions with continuative particles (e.g. *we read on*) is also assumed to contain these syntactic heads, but here the CHANGE head expresses the relation "V^{GO} *on*" and its specifier contains an empty element "X", as illustrated in (26)b.

(26) Syntactic structures, after McIntyre (2004: 550, 556, simplified)

a. *We pass the documents on.*



b. *We read on.*



A problem for the analysis in (26) is that the motivation for positing a CHANGE head in (26)b is not clear, since constructions such as *we read on* do not express any change at all, but express the extended and uninterrupted continuation of an event (see 5.3.5). Apparently, McIntyre assumes that the syntactic structures of *we pass the documents on* and *we read on* are similar, and since he supposes that the syntactic structure contains meaningful heads like CHANGE, this leads him to posit such a head for both constructions. The two constructions, however, are argument-structurally and lexical-aspectually different from one another; they have different event structures. That is, constructions with resultative particles like *we pass the documents on* are transitive and telic, but constructions with continuative particles such as *we read on* are intransitive (unergative) and atelic. McIntyre describes these differences and represents them in his semantic structures (i.e. in his Semantic Representations (SRs), which are assumed to be purely conceptual and not to belong to a lexical-semantic level of the grammar). But his syntactic structures, which contain semantically specified heads, seem to suggest that the two constructions have similar event structures: both structures contain a CHANGE head.

A related problem for McIntyre's analysis, which is also noted by McIntyre himself, is that it is not immediately clear how the same syntactic structure would account for SCV constructions expressing (atelic) activities, such as the German construction *jemanden anstarren* 'to stare at someone' and the English construction *to ring through (with the details)*. Since these SCV constructions express activities,

it is not a very plausible assumption that their syntactic structure, too, contains a CHANGE head. These constructions, then, seem to require a different syntactic structure in McIntyre's analysis.

These two issues amount to one general problem for McIntyre's analysis. McIntyre discusses the semantic, argument-structural, and lexical-aspectual differences between classes of SCV constructions. It was noted above that he assumes that the semantics is reflected by the syntax in the sense that his syntactic projections have semantic content (e.g. CHANGE_P). This implies that if McIntyre wants to do justice to the semantic differences between SCV constructions, he has to posit different syntactic structures for these SCV constructions (containing different syntactic heads, cf. the discussion of Ramchand and Svenonius 2002 in 3.3.2). We will see, however, that all SCVs behave the same syntactically, which suggests that semantically different SCV constructions have the same syntactic structure (see chapter 4).

I will show in chapter 5 that SCVs may have different Lexical-Conceptual Structures (LCSs), from which their argument-structural and lexical-aspectual differences follow straightforwardly. Since, however, the syntactic properties of these semantically different SCVs are the same, these SCVs should receive the same syntactic analysis. We should thus allow for a many-to-one semantics-syntax mapping that seems to be excluded in McIntyre's framework, which postulates syntactic structures that contain heads with semantic (and lexical-aspectual) content (cf. 2.2.1, see also 8.3.1 and 8.4.2).²³

Stiebels (1996) discusses the semantic properties and morphosyntactic structure of SCVs with the German particles *an* and *auf* (and prefixed verbs with the prefixes *ent-*, *er-*, and *ver-*). As for the morphosyntactic structure of SCVs, Stiebels adopts Stiebels and Wunderlich's (1994) morphological analysis (see 3.3.1). Although I do not agree with Stiebels' structural analysis of SCVs, her semantic analysis, being one of the few semantic analyses of SCVs, demands some discussion.

Stiebels distinguishes three types of preverb that may affect the argument structure of the base verb in different, predictable ways. Most preverbs function as either lexical arguments or lexical adjuncts of the verb. This distinction is based on the relation between the preverb and the verb's argument structure. If a preverb satisfies an (obligatorily filled) argument slot in the verb's argument structure, it is a lexical argument. An example is the preverb *an* in *Plakate ankleben* 'to stick on posters', which satisfies an argument position: *Plakate an X kleben* 'to stick posters on X' (Stiebels 1996: 89). If, on the other hand, a preverb does not satisfy an argument slot of the verb, it is a lexical adjunct. An example is *ab* in *seine überflüssigen Pfunde abschwimmen* 'to swim off one's redundant pounds': *schwimmen* 'to swim' does not contain an obligatorily filled argument slot (ibid., 132).

Both types of preverb combine with the verb through mechanisms of composition. Combining a verb with an adjunct preverb is expected to result in

²³ An analysis allowing for such a many-to-one mapping between the semantic structure and the syntactic structure of SCVs still allows for a semantic analysis according to which many particles express event paths, as proposed in McIntyre (2004), cf. section 5.3.7.

argument extension, that is, in the addition of an argument NP. The SCV *abschwimmen* 'to swim off' in *seine überflüssigen Pfunde abschwimmen* 'to swim off one's redundant pounds', for instance, contains an extra argument NP compared to the verb *schwimmen* 'to swim'.²⁴

Stiebels claims that her classification of preverbs into lexical arguments and lexical adjuncts accounts for the divergent argument-structural properties of SCVs and ICVs. Her analysis, however, appears to raise some questions, one of which I will discuss here (other questions raised by Stiebels' analysis will be discussed in section 8.4.3).

Some Dutch SCV constructions are given in (27).

- (27) a. het boek *doorlezen*
 the book through-read
 'to read through the book'
 b. het boek *doorkijken*, het boek *doorbladeren*
 the book through-look, the book through-leaf
 'to look through the book, to leaf through the book'

The first SCV, *doorlezen* 'to read through', contains an optionally transitive base verb, *lezen* 'to read'. The particle *door* in (27)a, then, does not satisfy an obligatorily filled argument slot; *door* in *doorlezen* would be classified as a lexical adjunct in Stiebels' classification.

The first SCV in (27)b, on the other hand, contains an intransitive base verb that calls for a prepositional argument expressing the direction of the activity of looking (*naar X kijken* 'to look at X', *door X kijken* 'to look through X', *in X kijken* 'to look into X'). The particle *door* can be said to satisfy this argument: *het boek doorkijken* 'to look through the book' may be paraphrased as *door het boek kijken* 'to look through the book', in which *door* satisfies, with the NP, the required prepositional argument. *Door* in *doorkijken*, then, is a lexical argument. The same seems to hold for *door* in *doorbladeren* 'to leaf through', as *bladeren* 'to leaf' also seems to require a prepositional object, specifying the substance that is leafed through/in (*door/in X bladeren* 'to leaf through/in X').

It thus appears that the particle *door* in the SCV in (27)a is a lexical adjunct and the particle *door* in the SCVs in (27)b is a lexical argument in Stiebels' classification. This classification, however, does not seem to do justice to the paradigmatic relations between these three SCVs. That is to say, the semantic relationship between the verb, the particle, and the object is the same in all three SCVs: all three SCVs represent the pattern in (28).

- (28) NP [*door-V*]_V 'to go through NP by V-ing'

²⁴ In addition to a class of argument preverbs and a class of adjunct preverbs, Stiebels (1996) distinguishes a class of preverbs that express purely aspectual or Aktionsart-related information (e.g. *er-* in *die Rosen erblühen in einer Stunde* 'the roses will start blooming in an hour', Stiebels 1996: 73). These preverbs are called "functors of the verb". Their distinctive property is that they do not influence the argument structure of the verb.

Paradigmatic relations seem to play a crucial role in synchronic SCV formation. The pattern in (28), for instance, could be derived from the relations between existing SCVs with *door*, and new SCVs belonging to this class could then be formed by inserting verbs into the verbal slot in this pattern. This can be done with both intransitive and (optionally) transitive verbs; this type of SCV formation appears to be insensitive to the argument-structural properties of the base verb.

What we see in (27)-(28) is that the argument structure of the input (i.e. of the base verb) may vary among SCVs, but the argument structure of the output (i.e. of the resulting SCVs) is uniform. The effect of this is that SCV formation cannot be defined as an operation on the argument structure of the input verb. This is because the argument-structural effects cannot be captured by a single rule (which is what Stiebels tries to do in her Lexical Composition framework, which is based on Wunderlich's 1994, 1997 Lexical Decomposition Grammar): no matter what the argument structure of the input verb is, the output verb is always transitive.

The same observation has been made for Dutch *be-* and *ver-*prefixed verbs and German *be-*prefixed verbs by, among others, Booij (2002a: 191), Booij and van Haaften (1988), and Michaelis and Ruppenhofer (2000). Booij (2002a: 191), for instance, argues that *be-*prefixation cannot be defined as an operation on the argument structure of the input verb, since input verbs with different argument structures form prefixed verbs with a uniform argument structure. Instead, these operations appear to take place at the level of Lexical-Conceptual Structure (LCS). That is to say, Booij posits morphological templates such as $[be-V]_V^0$, which are associated with a particular LCS that maps to a particular, uniform argument structure. According to such an analysis, the argument-structural properties of the output (the prefixed verb) follow from the lexical-semantic properties of the prefixes in question and the effects these properties have on the LCS of the output. This then captures the fact that argument-structurally different input verbs may form argument-structurally identical output verbs.

As illustrated above, the argument-structural properties of SCVs are similar to those of *be-*verbs in the sense that input verbs with different argument structures form SCVs with a uniform argument structure. It thus seems logical to claim that SCV formation involves a similar operation at LCS, according to which SCVs are formed on the basis of templates such as the one in (28) above. We have seen that such an approach to SCVs has been proposed by Booij (2002a, b). This approach will be elaborated in Part II of this book.

Some further questions raised by Stiebels' (1996) analysis will be discussed in section 8.4.3. It will be shown that her semantic classification of preverbs, which is based on the argument-structural properties of the base verb, does not in all cases provide an account of the argument-structural properties of SCV constructions. I will propose an alternative semantic classification of preverbs, which is based on the function a preverb performs in the Lexical-Conceptual Structure of an SCV construction (chapter 5). It will be shown that such a classification accounts for both the argument-structural and the lexical-aspectual properties of SCV constructions.

Stiebels (1996) points out that particles and prefixes may perform similar functions in the LCS of a construction and, as a consequence, may show identical argument-structural effects. She claims that this is evidence for a morphological analysis of SCVs. These effects, however, can also be accounted for in a phrasal

analysis (cf. 3.2, 3.3.1, and the chapters 5 and 6). We will see that the functions performed by particles and prefixes may also be performed by phrases (e.g. PPs/APs/AdvPs, which are structurally different from particles, see chapter 4). In other words, constructions with different phrase-structural realisations (i.e. PP-V combinations, particle-verb combinations, and prefix-verb combinations) may have similar semantic structures. This implies that the mapping between syntax and semantics is not necessarily isomorphic (cf. 2.2.1, 5.4, and 8.3.1).

Stiebels (1996) claims that SCVs are formed by combining the lexical entry of the particle with that of the verb. She assumes that restrictions on such combinations are basically semantically or conceptually grounded. Stiebels' analysis is, in this respect, similar to that of Toivonen (2003) and Zeller (2001), who also claim that SCVs are formed by combining the lexical entries of the particle and the verb (but whereas Toivonen and Zeller claim that this takes place in syntax, Stiebels claims that it takes place in morphology). We will see, however, that an analysis according to which SCVs are instantiations of partly lexicalised phrasal templates accounts for the properties of SCVs in a more straightforward way.

Both the analysis in Stiebels (1996) and the analysis proposed in this book are based on data from dictionaries, but the two sets of data differ in quantitative respects. Stiebels (1996) investigates the semantic properties of only five different preverbs (two particles, *an* and *auf*, and three prefixes, *ent-*, *er-*, and *ver-*). In order to see a representative picture of the functions particles and prefixes may perform, I have investigated the semantic properties of thirteen different particles and all (seven) prefixes that correspond to a preposition and/or postposition (see the chapters 5 and 6).

3.5 Summary of the synchronic analyses of SCVs

The overview of the existing synchronic analyses of SCVs illustrates that SCVs have both properties that are generally associated with words and properties that are generally associated with phrases. The main argument that has been brought up against a word analysis of SCVs is that they are separable. Phrasal analyses are, in my opinion, not necessarily faced with insurmountable problems, as long as they allow for multiple semantic structures for SCVs and distinguish SCVs from other phrasal combinations, thus accounting for the specific semantic and syntactic properties of SCVs.

The existing analyses pay relatively little attention to the semantics of SCVs. The focus has, furthermore, often been on a small subset of particles/SCVs, which has led to conflicting data and, consequently, to contradictory analyses. By consulting a more representative sample of SCVs, I hope to arrive at an analysis that stands up to SCVs in general.

My analysis of SCVs will demonstrate that the mapping between the semantic structure and the syntactic structure of SCVs is not necessarily isomorphic. Although a non-isomorphic semantics-syntax mapping might seem exceptional for linguists working in frameworks that assume a direct reflection of the semantics by the syntax, it is allowed for in 'linking' models such as that of LFG and Jackendoff's (2002a) tripartite parallel architecture (cf. 2.2.1, see also 8.3). I will show that it also

fits naturally into a diachronic analysis, according to which SCVs represent an intermediate stage in the grammaticalisation of fully projecting syntactic structures into morphologically complex words (ICVs). The next subsection will review the existing diachronic analyses of SCVs and ICVs.

3.6 Diachronic analyses of SCVs and ICVs

3.6.1 Grammaticalisation of SCVs and ICVs

The general diachronic hypothesis that has been made in the literature is that both SCVs and ICVs are grammaticalised resultative phrases (Booij 2002a, section 6.4, Neeleman and Weerman 1992), and that ICVs represent a further historical stage in this grammaticalisation development than SCVs (van der Auwera 1999, Booij 2002a, *ibid.*, van Loey 1976).²⁵ Grammaticalisation 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, see also section 2.3). Grammaticalisation is accompanied (or, according to some linguists, even triggered) by semantic changes. It often involves fusion (univerbation) of linguistic items with other items in their morphosyntactic context (see section 2.3).

The grammaticalisation pattern in (29)a-b has been proposed for SCVs and ICVs. This pattern represents the development of a resultative phrase (XP_{RES}) via a particle into a prefix.

- (29) a. structural pattern:
 [...-XP_{RES}-V⁰]_{VP} > [...[X-V⁰]_{V'}]_{VP} > [...[prefix-V⁰]_V⁰]_{VP}
 b. preverb cline:
 phrase > particle > prefix

On the basis of the literature on grammaticalisation phenomena (e.g. Hopper and Traugott 2003) these structural developments have been assumed to be accompanied by semantic changes, most notably by semantic bleaching in the preverbal element (i.e. the loss of lexical meaning and the development of more abstract, metaphorical meanings, cf. Booij 2002a: 218 and van der Auwera 1999: 132). That is, the semantic contribution of the preverbal element to the meaning of the SCV has been assumed to become more and more abstract in the course of the grammaticalisation development represented in (29). The synchronic hypothesis that can be derived from this diachronic assumption is that particles have more concrete meanings than the corresponding prefixes.

The concrete, basic meaning of a preverb is generally claimed to be similar to the spatial meaning of the corresponding preposition/postposition. For instance, the particle *op* 'up(wards), on high' in the SCV construction *de bal ópgooien* 'to throw

²⁵ Van Kemenade and Los (2003) make a similar claim, but in their terminology "ICV" refers to prefixed verbs in general (and not only to verbs with a prefix that corresponds to a preposition/postposition), and they only discuss verbs with the prefixes *be-*, *ver-*, and *ont-*.

up the ball' expresses a concrete, spatial meaning, as does the particle *door* 'through' in the SCV construction *het bos dóorlopen* 'to walk through the forest'. In contrast, the prefix *door* in the ICV *doorlopen*, which may be translated with 'to pass, to complete' (e.g. *de cursus doorlopen* 'to complete the course'), has been claimed not to express spatiality (Booij 2002a: 218). The spatial meanings are thus claimed to be more clearly present in particles than in the corresponding prefixes.

A look at a representative set of SCVs, however, shows that many SCV preverbs do not express concrete, spatial meanings at all. Some examples of SCVs with particles that have a non-spatial meaning are given in (30).

(30)	SCV	gloss	meaning
	<i>de informatie ópzoeken</i>	up-search	'to look up the information'
	<i>je schoenen ínlopen</i>	in-walk	'to wear in one's shoes'
	<i>de bestelling áfleveren</i>	down/off-deliver	'to deliver the order'
	<i>het oude jaar úitluiden</i>	out-ring	'to ring out the old year'

We will see in the chapters 4 and 5 that there are many SCVs with particles that have non-spatial meanings, such as the ones in (30) (the four particles in (30) are the most frequent ones in Dutch SCVs and express non-spatial meanings in the vast majority of the SCVs they form). We will also see that the particles in (30) do indeed contribute meaning to the SCV compositionally; these particles express meanings that are derived from the basic, spatial meaning of the corresponding preposition/postposition by mechanisms of semantic extension such as metaphor and metonymy. The SCV examples in (30) illustrate that the loss of spatial meaning cannot be a sufficient condition for a preverb to become inseparable. But can it be a necessary condition?

If the loss of spatial meaning of the preverb were a necessary condition for its development towards inseparability, productively used Modern Dutch prefixes would generally express non-spatial meanings. The ICVs in (31), however, do not do so.

(31)	ICV	gloss	meaning
	<i>het huis doorzóeken</i>	through-search	'to search (through) the house'
	<i>het huis omgéven</i>	around-give	'to surround the house'
	<i>het land overspóelen</i>	over-wash	'to wash over the land'

The ICV preverbs in (31) express spatial meanings: in *doorzóeken* 'to search the house', the searching goes through the house, in *omgéven* 'to surround', something is around the house, and in *overspóelen* 'to wash over', water comes over the land.

Booij (2002a: 218), however, claims that the ICV preverbs in (32) express abstract, non-spatial meanings.

(32)	ICV	gloss	Booij's translation
	<i>doorbréken</i>	through-break	'to break'
	<i>doorlópen</i>	through-walk/go	'to pass'
	<i>ondergáan</i>	under-go	'to undergo'
	<i>overkómen</i>	over-come	'to happen to someone'

At first sight the spatiality indeed seems to be lacking in these ICVs, but their prefixes actually do have spatial meanings. The first ICV in (32), *doorbréken*, is used in a context such as *de sleur doorbréken*, to be translated with 'to break through the rut, to break out of the rut'. This ICV, then, actually means 'to break completely through something'. Similarly, *doorlópen* means 'to go/pass completely through something' (which may, in a context such as *de cursus doorlópen* 'to go through the course completely' be interpreted as 'to pass/complete the course'). The third ICV, *ondergaan*, expresses the event of going completely under something. As for the last example in (32), *overkómen*, this ICV refers to the event of something coming completely over someone. These prefixes thus express spatiality. I will show in section 6.2 that such spatial meanings are present in the majority of ICV preverbs. This means that the loss of spatial meaning cannot be a necessary condition for the preverb's development towards inseparability either.

Booij compares the ICVs in (32) to the SCVs in (33) and notes that "the change from particle to prefix implies a loss of lexical meaning: the prefixes have an abstract, aspectual meaning, whereas the corresponding particles have a more concrete, spatial meaning" (Booij 2002a: 218).

(33)	SCVs	gloss	meaning
	<i>dóorbreken</i>	through-break	'to break through/in two'
	<i>dóorlopen</i>	through-walk/go	'to walk on'
	<i>óndergaan</i>	under-go	'to go down'
	<i>óverkomen</i>	over-come	'to come over'

One of the preverbs in these complex verbs, however, appears not to express any spatiality at all: *door* in *dóorlopen* 'to continue walking, to walk on' only expresses continuity, the spatial meaning of the preverb *door*, 'through', not being recognisable in the SCV meaning (this SCV has a second meaning in which the spatial meaning of *door* is indeed present: 'to walk through'). The expected semantic difference is thus not apparent in the minimal pairs in (32)-(33). Moreover, a look at a representative set of SCVs and ICVs shows that, in contrast to what we would expect on the basis of the literature on grammaticalisation phenomena and the pattern in (29), *ICV preverbs* generally express spatiality, whereas most *SCV preverbs* do not express spatiality at all.

The loss of spatial meaning, then, appears to be neither a necessary, nor a sufficient condition for a preverb to become inseparable. If we look at a representative set of SCVs and ICVs, it appears that there are other semantic differences between SCVs and ICVs that are much more important: there seem to be differences between the semantic structures of SCVs and ICVs. Some of these differences are illustrated in (34).

(34)	a.	SCV:	dat Jan de taart <i>dóorsnijdt</i> that John the cake through-cuts 'that John cuts the cake in two'
		ICV:	dat Jan het hele huis <i>doorzóekt</i> (op wapens) that John the whole house through-searches (on weapons) 'that John searches the whole house (for weapons)'

- b. SCV: dat Jan de informatie *óverbrengr*
 that John the information over-carries
 'that John carries over (conveys) the information'
 ICV: dat de rivier het land *overspóelt*
 that the river the land over-washes
 'that the river washes over the land'

Whereas the result of the event described by the SCV in (34)a can be paraphrased as THE CAKE IS IN TWO, such a paraphrase does not hold for the ICV in (34)a: the result of *dat Jan het huis doorzóekt op wapens* 'that John searches the house for weapons' is not that THE HOUSE IS THROUGH. Instead, the result is that John has gone THROUGH THE HOUSE (while searching for weapons). Similarly, the result of the SCV in (34)b is that THE INFORMATION IS OVER ('at the other side, at its destination'), but the result of the ICV *dat de rivier het land overspóelt* 'that the river washes over the land' is not that THE LAND IS OVER, but is that the river has come OVER THE LAND. In other words, the direct object NPs of the SCV constructions in (34) (*de taart* 'the cake', *de informatie* 'the information') refer to the participants that are affected by the changes of state/location denoted by the particles, but the direct object NPs of the ICV constructions in (34) (*het hele huis* 'the whole house', *het land* 'the land') do not refer to participants that are affected by changes of state/location denoted by the prefixes. These different semantic roles of the referent of a direct object NP in relation to that of a preverb are known as, respectively, 'Figure' and 'Ground' (see 5.2).

The semantic difference in (34) is related to the fact that the SCV preverbs and the ICV preverbs in (34) perform different functions in the Lexical-Conceptual Structure (LCS) of the SCV/ICV construction. We will see in chapter 5 that these different preverb functions are linked to different participant-licensing properties. We will also see that the majority of SCV preverbs differ from ICV preverbs with respect to the function they perform in the LCS of the SCV/ICV construction (chapter 6). These synchronic semantic differences between SCVs and ICVs make it highly unlikely that all SCVs and ICVs are part of one and the same grammaticalisation development, according to which both particles and prefixes are diachronically related to resultative phrases. As such, these synchronic observations will provide the basis for an alternative diachronic hypothesis, laid out in chapter 7. This alternative hypothesis posits two separate grammaticalisation developments and claims that ICV preverbs are part of only one of these two developments.

The alternative diachronic proposal implies that the assumptions underlying the grammaticalisation hypothesis, about the loss of structure and semantic change, are tenable: in both grammaticalisation developments, these two changes take place. In the grammaticalisation development containing both SCVs and ICVs, SCVs represent an intermediate stage in the development from 'ordinary' syntactic combinations into ICVs (morphologically complex words), and similarly, particles can structurally be characterised as being in between independent words and bound morphemes. We noted above, however, that this proposal posits an additional grammaticalisation development in which ICVs do not participate. Crucially, it will be shown that the preverbs in the minimal pairs of SCVs and ICVs in (32) and (33) above, which do not appear to exhibit the expected semantic difference, do not belong to the same grammaticalisation development. The same holds for the

preverbs in (30)-(31), which also appear to contradict the original hypothesis, the ICV preverbs in (31) expressing the allegedly basic, spatial meaning, but the SCV preverbs in (30) doing so less clearly.

3.6.2 Back formation

Stiebels and Wunderlich (1994: 944) claim that back formation is the main process taking care of *synchronic* productive SCV/ICV formation, although other operations are also available. Back-formed SCVs/ICVs are formed on the basis of morphologically complex nouns or adjectives that are reanalysed as being based on complex verbs. The relevant reanalysis patterns are given in (35).

- (35) reanalysis of complex nominal base:
- a. scheme: $[[X]-[V-er]_N]_N$ > $[[X-V]_V-er]_N$
 example: $[[stof]_N-[zuig-er]_N]_N$ > $[[stof-zuig]_V-er]_N$
 'vacuum-cleaner'
 back-formed V: $[stofzuig]_V$
 'vacuum' (V)
- b. scheme: $[[X]-[V-eres]_{N(Fem)}]_{N(Fem)}$ > $[[X-V]_V-eres]_{N(Fem)}$
 example: $[[bui]_N-[dans-eres]_N]_N$ > $[[bui-dans]_V-eres]_N$
 'belly dancer' (Fem)
 back-formed V: $[buihdans]_V$
 '(do a) belly dance'
- reanalysis of complex adjectival base:
- c. scheme: $[[prefix]-[A]]_A$ > $[[prefix-V]_V \text{ infl}]_A$
 example: $[[onder]-[betaald]_A]_A$ > $[[onder-betaal]_V d]_A$
 'underpaid'
 back-formed V: $[onderbetaal]_V$
 'underpay'

Although the left parts of the back-formed verbs are stressed (*stófzuig*, *búikhdans*, *ónderbetaal*), some of these newly formed verbs are reinterpreted as SCVs and some as ICVs (see 6.3). There is, furthermore, much variation regarding the separability of these verbs, both between and within speakers. Speakers seem to be uncertain about the separability properties of many of the back-formed verbs, and apply various strategies to avoid a separability choice. Well-known avoidance strategies in this respect are the use of infinitives and progressive *aan het*-constructions, which do not require a separability choice. The various constructions are illustrated in (36)-(37) (no progressive form is given for the second example, as a progressive form of this verb is pragmatically odd).

- (36) a. separation: *??*Marie danste de hele avond buik.*
 Mary danced the whole evening belly
 'Mary belly danced all night long.'
- b. no separation: ??*Marie buikdanste de hele avond.*
 Mary belly-danced the whole evening
 'Mary belly danced all night long.'

- c. infinitive: *Marie wilde de hele avond buikdansen.*
 Mary wanted the whole night belly-dance
 'Mary wanted to belly dance all night long.'
- progressive: *Marie was aan het buikdansen.*
 Mary was at the belly-dance
 'Mary was belly dancing.'
- (37) a. separation: **??Het bedrijf betaalt zijn werknemers onder.*
 the company pays its employees under
 'The company underpays its employees.'
- b. no separation: *??Het bedrijf onderbetaalt zijn werknemers.*
 the company underpays its employees
 'The company underpays its employees.'
- c. infinitive: *Het bedrijf zou zijn werknemers onderbetalen.*
 the company would its employees underpay
 'The company would underpay its employees.'

Back formation certainly plays a role in SCV (and ICV) formation, but contrary to what Stiebels and Wunderlich (1994) claim, it does not seem to be its primary synchronic source.

A first indication that back formation is not the primary source of synchronic SCV formation is that it is not productive; it happens only incidentally, on a word-by-word basis. Since new SCVs are formed productively, there must be some other mechanism of synchronic SCV formation.

A second indication is that most newly formed SCVs do not exhibit the separability uncertainty that back-formed complex predicates show (cf. (36)-(37)). The SCVs *oppiepen* 'to beep up' and *afchecken* 'to check off', for instance, which appear to have been formed fairly recently (cf. 8.2.3), have always been undisputedly separable in all morphosyntactic contexts.

Another problem for the claim that back formation is the primary source of synchronic SCV formation is the following: although the reanalysis involved in back formation (cf. (35)) is a discrete step, the acceptance of the back-formed complex predicate in the linguistic community is a gradual process, unfolding over time.²⁶ This is why I would not characterise back formation as a process resulting in *synchronic* SCV formation, but instead classify it as a *diachronic* process. It is, however, not the *primary* source of diachronic SCV formation, since the development whereby XP-V combinations grammaticalise into SCVs appears to take place on a much more general basis. I will propose in chapter 8 that *synchronic* SCV formation is based on lexical SCV templates that contain at least one open slot, and I will compare this proposal to other proposals. Back formation will be further discussed in section 6.3.

²⁶ This acceptance involves the complex predicate gradually becoming 'more and more verbal', that is, gradually being accepted in more verbal contexts, until its finite forms are accepted in main clauses.

3.6.3 Summary of the diachronic analyses of SCVs and ICVs

SCVs and ICVs have both been claimed to be historically related to constructions with resultative phrases. This means that one single grammaticalisation development has been posited in the literature, according to which ICV preverbs are more grammaticalised and have less concrete meanings than SCV preverbs. The semantic properties of Modern Dutch SCVs and ICVs, however, suggest otherwise: not all ICV preverbs seem to have less concrete meanings than SCV preverbs, and there seem to be differences between the semantic structures of SCV constructions and ICV constructions.

Back formation represents an additional source of diachronic SCV formation, being secondary to grammaticalisation.

3.7 Summary

The main points following from the discussion of the existing analyses of SCVs and ICVs are summarised in (38).

- (38)
- a. Synchronically, SCVs have been analysed both as (special) words and as (special) phrases. It is significant that people who have used the same diagnostics have come to these opposite conclusions. These different outcomes are largely due to the fact that people have focused on different samples of SCVs.
 - b. A complex predicate analysis according to which SCVs are instantiations of partly lexicalised phrasal templates appears to provide a neat account of the various properties of SCVs.
 - c. There are relatively few semantic analyses of representative sets of SCVs.
 - d. There are relatively few detailed diachronic analyses of SCVs and ICVs.

This summary concludes Part I of this book. I will present my own analysis of the synchronic and diachronic properties of SCVs and ICVs in Part II. I will start, in chapter 4, with my analysis of the morphosyntactic and lexical properties of SCVs, which will result in the presentation of the morphosyntactic structure that I propose for SCVs. Chapter 5 will discuss the semantics of SCVs, after which chapter 6 will discuss the semantics of ICVs. The results of these synchronic semantic investigations will lead to an alternative hypothesis about the diachrony of SCVs and ICVs, which will be presented and verified against historical data in chapter 7. The findings of the chapters 4 through 7 will be combined and elaborated in chapter 8, which concludes Part II.

Part II

Data and analysis

Morphosyntactic and lexical properties of SCVs

4.1 Introduction

This chapter presents my analysis of the morphosyntactic structure of SCVs.¹ It was illustrated in section 3.2 that SCVs have often been ascribed morphological properties; properties that have been claimed to indicate that SCVs have the structural status of words. We have seen, however, that these properties are not morphological properties, but are lexical properties; properties that are typical of lexical units (which can be either words or phrases). This confusion between morphological properties and lexical properties illustrates that it is important to separate the structural properties of SCVs from their lexical properties in analysing their morphosyntactic structure.

Not only have the lexical properties of SCVs been mistaken for morphological properties, distributional differences between particles and resultative phrases that are due to a structural difference have also been misinterpreted as being due to a difference in lexicalisation. This is the case in analyses according to which particles are structurally identical to resultative phrases (XPs), such as the SC-analysis (cf. 3.3.2). Particles are expected to behave like resultative phrases in all relevant respects in such analyses; they are expected to have the same syntactic distribution as resultative phrases. This means that they are predicted to participate in, for instance, topicalisation constructions, modification constructions, and copula constructions, all of which are available to a resultative phrase such as *oranje* 'orange' in *de fiets oranje verven* 'to paint the bike orange'. The availability of these constructions to this resultative phrase is illustrated in (1).

- (1) Resultative phrase *oranje* 'orange'
- a. modification:
dat Jan zijn fiets helemaal *oranje* verft
that John his bike completely orange paints
'that John paints his bike completely orange'
 - b. topicalisation:
Maar *oranje* heeft Jan zijn fiets niet geverfd.
but orange has John his bike not painted
'But John did not paint his bike orange.'

¹ Parts of this chapter and of the chapters 5 through 8 appeared in Blom (2004) and in Blom (2005).

- c. copula construction:
De fiets is *oranje*.
the bike is orange
'The bike is orange.'

As expected under an SC-analysis of particles, the particle *af* 'finished' may also show up in these constructions. This is shown in (2).

- (2) Particle *af* 'finished' (SCV *afmaken* 'lit. off-make, to finish')
 - a. modification:
dat Jan zijn huiswerk helemaal *afmaakt*
that John his homework completely off-makes
'that John finishes his homework completely'
 - b. topicalisation:
Maar *af* heeft Jan zijn huiswerk niet *gemaakt*.
but off has John his homework not made
'But John did not finish his homework.'
 - c. copula construction:
Het huiswerk is *af*.
the homework is off
'The homework is finished.'

There are, however, also particles that do not participate in the constructions in (1)-(2). An example is the particle *op* in the SCV *opzoeken* 'lit. up-search, to look up'. The examples in (3) illustrate that this particle cannot be used in modification, topicalisation, and copula constructions.

- (3) SCV *opzoeken* 'lit. up-search, to look up'
 - a. modification:
*dat Jan de boeken helemaal *opzoekt*
that John the books completely up-searches
'that John looks up the books completely'
 - b. topicalisation:
*Maar *op* heeft Jan de boeken niet gezocht.
but up has John the books not searched
'But John did not look up the books.'
 - c. copula construction:
*De boeken zijn *op*.
the books are up
'The books are up.'

Since analyses like the SC-analysis claim that particles are (resultative) phrases, the fact that *op* in *opzoeken* does not participate in these constructions can in such analyses not be attributed to its structure: phrases generally participate in these constructions. It has been argued in such analyses that the ungrammaticality of the constructions in (3) indicates that *opzoeken* is an idiomatic SCV. The ungrammaticality is thus ascribed to the specific lexical properties of *opzoeken*, which is claimed to be an unanalysable whole.

We have seen in section 3.2, however, that both *op* and *zoeken* contribute meaning to the meaning of the SCV *opzoeken*, the meaning of *op* being

'physically/cognitively/perceptually accessible'. *De boeken opzoeken*, for instance, means 'to cause the books to become accessible by searching' (cf. Lindner 1983: 126-127 on the English particle *up*).² *Op* contributes the same meaning in other SCVs, some examples of which are given in (4). The meanings of these SCVs can be paraphrased as 'to cause NP to become accessible by V-ing'.³

- (4) a. de informatie *opvragen*
'lit. up-ask, to ask for the information'
b. de kandidaten *oproepen*
'lit. up-call, to call up, summon the candidates'
c. de docent *opbellen*
'lit. up-ring, to call up the teacher'
d. de chirurg *oppiepen*
'lit. up-beep, to beep up the surgeon'

Both the particle and the verb, then, contribute their meaning to the SCV meaning in the SCVs in (4). If we claim that *opzoeken* (and the other SCVs in (4), which do not participate in the constructions in (3) either) is idiomatic, we cannot do justice to this semantic systematicity. An analysis that treats all SCVs that resist the constructions in (3) as idiomatic does, furthermore, not account for the productivity that is found among these supposed idiomatic SCVs; compare the example (4)d.

The compositionality of SCVs will be further discussed in section 4.2. It will be shown that the inability of particles to participate in the constructions in (3) does in itself not tell us anything about the compositionality of SCVs. I will show in section 4.3 that it informs us, instead, about their morphosyntactic structure. Section 4.3 will also discuss the usefulness of some other constructions as diagnostics for the morphosyntactic structure of SCVs and some further problems associated with the use of various constructions as diagnostics for the compositionality of SCVs. Section 4.4 will discuss the lexical properties of SCVs, which, as noted above, have often been confused with their structural properties. This section will focus on the combination of the properties compositionality and conventionality that most SCVs show, and relate SCVs to other constructions showing these two properties. Section 4.5 will discuss the morphosyntactic structure that I propose for SCVs and will illustrate how this structure accounts for the various properties of SCVs examined in this chapter. Section 4.6 will summarise the results.

² The meaning 'to cause the books to become accessible by searching' reflects the LCS of a resultative construction, to be discussed in section 5.2.

³ The meaning 'accessible' may receive a more specific interpretation in the individual SCVs on the basis of the information provided by the verb and its arguments. It is, for instance, generally interpreted as 'available' in SCV constructions with inanimate direct object referents (cf. (4)a) and *het woord opzoeken* 'to look up the word') and as 'present' or 'contacted' in SCV constructions with animate direct object referents (cf. (4)b-d) (see also 3.2 and 8.2).

4.2 Compositionality in the SCV system

It was noted in the introduction that the failure of *op* in *opzoeken* to participate in the constructions in (3) has been taken as evidence for the idiomatic status of this SCV. In other words, from the failure of this particle to participate in these constructions conclusions have been drawn about the *lexical status* of the SCV it forms. As we will see, however, the constructions in (3) test whether an element has the *syntactic status* of a phrase (the copula construction additionally tests the semantic relation between the particle and the verb, see 4.3.3). This means that the failure of *op* to participate in these constructions does not imply that *opzoeken* is an idiom, but instead implies that *op* does not have the syntactic structure of a phrase.

It was mentioned above that there is indeed a whole class of SCVs with *op* in which this particle contributes the same meaning as it does in *opzoeken*; 'physically/cognitively/perceptually accessible' (cf. (4)). Despite the fact that *op* in *opzoeken* does not participate in the constructions in (3), then, *op* does contribute meaning to the meaning of *opzoeken*. Put differently, the meaning of this SCV is distributed among its parts, and the same holds for the meanings of the other SCVs in (4). These SCVs are thus compositional, *compositionality* being defined here as the degree to which the meaning of a construction, once known, can be analysed in terms of the contributions of its constituent parts (Nunberg, Sag, and Wasow 1994: 498). Under this definition of compositionality, an idiomatic combination like *pull strings* 'be in charge' is also compositional, since its meaning contains "(...) certain properties of 'pulling' and an affected object that participates in the idiomatic activity in a way that is similar in certain key respects to the way strings are pulled" (Nunberg et al. 1994: 504).

Nunberg et al. distinguish compositionality from *predictability*, or *non-conventionality*. Conventionality is "determined by the discrepancy between the [meaning of a construction] and the meaning we would predict for [it] if we were to consult only the rules that determine the meanings of the constituents in isolation, and the relevant operations of semantic composition" (Nunberg et al. 1994: 504). The meaning of a construction is thus predictable (or non-conventionalised) if it follows straightforwardly from the combination of the meanings of its constituent parts in isolation. For *pull strings*, this is not the case: the meaning 'be in charge' does not follow straightforwardly from the combination of the meanings that *pull* and *strings* have in isolation.⁴

Nunberg et al. (1994), then, claim that a phrase can at the same time be compositional, its meaning being distributed among its parts, and conventionalised, its meaning not being entirely predictable. We will see that SCVs have exactly these two properties.

Many other definitions of compositionality have been given in the literature. Grant and Bauer (2004: 44), for instance, define compositionality as follows: "the meaning of a construction is compositional if it is derived transparently from the meanings of its elements". This definition implies that for Grant and Bauer,

⁴ Nunberg et al. distinguish compositionality from *transparency*, which they define as "the ease with which the motivation for the use (or some plausible motivation – it needn't be etymologically correct) can be recovered" (Nunberg et al. 1994: 498).

compositionality is the same as *predictability* (or *non-conventionality*), whereas Nunberg et al. (1994) make a distinction between these two notions.

In this study I use the terms *compositionality* and *predictability* in the same way as Nunberg et al. (1994) do. I thus refer to a construction as *compositional* if its meaning is distributed among its constituent parts, so that both parts contribute meaning. By contrast, the meaning of a construction is *predictable* if it follows straightforwardly from the combination of the meanings of its constituent parts in isolation. Phrases whose meanings are not fully predictable are *conventionalised*.

We have seen that the SCVs in (4) are compositional, their meanings being distributed among their parts. None of these SCVs, however, has a particle that allows the copula construction, modification, or topicalisation (cf. (3)). This shows that these syntactic tests are not informative with respect to the compositionality within the SCV system. It is important to note that SCVs such as the ones in (4) are not only compositional; their patterns are also productive. This is illustrated by the example in (4)d, *oppiepen* 'to cause to become accessible by beeping', which is a fairly recent formation. The existence of such SCVs suggests that patterns like [*op-V*]_V 'to cause NP to become accessible by V-ing' are used to form new SCVs.

It was noticed in section 3.2 that the meaning 'physically/cognitively/perceptually accessible' of *op* appears to be related to its basic, spatial meaning 'up(wards)' by mechanisms of semantic extension: there are SCVs in which *op* simultaneously means 'upwards' and 'visible' (e.g. *opborrelen* 'to bubble up'), so that the spatial meaning of *op* could be extended to the non-spatial meaning 'visible'. This extended meaning, which involves concrete visibility, could be further extended to abstract visibility, that is, to the meaning 'accessible'.

In addition to the meanings 'up(wards)' > 'visible' > 'accessible', *op* has meanings that form part of other chains. The basic meaning 'up(wards)' may, for instance, also be extended to 'assembly of items onto something and thereby forming a pile', which is present in, for example, *de bagage opbinden* 'to tie/bind up the luggage' (lit. up-bind) and *de spullen opladen* 'to pile/stack up the stuff' (lit. up-load). The motivation for this semantic extension appears to be that by putting things on a pile there is progress in the upward direction. The extended meaning of *op* 'assembly of items onto something and thereby forming a pile' may be further extended to 'assembly of items in a single place for storage'. This may lead to the development of the meaning '(stowed) away', which is present in *het speelgoed opbergen* 'to put/stow away the toys' (lit. up-store) (cf. Lindner 1983: 147).

For each particle, then, we can posit several semantic chains that group the SCVs with this particle into semantic classes and indicate how the extended meanings of the particle relate to its basic (spatial) meaning. Section 5.5, which discusses the semantic properties of SCVs with thirteen different particles, will show that the vast majority of SCVs are compositional: SCVs fall into semantic classes in which a particular particle expresses a particular meaning (cf. Lindner 1983, Morgan 1997).

There are, of course, also idiomatic SCVs, but these are relatively small in number. An example of an idiomatic SCV is *zich aanstellen* (lit. oneself at-put) 'to make a fool of oneself, to put on airs'. We cannot assess the semantic contribution of the particle and the verb in this SCV; the particle *aan* does not express a meaning that is also found in other SCVs with this particle (see also 4.4).

The view on the compositionality of SCVs adopted here is similar to that in Cappelle (2002), who defines literal particles (i.e. particles in compositional SCVs) as in (5).

- (5) A particle is literal if its meaning is constant across different verb-particle constructions, in other words, if its meaning is not dependent on the particular verb it combines with (Cappelle 2002: 56).

It follows from the foregoing discussion that SCVs such as *opzoeken* 'to look up' and *opbellen* 'to call up' are compositional, the function of *op* in these two SCVs also being present in many other SCVs and new SCVs with *op* expressing this same function being formed productively. But although these SCVs show compositionality, their meanings are not entirely predictable from the meanings of their parts in isolation (the meaning 'to look up' of *opzoeken*, for instance, does not follow straightforwardly from the combination of the meanings of *op* 'upwards' and *zoeken* 'search'); the meanings of these SCVs are conventionalised. This is related to the fact that *op* in *opzoeken* has an extended meaning that is dependent on its occurrence in the SCV construction and is not available when *op* is used outside this construction. Particles (and verbs) may thus express meanings that are specific to the SCV construction.

The construction-specific meanings in SCVs have also been noticed by others (e.g. Booij 2002a, b, McIntyre 2002, Zeller 2001). I will argue in section 4.4 that this property of SCVs is related to their lexicalisation properties. It will be shown that the apparently striking combination of the two properties compositionality and conventionality has also been ascribed to other constructions.

In sum, SCVs with particles that cannot be used in modification, topicalisation, and copula constructions show compositionality (their meaning being distributed among their parts), and their patterns are productive. In analyses according to which only those particles form compositional SCVs that behave like resultative phrases in participating in such constructions, such as the SC-analysis and related analyses treating particles as XPs, all of these SCVs would be classified as idiomatic. This would leave unexplained the semantic regularities and the productivity we see among such SCVs. We will see that an analysis according to which SCVs are structurally and semantically different from syntactic constructions that consist of a verb and a resultative phrase, having their own morphosyntactic structure, their own semantic properties, and their own semantics-syntax mapping, accounts for the data straightforwardly. Such an analysis allows us to account for the semantic systematicity within the SCV system, that is, for the fact that elements that behave syntactically differently from resultative phrases may nevertheless combine with verbs in a compositional way.

The following section discusses the morphosyntactic properties of SCVs, illustrating the usefulness of constructions such as the particle modification construction, the particle topicalisation construction, and the copula construction as diagnostics for the morphosyntactic structure of SCVs. This section will also point out some further problems with using these constructions as diagnostics for the compositionality of SCVs.

4.3 Diagnostics of the morphosyntactic structure of SCVs

4.3.1 Particle modification

An example such as (6) seems to suggest that the particle *uit* in *uitschrijven* 'to write out' can be modified, as opposed to what has been claimed above.

- (6) Hij *schreef* de toespraak *helemaal uit*.
 he wrote the speech completely out
 'He wrote out the speech in full.'

Constructions like (6), in which the modifier *helemaal* precedes a particle, have been brought up as evidence for the phrasal status of particles. It has been argued that *helemaal* modifies the particle in such constructions, that this modifier must therefore be the specifier of the particle, and that the particle thus projects a phrase with a specifier position. I will show in this section that the acceptability of constructions such as (6) does not provide evidence for the claim that particles project a phrase.

The example in (7)a contains the modifier *helemaal* and a simple verb, *lezen* 'to read'. Here, *helemaal* may have scope over the verb 'read' (or over the VP 'read the books').⁵ This is illustrated by the grammaticality contrast between (7)a and (7)b.

- (7) a. dat hij de boeken *helemaal las*
 that he the books completely read
 'that he read the books completely'
 b. *dat hij de boeken *helemaal kocht*
 that he the books completely bought
 'that he bought the books completely'

(7)a and (7)b only differ in the type of verb: whereas we can *read* books completely or partly, we cannot *buy* books completely or partly. *Helemaal*, then, is a modifier in the VP that may have scope over the verb or over a projection of that verb (V'/VP).⁶

Next, we look at SCV constructions. The OV order of the construction in (6) is given in (8) (I have added the VP brackets).

- (8) dat hij [de toespraak *helemaal uitschreef*]_{VP}
 that he the speech completely out-wrote
 'that he wrote out the speech in full'

Instead of having scope over the particle *uit*, *helemaal* appears to have scope over the whole SCV in (8): *helemaal uitschrijven* 'to write out completely'. I will argue in the remainder of this chapter that an SCV is a phrase; a V'. *Helemaal* thus modifies

⁵ *Helemaal* is similar to an adverb such as *gisteren* 'yesterday' in this respect, which may also modify the whole VP and may be in the same position as *helemaal*: *dat hij de boeken gisteren las* 'that he read the books yesterday'.

⁶ Modifiers such as *helemaal* may also have scope over the direct object NP, being called 'floating quantifiers'.

the event denoted by the V' *uitschrijven* in (8) (or, possibly, the event denoted by the whole VP *de toespraak uitschrijven* 'to write out the speech'). V2 movement in (8) results in (9).

- (9) Hij *schreef*_i [*de toespraak helemaal uit-t*]_{VP}.
 he wrote the speech completely out
 'He he wrote out the speech in full.'

The verb is in V2 position in (9), but *helemaal* still has scope over the whole SCV. This means that the presence of the modifier *helemaal* in front of a particle in constructions such as (9) does not imply that only the particle is modified in such constructions; *helemaal* appears to modify the whole SCV. In contrast then to what has often been assumed (e.g. Bennis 1991 and Neeleman 2002), the acceptability of constructions like (9) cannot be taken as evidence for the claim that *uit* in (9) has a specifier and projects a phrase.⁷ Similarly, the acceptability of such constructions does not tell us anything about the compositionality of the SCV in question. This is why particle modification will be excluded from this study as a diagnostic for the constituent structure of particles and the compositionality of SCVs.⁸

4.3.2 Particle topicalisation

Particle topicalisation data have been used in the literature both to argue in favour of and to argue against a phrasal analysis of particles: whereas proponents of such an analysis, who claim that particles are XPs, have focused on data such as in (10)a, opponents of such an analysis have focused on data such as (10)b.

- (10) a. Maar *af* heeft hij het huiswerk niet *gemaakt*.
 But off has he the homework not made
 'But he did not finish the homework.'

⁷ The same applies to the modifiers *pal* 'right' and *vlak* 'right' in constructions such as *Jan schoot de bal pal/vlak over* 'John shot the ball right over'. The acceptability of such constructions can thus not be taken as conclusive evidence for the XP status of the particle *over* 'over the goal' (or of particles in general), although this has been done by, among others, Bennis (1991) and den Dikken (1995: 108). (Note that data from a *Google*-search show that these modifiers do virtually not occur in front of particles, but instead occur in front of PPs, e.g. *dat Jan de bal pal/vlak over het doel schoot* 'that John shot the ball right over the goal'.) The acceptability of other constructions with *over* 'over the goal', however, can be taken as conclusive evidence for the XP status of *over* 'over the goal'. We will see that *over* 'over the goal' and a few other words that may function as particles behave syntactically differently from particles in general in several respects. These words appear to be structurally ambiguous between representing an X and representing an XP, and their dual structural status can be related to their diachrony (see 4.5 and 5.6).

⁸ The modifier *right* in English SCV constructions such as *he looked the information right up* appears to be a temporal modifier, its scope also being the event denoted by the SCV. This modifier seems to function as a focus marker, and in section 9.2.2 I will argue that its presence in front of a particle does not constitute conclusive evidence for the projecting status of this particle either.

- b. *Maar *op* heeft hij de boeken niet *gezocht*.
 But up has he the books not searched
 'But he did not look up the books.'

Particles, then, appear to vary with respect to topicalisation possibilities. In general, however, particle topicalisation is restricted (Zeller 2000, 2003). This is reflected by performance data, in which topicalised particles are infrequent (Müller 2002a: 277).⁹ Various, mostly semantic factors have been claimed to be responsible for this restrictedness.

It has, for instance, been claimed that topicalisation is only possible for particles with a resultative meaning (Webelhuth and Ackerman 1999). We have seen in section 4.2, however, that the particle *op* in (10)b, which does not allow topicalisation, also has a resultative meaning ('accessible'). The same holds for the particle *op* 'up(wards)' in (11), which does not allow topicalisation either.

- (11) *Maar *op* is het water niet *geborreld*.
 but up is the water not bubbled
 'But the water did not bubble up.'

The factor resultativity, then, cannot explain the topicalisation data satisfactorily.

Others have argued that topicalisation is only possible for particles of compositional SCVs (e.g. Wurmbrand 2000). This has led people to claim that SCVs such as *opzoeken* 'to look up' are idioms. We have seen in section 4.2, however, that *opzoeken* is not idiomatic, but compositional, and the same holds for *opborrelen* 'to bubble up': the SCV meaning is distributed among the SCV parts in both cases.

It has also been claimed that topicalisation is only possible for particles of SCVs with predictable (non-conventionalised) meanings: in order for particle topicalisation to be possible, both the particle and the verb of the SCV in question must have the same meaning when used in isolation; their meanings may not be construction-specific. This is because construction-specific meanings are assumed to be lost if the particle undergoes topicalisation (Zeller 2001: 95-96). This third factor, however, is problematic for at least two reasons.

A first problem is that topicalisation is not generally possible for the particles of SCVs with predictable meanings, as is the case for the particles of most other SCVs. This is illustrated in (12), in which the particle *op* of *opborrelen* 'to bubble up' and *opgooien* 'to throw up' contributes its predictable meaning 'up(wards), on high'.

- (12) a. *Maar *op* is het water niet *geborreld*.
 but up is the water not bubbled
 'But the water did not bubble up.'

⁹ Zeller (2000, 2003) and Müller (2002a) discuss German data. Although there are some differences between Dutch and German particles, it is generally assumed that particles in these two languages behave largely the same (whereas particles in both of these languages behave differently from, for instance, English particles, see chapter 9).

- b. *Maar *op* heeft hij de bal niet *gegooid*.
 but up has he the ball not thrown
 'But he did not throw the ball up.'

A second problem is that, in contrast to particles, parts of constructions other than SCVs that also have construction-specific meanings do allow topicalisation. This is for instance the case with the parts of compositional idioms such as *pull strings* 'be in charge', in which the idiom's meaning is distributed among the idiom parts (see section 4.4). The possibility of topicalising a part of this idiom is illustrated in (13)a. An example given by Zeller (2001: 187-188) to illustrate the same point is given in (13)b.

- (13) a. *Those strings*, he wouldn't *pull* for you.
 b. *Den Garaus* hat man ihm nicht *gemacht*.
 the *garaus* has one him not made
 'They did not finish him off.'

It could be argued that the acceptability difference between (10)b-(11)-(12) and (13)a is due to the fact that the topicalised elements in (10)b-(11)-(12) (that is, the particles) do not have a modifier: in order for an element to allow topicalisation, it must be heavy in information structure terms, and heaviness can be brought about through modification. However, topicalisation of *af* in (10)a and *den Garaus* in (13)b, which do not contain a modifier either, is fine. This illustrates that it is not the absence of the modifiers in itself that causes the unacceptability of (10)b-(11)-(12). Similarly, even if we try to interpret, for instance, *hoog* in (14)a as modifying the particle (instead of modifying the SCV, as I claim it does, cf. 4.3.1), we cannot topicalise the particle and this modifier. This is shown in (14)b.¹⁰

- (14) a. dat hij de bal *hoog opgooide*
 that he the ball high up-threw
 'that he threw the ball highly up'
 b. *Maar *hoog op* heeft hij de bal niet *gegooid*.
 but high up has he the ball not thrown
 'But he did not throw the ball highly up.'

Conversely, an adverbial phrase such as *omhoog* 'up(wards), on high' can be topicalised without any problems, as illustrated in (15).

- (15) Maar *omhoog* heeft hij de bal niet *gegooid*.
 but up/on high has he the ball not thrown
 'But he did not throw the ball up.'

The constructions in (13), then, illustrate that topicalising parts of constructions does not generally lead to the loss of construction-specific meanings. This means that if

¹⁰ I have shown in section 4.3.1 that it is generally impossible to modify particles and that those constructions that appear to involve particle modification generally represent SCV modification or VP modification (or NP modification).

the particle *op* in *opzoeken* were an XP with a construction-specific meaning, it would be expected to be able to undergo topicalisation, just like 'other' XPs with a construction-specific meaning, such as *those strings* in (13)a and *den Garaus* in (13)b. Since, however, particle topicalisation data appear to be extremely infrequent, there must be some other factor that plays a role.

Another semantic factor that has been claimed to restrict particle topicalisation is that a topicalised particle must have a contrastive reading, that is, there must be at least one other particle forming an SCV with the same base verb (see, among others, Hoeksema 1991a, Zeller 2001: 93-95, 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, to import', is given in (16) (the context clause is a translation of Zeller's 2003: 184).

- (16) Angola *voert* veel goederen *in*. *Uit voert* het land alleen koffie.
 Angola carries many goods in. Out carries the country only coffee
 'Angola imports a lot of goods. The country exports only coffee.'

The condition of contrastive reading is claimed to explain why topicalisation is not possible for the particle of *opzoeken* 'to look up' in (10)b above: there is no SCV with *zoeken* and a particle that semantically contrasts with *op* '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 topicalisation: there are SCVs with particles that may have a contrastive reading, but nevertheless resist topicalisation. The German topicalisation constructions in (17), for example, are not acceptable (Zeller 2001: 95).

- (17) a. **An* hat er den Pullover *gezogen*.
 on has he the sweater pulled
 'He put on the sweater.'
 b. **Aus* hat er den Pullover *gezogen*.
 out has he the sweater pulled
 'He took off the sweater.'

Zeller claims that the unacceptability of particle topicalisation in (17) is due to the construction-specific meaning of *ziehen* 'to pull'. As illustrated above, however, the presence of a construction-specific meaning in a construction does not necessarily block the topicalisation of its parts (cf. the discussion of (13)). We also saw that SCVs that do not have a construction-specific meaning do generally not allow particle topicalisation either (cf. (12)).

That the presence of a contrastive meaning cannot be the only factor of influence is also illustrated by the German example given in Zeller (2003: 188, 191), which is copied in (18). The particles of the SCVs *auftreten* 'lit. up-step, to appear' and *abtreten* 'lit. off-step, to leave' are contrasted in this example.¹¹

¹¹ Zeller (2003) adopted the example in (18)b from Müller (2002a), who found it in a weekly magazine. The judgment '?*' comes from Zeller (2003: 189), who tested the acceptability of this sentence and reports that of 16 native speakers of German, five judged (18)b as '?', two judged it as '?*', and nine judged it as '*'. By assigning points to the judgments that could be

- b. Maar *opgegooid* heeft hij de bal niet.
 but up-thrown has he the ball not
 'But he did not throw up the ball.'

The preference for SCV topicalisation to particle topicalisation may partly be due to the semantic dependence of the particle on its occurrence in the SCV construction, but as argued above (cf. the discussion of (12) and (13)), this cannot be the whole story. Analysing the particle as a non-projecting word instead of an XP and the SCV as the minimal verbal phrase in the VP appears to give a more satisfactory explanation for this preference: topicalisation generally applies to phrases (contra Hoeksema 1991a, b, but in line with most other proposals, such as Bennis 1991, Lüdeling 2001, Müller 2002a, Neeleman 1994, Neeleman and Weerman 1993, Zeller 2001, see also 4.5).

There are some additional problems with purely semantic explanations of the restrictions on particle topicalisation, which claim that particles are resultative XPs and have a structure that in principle allows topicalisation. For one thing, such explanations do not account for the fact that particles can generally not appear in other constructions typically available to (resultative) XPs, such as the copula construction in (21) (see also 4.3.3).

- | | | | |
|------|----|--|---|
| (21) | a. | de fiets <i>oranje verven</i>
the bike orange paint
'to paint the bike orange' | result: De fiets is <i>oranje</i> .
the bike is orange
'The bike is orange.' |
| | b. | de koffie <i>uitvoeren</i>
the coffee out-carry
'to export the coffee' | result: *De koffie is <i>uit</i> .
the coffee is out
'The coffee is outside the country, at its
export destination.' |

A purely semantic explanation (which supposes that particles are XPs) furthermore predicts that particle topicalisation data would be more frequent than they are: compared to the topicalisation of semantically similar XPs (resultative PPs and APs), particle topicalisation is infrequent (Zeller 2003: 189, cf. also Müller 2002a: 277, who notices that examples of particle topicalisation in performance data are not very frequent).¹² Moreover, most examples of particle topicalisation that have been presented in the literature as being acceptable are not judged perfectly acceptable by native speakers. In this respect, too, particles contrast with topicalised PPs (Zeller 2003: 189). Another difference between particles and PPs is that PPs allow so-called long topicalisation, 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 (Zeller 2003: 191-197). This suggests that there is a structural restriction on particle movement that does not exist for PP movement.

¹² Müller (2002a: 264-280) gives many examples of what he calls particle topicalisation, but the topicalised element is an XP instead of a particle (e.g. *auseinander* 'lit. out-one-other, apart', *heraus* 'lit. there-out, out (of)', *hinzu* 'lit. there-to, thereby, in addition to that') in most of these cases, cf. 3.3.2 and 4.5.

In sum, particle topicalisation is unexpectedly restricted under an analysis according to which particles are XPs and the conditions on particle topicalisation are purely semantic/pragmatic in nature. The general inability of particles to be topicalised applies to compositional SCVs across the board, both those with conventionalised meanings and those with predictable meanings (cf. 4.2). This is why particle topicalisation cannot be used as a diagnostic for the compositionality of SCVs or as a diagnostic for the presence of conventionalised meanings in SCVs. The general impossibility of particle topicalisation is accounted for by analysing particles as non-projecting words (cf. Booij 2002a: 214, see also 4.5).

I will argue in section 4.5 that an element like *af* 'finished', which shows XP behaviour in various respects (cf. (10)a), is structurally ambiguous between being a particle (X) and being a phrase (XP). This explains why it allows topicalisation, but may also appear in typical particle constructions, which are unavailable to XPs in general (see 4.3.5). Such a dual structure, however, will appear to be available only to a few particles. As for elements such as *uit* in *uitvoeren* 'to export' (cf. (16)), which may be topicalised but do not behave like phrases in other respects (see 4.3.3), I hypothesise that strong contrastive focus may result in the topicalisation of non-maximal elements, which are thereby reanalysed as syntactically independent elements and allowed to project (this is also hypothesised by Neeleman and Weerman 1993: 471, note 21 and Neeleman 1994: 331, note 3). This, however, appears to be a rather exceptional option: such data are infrequent and generally not judged perfectly acceptable by native speakers (cf. Zeller 2003). Judgments on such data are furthermore variable instead of categorical and strongly context-dependent.

Because of the variable judgments and the general restrictedness of particle topicalisation, we should be cautious in drawing conclusions on the constituent structure of SCVs from particle topicalisation data. Instead of using particle topicalisation data as a diagnostic for the constituent structure of SCVs (and particles), I will use copula construction data, to be discussed in the next subsection, and verb cluster data, to be discussed in section 4.3.5.

4.3.3 The copula construction

The copula construction has also been used as a test for the compositionality of SCVs. In the literature treating particles as resultative phrases, particles of compositional SCVs are claimed to be syntactically and semantically similar to resultative phrases like *oranje* in *de fiets oranje verven* 'to paint the bike orange' (cf. 3.3.2). Resultative phrases may be used in the copula construction, which makes explicit the predicative relation between the resultative phrase and the participant that is affected by the result in question. The use of this construction is illustrated in (22).¹³

¹³ I use the copulative verb *zijn* 'to be' in the copula construction, but other copulative verbs, such as *gaan* 'to go, to become' and *worden* 'to become', could, of course, also be used to illustrate the points made here.

- | | | | |
|------|----|--|---|
| (22) | a. | de fiets <i>oranje verven</i>
the bike orange paint
'to paint the bike orange' | result: De fiets is <i>oranje</i> .
the bike is orange
'The bike is orange.' |
| | b. | het huiswerk <i>afmaken</i>
the homework off-make
'to finish the homework' | result: Het huiswerk is <i>af</i> .
the homework is off
'The homework is finished.' |
| | c. | de soep <i>opeten</i>
the soup up-eat
'to eat up the soup' | result: De soep is <i>op</i> .
the soup is up
'The soup is eaten up, all gone.' |

This construction tests two properties of an element like *af* that are independent of one another. The first property is whether or not the particle expresses a result that is predicated of the referent of the direct object NP. In other words, it tests the presence of a predicative relation between *af* and *het huiswerk* in (22)b. This is a purely semantic property. Since the syntactic position after the copula verb is a phrasal position (XP position), the construction furthermore tests whether or not *af* in (22)b is a phrase (XP), which is a syntactic property. The consequence of this is that a particle may fail the test two-fold: either because it does not express a result (change of state/location) affecting the referent of the direct object NP, or because it is not an XP.

The first type of failure is semantic in nature. It will be shown in the next chapter that there are many particles that do not express results but nevertheless productively form SCVs. Three examples of SCVs with such particles are given in (23).

- | | | |
|------|----|---|
| (23) | a. | dat Jan de groenten <i>voorkookt</i>
dat John the vegetables for-cooks ¹⁴
'that John cooks the vegetables beforehand, that John precooks the vegetables' |
| | b. | dat Jan het publiek <i>toespreekt</i>
that John the audience to-speaks
'that John talks to the audience' |
| | c. | dat Jan de hele nacht heeft <i>doorgewerkt</i>
that John the whole night has through-worked
'that John continued working all night' |

Voor '(be)fore' in (23)a does not express a result that affects *de groenten*: the result of the event expressed in (23)a is not that THE VEGETABLES ARE (BE)FORE. Instead, *voor* appears to modify the event expressed by the verb and its direct object: [COOK THE FOOD] BEFOREHAND. The result of this is that the copula construction does not capture the meaning of the construction in (23)a correctly.

The particle *toe* 'to' in (23)b does not function as a resultative predicate either: the result of this event is not that THE AUDIENCE IS TO. Instead, (23)b expresses the fact that there is a talking event that is directed TO(WARD) THE AUDIENCE.

¹⁴ I gloss the particle *voor* with 'for' in all examples in this book, although in some cases the gloss 'fore' might seem more appropriate. See chapter 5, note 8 for the motivation behind this choice.

The fact that the particle *door* 'through' in (23)c does not express a result affecting a Theme appears immediately from the fact that there is no Theme in this construction: (23)c is unergative. The result of the event in (23)c, then, is not that JOHN IS THROUGH; the particle *door* does not function as a resultative predicate in this construction.

It thus appears that the three particles in (23) do not function as resultative predicates, so that these particles fail the copula test for semantic reasons (and also for syntactic reasons, as will become clear shortly). But despite the fact that these particles do not express results, they form SCVs in a compositional and productive way. The particle *voor* '(be)fore', for instance, is also used in SCVs such as *voorprogrammeren* 'lit. for-program, to pre-program' and *voorwassen* 'lit. for-wash, to pre-wash'. The particle *toe* 'directed toward' is also used in SCVs such as (*iemand*) *toelachen* 'lit. to-laugh, to laugh at someone' and *toeknikken* 'lit. to-nod, to nod at someone'. And the continuative particle *door* is used in SCVs such as (*uren*) *doorlezen* 'lit. through-read, to continue reading' and *doorslapen* 'lit. through-sleep, to continue sleeping' (these and other SCV types will be discussed in section 5.3). These facts illustrate that the copula construction is not a reliable diagnostic for the compositionality of SCVs.

There are also particles that do express resultativity and are semantically similar to a resultative phrase like *oranje* in (22)a. Although the particles in such constructions have the semantics that is required to be used in the copula construction, the majority of these particles cannot be used in this construction either. Some examples of such resultative particles are given in (24).

- (24) a. de bal *opgooien*
 the ball up-throw
 'to throw up the ball'
 result: THE BALL IS UP 'on high, in the air'
- b. de schoenen *inlopen*
 the shoes in-walk
 'to wear in the shoes'
 result: THE SHOES ARE IN 'in a certain desired shape/state'
- c. de vluchtelingen *uitzetten*
 the refugees out-put
 'to expel the refugees'
 result: THE REFUGEES ARE OUT 'outside the borders of the country'
- d. de dozen *afleveren*
 the boxes off-deliver
 'to drop off the boxes'
 result: THE BOXES ARE OFF 'at the required destination'

The semantic relation between the particles and the referents of the direct object NPs in (24) is indeed resultative: these particles express a (figurative) change of state/location that affects the referent of the direct object NP, as indicated in small capitals for each example (e.g. the result of the event in (24)a is that THE BALL IS UP 'on high, in the air'). The copula construction, then, correctly captures the meaning of these constructions, and we could say that these particles pass the copula test *semantically* (see 5.2). But as illustrated in (25), the particles in (24) fail the copula

test *syntactically*: despite the fact that these SCV constructions express the required semantic relation, the copula constructions with the particles and NPs of these SCV constructions are not syntactically well-formed.

- (25) a. *De bal is *op*.
'The ball is up.'
b. *De schoenen zijn *in*.
'The shoes are in.'
c. *De vluchtelingen zijn *uit*.
'The refugees are out.'
d. *De dozen zijn *af*.
'The boxes are off.'

I will illustrate in the next chapter that particles expressing resultativity generally fail the copula test syntactically, elements such as *af* 'finished' and *op* 'used up' in (22)b-c being exceptional in various respects. Despite failing the copula test, the particles in (24)-(25) do contribute their meanings to the SCV meanings compositionally, and new SCVs in which these particles express the same meanings may be formed productively. This means that these SCVs cannot be treated as idioms (cf. section 4.2 above, see also section 4.4). I suggest that the failure of the copula test of these particles is due to the constituent structure of particles: a particle does not project a phrase, but is a non-projecting word X. As only XPs can be inserted into the predicative slot in the copula construction, the copula test with particles fails (see section 4.5).

The example in (22)c above shows an additional problem for the use of the copula construction as a compositionality test. Whereas *op* 'eaten up' may be used in the copula construction, its English counterpart *up* 'eaten up' may not (**the soup is up* 'eaten up'). If the copula construction were a diagnostic for the compositionality of SCVs, this would suggest that the English SCV *eat up* is not compositional, whereas the Dutch SCV *opeten* is, which does not seem to be a welcome result. It has to be noted that these Dutch/English facts do not only hold for *opeten*, but for the use of *op* 'used up' in general. That is, the Dutch examples in (26)a are fine, but their English counterparts in (26)b are not.

- | | | |
|---------|--------------------------------|---|
| (26) a. | Het zout is <i>op</i> . | 'The salt is used up, there is no salt left.' |
| | De verf is <i>op</i> . | 'The paint is used up, there is no paint left.' |
| | De handdoeken zijn <i>op</i> . | 'The towels are used up, there are no towels left.' |
| | Het papier is <i>op</i> . | 'The paper is used up, there is no paper left.' |
| b. | *The salt is <i>up</i> . | 'The salt is used up, there is no salt left.' |
| | *The paint is <i>up</i> . | 'The paint is used up, there is no paint left.' |
| | *The towels are <i>up</i> . | 'The towels are used up, there are no towels left.' |
| | *The paper is <i>up</i> . | 'The paper is used up, there is no paper left.' |

Note, however, that it is not immediately obvious to which SCVs *op* is related in the examples in (26)a. Is *op* in *de verf is op* 'the paint is used up, there is no paint left', for instance, part of the SCV *opverven* 'lit. up-paint, to use up by painting'? It could, of course, also be part of the SCV *opschilderen* 'lit. up-paint, to use up by painting', or of the SCV *opgebruiken* 'lit. up-use, to use up'. The related SCV for the last two

examples is even less obvious, the semantically general SCV *opgebruiken* 'to use up' probably being the most plausible candidate. This illustrates that the Dutch word *op* 'used up' is often not linked to a specific SCV construction, but behaves like a (semantically and syntactically independent) resultative phrase, just like *oranje* in *de fiets oranje verven* 'to paint the bike orange'. But unlike resultative phrases (XPs) in general, *op* 'used up' may also have the structure of a particle (X) and form an SCV with a verb like *eten* 'to eat'. The chapters 5 through 8 will show that *op* 'used up' is exceptional in this respect, and that this exceptional status of *op* and a few other particles can be related to their diachrony.

I thus claim that the acceptability difference between the Dutch phrase *de soep is op* and its English counterpart **the soup is up* does not indicate a compositionality difference between the Dutch SCV *opeten* and the English SCV *eat up*: the SCV meaning is distributed among the SCV parts *op/up* 'used up' and *eten/eat* 'to eat' in both of these SCVs, both SCVs being compositional.¹⁵ The only difference between these two combinations is that, in addition to being used as a particle (X), the Dutch word *op* 'used up' may also be used as an XP, whereas this is not possible for the English word *up* 'used up' (see also 4.5 and 9.2.2).

In sum, the ability of a particle to be used in the copula construction does not tell us anything about the compositionality of the SCV it occurs in. This is because this construction tests the XP status of an element, as well as the semantic relation of predication between the particle and the referent of the direct object NP. Whereas some particles indeed express resultative predicates, passing the copula test semantically, all particles fail the test syntactically due to the fact that particles are not XPs, but Xs.

4.3.4 The presence of spatial meanings

It has been claimed that (presumed) non-compositional SCVs have a syntactic structure different from that of compositional SCVs (e.g. Wurmbbrand 2000, cf. 3.4.1). The (non-)compositionality of SCVs, then, has been taken as a diagnostic for their morphosyntactic structure. I have illustrated in the foregoing sections that the impossibility of using particles in modification, topicalisation, and copula constructions does not tell us anything about the compositionality of the SCVs they form (but it does tell us something about the morphosyntactic structure of these SCVs). An additional diagnostic for the compositionality of SCVs that has been mentioned in the literature is that compositional SCVs have particles that express the basic, spatial meaning of the corresponding adposition (see, for instance, Zeller 2003: 198 on German particles). The SCV *opgooien* 'to throw up(wards)' would be classified as compositional on the basis of this diagnostic, as *op* in this SCV means 'up(wards), on high'. An SCV like *opzoeken* 'to look up', on the other hand, would be classified as idiomatic. Such a classification has, furthermore, led people to propose different morphosyntactic structures for these two types of SCV.

It was shown in section 4.2, however, that *opzoeken* is not an idiom: both the particle (*op* 'accessible') and the verb contribute their meaning to the SCV meaning,

¹⁵ Cf. note 1 in chapter 3.

and new SCVs with *op* expressing this meaning are formed productively. Similarly, the diagnostic of spatial meaning would lead to the combinations in (27) being wrongly classified as non-compositional, since their particles do not express the spatial meanings of *af* 'down' and *op* 'up(wards)'.

- (27) a. het huiswerk *afmaken*
 'lit. the homework off-make, to finish the homework'
 b. de soep *opeten*
 'lit. the soup up-eat, to eat up the soup'

Importantly, the results of this test conflict with those of the other tests we have seen so far, such as the use of the copula construction. That is, whereas *af* and *op* in (27), which express non-spatial meanings, can be used in the copula construction, as illustrated in (22)b-c above, particles expressing spatial meanings, such as *op* in *opgooien* 'to throw up(wards)', can generally not be used in this construction. This is illustrated in (28)-(29). The lines in small capitals in the b-examples illustrate that the particles in (28)-(29) indeed function as resultative predicates affecting the referent of the NPs, thus passing the copula test semantically. But these particles fail this test for syntactic reasons: the c-examples show that the Dutch constructions expressing this predicative relation are not syntactically well-formed (cf. 4.3.3).

- (28) a. example: dat Jan de bal *opgooit* 'that John throws up the ball'
 b. result: THE BALL IS UP 'in the air'
 c. copula construction: *De bal is *op*. 'The ball is up, in the air.'
- (29) a. example: dat de weg *afloopt* 'that the road goes down'
 b. result: THE ROAD IS DOWN 'down'
 c. copula construction: *De weg is *af*. 'The road is down.'

Spatial particles that express results thus fail the copula test syntactically, and those few forms that pass this test syntactically express non-spatial meanings (e.g. *af* 'finished'). Dutch seems to differ from English in this respect: many English particles with spatial meanings appear to allow the copula construction. Some examples are given in (30).

- (30) a. *throw out* the garbage result: The garbage is *out*.
 b. *pull down* the handle result: The handle is *down*.
 c. *throw up* the ball result: The ball is (went) *up*.

I will argue in section 9.2.2 that *out*, *down*, and *up* in *throw out*, *pull down*, and *throw up* are structurally ambiguous between representing an X and representing an XP. Support for this claim is provided by the fact that these elements may appear both in typical particle contexts and in typical XP contexts (cf. the remarks on *af* 'finished' and *op* 'used up' in 4.3.3).

The Dutch equivalents of the SCVs in (30) contain adverbial and prepositional phrases (AdvPs and PPs) instead of particles. This is illustrated in (31).

- (31) a. het vuilnis *naar buiten* gooien
 b. de hendel *omlaag/naar beneden* duwen
 c. de bal *omhoog/in de lucht* gooien

The AdvPs and PPs in (31) may appear in the copula construction, e.g. *de hendel is omlaag* 'the handle is down'.¹⁶ This and other differences between Dutch and English SCV constructions will be discussed in chapter 9. The important point for now is that particles with spatial meanings that function as resultative predicates cannot be used in the copula construction in Dutch, as is the case for particles with non-spatial meanings that function as such. This indicates that particles are not XPs. Furthermore, the presence of spatial meanings does not distinguish between compositional and idiomatic SCVs, as compositional SCVs may contain particles with non-spatial, figurative meanings (e.g. *opzoeken* 'to look up', *inlopen* 'to wear in').¹⁷

4.3.5 V2, the AAN HET-construction, and verb clusters

Whereas elements that have been called particles behave differently in modification, topicalisation, and copula constructions, there are two other syntactic properties that are common to all particles: (a) all particles are separated from the verb by V2, by the infinitival marker *te* 'to', by the past participle marker *ge-*, and optionally by auxiliaries in the verb cluster, as in (32)a-d, and (b), all particles may appear in the position inside the verb cluster and in the position after *aan het* in the progressive *aan het*-construction, as illustrated in (32)e-f.

- (32) a. Jan zoekt de informatie *op*. (separator: V2)
 John searches the information up
 'John looks up the information.'
 b. Jan probeerde de informatie *op te zoeken*. (separator: inf.marker *te*)
 John tried the information up to search
 'John tried to look up the information.'
 c. Jan heeft de informatie *opgezocht*. (separator: past participle
 marker *ge-*)
 John has the information up-ge-searched
 'John has looked up the information.'
 d. dat Jan de informatie *op wilde zoeken* (separator: auxiliary)
 that John the information up wanted search
 'that John wanted to look up the information'
 e. dat Jan de informatie *wilde opzoeken* (particle in verb cluster)
 that John the information wanted up-search
 'that John wanted to look up the information'
 f. Jan is de informatie *aan het opzoeken*. (particle after *aan het*)
 John is the information at the up-search
 'John is looking up the information.'

¹⁶ Contrary to particles, these AdvPs and PPs may not appear in the verb cluster (e.g. **dat hij de hendel niet kon omlaag duwen* 'that he could not pull the handle down'), cf. 4.3.5.

¹⁷ Since the spatial and non-spatial meanings of particles are usually closely related to one another, it is often difficult to assess the presence of a spatial meaning (cf. *uitademen* 'to breathe out', *opporren* 'to stir up', *oplaaien* 'to flare up', *instappen* 'to get in (the car/train)').

I assume that the separability of SCVs indicates their phrasal status (words not being separable, cf. section 3.2): SCVs are phrases consisting of two words; a particle and a verb. As is the case with other (verbal) phrases, V2, inflectional elements such as *te* 'to' and *ge-*, and auxiliaries separate the verb (V^0) from the non-verbal part of the phrase. The ability of a particle to occur inside the verb cluster and after *aan het* ((32)e-f) is related to its non-projecting status, as I will argue in this section.

The cluster-internal position is not available to XPs in (standard) Dutch. Object NPs, PPs, and resultative APs, for instance, are banned from this position. This is illustrated in (33).

- (33) 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'
- c. dat Jan zijn fiets oranje wilde verven / *wilde oranje verven
 that John his bike orange wanted paint / wanted orange paint
 'that John wanted to paint his bike orange'

Like the particle *op* in (32), certain adjectives may appear in the verb cluster (see 4.5). If they do, such adjectives may not have a modifier, which illustrates that projections are banned from the cluster-internal position. This is shown in (34).¹⁸

- (34) a. dat Jan het huis heel schoon heeft gemaakt / *heeft heel schoon gemaakt
 that John the house very clean has made / has very clean made
 'that John made the house very clean'
- b. dat Jan het huis schoon heeft gemaakt / heeft schoon-gemaakt
 that John the house clean has made / has clean-made
 'that John made the house very clean'

Phrases (XPs) are thus excluded from the verb cluster in (standard) Dutch. The fact, then, that all particles may appear in the verb cluster indicates that a particle does not have phrasal structure.

¹⁸ Unlike modifiers such as *heel* 'very', the modifier *helemaal* 'completely' may be stranded when *schoon* is raised along with the verb, cf. (i):

- (i) a. dat hij het huis helemaal schoon heeft gemaakt
 'that he has cleaned the house completely'
- b. dat hij het huis helemaal heeft schoon-gemaakt
 'that he has cleaned the house completely'

This once more illustrates the claims made in section 4.3.1: *helemaal* does not necessarily modify the element it precedes (*schoon* in (i)a: 'completely clean'), but may modify the event expressed by the combination of this element and the verb (*schoon-maken* in (i)a-b: 'to clean completely'), or the event expressed by the whole VP (*het huis schoonmaken* in (i)a-b: 'to clean the house completely'). It may furthermore modify the NP it follows (*het huis* in (i)a-b: 'the complete house').

Similar facts hold for the construction referred to as the *aan het*-progressive: XPs may not occur with the verb in the position after *aan het*, as illustrated in (35), but particles may do so ((32)f).

- (35) 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.'

Similarly, certain adjectives may occur after *aan het*, but in that case they may not have a modifier, as shown in (36).

- (36) Jan is het huis aan het (**heel*) *schoon*-maken / (*heel*) *schoon* aan het maken.
 John is the house at the (very) clean-make / (very) clean at the make
 'John is making the house (very) clean.'

Verb cluster data and data with the progressive *aan het*-construction, then, illustrate a distributional difference between particles and XPs. As such, these data support the claim that particles and XPs are structurally different.

Neeleman and Weerman (1993: 465, note 16) argue that certain resultative phrases may also appear in the verb cluster. To illustrate this, they give the example in (37)a, which according to them is perfectly acceptable. I myself, however, do not accept this example, and the same seems to hold for most native speakers of Dutch.¹⁹ Conversely, (37)b is acceptable for all Dutch speakers.

- (37) a. *dat Jan de deur wil laten *groen* verven
 that John the door wants let green paint
 'that John wants to have the door painted green'
 b. dat Jan de deur *groen* wil laten verven
 that John the door green wants let paint
 'that John wants to have the door painted green'

Since Neeleman and Weerman postulate a parallel between the structure of particles and that of resultative phrases (see 3.3.1), their analysis predicts that like particles, resultatives may optionally appear in the verb cluster (Neeleman and Weerman 1993: 465, note 16). Neeleman and Weerman notice, however, that there is a difference between particles and resultatives in this respect: whereas all particles may appear in the verb cluster, only a few resultatives may do so. Neeleman and Weerman ascribe this difference to a phonological restriction according to which only elements consisting of one syllable or of two syllables one of which is headed by a schwa may appear in the verb cluster.

¹⁹ A Google search revealed only one instantiation for the combination *groen verven* occurring in the verb cluster (which comes from a review of a show by the Dutch performer Herman van Veen): *ook de rol van de seniele oude man, die ontroerend aan zijn kleinzoon vertelt dat hij het is die het gras heeft groen geverfd en de wolken blauw en grijs* 'also the role of the senile old man, who poignantly tells his grandson that it was him who painted the grass green and the clouds blue and grey' (http://www.harrysacksioni.nl/media_art/78-03-30_het_zuiden.html).

Particles, indeed, generally have the required syllable structure (e.g. *op* 'up', *in* 'in(to)', *over* 'over'). Nouns, adjectives, and adverbs that may uncontroversially appear in the verb cluster (and that represent nominal, adjectival, and adverbial particles, see 4.5), also have the required syllable structure (e.g. *schoon* 'clean' in *schoonmaken* 'to clean', *huis* 'house' in *huishouden* 'to run the house', and *terug* 'back' in *terugkomen* 'to come back'). But the generalisation seems to hold into one direction only: if an element may appear in the verb cluster, it has the required syllable structure, but not every adpositional, adjectival, nominal, or adverbial element that has the required syllable structure may appear in the verb cluster. That is, there are many adjectives that have the required syllable structure but are nevertheless excluded from this position (and also from the position after *aan het*, see above). This is illustrated in (38).

- (38) a. dat hij het bed niet *paars heeft* geverfd / **heeft paars* geverfd
 that he the bed not purple has painted / has purple painted
 'that he did not paint the bed purple'
- b. dat hij de groenten niet *kleiner kon* snijden / **kon kleiner* snijden
 that he the vegetables not smaller could cut / could smaller cut
 'that he could not cut the vegetables into smaller pieces'
- c. dat de reis de kinderen *moe heeft* gemaakt / **heeft moe* gemaakt
 that the journey the children tired has made / has tired made
 'that the journey has made the children tired'

The adjectives in (39), however, are perfectly acceptable in the verb cluster.

- (39) a. dat hij het geld *zou* wit-wassen
 that he the money would white-wash
 'that he would launder the money'
- b. dat hij zich niet langer *kon* groot-houden
 that he himself not longer could big-hold
 'that he could no longer bear up'

The same contrast appears from the *aan het*-construction:

- (40) a. *Hij is het bed *aan het* paars verven.
 he is the bed at the purple paint
 'He is painting the bed purple.'
- b. Hij is het geld *aan het* wit-wassen.
 he is the money at the white-wash
 'He is laundering the money.'

The difference between (38)-(40)a and (39)-(40)b seems to be semantic in nature, the combinations in (39)-(40)b expressing institutionalised activities, but those in (38)-(40)a not doing so. This is assumed to be related to the lexicalisation properties of the combinations in (39)-(40)b: *witwassen* 'to launder' and *zich groothouden* 'to bear up' are (phrasal) lexical units (see also 4.4 and 4.5).

I analyse the adjectives in (39) as adjectival particles, which have developed out of adjective phrases: as a consequence of frequent co-use of, for instance, *wit* and *wassen* in particular constructions with a specific meaning, these two elements

could be interpreted as a semantic unit. This, in turn, could lead to a reanalysis of these two elements as a syntactic unit consisting of a bare A and a verb (that is, as an SCV), and after this reanalysis had taken place, the adjective could appear in the verb cluster and after *aan het*. It will be shown in the remainder of this study that the development of XP-V combinations into X-V combinations is the primary source of diachronic SCV formation.

The adjective *schoon* 'clean' in the verb cluster in (34)b is also an adjectival particle, *schoonmaken* 'to make clean, to clean' representing an SCV. *Schoonmaken*, however, differs from the SCVs in (39) in that it is not an instantiation of a completely lexicalised template, but an instantiation of a partly lexicalised template (see 4.4). This leads to SCVs with the particle *schoon* being formed productively (e.g. *schoonvegen* 'to sweep clean', *schoonspuiten* 'to spray clean').

I claim that a word like *schoon* 'clean' or *wit* 'white' may be used either as a non-projecting word (A), being an adjectival particle and forming a semantic unit with a verb, or as a word projecting a phrase (AP), representing a syntactically and semantically independent adjective. Its dual structure reflects the phenomenon of *layering*, which is the synchronic result of the diachronic development whereby AP-V combinations develop into A-V combinations (cf. 2.3 and 4.5).

Elements like *af* 'finished' and *op* 'used up' also exhibit layering: these elements may also have either the structure of a phrase (XP) or that of a particle (X). The result of this is that *af* 'finished' and *op* 'used up' may appear both in typical phrasal contexts and in typical particle contexts. These elements may thus be used in topicalisation and copula constructions (cf. 4.3.2 and 4.3.3), but they may also appear in the verb cluster and after *aan het* in the progressive construction (which is impossible for resultative phrases like *oranje* 'orange' in *zijn fiets oranje verven* 'to paint his bike orange', cf. ((33)c and (35)). This is illustrated in (41)-(42) (see also 4.5).

- (41) a. dat Jan zijn huiswerk wilde *afmaken*
that John his homework wanted off-make
'that John wanted to finish his homework'
b. Jan is zijn huiswerk aan het *afmaken*.
John is his homework at the off-make
'John is finishing his homework.'
- (42) a. dat Jan zijn soep niet wilde *opeten*
that John his soup not wanted up-eat
'that John did not want to eat up his soup'
b. Jan is zijn soep aan het *opeten*.
John is his soup at the up-eat
'John is eating up his soup.'

In certain cases, the interpretation of an adjective-verb combination as a semantic unit may only be available to some speakers. This is reflected by inter-speaker variation in the grammaticality judgments on constructions in which such combinations occur in the verb cluster and after *aan het*. Eventually, such an interpretation may lead to the formation of a new SCV, in which case the variation reflects the change from an XP-V combination into an X-V combination being in

progress. The change, however, does not have to proceed, its progression depending on the adaptation of the new construction, treating the adjective-verb combination as a unit, in a wider speech community (cf. 2.3). This is reflected by the fact that the use of certain adjectives in the verb cluster and after *aan het* is sensitive to frequency effects: the more frequently a particular adjective and a verb are used together to express a specific meaning, the more likely it is that constructions in which this adjective appears together with the verb in the verb cluster and after *aan het* are accepted by speakers of Dutch.

Crucially, if an adjective appears in the verb cluster and after *aan het*, it may not have a modifier (despite the fact that it may have a modifier in other contexts). The fact then that certain adjectives may appear in the verb cluster and after *aan het* does not imply that XPs may do so. On the contrary, since only non-modified adjectives may appear in these positions, these positions appear to be exclusive to non-phrasal, bare adjectives.

In sum, the two morphosyntactic properties shared by all particles, their separability and their ability to appear in the verb cluster and after *aan het*, point to the following structure for SCVs: (1) being separable, SCVs cannot be words, but must be phrases, and (2), being able to appear in the verb cluster and after *aan het*, which are positions from which maximal projections are excluded in (standard) Dutch, particles must be non-projecting words. Analyses that, on the other hand, claim that particles are XPs require additional assumptions to account for the fact that 'other' XPs may not appear in the verb cluster and after *aan het*. Additional assumptions are, in such analyses, also needed to account for the fact that particles do not behave like XPs in other constructions, such as the copula construction (cf. 4.3.3). This typical particle behaviour, which distinguishes particles from XPs, in combination with the fact that particles showing such behaviour generally form compositional SCVs, appears to be difficult to account for in an XP analysis of particles. As I will illustrate more extensively in section 4.5, it can be explained straightforwardly in an analysis treating particles as non-projecting words.²⁰

4.3.6 Conclusions

Constructions that have often been used as diagnostics for the compositionality of SCVs, such as the particle modification construction, the particle topicalisation construction, and the copula construction, test the XP status of the element in question. The copula construction also tests the semantic relation of predication between the particle and the Theme of the SCV construction.

Dutch particles appear to score negatively on these diagnostics, particles generally being unable to show up in these typical XP constructions. Nevertheless, particles combine with verbs to form SCVs compositionally, and new SCVs can be formed productively.

There are a few words that are used as particles, but may also be used in the XP constructions that have been discussed in the previous sections. The various XP

²⁰ Certain postpositions, which are structurally different from particles, may also appear in the verb cluster (but this is not the case for all postpositions, cf. Groos 1989); see the remarks in section 4.5.

constructions, however, do not show uniform results in these cases. A particle like *uit* in *uitvoeren* 'to export', for example, may be topicalised in specific contexts (cf. 4.3.2), but it may not be used in the copula construction (cf. 4.3.3).

Despite their variable and apparently inconsistent behaviour in modification, topicalisation, and copula constructions, all particles are obligatorily separated from the verb by V2, and all particles may occur in the verb cluster and after *aan het* in the progressive *aan het*-construction. All particles, then, behave in exactly the same way in these contexts.

Although both a resultative XP analysis of particles and a morphological analysis of SCVs may account for some of the particle data, neither of these analyses appears to be able to account for all of the phenomena involved in a satisfactory way. Conversely, this is indeed the case for an analysis of particles as non-projecting words, which will be worked out in 4.5. First, however, section 4.4 will focus on the lexical properties of SCVs.

4.4 Lexical properties of SCVs

It has been noticed in section 4.2 that most SCVs are compositional as well as conventionalised: SCV meanings are distributed among the SCV parts (the particle and the verb), but these meanings are generally not entirely predictable from the meanings of these parts in isolation. Or, as Zeller (2003: 199) puts it, "the notions *semantically transparent* versus *idiomatic* are not incompatible when it comes to particle verbs". That the meanings of SCVs are generally not fully predictable is related to the fact that both the particle and the verb often express (figurative) meanings that they do not express when used outside the SCV construction. These meanings, then, are construction-specific (cf. Booij 2002a, b, McIntyre 2001b, 2002, Zeller 2001, 2003).

In addition to showing compositionality and conventionality, the SCV system is very productive. An investigation of a representative sample of SCVs shows that, in contrast to what is assumed by some linguists, the combination of the properties compositionality, conventionality, and productivity does not apply to a small subset of SCVs, but applies to the vast majority of SCVs (see 5.5).

The combination of the properties compositionality, conventionality, and productivity is also present in word formation processes, especially in derivation (cf. Jackendoff 1997a: 164-166, 174). That is, although derivation patterns may be represented by rules, such rules do typically not apply completely regularly, but show idiosyncrasies of various kinds (cf. for instance the discussion of German *bar*-derivation in Riehemann 1998). With respect to these properties, then, SCVs are similar to derived words. But SCVs differ from such morphologically complex words in that they are separable, which implies that they are not words, but phrases. The remainder of this section illustrates that these characteristics can be accounted for by analysing SCVs as phrases with specific lexicalisation properties, and compares SCVs to other construction types showing these lexicalisation properties.²¹

²¹ It follows from the foregoing that I use the term "lexical" (in e.g. "lexical properties" and "lexical item") exclusively to refer to the property of being stored in the lexicon (which may

We have seen in section 4.2 that the claim that the two properties compositionality and conventionality do not exclude each other has also been made in Nunberg, Sag, and Wasow's (1994) paper on idioms. According to Nunberg et al., certain constructions have a conventionalised meaning while at the same time this meaning is distributed among the parts of that construction. They illustrate this with the idiom *pull strings* 'have under control, be in charge', stating 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*" (p. 496). Both parts of the idiom thus contribute their meaning to the construction, and these meanings are metaphorical extensions of the basic meanings of these parts. Crucially, the metaphorical meanings of, for instance, *pull* and *strings* are dependent on the occurrence of these elements in the combination *pull strings*, and are not available outside this construction.

It has been illustrated in section 4.2 that SCVs exhibit similar semantic properties. In the SCV *opzoeken* 'lit. up-search, to look up', for example, the particle *op* contributes the meaning 'accessible', which is related to the basic meaning of *op* 'up(wards)' through semantic extension and which is also present in other SCVs. However, *op* does not have this meaning when used outside the SCV construction; it is a conventionalised (construction-specific) meaning (cf. Hampe 1997 on English SCVs).

Nunberg et al. (1994) call compositional idioms such as *pull strings* Idiomatically Combining Expressions (ICEs). Other examples of ICEs are *keep the ball rolling* 'keep the conversation (etc.) going', *hit the hay* 'go to sleep', and *come to blows* 'get into a fight'. Nunberg et al. contrast ICEs with Idiomatic Phrases (IPs) such as *kick the bucket* 'die' and *saw logs* 'snore loudly'. They claim that these IPs are not compositional: the meaning of, for example, *kick the bucket* 'die' is not distributed among its parts *kick* and *the bucket*.^{22, 23}

apply to words, phrases, or other elements). Lexical units/lexical items, then, are elements that are stored in the lexicon. Conversely, I use the notions "morphological unit" and "word" to refer to elements with a specific structural status, namely X^0 -status (cf. Jackendoff 2002a: 153).

²² Nunberg et al. notice that the meaning of an IP such as *kick the bucket* is not completely unmotivated either; *kick* in this idiom and *kick* 'strike with the foot' are not merely accidental homonyms (Nunberg et al. 1994: 493, note 2). Nevertheless, this idiom type contrasts with the *pull strings* type in that its parts do not contribute their meaning to the idiom meaning compositionally and (consequently) in that it does not participate in the syntactic constructions mentioned below (for more on the relation between the two types of idiom and possible representational differences, see Nunberg et al. 1994 and Jackendoff 1997a: 166-171).

²³ Many other classifications of idioms have been proposed in the literature (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, cf. 4.2) Grant and Bauer classify ICEs such as *pull strings* as non-compositional. They call these expressions *figuratives* instead of *idioms*, reserving the term (*core*) *idiom* for IPs such as *kick the bucket*. What we see, then, is that Grant and Bauer, too, distinguish between these two types of conventionalised phrase, although their terminology is different from that of Nunberg et al. (1994).

Nunberg et al. illustrate that the compositionality of ICEs is related to their ability to participate in passive, raising, topicalisation, and modification constructions, which contrasts with the inability of IPs to do so. That is, whereas the idiomatic meaning is not available in *logs were sawed, he kicked a slow bucket, and the bucket, he kicked*, it is so in *the strings were pulled, the strings seemed to be pulled, pull yet more strings*, and *those strings, he wouldn't pull for you*.²⁴ The parts of an ICE, contributing their (figurative) meaning to the ICE's meaning, can furthermore be substituted with 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*.

In addition to being similar to ICEs in showing both conventionality and compositionality, SCVs are similar to ICEs in that their parts can also be substituted with semantically compatible parts to form families/pairs of SCVs. There are, for instance, non-causative/causative pairs (*uitkomen* 'to come out' (of a book) vs. *uitbrengen* 'to bring out' (a book)) and families of SCVs in which the same particle expresses the same meaning (*op* 'accessible': *opzoeken* 'to look up the words', *opvragen* 'to ask for the information', etc., cf. (4) in 4.1). Similarly like ICEs, SCVs may undergo passivisation and raising. This is illustrated in (43).

- (43) a. passive: De boeken werden *opgezocht* (door Jan).
'The books were looked up (by John).'
- b. raising: Jan scheen de boeken te hebben *opgezocht*.
'John seemed to have looked up the books.'

SCVs, then, appear to be similar to ICEs in various respects. There are, however, also differences between SCVs and ICEs.

A first difference is that SCVs cannot participate in all of the above-mentioned constructions that are available to ICEs: although SCVs may undergo passivisation and raising, their particles do generally not allow modification and topicalisation (cf. 4.3.1 and 4.3.2). It was argued in the previous section that this defective behaviour of particles can be related to their specific morphosyntactic structure: particles are words that do not project a phrase (see also 4.5). The difference between SCVs and ICEs in the possibility of topicalising and modifying parts of the construction, then, is due to a difference between the constituent structures of SCVs and ICEs: whereas ICEs such as *pull strings* consist of a verb and an XP (NP), thus representing normal VPs, SCVs consist of a verb and a non-projecting word X. We have seen that the non-projecting status of particles is related to two other properties that are typical of these elements (i.e. that distinguish them from XPs in general and from resultative phrases such as *oranje* 'orange' in particular): (a) particles can generally not appear in the copula construction (cf. (25)

²⁴ In addition to passive, raising, modification, and topicalisation constructions Nunberg et al. (1994) discuss other constructions, and acknowledge that various semantic and pragmatic factors may play a role in the availability of these constructions. They also provide an explanation as to why an IP such as *kick the bucket* cannot participate in constructions such as the passive, and compare passive and raising constructions to German/Dutch V2 constructions.

in 4.3.3), and (b), particles may appear along with the verb in the verb cluster and after *aan het* in the progressive construction (cf. (32)e-f in 4.3.5).

A second difference between SCVs and ICEs is that SCV classes may be extended productively, whereas ICEs cannot be formed in a productive way.²⁵ The productivity of the SCV system is illustrated in (44)-(46): the paradigmatic relations between the SCVs in (44) may lead to the derivation of the template in (45), on the basis of which Dutch speakers may form the SCV in (46). (*Accessible* in (45) stands for 'physically/cognitively/perceptually accessible', which receives a more specific interpretation in the individual SCVs instantiating the pattern in (45) on the basis of the information provided by the verb and its arguments (e.g. 'available' or 'contacted', see also 3.2 and 8.2).)

- (44) a. de boeken *opzoeken*
'lit. the books up-search, to look up the books'
'to cause the books to become accessible by searching'
- b. de informatie *opvragen*
'lit. the information up-ask, to ask for the information'
'to cause the information to become accessible by asking'
- c. de kinderen *opbellen*
'lit. the children up-ring, to call up the children'
'to cause the children to become accessible by calling'
- (45) [*op-V*⁰]_V 'to cause NP to become accessible by V-ing'
- (46) de chirurg *oppiepen*
'lit. the surgeon up-beep, to beep up the surgeon'
'to cause the surgeon to become accessible by beeping'

As is the case with *oppiepen* in (46), productive SCV formation generally appears to involve the combination of a particular particle with a specific meaning, present in various existing SCVs, with a new verb. Some other SCVs that seem to have been formed in this way are, along with the existing SCVs (a) and the template their formation appears to be based on (b), given in (47)-(48).

- (47) a. existing SCVs:
de regels nalezen 'lit. after-read, to check the rules by reading'
het nummer navragen 'lit. after-ask, to check the number by asking'
de informatie nazoeken 'lit. after-search, to check the information by searching'
- b. template:
[*na-V*⁰]_V 'to cause NP to become checked by V-ing'
- c. new SCV:
de gegevens nachecken 'lit. after-check, to check (off) the data'²⁶

²⁵ As noted above, the parts of an ICE can be substituted to a limited extent.

²⁶ *Nachecken* contains a so-called pleonastic particle; see 5.5.15.2 and 8.2.3.

- (48) a. existing SCVs:
de hond opsluiten 'lit. up-lock, to lock up/cage the dog'
het speelgoed opbergen 'lit. up-stow, to put/stow away the toys'
de kleren opruimen 'lit. up-clear, to put away the clothes'
- b. template:
 $[op-V^0]_V$ 'to cause NP to become put together and away by V-ing'
- c. new SCVs:
de gevangenen opkooien 'lit. up-cage, to put the prisoners together into one cell'²⁷
de kippen ophokken 'lit. up-pen, to put the chickens together in a henhouse'
 (used frequently during the fowl pest in the Spring of 2003)

Examples like these suggest that SCV formation is based on templates such as $[na-V^0]_V$ 'to cause NP to become checked by V-ing', which contain a fixed particle slot and an open slot for the verb, thus representing partly lexicalised phrases (see below). By inserting verbs into the verbal slot, new SCVs with *na* 'checked' are formed in a productive way. Such SCV templates appear to have been derived by generalising over existing SCVs and have acquired a life of their own, being used to form new SCVs (cf. the discussion of Booij 2002a, b in section 3.3.2, see also section 8.2).

In contrast to what is the case for SCVs, ICEs do not show productivity, and therefore they are assumed to be instantiations of *completely* lexicalised templates instead of *partly* lexicalised templates. That is, the lexical representation of an idiomatic verb phrase like *pull strings* is assumed to contain two fixed slots: $[pull\ strings]_{VP}$.²⁸

It follows from the foregoing discussion that SCVs represent an intermediate position along a lexicalisation scale, in between completely free syntactic combinations and completely lexicalised syntactic combinations. This lexicalisation cline is given in (49).

- (49) Lexicalisation cline of individual phrasal combinations:
- | | | | | |
|---------------------------------|---|------------------------------|---|----------------------------------|
| completely free
combinations | > | partly fixed
combinations | > | completely fixed
combinations |
|---------------------------------|---|------------------------------|---|----------------------------------|

Examples of completely free phrasal combinations are *de fiets verven* 'to paint the bike' and *de fiets oranje verven* 'to paint the bike orange'. A completely fixed combination is *pull strings* 'be in charge'. A partly fixed combination, which was discussed in section 3.2, is represented in (50) (for more examples of partly lexicalised phrases, see Booij 2002b and Jackendoff 2002a, chapter 6).

- (50) Sam joked his way into the meeting.

²⁷ See 5.5.15.1 and 8.2.3 for more on SCVs with a nominal base.

²⁸ This is also the case for IPs such as *kick the bucket*. The representations of ICEs and IPs differ, however, in that the distinct parts of an ICE, which contribute their meaning to the construction compositionally, are individually linked to a part of the semantic structure of the construction, whereas this is not the case for IPs (cf. Jackendoff 1997a: 166-171).

The example in (50) is an instantiation of the *way*-construction, in which the noun *way* has a metaphorical meaning that is dependent on its occurrence in this specific construction (see the references in 3.2). The crucial difference between the partly lexicalised phrase in (50) and SCVs is that SCVs contain a non-projecting word, whereas the constituent structure of the phrase in (50) is similar to that of other phrases. As a consequence of this constituent-structural difference SCVs exhibit the distinctive behaviour of being able to appear in the verb cluster and after *aan het* in the progressive construction, and particles exhibit the distinctive behaviour of not being able to participate in XP constructions such as topicalisation.

In sum, SCVs are similar to the compositional idioms that Nunberg et al. (1994) call Idiomatically Combining Expressions (ICEs): both SCVs and ICEs are conventionalised as well as compositional. The SCV system furthermore shows productivity, which can be accounted for by assuming that SCVs are instantiations of *partly* instead of *completely* lexicalised phrases, containing both a fixed and an open slot. The constituent structure of SCVs appears to be different from that of phrasal combinations in general (such as NP-V combinations) in that the particle is a non-projecting word.

Although most SCVs represent the second stage in the lexicalisation development represented in (49), there are some SCVs that are in either the first or the third stage of this development. The particle *aan* in the SCV *zich aanstellen* 'lit. oneself at put, to put on airs', for instance, performs a function that *aan* does not perform in any other SCV, and we cannot form new SCVs in which *aan* performs this function. *Aanstellen*, then, is not compositional, nor related to productive SCV formation. This suggests that it is not *partly* lexicalised, but *completely* lexicalised, representing the third instead of the second stage in (49), like the ICE *pull strings*.²⁹ There are also some SCVs that do not show any lexicalisation, the SCV meaning following straightforwardly from combining the meanings of the particle and the verb. Such SCVs represent the first stage in (49). An example of such an SCV is *opgooien* 'lit. up throw, to throw up(wards)'. Both the particle and the verb of this SCV convey a meaning that they may also convey outside the SCV construction. These meanings are thus not construction-specific (cf. 4.3.2, see also 8.2).

Importantly, the distributional properties of these few SCVs showing either complete lexicalisation or no lexicalisation at all are exactly the same as those of the majority of SCVs, which are partly lexicalised. The particles of these SCVs, too, are separable, may appear in the verb cluster and after *aan het*, and do generally not participate in topicalisation, modification, and copula constructions (cf. 4.3). This indicates that these SCVs, too, represent phrases consisting of a non-projecting word and a verbal head, thus having the same constituent structure as other SCVs. The relationship posited between the different SCV types is illustrated in (51).

²⁹ In contrast to what is the case for *pull strings*, however, the SCV *aanstellen* does not appear to be compositional: the meaning of this SCV does not seem to be distributed among its parts *aan* and *stellen*. So although both *aanstellen* and *pull strings* represent the third stage in the lexicalisation cline in (49), these two phrases differ in that the distinct parts of *pull strings*, unlike those of *aanstellen*, are individually linked to a part of the semantic structure. *Aanstellen* thus appears to be more similar to an idiomatic phrase like *kick the bucket* than to an ICE like *pull strings* in this respect (cf. the previous note).

- (51) Lexicalisation cline of the pattern $[X-V^0]_{V'}$:
- | | | | | |
|------------------------------|---|---------------------------|---|-------------------------------|
| completely free combinations | > | partly fixed combinations | > | completely fixed combinations |
| $[X-V^0]_{V'}$ | | $[op-V^0]_{V'}$ | | $[aan-stellen]_{V'}$ |
| <i>opgooien</i> | | <i>opzoeken</i> | | <i>zich aanstellen</i> |
| 'to throw up(wards)' | | 'to look up' | | 'to put on airs' |

Both completely free and completely lexicalised 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 conventionalised, compositional, and may be formed productively.

To conclude, an analysis of SCVs as partly lexicalised phrases that consist of a fixed non-projecting word and an open slot for the verb provides us with an account of their lexical properties. Such an analysis explains the combination of the properties conventionality and productivity that we see in SCVs without treating them as words, with which we typically associate this combination of properties. As such, 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.

According to the analysis proposed in this section, most SCVs are in an intermediate position in the lexicalisation development in (49). It will be argued in the remainder of this book that SCVs are also intermediate in another development. This second development is a grammaticalisation development whereby XPs that may be adjacent to the verb develop into particles, and particles develop further into prefixes.

The next section, which relates the results of this section to those of section 4.3, will work out the morphosyntactic structure that I propose for SCVs.

4.5 Particles as non-projecting words

I take the separability of SCVs as evidence for their phrasal status: both the particle and the verb represent a word and together these elements form a V' . I claim that the characteristic behaviour of SCVs that distinguishes them from other phrasal combinations, such as combinations of a verb and a resultative phrase, is related to the particle's status of a non-projecting word (X). The structure of SCVs, then, is $[X-V^0]_{V'}$ (cf. Booij 2002a, b on Dutch particles and Toivonen 2003 on Swedish particles).

Since V2 applies to V^0 , the particle is separated from the verb in root clauses (e.g. *Jan zocht de informatie op* 'John looked up the information'). Verb Raising, on the other hand, is assumed to apply to either V^0 or V' in (standard) Dutch, the result being that either only the verb, or the whole SCV appears in the verb cluster (*dat Jan de informatie op wilde zoeken / wilde opzoeken* 'that John wanted to look up the information'). As illustrated in 4.3.5, however, projections are excluded from the cluster-internal position in (standard) Dutch. This can be accounted for by assuming that Verb Raising may only apply to V-bars that do not contain projecting words (say small V-bars or V^* 's, cf. Booij 1990). It may, for instance, apply to

combinations of a verb and a non-projecting P, A, or N (e.g. *wilde opzoeken* 'wanted to look up', *wilde schoonmaken* 'wanted to clean', *wilde ademhalen* 'wanted to breathe'). It was also illustrated in section 4.3.5 that the same restriction on projections applies to the position after *aan het* in the progressive *aan het*-construction (**aan het oranje verven* 'painting orange').

Toivonen (2003: 61-66) illustrates how the assumption of non-projecting words can be accommodated in X'-theory.³⁰ In traditional X'-theory, lexical categories project a uniform structure in syntax: each X⁰ projects an X' and each X' in turn projects an XP. This strong hypothesis of X'-theory still holds, but appears to require some further elaboration: lexical categories project this X'-structure unless there is direct evidence that they do not do so. Such evidence is provided by the distributional differences between, for example, a non-projecting word and an XP of the same lexical category (e.g. the distributional differences between the particle *op* 'up' and the postposition *op* 'up' or that between the (nominal) particle *adem* 'breath' in *ademhalen* 'to breathe' and the projecting noun *adem* 'breath' in *veel adem krijgen* 'to get much breath', see 4.3 and below).

The phenomenon of non-projecting words is not confined to Dutch (or Germanic, cf. chapter 9) verbal particles. Examples of non-projecting words in Romance are the nouns in French V-N constructions such as *donner soif à* 'lit. give thirst to, to make thirsty' and *faire plaisir à* 'lit. make pleasure to, to give pleasure to' (similar V-N constructions occur in other Romance languages and in many other languages, see also section 10.1). Evidence for the non-projecting status of the nouns in these constructions can also be found in their distribution. To see this, compare (52)a-c (which are adapted from Abeillé and Godard 2000, see also Toivonen 2003: 79-82).

- (52) a. Paul *donne un livre à son fils* / *donne à son fils un livre.*
 Paul gives a book to his son / gives to his son a book
 'Paul gives a book to his son.'
- b. La course *donne soif à Jean* / **donne à Jean soif.*
 the race gives thirst to John / gives to John thirst
 'The race makes John thirsty.'
- c. La course *donne une grande soif à Jean* / *donne à Jean une grande soif.*
 the race gives a great thirst to John / gives to John a great thirst
 'The race makes John very thirsty.'

The example in (52)a illustrates that the ordering of NP complements and PP complements is generally free in French. In (52)b, however, the ordering of *soif* and *à Jean* is fixed: *soif* must precede *à Jean*. In (52)c, on the other hand, in which the noun *soif* is modified, the ordering of the complements is again free. Other V-N constructions, such as *faire plaisir à*, show similar distributional differences.

³⁰ Toivonen (2003: 73-82) formalises the phenomenon of non-projecting words within the framework of LFG, but mentions that non-projecting words have also been posited in the Principles and Parameters framework (Baltin 1989) and in HPSG (Abeillé and Godard 2000, Sag 1987) (see section 3.3.2 for more on Toivonen's (2003) structural analysis of Swedish SCVs and see section 3.4.1 for more on her semantic analysis of these SCVs).

These facts can be accounted for by assuming that *soif* is a non-projecting noun that combines with V^0 to form a V' in constructions such as (52)b: $[V^0-N]_{V'}$. In (52)c, on the other hand, in which *soif* is modified, this noun projects an NP. Like other NP complements, it may follow the PP complement. The distributional difference between, on the one hand, (52)a-(52)c, and, on the other hand, (52)b is thus accounted for by analysing nouns such as *soif* in *donner soif à* as non-projecting words that form a V' with the verb.

The modification, topicalisation, and copula construction data discussed in section 4.3 follow straightforwardly from the particle's status as a non-projecting word. That is to say, only projecting words, which form syntactically independent phrases, have a specifier in which they can host a modifier (cf. 4.3.1), and it is generally assumed that only phrases allow topicalisation (cf. 4.3.2). Similarly, only phrases can participate in the copula construction (cf. 4.3.3).

The specific constituent structure of SCVs, to be represented as $[X-V^0]_{V'}$, is identical for all SCV types regardless of their semantic properties.³¹ I thus propose the same constituent structure for SCVs with a predictable meaning (*opgooien* 'to throw up(wards)'), for SCVs with a compositional but not fully predictable meaning (*opzoeken* 'to look up'), and for SCVs with a non-compositional meaning (*aanstellen* 'to put on airs'), cf. (51) in section 4.4. This is justified by the fact that all of these SCVs show the same syntactic distribution: all of these SCVs are separable and the particles of all of these SCVs may appear in the verb cluster and after *aan het* in the progressive construction. Similarly, the particles of all of these SCVs show defective behaviour in modification, topicalisation, and copula constructions. The only differences between the three SCV types mentioned above, then, are the conventionality in their meaning and their productivity. It was argued above that these differences can be accounted for by positing different lexicalisation properties for these three SCV types.

If we analyse particles as non-projecting words, an obvious question is how to account for contexts in which such words show phrasal behaviour, such as *het huiswerk is af* 'the homework is finished' and *de soep is op* 'the soup is eaten up', in which *af* 'finished' and *op* 'used up' are used as syntactically and semantically independent resultative predicates in the copula construction. I assume that in these undisputed XP constructions elements like *af* 'finished' and *op* 'used up' are phrases: they represent resultative APs/PPs that are not inherently linked to a verb and are thus not part of an SCV (cf. (26) in 4.3.3). These elements, then, are not particles, but are resultative phrases. Unlike other resultative phrases (such as *oranje* 'orange' in *de fiets oranje verven* 'to paint the bike orange'), however, *af* 'finished' and *op* 'used up' may also represent a particle (X) and form an SCV in combination with a verb. In that case, these elements may appear in typical particle positions, which are unavailable to resultative phrases. They may, for instance, appear inside the verb cluster and after *aan het* in the progressive construction.

Words like *af* 'finished' and *op* 'used up', then, are structurally ambiguous. I assume that this is related to their diachrony: as a consequence of the diachronic development whereby XPs that are adjacent to the verb in certain contexts may

³¹ My analysis differs in this respect from that of, for instance, Wurmbrand (2000), who posits different constituent structures for compositional and idiomatic SCVs (cf. 3.4.1).

grammaticalise into particles, some words, such as *af* 'finished' and *op* 'used up', may synchronically be ambiguous between being an XP and being an X. In other words, these words exhibit *layering*, which is the phenomenon, typical of grammaticalisation, that old and new forms coexist (cf. 2.3). A word like *af* 'finished' may thus be used as an X and combine with a verb to form an SCV, in which case it may appear in the verb cluster and after *aan het*, but it may also be used as an XP, in which case it may appear in topicalisation, modification, and copula constructions. Unlike *af* 'finished' and *op* 'used up', however, the overwhelming majority of particles do not show such undisputed XP behaviour. For instance, *af* 'at the final destination' in *de goederen afleveren* 'lit. off-deliver, to drop off the goods', *op* 'upwards' in *de bal opgooien* 'lit. up-throw, to throw up the ball', and *op* 'accessible' in *de boeken opzoeken* 'lit. up-search, to look up the books' cannot be used in topicalisation, modification, and copula constructions (cf. 4.3, see also 5.6). I have illustrated that the inability of particles to be used in these constructions is accounted for by analysing them as non-projecting words that form a minimal projection with the verb.

Alternatively, it has been suggested that particles in general should be analysed as being *optionally* projecting (see, for instance, Neeleman 2002 on Dutch particles and Zeller 2000, 2003 on German particles), relating their apparent ambivalent behaviour to Chomsky's (1995) Bare Phrase Structure. Zeller (2000) claims that particles project a phrase in all separated contexts (V2, particle topicalisation, etc.), but do not project in the non-separated contexts (such as *wilde opgooien* 'wanted to throw upwards' and in morphological derivations of SCVs). A possible problem for such an analysis is that *all* Dutch (and German) particles are separated by V2 (and Dutch particles are also, optionally, separated in the verb cluster), which would, according to such an analysis, indicate their phrasal status, but that only very few of these alleged phrases may appear in modification, topicalisation, and copula contexts. These phrasal contexts would be expected to be more generally available to such (alleged) phrases.

Zeller (2003) proposes a similar (but not identical) analysis. He claims that a particle projects a phrase if it appears in a topicalisation construction, and that particles that resist topicalisation do not do so. According to this analysis, then, particles do not project in *every separated context* (such as, for instance, V2), but only do so in topicalisation constructions. What is more important, however, is that Zeller (2003) claims that if a particle does not project, the relevant SCV does not have a phrasal representation, but represents a word: $[X-V^0]_V^0$. He furthermore claims that *all* SCVs have both the phrasal representation, containing a projecting particle ($[XP-V^0]_V$), and the word representation.

A problem for Zeller's (2003) analysis is that those SCVs that resist topicalisation, which is the case for the vast majority of SCVs, do not behave like words: they are separable (cf. 4.3.5). This is why these SCVs should also be analysed as phrases. The particles of these SCVs, however, do not allow topicalisation, which indicates that these SCVs do not have the structure of a

'normal' phrase ($[XP-V^0]_V$). Instead, their particles are non-projecting words; we need a specific SCV syntax ($[X-V^0]_V$).³²

A similar problem arises in the analysis of Neeleman (2002), according to which Dutch particles project in modification contexts (cf. Toivonen 2003: 191, where the same claim is made for Swedish particles). Neeleman claims that in other contexts, particles represent a syntactic structure "below the X^0 -level" (Neeleman 2002: 150). Like Zeller (2003), then, Neeleman (2002) seems to suggest that a particle that does not project is part of a word. This, however, would leave unexplained the separability of these alleged words (cf. the discussion of Neeleman 1994 and Neeleman and Weerman 1993 in section 3.3.1).

But even if Neeleman (2002) and Zeller (2003) claimed that non-topicalised/non-modified particles are non-projecting words instead of morphemes below the X^0 -level, and that SCVs with such particles are phrases with the structure $[X-V^0]_V$ instead of words (i.e. even if they analysed these particles/SCVs in the same way as I analyse all particles/SCVs), their analyses would not account for the data in a satisfactory way. This is because all SCVs additionally have the structure $[XP-V^0]_V$ in these analyses, since all particles are assumed to be optionally projecting. The vast majority of particles, however, may never appear in modification constructions, topicalisation constructions, or any other undisputed XP constructions (cf. 4.3, see also 5.6). This implies that it does not seem to be necessary to postulate that particles are optionally projecting. On the contrary, such a postulation even appears to be undesirable, since it would make the wrong predictions: it would predict that particles generally occur in such undisputed XP constructions, so that additional assumptions would be needed to account for the fact that the majority of particles never do so. Instead then of assuming that particles are *optionally projecting*, it seems better to assume that particles are *non-projecting*, and to assume that there are only a few words that, in addition to having a particle structure (X structure), have a phrasal structure (XP structure), thus exhibiting layering.

In short, Neeleman's (2002) and Zeller's (2003) proposals are similar to mine in that we all claim that certain elements, such as *af* 'finished', have two representations. For Neeleman and Zeller, such elements are phrases as well as elements below the X^0 -level, whereas in my proposal they are phrases as well as non-projecting words. Our proposals furthermore differ in that Neeleman and Zeller posit such a dual representation for all words functioning as particles, whereas I only posit a dual representation for a very small subset of these words. The postulation of dual structures might seem unattractive from a synchronic perspective, but I will show in the remainder of this study that it falls naturally into place in a diachronic approach.

Particles, then, are those elements that are separable from the verb, but may appear together with the verb in the verb cluster. Their structural representation is that of a non-projecting word, forming a phrasal combination with a verb: $[X-V^0]_V$.

³² Another problematic aspect of Zeller's (2003) proposal is that the factors that determine which of the two representations is chosen are not well-defined: the word representation is claimed to be chosen if it is "conceptually heavier" than the phrasal representation as a consequence of which speakers cannot analyse such SCVs as phrases (Zeller 2003: 200-205).

As has been noted in section 4.3.5, I consider adjectives that appear in the verb cluster, such as *schoon* 'clean' and *goed* 'good' in (53), also to be particles. When used as such, these adjectives express a unitary concept together with the verb and cannot have a modifier:

- (53) a. dat Jan het huis heeft (*heel) *schoongemaakt*
 that John the house has very clean-made
 'that John made the house (very) clean'
 b. dat Jan niet alles zou (*heel) *goedkeuren*
 that John not all would very good-judge
 'that John was not going to approve (much) of everything'

The adjectives in (53), then, are also non-projecting words. In addition to their particle uses, however, the forms *schoon* and *goed* may be used as adjective phrases (APs), as in (54).

- (54) a. Het huis was heel *schoon*.
 'The house was very clean.'
 b. Zijn stem is erg *goed*.
 'His voice is very good.'

A-V combination such as the ones in (53) are similar to N-V combinations referring to institutionalised activities, such as *ademhalen* 'to breathe' and *huishouden* 'to run the house' in (55).

- (55) a. dat Jan niet kon (*veel) *ademhalen*
 that John not could much breath-fetch
 'that John could not breathe (much)'
 b. dat Jan niet kan (*een groot) *huishouden*
 that John not can a big house-hold
 'that John cannot run a (big) house'

The examples in (55) illustrate that the combinations *ademhalen* and *huishouden* may appear in the verb cluster, in which case their nominal left-hand parts may not have a modifier: these left-hand parts represent non-projecting nouns, that is, nominal particles. Like other particles, *adem* in *ademhalen* and *huis* in *huishouden* may occur after *aan het* in the progressive construction, as illustrated in (56).³³

- (56) a. Jan was onregelmatig aan het *ademhalen*.
 John was irregularly at the breathe-fetch
 'John was breathing irregularly.'
 b. De storm is flink aan het *huishouden* in Amsterdam.
 the storm is heavily at the house-hold in Amsterdam
 'The storm is causing much damage in Amsterdam.'

³³ *Huishouden* may only occur as a whole after *aan het* in the progressive *aan het*-construction if it has the extended meaning 'to cause damage' (cf. (56)b). This is because the non-extended meaning 'to run the house', which denotes an ability, is incompatible with progressive aspect.

Booij (2002a: 210) illustrates that negation contexts provide additional evidence for the claim that SCVs such as *ademhalen* are structurally different from phrases consisting of a direct object NP and a verb. The use of the two Dutch negative elements *geen* 'no' and *niet* 'not' is illustrated in (57): whereas the nominal modifier *geen* is used in NP-V combinations, *niet* is used to negate verbs.

- (57) a. Jan kan *geen* lied zingen.
 John can no song sing
 'John cannot sing a song.'
 b. Jan kan *niet* zingen.
 John can not sing
 'John cannot sing.'

The examples in (58) show that SCVs with nominal particles such as *ademhalen* 'to breathe' may take the verbal negation *niet*, whereas this is not possible for a combination like *adem krijgen* 'to get breath', which is not an SCV but an NP-V combination: *adem krijgen* must take the nominal negation *geen*.

- (58) a. Jan kan *niet* *ademhalen*.
 John can not breath-fetch
 'John cannot breathe.'
 b. Jan kan *geen* / **niet* *adem krijgen*.
 John can no / not breath get
 'John cannot get any breath.'

The combination *adem halen*, however, may, at least for some speakers, also take the nominal negation *geen*, compare (59)a below. The combination *adem halen* is not treated as an SCV here, but as a normal VP with a syntactically independent direct object NP. If, on the other hand, the combination *ademhalen* appears in the verb cluster or after *aan het* and is an undisputed SCV, only the verbal negation *niet* is possible, as illustrated in (59)b-c.³⁴

- (59) a. ?Jan kan *geen* *adem halen*.
 John can no breath fetch
 'John cannot get any breath.'
 b. dat Jan *niet* / **geen* kon *ademhalen*
 that John not / no could breath-fetch
 'that John could not breathe'
 c. dat Jan *niet* / **geen* onregelmatig aan het *ademhalen* was
 that John not / no irregularly at the breathe-fetch was
 'that John was not breathing irregularly'

SCVs such as *ademhalen*, then, behave differently from NP-V combinations (e.g. *adem krijgen*) in negation contexts. The proposed SCV structure, according to which

³⁴ This negation must appear outside the verb cluster and before *aan het*: **dat Jan kon niet/geen ademhalen* 'that John could not breathe', **dat Jan onregelmatig aan het niet/geen ademhalen was* 'that John was not breathing irregularly'.

the noun *adem* in *ademhalen* is a non-projecting word and forms a minimal projection with the verb *halen*, accounts for this difference.³⁵

In addition then to particles that correspond to adpositions (prepositions and/or postpositions), such as *op* 'up' (*opgooien* 'to throw up(wards)', *opzoeken* 'to look up'), there are adjectival particles (*goedkeuren* 'to approve') and nominal particles (*ademhalen* 'to breathe'). There are also particles that correspond to adverbs, such as *neer* 'down' (*neerleggen* 'to put down') and *terug* 'back' (*terugkomen* 'to come back'), cf. (60). All of these elements are separable from the verb, but may appear along with it in the verb cluster, on the basis of which I analyse these elements as non-projecting words.

- (60) dat Jan morgen zou *terugrijden*
 that John tomorrow would back-drive
 'that John would drive back tomorrow'

Like nouns and adjectives, adverbs such as *terug* may also be used as XPs instead of as particles. In that case they may appear in, for instance, the copula construction. This is illustrated in (61).

- (61) Jan is *terug*.
 'John is back.'

This means that the adverb *terug* is structurally ambiguous in constructions such as *dat Jan terug reed* 'that John drove back', in which it occupies a syntactic position that is available to both particles and XPs: *terug* may be either an X or an XP in such constructions. Such structural ambiguity, however, does generally not affect

³⁵ The same structural ambiguity that we see in the case of *ademhalen* (cf. (58)a-(59)a) might account for the two passive constructions in (i), the combination *take advantage (of)* instantiating the syntactic structure $[V-NP]_{VP}$ in (i)a and instantiating the syntactic structure $[V-N]_V$ in (i)b.

- (i) a. *Advantage was taken of* the students.
 b. The students were *taken advantage of*.

Nunberg et al. (1994: 520-523) show that modifiers and determiners preceding the noun are absent in constructions such as (i)b, but are frequently present in constructions such as (i)a. This supports the analysis proposed here. Bresnan (1982), however, posits a morphological $[V-N]_V^0$ structure instead of a syntactic $[V-N]_V$ structure for the construction in (i)b. A possible problem for such a morphological analysis is that the combination does not obey the Right-hand Head Rule. Nunberg et al., on the other hand, claim that the two passive constructions represent semantically different types of idiom. That is, they claim that *take advantage (of)* is an Idiomatically Combining Expression (ICE) in (i)a and an Idiomatic Phrase (IP) in (i)b (cf. 4.4). According to their analysis, however, these two types of idiom are generally distinguishable in terms of their compositionality (cf. the remarks in 4.4), but such a distinction seems to be absent in (i): the meaning of the construction is distributed among its parts in both (i)a and (i)b. Similarly, Nunberg et al. claim that IPs (such as *kick the bucket*) cannot be passivised, but passivisation is possible for the alleged IP in (i)b. Instead then of assuming that constructions like (i)a-b represent semantically different types of idiom, it seems better to assume that both of these constructions represent ICEs and that these ICEs differ in terms of their constituent structure.

particles corresponding to adpositions. This appears from the fact that adpositions that may form an SCV with a verb (e.g. *op* 'up(wards)', *op* 'accessible') may not generally be used in the copula construction (or in any other undisputed XP construction). This is illustrated in (62) (cf. 4.3.3).

- (62) a. dat Jan de bal wilde *opgooien*
 that John the ball wanted up-throw
 'that John wanted to throw up the ball'
 result: *De bal is *op*.
 'The ball is up (in the air).'
- b. dat Jan de boeken wilde *opzoeken*
 that John the books wanted up-search
 'that John wanted to look up the books'
 result: *De boeken zijn *op*.
 'The books are up (accessible).'

The dual structural status of nominal, adjectival, and adverbial particles reflects layering: as a result of the diachronic development whereby NPs, APs, and AdvPs that show up left-adjacent to a verb may grammaticalise into nominal, adjectival, and adverbial particles (non-projecting Ns/As/AdvS), both the X structure and the XP structure may synchronically be available. The effect of this is that nouns, adjectives, and adverbs may, in certain contexts, be ambiguous between representing an XP and representing an X. We have seen, however, that verb cluster contexts, *aan het*-progressive contexts, and negation contexts provide disambiguation, thereby illustrating that there is a non-trivial structural distinction between these two options.

Similar X/XP-ambiguities appear to affect postpositions, as a consequence of which postpositions may be realised in the verb cluster, which is illustrated in the first construction in (63)b. Note, however, that this construction is certainly not generally accepted; it seems to be especially bad if we apply the appropriate stress pattern (i.e. if we avoid stress on the postposition; as opposed to particles, postpositions do not bear stress, cf. (64) below).

- (63) Postposition: NP [NP P]_{PP} V
- a. dat hij de auto [de garage *in*]_{PP} *reed*
 that he the car the garage in drove
 'that he drove the car into the garage'
- b. dat hij de auto ?de garage heeft *in gereden* / de garage *in heeft gereden*
 that he the car the garage has in driven / the garage in has driven
 'that he has driven the car into the garage'

There is much variation in the acceptability of constructions such as the first one in (63)b, both among different postpositions and among speakers (cf. Groos 1989). Conversely, there is no such variation for SCV constructions such as the first one in (64)b below.

- (64) Particle: NP [P-V⁰]_{V'}
- a. dat hij de auto *inreed*
 that he the car in-drove
 'that he ran in the car'
- b. dat hij de auto heeft *ingereden* / in heeft *gereden*
 that he the car has in-driven / in has driven
 'that he has run in the car'

These examples also show that combinations of a particle and a verb (64) have a unitary (often extended) meaning, whereas this is not the case for combinations of a postposition and a verb (63).

The structural difference between postposition constructions and particle constructions indicated in (63)-(64) is made explicit in passive, nominalisation, and topicalisation constructions such as (65)-(67) below. The a-examples give the particle construction (*de auto [inrijden]_{V'}* 'to run in the car') and the b-examples give the postposition construction (*[de garage in]_{PP} rijden* 'to drive into the garage').

- (65) a. Particle construction: NP [P-V⁰]_{V'}
 De auto werd *ingereden*.
 the car was in-driven
 'The car was being run in.'
- b. Postposition construction: [NP P]_{PP} V
1. *De garage werd *in gereden*.
 the garage was in-driven
 'The garage was driven into.'
 2. De auto werd de garage *in gereden*.
 the car was the garage in driven
 'The car was being driven into the garage.'
- (66) a. Particle construction: NP [P-V⁰]_{V'}
 het *inrijden* van de auto
 the in-driving of the car
 'the running in of the car'
- b. Postposition construction: [NP P]_{PP} V
1. *het *in rijden* van de garage
 the in drive of the garage
 'the driving into of the garage'
 2. het de garage *in rijden* (van de auto)
 the the garage in drive (of the car)
 'the driving into the garage (of the car)'
- (67) a. Particle construction: NP [P-V⁰]_{V'}
Ingereden heeft hij de auto niet.
 in-driven has he the car not
 'He has not run in the car.'
- b. Postposition construction: [NP P]_{PP} V
1. **In gereden* heeft hij de garage niet.
 in driven has he the garage not
 'He has not [driven into] the garage.'

2. De garage *in gereden* heeft hij de auto niet.
 the garage in driven has he the car not
 'He has not driven the car into the garage.'

The constructions in (63)-(67) illustrate that combinations of a particle and a verb are treated as a syntactic unit, whereas combinations of a postposition and a verb are not treated as such. This follows from the proposed phrase structures: there is no phrase boundary between a particle and a verb, which together form a V', but there is a phrase boundary between a postposition and a verb, as postpositions form a syntactic unit with the preceding NP.

The PP-V construction in (68)a below, then, does not have the same structure as the SCV construction in (68)b (cf. the examples on the right-hand side). It should be noted that this immediately appears from the possibility of adding a direct object NP to such a PP-V construction. This is illustrated in (68)c.

(68)	example	structure
a.	<u>de garage</u> <i>in rijden</i> the garage in drive 'to drive into the garage'	[[de garage <i>in</i>] _{PP} <i>rijden</i>] _{VP}
b.	<u>de auto</u> <i>inrijden</i> the car in-drive 'to run in the car'	[de auto [<i>inrijden</i>] _{V'}] _{VP}
c.	<u>de auto de garage</u> <i>in rijden</i> the car the garage in drive 'to drive the car into the garage'	[de auto [de garage <i>in</i>] _{PP} <i>rijden</i>] _{VP}

If (68)a had the structure of (68)b, *de garage* would be the direct object of *inrijden* and we would expect it to be impossible to add the (second) direct object *de auto*. Constructions such as (68)c, however, are perfectly well-formed. Since the NP *de auto* is the direct object in (68)c, the NP *de garage* can only be analysed as forming a PP with *in*, as indicated in the structure of (68)a-c (see also section 7.3.2.5, cf. Haeseryn et al. 1997: 609-610 and de Vries 1975: 55-58, 139, 146).

The variation that can be observed for constructions such as (63)b reflects the uncertainty of the language user about the structural status of elements like *in* in these constructions: do such elements represent postpositions that form a PP with the preceding NP or do they represent particles that form a V' with the verb? The variation resulting from this uncertainty may reflect a change in progress, which would parallel previous changes whereby postpositions (but also nouns, adjectives, and adverbs) have developed into particles (see chapter 7). Although the differences between the two structures are apparent in certain constructions (e.g. passives, cf. (65)a-(66)a), the 'wrong' analysis may be made in certain cases, as the relevance of such constructions may be unknown to the language user.

The diachronic development involved in the formation of SCVs is similar for SCVs with nominal, adjectival, adverbial, and adpositional particles, all of which result from the grammaticalisation of XP-V constructions into X-V constructions. The synchronic results of this development, however, differ in terms of productivity. The subsystem of SCVs with adpositional particles is the most productive one. We have seen that this productivity can be accounted for by assuming that such SCVs

are instantiations of P-V templates with open slots (cf. 4.4, see also 8.2). The formation of SCVs with adverbial particles is also productive, which suggests that we may posit similar Adv-V templates. But such Adv-V templates seem to be smaller in number than the P-V templates, as there are less adverbial particles than adpositional particles. SCV formation with nominal particles is not productive, which means that there do not seem to be N-V templates with open slots on the basis of which new SCVs with nominal particles can be formed synchronically. This implies that all existing SCVs with nominal particles have developed diachronically. The same holds for SCV formation with adjectival particles, which is not productive across the board. There are, however, a few adjectival particles that do form SCVs productively, such as *schoon* 'clean' and *open* 'open'. This implies that we may posit some A-V templates with open slots (cf. Booij 2002a: 220-222).

As will be clear by now, I define the category of particles structurally, that is, in terms of their constituent structure (cf. Toivonen 2003, Zeller 2001). Particles do not constitute a separate syntactic category (word class): elements from different categories (adpositions, adverbs, adjectives, and nouns), may, as a consequence of grammaticalisation, have the constituent structure of a non-projecting word that forms a V' with a verb.

I will show in the next chapter that particles corresponding to adpositions may perform various functions in the LCS of the SCV construction. That is to say, these particles cannot be uniformly linked to the function of resultative predicate, but may also function as, for instance, adverbial modifier (cf. *voor* '(be)fore' in *voorkoken* 'to cook beforehand, to precook', mentioned in 4.3.3 and further discussed in 5.3.2). I will furthermore show that the functions that particles perform at LCS may also be performed by elements with different constituent structures, such as phrases and prefixes. Particles, then, cannot be distinguished from other elements on the basis of their function in the LCS of the SCV construction.

It thus appears that particles cannot be distinguished from other elements on the basis of their syntactic category or their semantic properties. The distinctive property of particles (besides being stressed) is their constituent-structural realisation, particles being non-projecting words that form a minimal projection with a verb: $[X-V^0]_{V'}$ (cf. Toivonen 2003 on Swedish particles).³⁶ We have seen that this structure accounts for the distributional properties of SCVs/particles. I will illustrate in chapter 6 that it also accounts for the possible and impossible cooccurrences of particles, prefixes, and resultative phrases.

4.6 Summary

This chapter has pointed out problems with the use of the particle modification construction, the particle topicalisation construction, and the copula construction as diagnostics for the compositionality of SCVs. Particles generally appear to resist these three constructions, which would lead SCVs to be generally classified as idioms. This, however, would leave unexplained the semantic systematicity among

³⁶ For differences between my analysis and that of Toivonen (2003), see 3.4.1 and 8.3.1.

SCVs: particles that resist these constructions nevertheless form compositional SCVs.

Two morphosyntactic properties that are shared by all particles are their separability and their ability to appear along with the verb in the verb cluster and after *aan het* in the progressive *aan het*-construction. These two properties, as well as the general inability of particles to appear in modification, topicalisation, and copula constructions, are accounted for by analysing particles as non-projecting words that form a phrase with a verb: $[X-V^0]_V$. A small subset of the adpositions that are used as particles (e.g. *af* 'finished') may also project a phrase, thereby exhibiting layering.

SCVs are generally compositional as well as conventionalised: both the particle and the verb contribute their meaning to that of the SCV, but these meanings (especially that of the particle) are generally not available outside the SCV construction. Crucially, SCVs with particles that express such construction-specific meanings may be formed productively. We can account for these properties by assuming that SCVs are instantiations of phrasal lexical templates with a fixed particle slot and an open slot for the verb. Inserting verbs into this slot leads to the formation of new SCVs. The templates are assumed to be linked to specific meanings to which the verb's meaning is added in a consistent way: $[op-V^0]_V$ 'to cause NP to become accessible by V-ing'. Being instantiations of *partly* lexicalised templates, SCVs represent an intermediate stage in a lexicalisation development.

In addition to SCVs that exhibit conventionality, compositionality, and productivity, which constitute the majority of SCVs, there are SCVs whose meanings are not conventionalised and SCVs that do not instantiate productive patterns. This suggests that the lexicalisation properties of these SCVs are different from those of the majority of SCVs: instead of instantiating phrasal templates with one lexically fixed slot, these SCVs instantiate phrasal templates with, respectively, no fixed slots at all or two fixed slots.

Despite their variable lexicalisation properties, all SCVs behave the same syntactically (e.g. all SCVs are separated by V2 and all SCVs may appear as a whole in the verb cluster). This indicates that all SCVs, regardless of their lexicalisation properties, have the same constituent structure: they represent phrases consisting of a non-projecting word and a verb.

Chapter 5

The semantics of SCVs

5.1 Introduction

This chapter investigates the semantic properties of SCVs with particles corresponding to adpositions, such as *op* in *opzoeken* 'to look up' and *in* in *inrijden* 'to run in'. It will be illustrated that these particles may perform various functions in the LCS of the SCV construction. They may, for instance, function as resultative predicates or as modifiers of the event denoted by the verb and its arguments. Since resultative predicates and modifiers have different participant-licensing properties, resultative predicates licensing the participant they predicate of, but modifiers not licensing any participant, these functionally different particles also have different participant-licensing properties. The effect of this is that the SCVs these particles form have different argument-structural properties and different lexical-aspectual properties. It will be shown that these different argument-structural and lexical-aspectual properties among SCVs are not unpredictable, but follow from the particle's function in the LCS of the SCV construction.

Section 5.2 will discuss SCVs with particles that function as resultative predicates, after which section 5.3 will focus on SCVs with particles that have other functions. Implications of the results of the sections 5.2 and 5.3 will be formulated in section 5.4. Section 5.5 will investigate existing SCVs with thirteen different particles in order to check whether they can properly and insightfully be categorised in the proposed classification. Section 5.6 will check whether the particles of these SCVs do indeed generally not exhibit phrasal behaviour, as claimed in chapter 4. Section 5.7 will conclude the chapter with a summary.

It should be noted that the sections 5.5 and 5.6 serve to further support the claims made in chapter 4 and in the sections 5.2 through 5.4 by providing supplementary data, and that, with the exception of the subsections 5.5.15 and 5.5.16, no new claims are made in these sections. Readers, then, that do not feel the need to be presented with additional support for these claims may choose to skip the sections 5.5 and 5.6. These readers, however, are advised to make an exception for the subsections 5.5.15 and 5.5.16, which contain information that will be referred to in the following chapters.

5.2 SCVs with resultative particles

Many particles are *semantically* similar to resultative phrases: they function as resultative predicates (but see 5.3 for particles that have other functions). As shown in the previous chapter, however, particles and resultative phrases do not behave the

same *syntactically*: the topicalisation construction, the copula construction, the verb cluster construction, and the progressive *aan het*-construction show that, unlike resultative phrases, particles do not project a phrase.

Resultative phrases are assumed to have the Lexical-Conceptual Structure (LCS) in (1)a, which is based on Spencer and Zaretskaya (1998) (and ultimately on Jackendoff 1990). I replaced the brackets of the *by*-phrase in the LCS of Spencer and Zaretskaya by curly brackets to indicate its adjunct status.¹

- (1) [[CAUSE (x), BECOME [W (y)]], BY{V (x)}]

An example of a construction with a resultative phrase is given in (2)a. (2)b illustrates the application of the resultative LCS to this construction. (2)c makes explicit the predicative relation between the resultative predicate ORANGE and the entity THE BIKE expressed in the example in (2)a.

- (2) a. dat Jan zijn fiets *oranje* verft
that John his bike orange paints
'that John paints his bike orange'
b. [[CAUSE (*Jan*), BECOME [*oranje* (*zijn fiets*)]], BY{*verven* (*Jan*)}
'John causes his bike to become orange by painting'
c. result: THE BIKE IS ORANGE

The resultative LCS (R-LCS) represents a complex event consisting of a causative outer event and an inchoative inner event. The inner event contains a change of state predicate ("W"), expressed by the adjective *oranje* 'orange'. This change of state predicate is assumed to be the core eventuality in the LCS of the construction; it is the predicate that is semantically primary. The verb, on the other hand, is semantically secondary: it is subordinated as a manner/means modifier (adjunct) in the LCS, as indicated by the subscript 'BY'. The LCS indicates that the argument of the CAUSE predicate (x) must match the argument of the V (x). The change of state predicate provides the event structure of the construction with internal structure by imposing a boundary on the event: resultative constructions are generally telic.²

The change of state is predicated of a participant at LCS (the so-called *affected Theme*; it is affected by this change of state). The effect of this is that resultative constructions contain a Theme, thus being either transitive or unaccusative (but not unergative) at the level of syntactic structure.³ The Theme may be a so-called unselected object, that is, a direct object that is not selected by the

¹ The resultative LCS of Spencer and Zaretskaya (1998) also contains an ACT predicate: [[CAUSE [ACT (x)], BECOME [W (y)]], BY[V (x)]]. Following others (e.g. Goldberg and Jackendoff 2004), I leave out this predicate in the LCSs given in this book.

² Goldberg and Jackendoff (2004), however, give examples of atelic and stative resultatives.

³ Goldberg and Jackendoff (2004) and Rappoport Hovav and Levin (2001) give examples of constructions with so-called "subject resultatives", such as the PP in *John danced mazurkas across the room*. This PP, however, might be a modifier instead of a resultative predicate, and further research is necessary here (cf. McIntyre 2004: 564-565).

verb and cannot appear with this verb when the resultative predicate is absent.⁴ The participant that is affected by the change of state can be said to measure out the event (Tenny 1992, 1994) and is the incremental Theme in the sense of Dowty (1991): the progression of the event (e.g. of becoming orange) can be measured by looking at this participant (e.g. the bike), the event being partly finished implying this participant to have partly undergone the change of state in question.

SCVs with particles that are semantically (but not syntactically) similar to resultative phrases are also assumed to have the LCS in (1). This is illustrated in (3). 'UP', 'OVER', etc. in the LCSs in (3) refer to the meaning of the respective particles in the SCV constructions (and are not meant to refer to semantic primitives).

- (3) a. de bal *opgooien* (up-throw)
'to throw up the ball'
[[CAUSE (x), BECOME [UP (*de bal*)]], BY {*gooien* (x)}]
'to cause the ball to become up/on high by throwing'
- b. de informatie *overbrengen* (over-bring)
'to carry over the information'
[[CAUSE (x), BECOME [OVER (*de informatie*)]], BY {*brengen* (x)}]
'to cause the information become over by carrying'
- c. de informatie *opzoeken* (up-search)
'to look up the information'
[[CAUSE (x), BECOME [UP (*de informatie*)]], BY {*zoeken* (x)}]
'to cause the information to become accessible searching'
- d. de schoenen *inlopen* (in-walk)
'to wear in the shoes'
[[CAUSE (x), BECOME [IN (*de schoenen*)]], BY {*lopen* (x)}]
'to cause the shoes to become in the desired shape by walking'
- e. het glas *omgooien* (down-throw)
'to knock down/over the glass'
[[CAUSE (x), BECOME [DOWN (*het glas*)]], BY {*gooien* (x)}]
'to cause the glass to become down/over by throwing'

The semantic structures in (3) illustrate that the particles in the examples in (3) are conceptualised as change of state/location predicates and the verbs as manner/means modifiers. The conceptualisation of the particles in (3) as results leads to the SCV constructions with these particles being telic. I assume that the BECOME component in these semantic structures represents a general predicate indicating a change (BECOME/GO), which can refer to either a change of state or a change of location.⁵

⁴ Examples of unselected objects in resultative constructions are *de schoenen* 'the shoes' in *de schoenen kapot lopen* 'to wear out the shoes' and the reflexive pronoun *zich* 'oneself' in *zich kapot werken* 'to work one's fingers to the bone'.

⁵ I assume that this general change predicate is interpreted as either BECOME (in case the particle denotes a change of state) or GO (in case the particle denotes a change of location) on the basis of the information provided by the verb and the arguments in the clause. Alternatively, one might posit a BECOME predicate in the LCS of events indicating a change of state and a GO predicate in the LCS of events indicating a change of location (cf. McIntyre 2004).

The results expressed by particles may vary from concrete to very abstract; we have already seen that particles often have extended meanings. Particular extended meanings, however, do not show up in individual cases, but are usually present in groups of SCVs, so that the SCVs with a particular particle fall into semantic classes (cf. 4.2). The particle *in* in (3)d, for instance, with the meaning 'in a certain, desired shape/state', is also present in SCVs such as *de auto inrijden* 'to run in the car' (lit. in-drive) and the reflexive *je inlezen* 'to read up (on)' (lit. in-read).

It is to be known that the verbs in (3) express manner/means modifier regardless of the meaning they have in isolation. That is to say, although the base verbs *gooien* 'to throw', *brengen* 'to bring', and *zoeken* 'to search' do not particularly express manners or means when used in isolation, they are interpreted as such in the SCV constructions in (3) ((3)c, for example, expresses the fact that someone causes the information to become accessible by means of searching).⁶

We thus see that in the SCVs discussed in this section the particle expresses a result that it also expresses in many other SCVs, and the verb expresses the manner/means that leads to the attainment of this result. The meanings of these SCVs, then, are distributed among the SCV parts; these SCVs are compositional (cf. McIntyre 2002). SCVs with the R-LCS will be referred to as SCVs with resultative particles in this study.

Elements appearing as particles do not always express the same meaning when used in isolation, that is, outside the SCV construction. The resultative meanings of *op* 'accessible' and *in* 'in a certain, desired shape/state', for instance, are not available outside the SCV construction. This is illustrated in (4).

- (4) a. *Na een uurtje zoeken was de informatie eindelijk *op*.
after an hour-DIM search-INF was the information finally up
'After a search of an hour the information was finally accessible.'
- b. *Na een middagje lopen zijn mijn schoenen nu eindelijk *in*.
after an afternoon-DIM walk-INF are my shoes now finally in
'After having walked during the afternoon my shoes are now finally in shape.'

The participant that undergoes the change of state/location expressed by a particle can be characterised as its *Figure*. The denotation of this semantic notion, as well as that of the notion *Ground*, which is its counterpart, can be illustrated by preposition constructions such as (5), which is from Svenonius (2003a).

- | | | | | |
|-----|----------------------|------------------|----------------|---------------|
| (5) | | <i>Figure</i> | <i>relator</i> | <i>Ground</i> |
| a. | The helicopter flew | the firefighters | up | the mountain. |
| b. | The cook twisted | the lid | off | the jar. |
| c. | The police will fire | tear gas | in | the window. |

Svenonius argues that prepositions such as *up*, *off*, and *in* in (5) typically relate two entities in a spatial configuration. The Figure of a preposition (also called *locatum* or

⁶ Conversely, examples of 'pure' manner verbs are manner of motion verbs (*huppelen* 'to frolic', *wandelen* 'to walk'), manner of speaking verbs (*mompelen* 'to mumble'), and manner/means of wiping verbs (*stoffen* 'to dust', *borstelen* 'to brush') (cf. Levin 1993, sections 51.3, 37.3, and 10.4 respectively).

trajector) is the entity in motion or at rest which is located with respect to the Ground. The Ground (also called *locator* or *landmark*) is the entity with respect to which the Figure is located (Svenonius 2003a: 432-433, after Talmy 1978). Talmy (2000: 184) gives the following formulation of these two concepts:

(6) *The general conceptualisation of Figure and Ground in language*

The Figure is a moving or conceptually movable entity whose site, path, or orientation is conceived as a variable the particular value of which is the relevant issue.

The Ground is a reference entity, one that has a stationary setting relative to a reference frame, with respect to which the Figure's site, path, or orientation is characterised.

(Talmy 2000: 184)

Prepositions may license either a Figure and a Ground, or only a Ground. Svenonius (2003a) claims that particles differ from prepositions in that they may license at most one participant (but counterevidence to this claim will be presented in section 5.5.15.4). Particles that express resultative predicates license a Figure participant, which is affected by the change of state/location the particle expresses. In *de schoenen inlopen* 'to wear in the shoes', for instance, the shoes undergo the change of state expressed by the particle *in*, so that their state is the variable the particular value of which is the relevant issue.

It will be shown in the next section that certain non-resultative particles (i.e. particles that do not function as resultative predicates) license a Ground participant. This is, for example, the case with the particle *toe* 'to, at' in (7) (this non-resultative particle will be discussed in section 5.3.3).

- (7) dat Jan het publiek *toespreekt*
 that John the audience to-speaks
 'that John talks to/addressed the audience'

The event expressed by (7) is not that THE AUDIENCE undergoes some change of state/location expressed by *toe*, so that the state/location of THE AUDIENCE is not the variable the particular value of which is the relevant issue. The entity THE AUDIENCE has, instead, a stationary setting relative to a reference frame in the event in (7), and something else, namely the talking of John, is characterised with respect to this entity: JOHN TALKS [TO THE AUDIENCE]. The entity referred to by *het publiek*, then, is the Ground of (the referent of) the particle *toe*, and this particle does not license a Figure. So whereas resultative particles license a Figure participant, which is affected by the result expressed by the particle, non-resultative particles may license a Ground participant. It will be shown in the remainder of this chapter that there are also particles that do not license any participant (sections 5.3.2 and 5.3.4) and particles that license both a Figure participant and a Ground participant (section 5.5.15.4).

The Figure participant licensed by a resultative particle at LCS, which is affected by the result the particle expresses, is usually referred to as the affected

Theme.⁷ Since SCV constructions with resultative particles contain a Theme, their syntactic structure is either transitive or unaccusative, but not unergative. An example of an unaccusative SCV is (8), which contains the unergative verb *lopen* 'to walk' and the resultative particle *op* 'upward', and selects the unaccusative auxiliary *zijn* 'be' instead of the transitive/unergative auxiliary *hebben* 'have'.

- (8) De kosten zijn *opgelopen*.
 the costs are up-walked
 'The costs have increased.'

I assume that unaccusative resultative constructions lack the CAUSE predicate in their LCS; such constructions only express a change of state/location and the manner that leads to the achievement of this change of state/location (cf. McIntyre 2004: 548 and Spencer and Zaretskaya 1998: 6). The LCS assumed for (8) is given in (9). 'UP' in this LCS refers to the meaning of the particle *op* in this SCV: 'on high'.

- (9) [BECOME [UP (*de kosten*)], BY {*lopen* (*de kosten*)}]

The resultative LCS indicates that resultative predicates license a participant, and as noted above, this participant may be an unselected object. As SCV constructions with resultative particles also have the resultative LCS, these constructions may also contain unselected objects (cf. Spencer and Zaretskaya 1998). The direct objects *de schoenen* 'the shoes' and *zich* 'himself' in the SCV constructions in (10), for instance, are not licensed by the verbs *lopen* 'to walk' and *lezen* 'to read' (cf. **de schoenen lopen* 'to walk the shoes' and **zich lezen* 'to read himself').

- (10) a. Jan heeft zijn schoenen *ingelopen*.
 John has his shoes in-walked
 'John has worn in his shoes.'
 b. Jan heeft zich *ingelezen*.
 John has himself in-read
 'John has read up.'

The mapping from semantics to syntax is not isomorphic in SCVs with a resultative particle. This is illustrated for the example *dat Jan de schoenen inloopt* 'that John wears in the shoes' in (11) below, (11)a giving the semantic structure and (11)b the giving the constituent structure (the V' [*in-loopt*] in (11)b is assumed to have the structure [X-V⁰]_V, cf. 4.3 and 4.5).

- (11) dat Jan de schoenen *inloopt* 'that John wears in the shoes'
 a. LCS (semantic structure):
 [[CAUSE (*Jan*), BECOME [IN (*de schoenen*)]], BY {*lopen* (*Jan*)}]

⁷ The same participant may also be licensed by the verb in isolation, in which case the two participants are "fused" (cf. Butt 1998): *de bal (op)gooien* 'to throw (up) the ball'. This may also be the case in constructions with resultative phrases: *de fiets (oranje) verven* 'to paint the bike (orange)'.

- b. Constituent structure (syntactic structure):
 [dat Jan [[de schoenen]_{NP} [in-loopt]_V]_{VP}]_{CP}

At the level of semantic structure ((11)a), a resultative particle is an independent resultative predicate, conceptualising a subject-predicate relation with the participant it predicates of (which constitutes the core event): THE SHOES BECOME IN. At the level of syntactic structure ((11)b), a resultative particle is a non-projecting word that forms a syntactic unit (V') with the verb. The NP *de schoenen* is the syntactic complement of this V' (see chapter 4). At the level of grammatical-function structure, representing grammatical relations such as subject and direct object (cf. 2.2.1), the SCV is the unitary verbal predicate of the clause, the NP *de schoenen* is its direct object, and the NP *Jan* is its subject (see also 5.4; the motivation for positing a separate level that represents the grammatical functions will be discussed in section 8.3.1).

The result of an event expressed by an SCV with a resultative particle such as *de bal opgooien* 'to throw up the ball' is that the ball is up ('in the air, on high'). Similar copula constructions, which make explicit the semantic relation of predication, are given in small capitals in the examples in (12) (cf. section 4.3.3).

- (12) a. de bal *opgooien* (up-throw)
 'to throw up the ball'
 result: THE BALL IS UP 'in the air, on high'
- b. de informatie *overbrengen* (over-bring)
 'to carry over the information'
 result: THE INFORMATION IS OVER 'at another place, at its destination'
- c. de informatie *opzoeken* (up-search)
 'to look up the information'
 result: THE INFORMATION IS UP 'accessible, available'
- d. de schoenen *inlopen* (in-walk)
 'to wear in the shoes'
 result: THE SHOES ARE IN 'in a certain, desired shape/state'
- e. het glas *omgooien* (over-throw)
 'to knock over the glass'
 result: THE GLASS IS DOWN 'fallen down/over'

I use capitalised copula constructions such as the ones in (12) (e.g. THE BALL IS UP) to make explicit the semantic relation of predication between the referent of a particle and the participant it licenses, which is syntactically realised as the direct object NP (or as the subject NP in unaccusative constructions). These capitalised copula constructions thus refer to a relation at the level of *semantic* structure. It was illustrated in section 4.3.3, however, that the Dutch phrases that would express this relation are generally not *syntactically* well-formed (e.g. copula constructions such as **de bal is op* 'the ball is up (in the air)' and **de schoenen zijn in* 'the shoes are in (in the desired shape)'). This ungrammaticality is related to the particle's structural status of a non-projecting word: the predicative position in the copula construction is a phrasal (XP) position. Capitalised copula constructions such as THE BALL IS UP are thus meant to make explicit the semantic relation according to which the particle expresses a change of state/location affecting the participant it licenses. I will show

in the next section that this is not the only semantic relation that may exist between a particle and the participant it licenses, alternative relations being possible as well.

The claim that many particles express results, thus being semantically similar to resultative phrases, is not new. On the contrary, many analyses of particles as expressing resultative predicates have been given in the literature, such as the SC-analysis of particles (e.g. Hoekstra, Lansu, and Westerduin 1987 and den Dikken 1995), the *l*-syntactic analysis of Ramchand and Svenonius (2002), and the semantic analysis of Kiss (2004, 2005), in which particles are generally treated as delimiters expressing a change of state/location in the spirit of Tenny (1994). In these approaches, too, similarities are pointed out between SCV constructions and constructions with resultative phrases (cf. 3.3.2). The analysis proposed in this study, however, differs from most existing analyses in that it explicitly claims that (1) only a subset of the particles that productively form SCVs express results, and (2) although many particles are *semantically* similar to resultative phrases (in expressing a change of state/location affecting a participant), particles are *syntactically* different from resultative phrases. The syntactically distinct behaviour of a particle is assumed to be related to its structural status of a non-projecting word that forms a syntactic unit (V') with a verb (cf. 4.3 and 4.5).

The next subsection discusses particles that do not express results. We will see that SCV constructions with these non-resultative particles do not have the resultative LCS in (1), but have other LCSs. Different SCV constructions, then, may have different LCSs, their particles performing different functions, and, correspondingly, having different participant-licensing properties. But despite these variable semantic properties, all SCVs have exactly the same constituent structure, representing a phrase (V') that consists of a non-projecting word and a verb. All SCV constructions are furthermore similar in that the particle and the verb together form the verbal predicate of a simple clause, taking a single subject. The presence of objects will appear to depend on the particle's function: particles may or may not license participants, so that they may or may not influence the argument structure of the SCV construction. Similarly, particles may or may not influence the lexical-aspectual structure of the SCV construction, and this property, too, will appear to follow from the function that the particle performs at LCS.

5.3 SCVs with non-resultative particles

5.3.1 Introduction

Although many SCVs have a resultative particle, there are also many SCVs with non-resultative particles. These SCVs, too, show compositionality, and their classes, too, may be extended productively (productivity being defined as the possibility to form new SCVs in a systematic way, i.e. by actualising some form-meaning systematicity). I distinguish three semantic types of non-resultative particle, based on the functions particles perform in the LCS of the SCV construction and the participant-licensing properties linked to these functions (we will see that various subcategories can be distinguished for some of these categories). The characteristics

of these three particle types are given in (13)b; those of the resultative particles, discussed in the previous section, are given in (13)a.

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

It will be illustrated in the remainder of this chapter that these functions represent clear-cut categories, particles generally unambiguously falling into exactly one of these categories. Chapter 7 will show that it is not accidental that particles have precisely these four functions. The system behind the classification will also appear to account for the fact that particles in languages related to Dutch (other Germanic OV languages) perform similar functions, but that not all of these particle functions are present in less related languages (e.g. Germanic VO languages like English, see chapter 9).

A particular particle form, such as *op* 'up', may perform various functions. We will see that this particle may either be conceptualised as a resultative predicate or as a modifier. In a particular SCV construction, however, there is generally no uncertainty about which of the two functions *op* performs. Similarly, particles that may be conceptualised as, for instance, modifiers (e.g. *voor* 'beforehand' in *de groenten voorkoken* 'to cook the vegetables beforehand', see 5.3.2), may also be conceptualised as resultative predicates (e.g. *voor* 'in front of/on the body' in *de schort voorbinden* 'to tie/put on the apron'). It is obvious that this functional duality is not exclusive to particles: an element like *boven* 'up(stairs)' may also perform either of these two functions. In (14)a, for example, *boven* functions as a resultative predicate, predicating of the Figure THE BOOKS (the result being that THE BOOKS ARE UP(STAIRS)). In (14)b, on the other hand, *boven* functions as an adverbial modifier, indicating the location of the event denoted by the verb and not predicating of any participant.

- (14) a. dat Jan de boeken *boven* brengt
that John the books upstairs brings
'that John carries up the books'
- b. dat Jan het boek *boven* leest
that John the book upstairs reads
'that John reads the book upstairs'

Section 5.3.2 discusses SCVs with particles functioning as modifiers, after which 5.3.3 and 5.3.4 focus on SCVs with two different types of relator particle. Section 5.3.5 discusses SCVs with particles functioning as so-called Aktionsart markers. Section 5.3.6 discusses SCVs with particles that at first sight appear to be different

from the ones discussed in the previous sections, but that by a closer look turn out to fit into one of the proposed categories. Section 5.3.7 summarises the results.

5.3.2 SCVs with modifying particles

The particles in the SCVs in (15) are not conceptualised as resultative predicates:⁸

- (15) a. de groenten *voorkoken*
 the vegetables for-cook
 'to cook the vegetables beforehand, to precook the vegetables'
 *THE VEGETABLES ARE (BE)FORE
- b. over de film *napraten*
 about the film after/behind-talk
 'to discuss the film afterwards'
 *THE FILM IS AFTER(WARDS)/BEHIND
- c. het lied *meezingen*
 the song with-sing
 'to sing the song along'
 *THE SONG IS ALONG

The asterisks indicate that the semantics of the copula construction, which would indicate a predicative relation between the particle and the referent of the NP at LCS (according to which this referent is affected by a change of state expressed by the particle), does not apply to the SCV constructions in (15). That is, precooking the vegetables does not imply that the vegetables end up being (BE)FORE as a result of the cooking. Instead, it implies cooking the vegetables BEFORE doing other things with the vegetables (or cooking the vegetables BEFOREHAND). The particle *voor*, then, is not a change of state predicate, but temporally relates the event of cooking the vegetables to another event, involving additional processes that need to be done with the vegetables (more cooking, baking, frying, etc.). As such, this other event functions as an inferred reference point. Similarly, *over de film napraten* 'to discuss the film afterwards' in (15)b does not imply that the film ends up being AFTER/BEHIND, but implies discussing the film AFTERWARDS; after having seen it. In this case, the inferred reference point (the event the particle makes reference to) is the event of watching the film.⁹ *Het lied meezingen* 'to sing the song along' in (15)c,

⁸ I 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 *voor* appears to be ambiguous between being related to English 'for' and being related to English 'fore' in some SCVs (cf. (48) in 5.3.6 and 5.5.14); using 'for' in all cases avoids any forced choices on this matter. I translate the SCV *voorkoken* with 'to cook the vegetables beforehand, to precook the vegetables', but neither of these two translations seems to match exactly the meaning of *voorkoken*.

⁹ The fact that the SCV in (15)b is unergative, taking a PP object instead of an NP object, immediately shows that the particle *na* in this SCV construction is not conceptualised as a resultative predicate: resultative predicates license a participant referring to a Theme that undergoes the change of state/location denoted by the resultative predicate, as a consequence of which constructions with resultative predicates are either transitive or unaccusative, but not unergative (cf. 5.2).

finally, implies singing the song at the same time as another event takes place, namely as someone else sings (or plays) the song. In other words, the event of someone else singing the song serves as the inferred reference point.

The particles in (15) express temporal meanings that make reference to another event (event E): 'before/after/simultaneous with event E'. The exact content of the event that is referred to seems to be construed on the basis of information provided by the verbal base and, if present, the object(s) of the construction. In this way, these particles function at LCS as temporal modifiers of the event denoted by the verb and its arguments: COOK THE FOOD {BEFORE E}, DISCUSS THE FILM {AFTER E}, SING THE SONG {SIMULTANEOUSLY WITH E}. I will label these particles *modifying particles*.

As is generally the case with elements functioning as modifiers, these particles do not influence the argument-structural properties and the lexical-aspectual properties of the construction. A construction containing an SCV with a modifying particle, then, has the same transitivity properties and the same telicity properties as the construction containing the corresponding base verb and the arguments in question; the modifying particle only gives semantically secondary information.

The three modifying particles in (15) productively form SCVs. Examples of other SCV constructions with the modifying particle *voor* 'beforehand' are *de video voorprogrammeren* 'to preprogram the videoplayer', *de borden voorspoelen* 'to rinse the plates beforehand, to pre-wash the plates', and *voorgloeien* 'to pre-heat'. Some other SCV constructions with the modifying particle *na* 'afterwards' are *de vergadering nabespreken* 'to discuss the meeting afterwards', *nagenieten* 'to enjoy the memory of' (lit. after-enjoy), and *nagalmen* 'to echo afterwards'. Other SCV constructions with the modifying particle *mee* are *de tekst meelezen* 'to read the text together' and *meelachen* 'to join in the laughter' (see also 5.5).

I propose the semantic structures in (16)a-c for SCVs with the modifying particles *voor*, *na*, and *mee*. 'BEFORE' in (16)a refers to the meaning of the particle *voor* in these SCVs ('beforehand/before event E'), 'AFTER' in (16)b refers to the meaning of the particle *na* in these SCVs ('afterwards/after event E'), and 'WITH' in (16)c refers to the meaning of the particle *mee* in these SCVs ('along, simultaneously with') (the adjunct status of the modifiers is indicated by curly brackets). (17) illustrates the application of the semantic structure in (16)a to the construction in (15)a above.

- (16) a. $[voor-V^0]_V$:
 $[V(x), ((y)) \{BEFORE\}]$
 'to V (NP) beforehand/before event E'
- b. $[na-V^0]_V$:
 $[V(x), ((y)) \{AFTER\}]$
 'to V (NP) afterwards/after event E'
- c. $[mee-V^0]_V$:
 $[V(x), ((y)) \{WITH\}]$
 'to V (NP) along with/together/simultaneously with'

- (17) *de groenten voorkoken*
 [koken (x), (de groenten) {BEFORE}]
 'to cook the vegetables beforehand/before event E'

The referent *y* in the structures in (16), which is syntactically realised as the direct object NP, is optional; its presence depends on the transitivity properties of the verb. Modifying particles, then, combine with both transitive and intransitive (unergative as well as unaccusative) verbs. It was noted above that the exact content of *event E*, the event the semantic structure makes reference to, is construed on the basis of the information provided by the verb, its argument(s), and the lexical-semantic content of the particle.

The capitalised words in semantic structures such as (16) are not meant to refer to semantic primitives, but refer to the common meaning that, for instance, the particle *voor* has in a class of SCVs. We have seen that particles correspond to words, but that the meanings particles express are usually dependent on their occurrence in the SCV construction. That is, meanings such as *voor* 'beforehand, before event E' show up in classes of SCVs, but are generally not available outside the SCV construction (*voor* does not mean 'beforehand, before event E' when it occurs as, for example, a preposition projecting a PP). Semantic structures such as (16) serve to indicate the semantic patterns in SCV constructions with a particular particle/particular particles. These structures, then, do not in themselves make any claims on the lexical representation of SCVs/particles, which is an issue that will have to wait until chapter 8.

Modifying particles are not always temporal. Examples of directional instead of temporal modifying particles are given in (18).

- (18) a. dat Jan *inademde*
 that John in-breathed
 'that John breathed in'
- b. dat Jan *opkeek* (uit het boek)
 that John up-looked from the book
 'that John looked up (from the book)'
- c. dat Jan nog even *omkeek*
 that John yet shortly around-looked
 'that John looked round, that John shortly turned and looked'

The particle *in* in (18)a does not make reference to another event, but 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 particles *om* and *op* in (18)b-c have similar functions.¹⁰ Like the other particles discussed in this section, the particles in (18) function as modifiers of the event expressed by the verb and its arguments and do not license any participant. This crucial property of particles functioning as modifiers is represented in the general semantic structure for SCV constructions with such particles in (19), where 'PRT' stands for the lexical-semantic content of the particle in SCV constructions with this semantic structure.

¹⁰ The PP *uit het boek* 'from the book' appears to modify the SCV *opkijken* 'to look up(wards)'. As indicated, this PP modifier is not obligatory.

(19) [V (x), ((y)) {PRT}]

Section 5.3.6 will discuss some SCVs with other particles fitting this semantic representation.

In short, particles that are conceptualised as modifiers do not license any participant, thereby leaving the argument structure and the lexical-aspectual structure of the base construction intact. These particles give additional information about the event expressed by the verb and its arguments.

5.3.3 SCVs with relator particles: orienting particles

Examples of SCVs with orienting particles are given in (20).

- (20) a. de jongen *aankijken* 'to look at the boy'
 *THE BOY IS AT
 b. het publiek *toespreken* 'to talk to the audience'
 *THE AUDIENCE IS TO

Here, too, the copula constructions do not capture the intended meanings, since the particles in (20) do not conceptualise change of state predicates affecting the participants. That is, neither *de jongen* in (20)a, nor *het publiek* in (20)b undergoes a change of state expressed by the particle. The verbs in these SCVs are generally intransitive activity verbs, although SCVs with transitive bases also occur (see below). The particles in (20) express the directions toward which these activities are oriented: the activity of looking is oriented toward the boy, and the activity of talking is oriented toward the audience. The events expressed in (20)a-b do not express any incremental progression or any boundary, and are atelic (cf. *dat hij het publiek urenlang/*in een uur toesprak* 'that he talked to the audience for hours/in an hour'); these SCVs inherit their telicity properties from the base verb.¹¹

The lexical-conceptual properties of the particles in (20) resemble those of prepositions that introduce a participant with which they express a directional modifier (LOOK {AT THE BOY}, TALK {TO THE AUDIENCE}). Semantically, then, these particles can be characterised as relators licensing a Ground participant. The semantic representations that I propose for these SCVs are given in (21)-(22).

- (21) a. [*aan*-V⁰]_v:
 [V (x) {AT (y)}]
 'to V at Y'
 b. *de jongen aankijken*
 [*kijken* (x) {AT (*de jongen*)}]
 'to look at the boy'

¹¹ The construction *dat hij het publiek binnen een uur toesprak* 'that he talked to the audience within an hour' is acceptable in the reading according to which the temporal modifier *binnen een uur* does not modify the event expressed by *het publiek toespreken*, but modifies the time preceding that event: 'that he started to talk to the audience after an hour'.

- (22) a. [*toe-V⁰*]_V:
 [V (x) {TO (y)}]
 'to V to Y'
- b. *het publiek toespreken*
 [*spreken* (x) {TO (*het publiek*)}]
 'to talk to the audience'

Since orienting particles license a participant at LCS (*y* in (21)-(22)), these particles have a transitivity effect at the level of syntactic structure.

The participant licensed by an orienting particle is its *Ground*: THE AUDIENCE is not the moving or conceptually movable entity whose site, path, or orientation is relevant in the event expressed by (20)b (cf. (6) in 5.2). Instead, the event (that is, the Agent's talking) is characterised with respect to this entity: the talking is oriented toward the audience. We have seen that resultative particles also license a participant at LCS (cf. 5.2), but unlike the participant licensed by an orienting particle, the participant licensed by a resultative particle is the particle's *Figure* (that is, the entity undergoing the change of state/location expressed by the particle).

Two other, related differences between SCVs with resultative particles and SCVs with orienting particles must be mentioned here. There is, in the first place, a telicity difference that follows from the different particle functions: whereas resultative particles, which express a change of state/location, impose a boundary on the event expressed by the verb and thereby bring about telicity, orienting particles, which express an orientation, do not have this effect, but leave the lexical-aspectual structure of the construction intact. A second difference between these two types of SCV construction is that the core eventuality is conceptualised by different parts in these SCV constructions. It was argued in section 5.2 that a resultative particle and the participant this particle predicates of together constitute the semantic core of the SCV construction, the verb of an SCV with a resultative particle being conceptualised as a manner/means modifier. In the LCS of an SCV with an orienting particle, on the other hand, it is the verb that constitutes the core eventuality, the orienting particle and its *Ground* together being conceptualised as a modifier (which indicates the direction toward which the activity expressed by the verb is oriented).

The orienting particles *aan* and *toe* productively form SCVs. Some examples of other SCVs with these particles are given in (23) (see also 5.5).

- (23) *de leraar aanhoren* 'to listen to the teacher', *het meisje aanstaren* 'to stare at the girl',
het kind toeknikken 'to nod at the child', *de winnaar toejuichen* 'to cheer/applaud the
 winner'

Another orienting particle is *in* in (24).

- (24) *dat Jan het boek inkeek*
 that John the book in-looked
 'that John looked in the book, that John had a look at the book'

The particle in (24) does not express a change of state affecting the book. Instead, the construction in (24) expresses the event of John looking, which is oriented 'into the book, toward the inside of the book'. In combination with the example in (18)b

in the previous subsection, which is repeated in (25) below, this example nicely illustrates the relationship between, on the one hand, particles that are conceptualised as modifiers and, on the other hand, orienting particles, which are conceptualised as relators licensing a Ground: whereas *op* in (25) expresses a modifier on its own (TO LOOK {UPWARD}), *in* in (24) expresses a modifier in combination with the Ground participant it licenses (TO LOOK {INTO THE BOOK}).

- (25) *dat Jan opkeek*
 that John up-looked
 'that John looked up'

Orienting particles, then, license a Ground participant with which they express a directional modifier. In the examples given so far, this Ground participant is syntactically realised as the direct object of the SCV construction. This is for instance the case in (20)b, which is repeated in (26) below. There are, however, also SCV constructions with orienting particles in which the Ground participant is syntactically realised as the indirect object. The direct object is licensed by the verb in these constructions. An example is given in (27) (the NPs referring to the Ground participants are underlined in the examples in (26)-(27) and in the English translations).

- (26) het publiek *toespreken*
 the audience to-speak
 'talk to the audience'
- (27) a. de spelers *aanwijzingen toeroepen*
 the players instructions to-call
 'to call out instructions to the players'
 b. de patiënt *rust aanraden*
 the patient rest at-advise
 'to advise the patient to take rest'

The construction in (27)a expresses the event of instructions being called out that is oriented toward the players. THE PLAYERS, then, is the Ground of *toe*. Similarly, (27)b expresses the event of rest being advised to the patient, THE PATIENT being the Ground of *aan*. The semantics of these SCV constructions can be represented as in (28) (cf. (21)-(22)).

- (28) a. [*toe*-V⁰]_V:
 [V (x) (y) {TO (z)}]
 'to V Y to Z'
- b. *dat de coach de spelers aanwijzingen toeroept*:
 [*roepen* (de coach) (aanwijzingen) {TO (de spelers)}]
 '(that) the coach calls out instructions to the players'

The German particles *an* 'at' and *zu* 'to' perform the same orienting functions as the Dutch particles *aan* and *toe* (cf. McIntyre 2004, Stiebels 1996: 162-165, Zeller

2001: 218-219). Some examples of German SCV constructions with orienting particles are given in (29).

- (29) a. dem Kind *zunicken*
 the child to-nod
 'to nod to the child'
- b. den Zeugen *anhören*
 the witness at-hear
 'to listen to the witness'
- c. dem Mann *Anweisungen zurufen*
 the man instructions to-call
 'to call out instructions to the man'
- d. dem Patienten *eine Impfung anraten*
 the patient a vaccination at-advise
 'to advise the patient to have a vaccination'

Like the Dutch particles *toe* 'to' and *aan* 'at', the German particles *zu* 'to' and *an* 'at' license a Ground participant that is syntactically realised either as the direct object ((29)a-b), or as the indirect object of the SCV construction ((29)c-d) (the relevant NP is underlined in the examples in (29)). A difference between Dutch and German is that German has overt case marking. The examples in (29)a-b show that monotransitive SCVs with orienting *zu* assign dative case to the NP referring to the Ground (*dem Kind*), whereas monotransitive SCVs with orienting *an* assign accusative case to this NP (*den Zeugen*). The corresponding prepositions exhibit the same case-assigning properties if they indicate an orientation/direction. In that case, the preposition *zu* also assigns dative case to the NP that syntactically realises the participant it licenses, and the preposition *an* also assigns accusative case (e.g. *zur Oper gehen* 'to go to the opera' vs. *an die Küste gehen* 'to go to the seaside').¹²

As is the case with the Dutch particle *toe*, however, the German particle *zu* may also be conceptualised as a resultative predicate, meaning 'closed' (e.g. Dutch *de deur toedoen* and German *die Tür zumachen* 'lit. the door to-do, to close the door', cf. 5.5.12). Like other resultative particles, the resultative particle *zu* licenses a Figure participant, and like other SCVs with resultative particles, SCVs with the resultative particle *zu* assign accusative case to their direct object NP. What we see, then, is that the case differences among SCVs with *zu* (dative case vs. accusative case) follow from the different functions this particle may perform (orienting vs. resultative).¹³ In this way, these case assigning properties support the claim that orienting particles function as relators: the orienting particle *zu* is semantically related to the orienting preposition *zu*, and like this preposition, it licenses a Ground to which it assigns dative case. Section 7.3.2.2, which discusses the diachrony of orienting particles, will show that this semantic relationship reflects a historical relationship. The diachrony of these particles thus accounts for their semantic similarity with prepositions, that is, for their participant-licensing properties, and

¹² The German preposition *an* assigns dative case if it indicates a location instead of an orientation/direction, e.g. *die Stadt an der Elbe* 'the city by the river Elbe'.

¹³ See Zeller (2001: 218-225) for a formalisation of how case assignment might work in such SCV constructions.

also for the case-assigning properties of the SCVs they form (cf. also 5.3.6, esp. note 26).

Los (2004) and Booij (2002a: 216) point out that the particle *toe* has the postpositional form *toe* instead of the prepositional form *tot*, and therefore call this particle a "postpositional particle". Los hypothesises that SCVs with orienting particles originate from PP-V constructions with postpositions. This hypothesis will be discussed in section 7.3.2.2.

Note that the postpositional form *toe* is identical to the predicative form (cf. *de deur is toe* 'the door is closed', see also 5.5.12). Similar properties hold for the particle *mee*, which is the postpositional/predicative counterpart of the preposition *met* (*met*/**mee* *Jan* 'with John', *met* *Jan mee* 'along with John'). The postpositional forms being identical to the predicative forms, these data conform to Booij's (2002a: 216) claim that only those forms of adpositions function as particles that may show up in predicative contexts. However, the data suggest a refinement of this claim. We have seen that the formal similarity between, for instance, the orienting particle *toe* and the predicative form *toe* does not imply that this orienting particle functions as a resultative predicate (and it does not imply that this particle is diachronically related to a resultative predicate either, see 7.3.2.2). Instead, this particle functions as a relator, licensing a Ground participant, and its form can be related to that of the postposition *toe*. Forms such as *toe* and *mee*, then, appear to indicate either a predicative or a postpositional source. This is why I suggest the following refinement of Booij's (2002a: 216) claim: only those forms of adpositions function as particles that may show up in *predicative and/or postpositional* contexts (see also 9.3.1).

In sum, orienting particles are conceptualised as relators; they are semantically similar to prepositions that license a Ground participant. These particles express, in combination with their Ground, a modifier that indicates the direction toward which the action denoted by the verb is oriented. Formally, these particles are similar to postpositions instead of prepositions.

5.3.4 SCVs with relator particles: path particles

Some particles denote paths through or over the direct object referent of the construction:

- (30) a. dat Jan de sonate *doorspeelt*
that John the sonata through-plays
'that John plays through the sonata'
*THE SONATA IS THROUGH
- b. dat Jan het boek *doorleest*
that John the book through-reads
'that John reads through the book'
*THE BOOK IS THROUGH
- c. dat Jan de brief *overleest*
that John the letter over-reads
'that John reads over/through the letter'
*THE LETTER IS OVER/THROUGH

The particle in (30)a does not predicate of the direct object referent at LCS: the result of *dat Jan de sonate doorspeelt* 'that John plays through the sonata' is not that the sonata is THROUGH. Instead, (30)a expresses the event of *Jan* 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, (30)b expresses the fact that *Jan* goes THROUGH THE BOOK by reading, and (30)c expresses the fact that *Jan* goes THROUGH/OVER THE LETTER by reading. The telicity of SCV constructions with path particles, which conceptualise a telic path through/over the direct object referent, is apparent from clauses such as *dat Jan de sonate in een uur/*urenlang had doorgespeeld* 'that John played through the sonata in an hour/*for hours'.¹⁴

At LCS, the referents of the direct objects in (30), being part of path designations such as THROUGH THE SONATA, are the Ground participants of these particles. In the event expressed in (30)a, 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 (cf. (6) in 5.2). Path particles thus license a Ground participant. They express, in combination with the NP referring to this Ground participant (which is syntactically realised as the direct object NP of the SCV construction), 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 optionally transitive (*spelen* 'to play' in *de sonate doorspelen* 'to play through the sonata', *lezen* 'to read' in *de brief overlezen* 'to read over/through the letter') or unergative (*werken* 'to work' in *het hele boek doorwerken* 'to plough through the whole book', *bladeren* 'to leaf, to thumb' in *de catalogus doorbladeren* 'to leaf through the catalogue'). Since these particles license a Ground participant, with which they form a path expression, they have a transitivity effect at the level of syntactic structure (cf. *het boek doorwerken* 'to plough through the book').¹⁵

Although both path particles and orienting particles (cf. 5.3.3) license a Ground participant with which they conceptualise a directional expression (THROUGH THE SONATA, TO THE AUDIENCE), the two classes of particles differ with respect to the function of that directional expression. We have seen that the directional expression conceptualised in orienting SCV constructions, which denote (atelic) activities (e.g. *het publiek toespreken* '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 conceptualised 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

¹⁴ The construction with *urenlang* 'for hours' is acceptable with a repetitive reading, which supports the claim that it refers to a telic (bounded) event.

¹⁵ As is the case with constructions with resultative particles (and resultative phrases), the same participant may also be licensed by the verb in isolation: *de sonate spelen/doorspelen* 'to play/play through the sonata' (cf. note 7).

measured by looking at the progression of the subject referent along the path (the events in (30) being halfway implies their subject referents being halfway 'through the sonata', 'through the book', and 'over the letter') (cf. Jackendoff 1996b, esp. section 7.6).

SCV constructions with path particles are semantically similar to constructions like (31).

- (31) dat Jan [Azië *door*]_{PP} is gereisd
 that John Asia through is travelled
 'that John has travelled through Asia'

The postposition construction in (31) 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 do. I interpret this conceptual similarity among postposition constructions and SCV constructions with path particles as the two types of construction having similar semantic structures. The semantic structure that I posit for postposition constructions like (31) is given in (32). In this semantic structure, 'THROUGH' refers to the meaning of *door* in such postposition constructions (cf. (9) in 5.2, I replaced the BECOME predicate with GO in (32) because postposition constructions like (31) invariably refer to a change of location instead of a change of state).¹⁶

- (32) [GO [(THROUGH (*Azië*)) (*Jan*)], _{BY}{*reizen* (*Jan*)}]
 'John goes through Asia by travelling'

The semantic similarities between postposition constructions such as (31) and SCV constructions with path particles lead me to propose the semantic structure in (33) for these SCV constructions. The examples in (34) show the application of this structure to the SCV constructions in (30)a and (30)c.

- (33) a. [GO [(THROUGH/OVER (*y*)) (*x*)], _{BY}{V (*x*)}]
 'to go through Y by V-ing'
- (34) a. *dat Jan de sonate doorspeelt*
 'that John plays through the sonata'
 [GO [(THROUGH (*de sonate*)) (*Jan*)], _{BY}{*spelen* (*Jan*)}]
 'John goes through the sonata by playing'
- b. *dat Jan de brief overleest*
 'that John reads over/through the letter'
 [GO [(OVER (*de brief*)) (*Jan*)], _{BY}{*lezen* (*Jan*)}]
 'John goes over/through the letter by reading'

¹⁶ See the remarks below (3) in 5.2 and Spencer and Zaretskaya (1998) for more on this semantic structure. See also Levin (2000) and Levin and Rappoport Hovav (1999), who claim that manner of motion verbs with goal phrases represent telic, non-causative accomplishments.

The semantic structures in (33)-(34) indicate that the change of location (e.g. 'John goes through the sonata') constitutes the semantic core of an SCV construction with a path particle and that the verb is conceptualised as a manner/means modifier. Although the verb has the same function in SCV constructions with resultative particles (cf. 5.2), the conceptual structures of these two types of SCV construction are crucially different from one another. To see this, compare the semantic structure in (34)a with that of the construction *dat Jan de schoenen inloopt* 'that John wears in the shoes' (which contains a resultative particle), given in (35).

- (35) *dat Jan de schoenen inloopt*
 'that John wears in the shoes'
 [[CAUSE (*Jan*), BECOME [IN (*de schoenen*)]], BY {lopen (*Jan*)};
 'John causes the shoes to become in the desired shape by walking'

A first difference between the semantic structure in (34)a and that in (35) is that the structure in (34)a contains a GO predicate and that in (35) contains a BECOME predicate. This accounts for the fact that SCV constructions with path particles denote a change of location (telic path), whereas SCV constructions with resultative particles generally denote a change of state (but see the remarks below (3) in 5.2).

A second difference is the following: the resultative particle in (35) expresses a change of state on its own (IN 'in the desired shape'). This change of state affects the direct object referent of the SCV construction: the shoes end up being in the desired shape. The direct object referent, then, is the particle's Figure (cf. 5.2). The path particle in (34)a, 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 construction with a path particle (THE SONATA) is thus not the particle's Figure, but is the particle's Ground. Correspondingly, the result of the event in (35) is that THE SHOES ARE IN 'in the desired shape', but the result of the event in (34)a is that JOHN IS THROUGH THE SONATA. Similar results are expressed by the other SCV constructions with path particles in (30), as illustrated in (36).

- (36) a. *dat Jan het boek doorleest*
 'that John reads through the book'
 result: JOHN IS THROUGH THE BOOK
 b. *dat Jan de brief overleest*
 'that John reads over/through the letter'
 result: JOHN IS OVER/THROUGH THE LETTER

Constructions with postpositional PPs that denote telic paths, such as (31), express similar results: the result of *dat Jan Azië door reist* 'that John travels through Asia' is that John has gone through Asia: JOHN IS THROUGH ASIA (cf. (32) above). The semantic similarities between postposition constructions such as (31) and SCV constructions with path particles lead me to the hypothesis that SCVs with path particles have developed out of such postposition constructions. This diachronic

hypothesis will be worked out in section 7.3.2.3, which will also present historical support for it.¹⁷

In conclusion, path particles are conceptualised as relators that express, in combination with the Ground participant they license, a telic path (change of location) through/over this Ground, along which the subject referent metaphorically moves by performing the action denoted by the verb. These particles, then, do not express a result affecting the direct object referent, which means that they are semantically different from the resultative particles discussed in section 5.2.¹⁸

5.3.5 SCVs with Aktionsart particles

Some particles contribute continuity to the verbal meaning:

- (37) a. dat Jan de hele nacht heeft *doorgewerkt*
that John the whole night has through-worked
'that John has been working all night long'
*JOHN IS THROUGH/ON
- b. dat de kinderen urenlang hebben *doorgezongen*
that the children hours-long have through-sung
'that the children kept on singing for hours'
*THE CHILDREN ARE THROUGH/ON
- c. dat hij uren in de stad heeft *rondgelopen*
that he hours in the city center has around-walked
'that he walked around in the city center for hours'
*HE IS AROUND

Unlike resultative particles, these particles do not express a change of state that affects a participant at LCS. The event expressed in (37)a, for instance, does not imply that JOHN IS THROUGH/ON. The absence of such a predicative relation appears immediately from the fact that there is no Theme in the constructions in (37): these constructions only contain an Agent; they are unergative. The unergativity of these

¹⁷ Section 7.3.2.3 will also discuss differences between constructions like (31) and SCV constructions with path particles, such as the difference in auxiliary selection in the perfect tense (postposition constructions selecting *zijn* 'be' and SCV constructions selecting *hebben* 'have') and the fact that postposition constructions express actual motion, whereas SCVs with path particles may express either actual motion or metaphorical motion ('John moves through the book by reading').

¹⁸ Likewise, McIntyre (2004) claims that English path particles express a dynamic path through the direct object referent (but see 9.3.1). Instead of claiming that this path is followed by the subject referent, however, he claims that it is followed by the event denoted by the verb and its subject: 'John is reading and his reading goes through the book'. Nevertheless, the fact that it is *John's* reading that follows this particular path seems to imply that *John* is following this path while reading. In any case, this and other differences between McIntyre's analysis and mine (see 3.4.2 and 8.4.2) do not alter the fact that our analyses converge on what is at stake here: unlike resultative particles, path particles do not predicate of the referent of the direct object NP of the construction; this referent is not the particle's Figure, but is its Ground (cf. McIntyre 2004: 539-541).

constructions is apparent from the fact that they select the auxiliary *hebben* 'have' and not the auxiliary *zijn* 'be' in the perfect tense (see (37)).

The meaning of the SCVs in (37) can be paraphrased as 'to continue V-ing', where 'V' expresses an activity, with the additional semantic component 'without an intended goal' (see below, cf. 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!', which can be seen as an extension of the continuative meaning.

Continuative particles combine with (both intransitive and optionally transitive) activity verbs. SCVs with a continuative particle and a transitive base verb are incompatible with the direct object licensed by this base verb (cf. McIntyre 2001a, 2004: 528): such SCVs are always unergative and atelic.¹⁹ This is illustrated in (38).

- (38) a. *dat de kinderen het liedje urenlang hebben *doorzongen*
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 *doorat*
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 SCV constructions, as shown in (39)a. The example in (39)b shows that the presence of such direct objects does not generally result in telicity.²⁰

- (39) a. *dat Jan uren appels *doorat*
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'

¹⁹ 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 conceptualised as modifiers do not influence the argument structure (and the lexical-aspectual structure) of the base (cf. 5.3.2).

²⁰ Direct objects that do not qualify as incremental Themes, the presence of which 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 doorschoppen*
'to continue kicking for hours'
- c. **zijn klasgenoot uren doorschoppen*
'to continue kicking one's classmate for hours'

It thus appears that an Aktionsart account appealing to telicity or boundedness as such, which has been proposed by Stiebels (1996: 64f), cannot explain the atransitivity effect satisfactorily.

Instead of telicity being the factor responsible for the atransitivity effect of continuative SCVs, directionality or goal-orientedness seems to play a role. This is illustrated in (40), containing the continuative PP *in het rond* 'around, about' and a direct object and showing the same kind of unacceptability as (39)a (cf. McIntyre 2004).

- (40) Context: *during the first year of his dissertation project, John always sat in the library, reading books left and right.*
 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'

The atransitivity effect in (40) appears to be related to a semantic clash: John either reads just about (left and right), or reads books, but he cannot at the same time read left and right and read books. This is because reading books (more generally, reading any object) implies directionality or progression towards a goal (or towards subgoals), which is incompatible with the a-directional meaning of left and right ('in an unstructured way'). Similarly, (39)a expresses an iteration of apple-eating events, each of which involves progression towards a goal, and this appears to clash with the meaning of the particle *door*, which involves the absence of goal-oriented progression. These direct objects, then, introduce a directional component, which appears to be incompatible with the a-directional meaning of the continuative PP/particle.

McIntyre (2001a, 2002) and Los (2004) call continuative particles *event-modifiers*; McIntyre (2001a: 151) claims that "[continuative particles] modify events. They stipulate some property of an event in the same way as a VP adjunct does (...)". Unlike modifiers in general, however, continuative particles influence the argument structure and the lexical-aspectual structure (i.e. Aktionsart) of the base construction: these particles block the presence of direct objects and SCVs with these particles are always unergative and atelic (cf. 5.3.2). This is why I use the term *continuator* instead of the term *event-modifier* to refer to the function of particles like the ones in (37) and PPs like the one in (40). 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 provisional semantic structure of SCVs with a continuative particle is given in (41).

- (41) [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 (41) 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' (this property is not specific to

constructions with continuative particles, but applies to durative events in general, cf. *ik heb de hele dag/urenlang gewerkt* 'I have worked all day/for hours').

Continuative particles appear to show exactly the same behaviour across the Germanic languages. Continuative particles in German, English, and the Scandinavian languages, for instance, also exhibit the atransitivity effect (McIntyre 2002). The same holds for the Hungarian continuative particles *ál* 'through' and *el* 'along'. There are also striking formal similarities and differences across languages: the particle that corresponds to the adposition 'through', for instance, performs the continuative function in Dutch and Hungarian, but the particle that corresponds to the adposition 'on' performs this function in Germanic VO languages such as English and Swedish. Section 9.3.1 relates this formal difference to the different diachrony of continuative particles in these two groups of languages.

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 (some of which are historically unrelated to one another) have both the continuative function and a spatial, goal-oriented function ('through' for the Dutch form *door*, 'around' for the Dutch form *rond*). This can be accounted for by assuming that the spatial function is related to the continuative function by the same metaphorical extension in all of these cases; the extension from space to time. I will show in section 7.3.2.4 that constructions with *door* that express temporal directionality, which are metaphorically related to constructions with *door* expressing spatial directionality, appear to have been reanalysed as continuative SCV constructions. The result of this reanalysis is that *door* does not express its directional meaning when used in continuative SCV constructions, but expresses, conversely, a-directionality in such constructions.

Only words expressing directional meanings appear to have developed into continuative particles; this is not the case for words such as *verder* 'further (away), more, longer' and *mee* 'along, with'. These latter elements do not show the atransitivity effect: *het lied meezingen* 'to sing the song along', *het boek verder lezen* 'to read the book further'. Words such as *verder* and *mee*, then, appear not to be conceptualised as continuators, but appear to be conceptualised as modifiers, which leave the argument structure and the lexical-aspectual structure of the base construction intact: SING THE SONG {SIMULTANEOUSLY}, READ THE BOOK {FURTHER} (cf. 5.3.2).²¹

The atransitivity of constructions with continuative SCVs is illustrated once more in (42).

- (42) a. dat Jan (*de sonate) de hele middag *doorspeelde*
 that John the sonata the whole afternoon through-played
 'that John continued playing (*the sonata) for hours'

²¹ *Mee* 'along, with' may also function as a resultative particle (X) or as a resultative phrase (XP, see 5.5.6). *Verder* 'further' is an XP; it does generally not show up in particle positions (cf. *dat Jan het boek *wil verder lezen/verder wil lezen* 'that John wants to read the book further').

- b. dat de kok (*de groenten) urenlang *doorsneed*
 that the cook the vegetables hours-long through-cut
 'that the cook continued cutting (*the vegetables) for hours'

By contrast, the constructions in (43)a-b below are acceptable. *Door* is not a continuative particle in these constructions, but is interpreted as a path particle in (43)a and as a resultative particle in (43)b. The particle *door* in (43)a, then, is conceptualised as a relator, which licenses a Ground participant and expresses together with this participant a telic path (THROUGH THE SONATA, cf. 5.3.4). The particle *door* in (43)b, on the other hand, is conceptualised as a resultative predicate, which licenses a Figure participant that is affected by the change of state expressed by *door* 'in two, through' (the result of this event being that THE PUMPKIN IS IN TWO, cf. 5.2).

- (43) a. dat Jan de sonate (*de hele middag/binnen een half uur) *had doorgespeeld*
 that John the sonata the whole afternoon/in half an hour had through-played
 'that John had played through the sonata (*the whole afternoon/in half an hour)'
 b. dat de kok de pompoen (*urenlang/in een seconde) *had doorgesneden*
 that the cook the pumpkin hours-long/in a second had through-cut
 'that the cook had cut the pumpkin in two (*for hours/in a second)'

The constructions in (43)a-b are incompatible with durative temporal modifiers such as *de hele middag* 'the whole afternoon' and *urenlang* 'for hours'.²² This is because these constructions, which contain a path particle and a resultative particle, represent telic events: telic events are incompatible with such durative temporal modifiers.

The examples in (42)-(43) illustrate that the addition of a direct object NP to a construction with a continuative particle leads to the activation of alternative particle functions, such as the path function and the resultative function. The activation of such alternative functions seems to result from the fact that the referent of the added NP must be licensed at LCS. We have seen that continuative particles do not license a participant, and verbs in continuative constructions do not do so either (cf. the discussion of the attransitivity effect above). Path particles and resultative particles, on the other hand, do license a participant (cf. 5.2 and 5.3.4).²³

Much more can be said about continuative particles, but the relevant point for now is that these particles do not function as resultative predicates. These particles, then, are semantically different from the resultative particles, discussed in section 5.2, which license a Figure participant at LCS. Continuative particles do not license a participant and function as continuators. The SCVs they form express durative,

²² The examples in (43) with the durative temporal modifiers *de hele middag* 'the whole afternoon' and *urenlang* 'for hours' are acceptable in a repetitive reading (cf. note 14).

²³ The verbs used in SCV constructions with continuative particles do license participants when appearing outside these constructions, such as *de sonate spelen* 'to play the sonata' and *de pompoen snijden* 'to cut the pumpkin' (cf. note 7 and note 15). As illustrated above, these participants cannot be present in SCV constructions with continuative particles, since their presence brings about a clash with the particle's semantic properties. Section 7.3.2.4 will relate this clash to the diachrony of SCV constructions with continuative particles.

atelic, and a-directional events. Syntactically, SCVs with continuative particles are always unergative.

Similar properties can be observed for the particle *toe* in the SCVs in (44).

- (44) a. *toehappen* 'lit. to-bite, to bite/snap at something'
 b. *toeslaan* 'lit. to-strike, to strike'
 c. *toetasten* 'lit. to-grope, to seize'

The SCVs in (44), 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'. *Toe*, however, does not express the continuation of the event denoted by the verb, but expresses its inception (e.g. *dat zij bij dat voorstel meteen toehapte* 'that she immediately snapped/jumped at that proposal'). The examples in (44) illustrate that this inceptive particle combines with semelfactive verbs; verbs that express 'instantaneous activities' (Smith 1997: 29-30).²⁴ The SCVs this particle forms are telic and punctual, that is, these SCVs represent achievements (cf. Smith 1997: 32). The semantic structure that I propose for SCV constructions with the inceptive particle *toe* is given in (45).

- (45) [START V_{SEMELFACTIVE} (x)]
 'to start V-ing'

In both the semantic structure for SCV constructions with continuative particles (41) and that for SCV constructions with inceptive particles (45) the verb is embedded under an Aktionsart marker (CONTINUE, START). These particles, then, function as Aktionsart markers, which is why I call them *Aktionsart particles*. The semantic embedding of the verb under the Aktionsart marker leads to the arguments of the verb being blocked in SCV constructions with Aktionsart particles.²⁵

5.3.6 SCVs with other modifying and relator particles: extended meanings

Section 5.3.2 discussed particles that are conceptualised as temporal modifiers, such as *voor* 'beforehand, before event E', and section 5.3.3 discussed particles that are conceptualised as relators, which express a directional modifier in combination with the Ground participant they license. There are also particles that function either as modifiers or as relators and have the same participant-licensing properties as the

²⁴ 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).

²⁵ With the term "Aktionsart particle" I only refer to atransitive particles, that is, to continuative particles like *door* and inceptive particles like *toe*, which embed the verb at LCS and form SCVs that are unergative at the level of syntactic structure, thus blocking the presence of direct objects. The term "Aktionsart particle" has often been used in a different way in the literature, as is the case with the related term "aspectual particle". In particular, these terms have been used to refer both to a subset of the resultative particles (namely to those resultative particles that only seem to express the completion of the event denoted by the verb and its arguments, which have been called "telic particles") and to continuative particles. See section 3.4.1 for problems with this use of the term.

particles discussed in the sections 5.3.2 and 5.3.3, but that have extended (i.e. non-temporal and non-directional) meanings. Some examples are given in (46).

- (46) a. *het lied voorzingen*
 the song for-sing
 'to sing the song demonstratively, as an example'
 *THE SONG IS (BE)FORE
- b. *de jongen nafluiten*
 the boy after-whistle
 'to whistle at the boy'
 *THE BOY IS AFTER
- c. *de man napraten*
 the man after-talk
 'to echo the man, to talk like the man'
 *THE MAN IS AFTER/BEHIND

The predicative relation expressed by the copula construction does not capture the intended meaning in the examples in (46); these particles do not function as resultative predicates. The particle *voor* in (46)a is conceptualised as a modifier, modifying the event expressed by the verb and the object: TO SING THE SONG {DEMONSTRATIVELY} (where 'demonstratively' must be read as 'to demonstrate, as an example'). The meaning 'demonstratively' of *voor* in (46)a seems to be derived from the temporal meaning of this particle, expressed in 'to sing the song beforehand/before someone else sings it'. This illustrates that this meaning is close to the modifying function of *voor*, discussed in 5.3.2. Other SCVs with *voor* 'demonstratively' are *het stukje voordansen* 'to dance the piece demonstratively' and *de sonate voorspelen* 'to play the sonata demonstratively'. Like other modifier particles, *voor* 'demonstratively' does not alter the transitivity properties or the telicity properties of the base verb.

Na in (46)b means 'to whistle at y after y has passed', which appears to be an extension of the temporal meaning 'to whistle after y'. With respect to the participant-licensing properties, this particle resembles the orienting particles discussed in section 5.3.3: the particle is conceptualised as a relator that licenses a Ground participant (THE BOY) and expresses a modifier in combination with this Ground participant ('at the boy after the boy has passed'). Other SCVs with this particle are *nagluren* 'to peek after', *naroepen* 'to call after', and *nawijzen* 'to point after'. Like other relator particles, *na* 'at y after y has passed' licenses a participant and forms transitive SCVs.²⁶

²⁶ Support for the assumption that *na* in SCVs such as *nafluiten* is conceptualised as a relator comes from data with the German counterpart of this particle, *nach*. SCVs with *nach* 'after' (e.g. *jemandem nachlaufen* 'to run after somebody', *jemandem nachsprechen* 'to speak after somebody') assign dative case to the direct object NP, as does the preposition *nach* to its complement (cf. the remarks on the case-assigning properties of the German orienting particles *an* 'at' and *zu* 'to' in 5.3.3). Other SCV with *nach*, however, assign accusative case (*ein Wort nachschauen* 'to look up/check a word'), but in these SCVs *nach* appears to be conceptualised as a resultative predicate with the meaning 'checked (afterwards)' (see 5.5.7); SCVs with resultative particles assign accusative case (cf. 5.3.3 and Zeller 2001: 218).

The meaning 'like y' of *na* in (46)c can also be characterised as an extension of the temporal meaning of *na* 'after y': talking like someone implies talking after this person has talked (i.e. has spoken the same words/similarly). This particle, too, licenses a Ground participant: TALK [AFTER THE MAN] > TALK [LIKE THE MAN]. Some other SCVs with *na* 'like y' are *de man nafluiten* 'to whistle like the man', *de man nazingen* 'to sing like the man', and *de man nadoen* 'to do like the man, to imitate the man'.²⁷

The SCVs in (46) illustrate that temporal meanings may be extended to meanings that are not primarily temporal, and that certain aspects of the original meanings are still detectable in the extended meanings (cf. *na* 'after y' > 'like y', *voor* 'before' > 'demonstratively'). The provisional semantic representations for SCVs such as *voorzingen* 'to sing demonstratively', *nafluiten* 'to whistle at y', and *napraten* 'to talk like y' are given in (47). 'AFTER (y)' in (47)b stands for the meaning of the particle *na* in SCVs like *nafluiten*: 'at y after y has passed'.

- (47) a. *het lied voorzingen*
 [V (x), (y) {DEMONSTRATIVELY}]
 'to V Y demonstratively'
 [zingen (x), (*het lied*) {DEMONSTRATIVELY}]
 'to sing the song demonstratively'
- b. *de jongen nafluiten*
 [V (x) {AFTER (y)}]
 'to V at Y after Y has passed'
 [fluiten (x) {AFTER (*de jongen*)}]
 'to whistle at the boy after the boy has passed'
- c. *de man napraten*
 [V (x) {LIKE (y)}]
 'to V like Y'
 [praten (x) {LIKE (*de man*)}]
 'to talk like the man'

The first representation is similar to the one for SCVs with particles functioning as modifiers, given in 5.3.2 ((16), (19)): according to both LCSs, the particle *voor* expresses a modifier of the event denoted by the verb and its arguments. The representations in (47)b and (47)c are different, since the particle introduces a Ground participant *y* according to these representations and expresses a modifier in combination with this participant. The representations in (47)b and (47)c are, in this respect, similar to the ones for SCVs with orienting particles, given in 5.3.3 ((21)-(22)). The presence of the Ground participant in the representations of (47)b-c results in SCVs formed with these particles being transitive.

²⁷ An SCV like *nafluiten*, then, may have different, related meanings: 'to whistle at y after y has passed' and 'to whistle like y'. Both of these meanings represent extensions of the temporal meaning of *na* 'after y', thus being instantiations of the same relator function of *na* 'after y'. It follows that *na* licenses a Ground participant and conceptualises, in combination with this participant, a modifier in both cases. These two meanings, then, only differ in their precise lexical-semantic content; they have different senses and thus instantiate polysemy.

The verb represents the semantic core of the event denoted by the SCV construction in all three representations in (47). The particle, which conceptualises a modifier in combination with its Ground participant (if present), expresses secondary information. Since all of these particles express modifiers (either alone or in combination with their Ground), they do not alter the telicity properties of the base verbs.

It must be noted that *voor* 'demonstratively, as an example' may also license a participant, in the same way as *na* does in (47)b-(47)c. The modifier DEMONSTRATIVELY, then, appears to contain an optionally filled participant slot at LCS. This slot is filled in, for instance, (48)a.

- (48) a. dat ik **Jan** het lied *voorzing*
 that I John the sing for-sing
 'that I sing the song demonstratively for/to John'
 b. [V (x), (y) {DEMONSTRATIVELY (FOR/TO (z))}]
 [*zingen* (*ik*), (*het lied*) {DEMONSTRATIVELY (FOR/TO (**Jan**))}]

In the syntactic structure of (48)a, *Jan* is the indirect object of the SCV *voorzingen*. In the semantic structure, represented in (48)b, *Jan* is licensed by *voor*, being its Ground.²⁸ Evidence for the claim that the referent of the indirect object NP is licensed by the particle *voor* 'demonstratively' at LCS in constructions such as (48) is provided by the fact that this referent is not generally available when the particle *voor* 'demonstratively' is absent.²⁹ This particle, then, must be able to introduce the referent in question: DEMONSTRATIVELY (FOR/TO (z)). In order to account for the fact that an indirect object NP is not present in all constructions with the particle *voor* 'demonstratively' (cf. (45)a-(47)a), the component FOR/TO (z) is represented as optional in the semantic structure in (48)b.

A comparison of the SCV constructions discussed in this subsection suggests that the temporal particles *voor* and *na* may be conceptualised as either temporal modifiers, expressing a modifier on their own and not licensing any participant, or as relators, licensing a Ground participant and expressing a temporal modifier in combination with this Ground participant. These two options are, respectively, represented in (49)-(50).

- (49) a. [V (x), ((y)) {BEFORE}]
 'to V beforehand/before event E'
 b. [V (x), ((y)) {AFTER}]
 'to V afterwards/after event E'

²⁸ This participant bears the benefactive thematic role at the level of argument structure (cf. 2.2.1).

²⁹ Compare *Jan een liedje *(voor)zingen* 'to sing a song (demonstratively) to John', *iemand iets *(voor)spellen* 'to spell (out) something to someone', but also *iemand iets voorzeggen* 'to prompt something to someone', *iemand iets zeggen* 'to say something to someone'. (*Zingen* 'to sing' appears to license an indirect object in certain constructions in standard Dutch, which may be archaic, cf. *zing de Heer een nieuw lied* 'sing a new song to the Lord'. It also does so in some dialects of Dutch.)

- (50) a. [V (x), ((y)) {BEFORE (z)}]
 'to V (Y) before Z'
 b. [V (x), ((y)) {AFTER (z)}]
 'to V (Y) after Z'

The structures in (49) indicate that the particles *voor* and *na* are conceptualised as modifiers with the meaning 'beforehand/before event E' or 'afterwards/after event E' (see section 5.3.2). Since these modifiers do not license any participant, particles that are conceptualised as such leave the argument-structural properties of the base verb intact. These particles do, furthermore, not modify the lexical-aspectual properties of the base construction, as the modifiers they express do not impose internal structure (i.e. a boundary or incrementality) on the event.

The structures in (50), on the other hand, indicate that the particles *voor* and *na* are conceptualised as relators expressing the meanings 'before Z' and 'after Z', where Z refers to the Ground participant licensed by these particles. Because of the fact that they license a participant, such particles form transitive SCVs. These particles do not modify the lexical-aspectual properties of the base construction, since the modifier that is conceptualised by the particle and its Ground does not impose internal structure on the event.

Both the structures in (49) and those in (50) contain an optional participant *y* that is licensed by the verb. This indicates that both particle functions may apply to intransitive as well as to transitive bases.

Both in (49) and in (50), too, the meanings of the particles may be extended to non-temporal meanings, in which case these particles show the same participant-licensing properties, and, as a consequence, also the same argument-structural properties and the same lexical-aspectual properties. The temporal meaning of *na* 'after Z', for instance, which licenses a Ground participant, may be extended to the meaning 'like Z'. As is the case for the basic, temporal meaning, this extended meaning involves the licensing of a Ground participant (see above).

The verb expresses the core eventuality in all SCV constructions formed by these modifier particles and relator particles. In the case of a modifying particle, the particle on its own modifies the event denoted by the verb and its arguments, and in the case of a relator particle, the particle does so in combination with its Ground. In either case, then, these particles express semantically secondary information.

5.3.7 Summary

I have distinguished different categories of non-resultative particles, all of which productively form SCVs. These particles differ from the resultative particles, discussed in section 5.2, in that they do not express a change of state/location affecting a Figure participant at LCS. These particles do, correspondingly, not uniformly form transitive (or unaccusative) and telic SCV constructions. Instead of functioning as resultative predicates, these particles perform other functions, as a consequence of which they have other participant-licensing properties at LCS. The specific participant-licensing properties of these non-resultative particles account for the argument-structural and lexical-aspectual properties of the SCVs they form.

A first category of non-resultative particles is that of particles that are conceptualised as modifiers of the event expressed by the verb and its arguments. Examples of modifying particles are *voor* 'beforehand' in *de groenten voorkoken* 'to cook the vegetables beforehand, to precook the vegetables' and the (semantically related) modifying particle *voor* 'demonstratively' (i.e. 'to demonstrate, as an example') in *het lied voorzingen* 'to sing the song demonstratively'. These particles combine with both transitive and intransitive verbs and, like other elements that function as modifiers, leave both the argument structure and the lexical-aspectual structure (Aktionsart) of the base verb intact.

A second category of non-resultative particles is that of particles that are conceptualised as relators licensing a Ground participant. These fall into two subcategories.

The first type of relator particle conceptualises, in combination with the Ground participant it licenses, a temporal, spatial, or other type of modifier that does not impose internal structure on the event. The orienting particle *toe* 'to' (*het publiek toespreken* 'to talk to the audience'), for instance, denotes, in combination with its Ground, the direction toward which the event expressed by the verb is oriented (TALK {TO THE AUDIENCE}). Similarly, the particle *na* 'like y' (*de man napraten* 'to talk like the man') expresses a modifier in combination with its Ground (TALK {LIKE THE MAN}), the meaning 'like y' being an extension of the temporal meaning of *na* 'after y'. Since all of these particles license a Ground participant, they form transitive SCV constructions, and since all of these particles express, in combination with this Ground participant, a modifier that does not impose internal structure on the event, they leave the lexical-aspectual structure of the construction intact.

The second type of relator particle also licenses a Ground participant, but expresses, in combination with this Ground, the telic path (change of location) of the referent of the subject NP. The result of *dat Jan de sonate doorspeelt* 'that John plays through the sonata', for example, is that John has gone THROUGH THE SONATA. Likewise, the result of *dat Jan het boek doorbladert* 'that John leafs through the book' is that John has gone THROUGH THE BOOK. Since these path particles license a Ground participant, they also form transitive SCV constructions, and since they conceptualise, in combination with their Ground, a change of location, constructions with these particles are telic.

The final category of non-resultative particles is that of particles that are conceptualised as pure Aktionsart markers, which express either the unbounded continuation or the inception of the activity denoted by the verb. In doing so, these particles determine the lexical-aspectual properties of the SCV construction they form: SCV constructions with continuative particles are always atelic and SCV constructions with inceptive particles are always telic. These particles block the presence of a direct object NP, which appears to be related to their semantic properties.

The foregoing discussion illustrates that the divergent argument-structural and lexical-aspectual properties of SCV constructions are not unpredictable (as opposed to what has been claimed in the literature, see, for instance, Toivonen 2003: 150-155). These properties follow straightforwardly from a classification of SCVs according to the function their particles perform in the LCS of the SCV construction. The fact that a modifying particle such as *na* 'afterwards' in (51)a does not alter the

transitivity properties of the verb, for instance, follows from the classification of this particle as a modifying particle: modifiers do not license a participant at LCS. Similarly, the fact that the orienting particle *toe* 'to, at' in (51)b and the path particle *door* 'through' in (51)c transitivity the construction follows from their classification as relator particles: relators license a Ground participant.

- | | | | |
|------|----|------------------------------|----------------------------------|
| (51) | a. | over de film <i>napraten</i> | 'to discuss the film afterwards' |
| | b. | de winnaar <i>toejuichen</i> | 'to cheer at the winner' |
| | c. | het boek <i>doorbladeren</i> | 'to leaf through the book' |

The proposed classification also accounts for the telicity difference between, for example, the atelic construction in (52)a and the telic construction in (52)b, both of which are transitive and contain an intransitive base verb.

- | | | | |
|------|----|------------------------------|----------------------------|
| (52) | a. | de winnaar <i>toejuichen</i> | 'to cheer at the winner' |
| | b. | het boek <i>doorbladeren</i> | 'to leaf through the book' |

The particles of both constructions in (52) are conceptualised as relators and thus license a Ground participant. This results in both of these constructions being transitive. The two constructions differ, however, in the type of expression that is conceptualised by the particle and its Ground. An orienting particle such as *toe* in (52)a conceptualises, in combination with its Ground, a modifier (which indicates the orientation toward which the event is directed: AT THE WINNER). Such a modifier does not impose internal structure on the event, as a consequence of which the event in (52)a is atelic. A path particle such as *door* in (52)b, on the other hand, conceptualises, in combination with its Ground, a telic path (THROUGH THE BOOK), which does impose internal structure on the event.³⁰ In this way, the proposed classification of the particles in (52) accounts for the telicity difference between the SCV constructions they form.

Table 5.1 in appendix 1 presents an overview of the four basic types of particle that have been distinguished in the previous sections (sections 5.2 and 5.3),

³⁰ McIntyre (2004) discusses various (German and English) non-resultative particles and claims that all of these conceptualise "event paths" (paths followed by the event). Such a semantic analysis is not in itself incompatible with the analysis proposed here, according to which a particle is conceptualised as a modifier, a relator licensing a Ground participant, or a pure Aktionsart marker (and from which the argument-structural and lexical-aspectual properties of the different types of SCV follow straightforwardly), as all of these elements may express event paths. McIntyre's (2004) syntactic analysis of these SCV types, however, is incompatible with the analysis I propose. McIntyre proposes an extended VP analysis in which the different SCV types (having different argument-structural and lexical-aspectual properties) appear to require different syntactic structures (containing different light verbs in the extended VP structure, see section 3.4.2). But since the differences in question follow from systematic lexical-conceptual differences and since all particles behave the same syntactically (cf. chapter 4), these differences should be located at LCS instead of in the syntax (see also 5.4, 8.3.1, and 8.4.2).

A different semantic classification of (German) particles is proposed in Stiebels (1996) (see 3.4.2). A comparison between her classification and the one I propose will be made in section 8.4.3.

thus summarising the semantic analysis of SCVs proposed here. This table lists the main properties of the SCV constructions formed with each of the particle types, a few examples of such SCV constructions, and the semantic structures ('sem.str.') proposed for these SCV constructions. The next section will formulate some implications of this semantic analysis for the grammar of SCVs.

5.4 The mapping between the semantics and the syntax of SCVs

Both resultative particles (5.2) and non-resultative particles (5.3) productively form SCVs. We have seen that one particle form, such as *door*, may have different functions at LCS: *door* may function as a resultative predicate, as a path particle, or as a continuator. These different functions correspond to different participant-licensing properties, so that particles performing different functions affect the argument structure and the lexical-aspectual structure of the construction in different ways.

The fact that particles may have different functions, which correspond to different argument-structural and lexical-aspectual properties for the SCV constructions they form, explains why a uniform analysis of SCVs such as the resultative SC-analysis (according to which all particles express resultative predicates) cannot account for the SCV data satisfactorily (cf. Stiebels 1996: 298 and Stiebels and Wunderlich 1994). The same seems to hold for the general percolation mechanism that is postulated in the morphological analysis of Neeleman (1994) and Neeleman and Weerman (1993) (cf. section 3.3.1). According to this analysis, the transitivity of (many) SCV constructions is due to the fact that both the particle and the verb generally percolate their theta roles to the complex verb. This analysis differs from the SC-analysis in many respects, but like the SC-analysis, it claims that particles are generally similar to resultative phrases in terms of their semantic and participant-licensing properties. The effect of this is that, like the SC-analysis, it cannot explain the argument-structural and lexical-aspectual differences among SCVs.³¹

It has to be noted, however, that there is a clear motivation behind these uniform analyses: despite their semantic differences, all particles (both the resultative and the non-resultative ones) behave exactly the same in syntax. That is, all particles are separable, appear in the verb cluster and after *aan het* in the progressive construction, and resist modification, topicalisation, and copula constructions (cf. 4.3). This implies that multiple semantic structures (according to which particles may be conceptualised as, for instance, resultative predicates licensing a Figure participant or as modifiers not licensing any participant) map to one and the same syntactic structure (according to which all particles have the structural status of a non-projecting word, which forms, with the verb, a V' that

³¹ Neeleman (1994: 285) and Neeleman and Weerman (1993: 451) notice that there are argument-structural differences among SCVs (see also section 3.3.1). They claim that these differences are related to the *optional* percolation of the particle's theta role. But since their analysis makes no claims about the conditions under which a particle percolates its theta role, it does not provide an explanation of these differences.

functions as the verbal predicate of a simple clause). In order then to be able to account both for the divergent argument-structural and lexical-aspectual properties of SCVs and for their uniform syntactic behaviour, we should allow for a non-isomorphic mapping between the semantic structure of SCVs and their syntactic structure.

The fact that all particles form with the verb the verbal predicate of a simple clause refers to the uniform grammatical-function structure (f-structure) of SCV constructions (cf. 2.2.1). The non-subject NP of a transitive SCV construction is the direct object of the SCV at f-structure, regardless of the licensing relations between this NP, the particle, and the verb at LCS. To see this, compare the constructions in (53).

- (53) a. active: dat Jan de schoenen *inloopt*
'that John wears in the shoes'
passive: de schoenen worden *ingelopen* (door Jan)
'the shoes are being worn in (by John)'
- b. active: dat Jan het publiek *toespreekt*
'that John talks to the audience'
passive: het publiek wordt *toegesproken* (door Jan)
'the audience is being talked to (by John)'
- c. active: dat Jan de groenten *voorkookt*
'that John precooks the vegetables'
passive: de groenten worden *voorgekookt* (door Jan)
'the vegetables are being precooked (by John)'

The referents of the underlined NPs in the active constructions in (53) have different licensing properties at LCS: *de schoenen* in (53)a is licensed by the particle at LCS, being its Figure, *het publiek* in (53)b is also licensed by the particle at LCS, but is its Ground, and *de groenten* in (53)c is not licensed by the particle, but is licensed by the verb at LCS (cf. 5.2, 5.3.2, and 5.3.3). Despite these different licensing properties, all three of these NPs are syntactically realised as the direct object of the SCV construction. As a consequence, all three of these NPs may surface as the subject in the corresponding passive constructions, which are also given in (53).³²

³² Like other direct objects, the underlined NPs in (53) are interpreted as the Patients undergoing the action denoted by the SCV. The referents of these direct object referents, then, fulfil two semantic roles. *De schoenen* in (53)a, for instance, refers both to the Figure that is affected by the change of state denoted by the particle *in* 'in the desired shape/state', and to the Patient that undergoes the event denoted by the SCV *inlopen* 'to wear in'. It should be noted, however, that the property of fulfilling two semantic roles is not exclusive to the direct objects in SCV constructions. The examples in (i) illustrate that elements in other complex predicate constructions also exhibit this property.

- (i) a. dat Jan *Marie* het boek liet zien 'that John showed Mary the book'
b. dat Jan *zijn fiets* oranje verfde 'that John painted his bike orange'

The causee *Marie* 'Mary' in (i)a is both the Goal of the causative verb *laten* 'to let' and the Agent of the embedded verb *zien* 'to see'. Similarly, *zijn fiets* 'his bike' in (i)b is both the Figure that is affected by the change of state denoted by *oranje* 'orange' and the Patient that undergoes, depending on one's analysis, either the event denoted by the complex predicate *oranje verven* 'to paint orange' or the event denoted by the verb *verven* 'to paint' (cf. *de fiets*

This f-structure uniformity of SCV constructions might seem to follow directly from their constituent structure (c-structure) uniformity. The usefulness of distinguishing a separate level of f-structure in accounting for the properties of SCVs will be discussed in section 8.3.1.

The next section investigates SCVs with thirteen different particles in order to check whether they can, indeed, be properly classified according to the functions their particles perform in the LCS of the SCV construction, as proposed in the foregoing sections (see Table 5.1 in appendix 1). Section 5.6 discusses the morphosyntactic properties of these SCVs. The sections 5.5 and 5.6 mainly serve to provide supplementary support for the claims made in chapter 4 and in the sections 5.2 through 5.4. This is why readers that do not wish to be presented with additional support for these claims may choose to skip these two sections. However, these readers should make an exception for the subsections 5.5.15 and 5.5.16, which indeed contain information that will be referred to in the subsequent chapters.

5.5 Particle functions in SCVs: additional data

5.5.1 Introduction

The basic claim made in the previous sections is that particles are not always conceptualised as resultative predicates, so that there is not one unique LCS that is associated with SCV constructions. Particles may, instead, perform various functions, having various participant-licensing properties. The effect of this is that the semantic relations between the verb, the particle, and the arguments in an SCV construction may be of various kinds.

This section provides additional data in order to illustrate the merits of the analysis. The central question in this data discussion is whether particles can successfully be classified in the categories distinguished in the previous sections, and whether this classification accounts for the argument-structural and lexical-aspectual properties of the SCVs these particles form. The central properties of the different types of particle that have been distinguished in the foregoing are summarised in (54) (cf. Table 5.1).

- (54)
1. Particles functioning as *resultative predicates*: express a result and license a Figure participant, thus forming transitive/unaccusative and telic SCV constructions.
 2. Particles functioning as *modifiers*: modify the event denoted by the verb and its argument(s) and do not license any participant, thus not influencing the transitivity properties and the telicity properties of the base verb.

wordt oranje geverfd 'the bike is painted orange'). These examples illustrate the common property of semantic representations being richer than syntactic representations (cf. Goldberg and Jackendoff 2004: 539).

3. Particles functioning as *relators*: license a Ground participant, thus forming transitive SCVs.
 - a) Particles denoting, in combination with their Ground participant, a (directional, temporal, or other type of) modifier of the event denoted by the verb and its arguments, thus not influencing the telicity properties of the base verb.
 - b) Particles denoting, in combination with their Ground participant, the change of location (telic path) of the subject referent, thus forming telic SCV constructions.
4. Particles functioning as *Aktionsart markers*: express either the unbounded continuation or the inception of the event denoted by the verb and block the realisation of any non-Agent participant, thus forming unergative SCVs (atelic SCVs in the case of continuative particles and punctual, telic SCVs in the case of inceptive particles).

The data in this section are taken from the *Van Dale Handwoordenboek van Hedendaags Nederlands* ('Van Dale Concise Dictionary of Contemporary Dutch', 1996). It was illustrated in section 4.2 that SCVs are generally compositional and may be formed productively, but are also conventionalised: SCV meanings are generally not predictable from the meanings of their parts. This is why SCVs are listed in dictionaries. This section discusses SCVs with thirteen different particles, which are listed in (55).³³

- (55) *aan* 'at, to', *af* 'down, off', *door* 'through, on', *in* 'in(to)', *mee* 'along, with', *na* 'after, behind', *om* 'around, down', *onder* 'under, below', *op* 'up, on high', *over* 'over, across', *toe* 'at, to, closed', *uit* 'out (of)', *voor* '(be)fore, for'

The reasons for choosing these particles are the following:

- *Af*, *in*, *op*, and *uit* form the highest number of SCVs.
- *Door*, *over*, and *om* are the only forms that are productively used in both SCVs and ICVs (see chapter 6).
- *Aan* and *onder* productively form SCVs and their forms also occur in quite a few ICVs (although they are not productively used in ICVs).
- *Toe* and *mee* have a postpositional (or predicative) form instead of a prepositional form, which asks for a clarification (cf. 5.3.3).
- *Na* and *voor* have functions that are usually not attributed to SCV particles (modifier functions, cf. 5.3.2).

The list of particles in (55), then, contains the most frequently occurring particles, particles that have productive prefix counterparts, and particles that appear to be remarkable in some respect or another.

³³ There are four other particles that correspond to an adposition in Dutch: *achter* 'behind', *bij* 'at', *rond* 'around', and *tegen* 'against'. There are, furthermore, thirteen particles that correspond to an adverb, such as *neer* 'down', *terug* 'back', and *weg* 'away', and a few particles that correspond to a noun or an adjective (see note 10 in chapter 1).

The following subsections (5.5.2 through 5.5.14) discuss some semantic subclasses of the SCVs formed with the particles in (55), assessing the functions these particles perform in these SCVs and illustrating how these functions account for the argument-structural and lexical-aspectual properties of these SCVs.

5.5.2 *Aan* 'at, to'

Three semantic subclasses of SCVs with the particle *aan* 'at, to' are given in (56).³⁴

- (56) a. *de man aangrijzen* 'lit. at-grin, to grin at the man', *de actrice aanstaren* 'lit. at-stare, to gaze at the actress' [transitive];
 b. *maar wat aanrommelen* 'lit. at-muddle, to mess around a bit', *maar wat aanmodderen* 'lit. at-mud, to mess around a bit' [unergative];
 c. *de kurk aandrukken* 'lit. at-press, to press the cork to/tight', *de bladeren aanstampen* 'lit. at-stamp, to tamp down the leaves', *aanschuiven (het kind)* 'lit. at-slide, to join the group silently (at the table) (the child)' [transitive or unaccusative].

The SCVs in (56)a are transitive, but have unergative base verbs (*grijzen* 'to grin', *staren* 'to stare, gaze'). The particle *aan*, then, appears to introduce a participant in the LCS of the SCV constructions in (56)a. Table 5.1 in appendix 1 illustrates that this implies that this particle cannot be a modifying particle or an Aktionsart particle (continuative or inceptive particle), since these two types of particle are not capable of introducing a participant. In addition to being transitive, the SCVs in (56)a are atelic (e.g. *de actrice uren aanstaren* 'to gaze at the actress for hours'). This means that *aan* in (56)a cannot be a resultative particle or a relator 2 particle (path particle) either, as resultative particles and path particles form telic SCVs (cf. Table 5.1). We thus conclude that *aan* in the SCVs (56)a (and in other SCVs belonging to this class) is a relator 1 particle (orienting particle), expressing the direction toward which the action denoted by the verb (e.g. the grinning) is oriented (e.g. toward the man). This means that the SCV constructions in (56)a have the semantic structures in (57), in which 'AT' refers to the meaning of the particle *aan* in this class of SCVs: 'at, oriented toward'.³⁵

- (57) a. $[aan-V^0]_{V^0}$:
 $[V(x) \{AT(y)\}]$
 'to V at Y'
 b. *de man aangrijzen*:
 $[grijzen(x) \{AT(de\ man)\}]$
 'to grin at the man'

³⁴ I give the subject in parentheses in unaccusative SCV constructions such as the last SCV construction in (56)c: *aanschuiven (het kind)* 'to join (the child)'. The same is done in some unergative SCV constructions in the subsections of 5.5.

³⁵ As in the semantic structures in the previous sections, capitalised words like AT are not meant to refer to semantic primitives, but refer to the meaning that particles have in a class of SCVs. It should also be noted that the semantic structures presented in this chapter do in themselves not make any claims about the lexical representation of SCVs and/or particles (the lexical representation of SCVs will be discussed in chapter 8).

- c. *de actrice aanstaren*:
 [staren (x) {AT (de actrice)}]
 'to gaze at the actress'

The SCVs in (56)b are unergative (cf. *hij heeft maar wat aangerommeld* 'he has only messed around a bit'). Table 5.1 shows that unergative SCVs have either a modifying particle (if the base verb is also unergative, modifying particles inheriting the transitivity properties of the base verb) or an Aktionsart particle (continuative or inceptive particle). The semantic properties of *aan* in (56)b suggest that it functions as a continuative particle, expressing the unbounded continuation of the activity denoted by the verb.

In the SCVs in (56)c the particle *aan* means something like 'together, tight, joined'. The first two SCVs are transitive and the third one is unaccusative (cf. *het kind is aangeschoven* 'the child has joined'). Table 5.1 shows that transitive/unaccusative SCVs have either a resultative particle or a modifying particle (SCVs with relator particles always being transitive and SCVs with Aktionsart particles always being unergative). The direct object referents in the transitive SCVs in (56)c are not licensed by the verb (**de kurk drukken* 'to press the cork', **de bladeren stampen* 'to stamp the leaves'), but are licensed by the particle at LCS. This implies that *aan* in these SCVs cannot be a modifying particle: modifying particles do not license participants, so that SCVs with modifying particles inherit the transitivity properties of the base verb. The particle *aan* in (56)c, then, turns out to be a resultative particle.

Resultative particles license a Figure participant that is affected by the result the particle expresses (e.g. the result of *de kurk aandrukken* is that the cork is 'tight', cf. 5.2). The effect of this is that SCV constructions with resultative particles contain an affected Theme, which explains why such SCV constructions are either transitive or unaccusative. The LCSs for the SCVs in (56)c are given in (58) (cf. 5.2). 'AT' in these LCSs stands for the meaning of the particle *aan* in this class of SCVs: 'together, tight, joined'.³⁶

- (58) a. $[aan-V^0]_{V^0}$:
 [[CAUSE (x), BECOME [AT (y)]], BY {V (x)}]
 'to cause Y to become together/tight/joined by V-ing'
- b. *de kurk aandrukken*:
 [[CAUSE (x), BECOME [AT (de kurk)]], BY {drukken (x)}]
 'to cause the cork to become tight by pressing'
- c. *de bladeren aanstampen*:
 [[CAUSE (x), BECOME [AT (de bladeren)]], BY {stampen (x)}]
 'to cause the leaves to become together/tight by tamping'
- d. *aanschuiven (het kind)*:
 [BECOME [AT (het kind)], BY {schuiven (het kind)}]
 'the child becomes joined by sliding'

³⁶ Unaccusative constructions with resultative predicates, such as *aanschuiven (het kind)* 'to join (the child)', are assumed to lack the CAUSE predicate in their LCS, since such constructions only express a change of state/location and the manner that leads to the achievement of this change of state/location (cf. 5.2).

Each of the SCV classes exemplified in (56) contains more SCVs than the ones given here. The particle *aan* may furthermore express many other results in addition to 'together/tight/joined', thus forming many other semantic subclasses of SCVs with the resultative particle *aan*. *Aan* may, for instance, express the result 'more until it is enough', as in *het bestuur aanvullen* 'lit. at-fill, to fill up the board of directors' and *aanzwellen* 'lit. at-swell, to swell up', or the result 'to oneself, into possession', as in *grond aankopen* 'lit. at-buy, to purchase/acquire land' and *het aanbod aannemen* 'lit. at-take, to accept the offer'. These different senses are generally related to one another by mechanisms of semantic extension such as metaphor or metonymy.

The LCSs in (58)b-c are to be seen as instantiations of the more general LCS in (58)a for transitive SCVs with the resultative particle *aan* 'together, tight, joined'. As indicated in (58)b-c, particles (as well as the other elements of the construction) may receive a more specific interpretation in such concrete instantiations on the basis of the information provided by the verb and the participants (see section 8.2 for more on the relation between more general LCSs and the specific LCSs).

In sum, the classification of *aan* as an orienting particle, a continuative particle, and a resultative particle in the SCV constructions in, respectively, (56)a, (56)b, and (56)c accounts for the argument-structural properties and the lexical-aspectual properties of these SCV constructions.

5.5.3 *Af* 'down, off'

Some examples of SCV classes with the particle *af* 'down, off' are given in (59).

- (59) a. *afrijden* 'lit. off-drive, to take one's driving test', *afzwemmen* 'lit. off-swim, to take one's final swim exam' [unergative];
 b. *de gewonden afvoeren* 'lit. off-carry, to move away the injured', *afbuigen (de weg)* 'lit. off-bend, to bear off (the road)' [transitive or unaccusative];
 c. *de kerstspullen afprijzen* 'lit. off-price, to mark down/reduce the Christmas stuff', *afreden (de minister)* 'lit. off-step, to step down/resign (the minister)' [transitive or unaccusative].

The SCVs in (59)a are unergative (cf. *Jan heeft vandaag afgereden/afgezwommen* 'John has taken his driving test/final swim exam today'), which means that the particle *af* in these SCVs cannot be a resultative particle, a relator particle, or an Aktionsart particle (cf. Table 5.1 in appendix 1). *Af* in these SCVs thus functions as a modifier particle; it modifies the activity denoted by the verb (i.e. *rijden* 'to drive', *zwemmen* 'to swim'). Other examples of SCVs with this particle are *afdansen* 'to take one's dancing test' and *afroeien* 'to take one's rowing test' (both of which are not listed in *Van Dale* 1996). These SCVs appear to instantiate the pattern [*af*-V⁰]_V 'to V for one's V-test'.

In the SCVs in (59)b the particle *af* means 'away' (in a literal or figurative sense). The direct object referent in the first SCV is not licensed by the base verb (**de gewonden voeren* 'to carry the injured'), which implies that the particle *af* 'away' licenses this participant at LCS. Modifying particles and Aktionsart particles are unable to license a participant, which implies that *af* 'away' is either a resultative

particle or a relator particle in (59)b (cf. Table 5.1). Since, however, relator particles are always transitive and never unaccusative, *af* in (59)b must be a resultative particle. This conclusion is supported by the telicity of the constructions in (59)b. It is furthermore supported by the fact that the results of the events denoted by the SCV constructions in (59)b can be paraphrased as, respectively, THE INJURED ARE AWAY and THE ROAD IS AWAY. These paraphrases illustrate that the participants THE INJURED and THE ROAD are the Figures that are affected by the change of state/location expressed by the particle *af* in these SCV constructions. The SCV constructions in (59)b, then, have the semantic structure of constructions with a resultative predicate, i.e. they have the resultative LCS. The general LCS for SCV constructions in which the particle *af* functions as a resultative predicate with the meaning 'away' is given in (60)a; the LCSs for the specific SCV constructions in (59)b are given in (60)b-c. 'OFF' in these LCSs refers to the meaning of the particle *af* in this class of SCVs: 'away'.

- (60) a. $[af-V^0]_{V^0}$:
 [[CAUSE (x), BECOME [OFF (y)]], BY {V (x)}]
 'to cause Y to become away by V-ing'
- b. *de gewonden afvoeren*:
 [[CAUSE (x), BECOME [OFF (*de gewonden*)]], BY {voeren (x)}]
 'to cause the injured to become away by carrying'
- c. *afbuigen (de weg)*:
 [BECOME [OFF (*de weg*)], BY {buigen (*de weg*)}]
 'the road becomes away by bending'

In the SCVs in (59)c the particle *af* means '(literally/figuratively) down', and the SCVs express the fact that the Theme participant (i.e. the Christmas stuff/the minister) ends up being 'down'. This means that in these SCVs, too, the particle *af* expresses a result affecting the direct object referent/subject referent, thus functioning as a resultative predicate with the meaning 'down'. This accounts for the fact that these SCVs are either transitive or unaccusative, and telic. The LCSs of the SCV constructions in (59)c are given in (61); 'DOWN' in these LCSs stands for the meaning of the particle *af* in SCVs belonging to this class: 'down'.

- (61) a. $[af-V^0]_{V^0}$:
 [[CAUSE (x), BECOME [DOWN (y)]], BY {V (x)}]
 'to cause Y to become down by V-ing'
- b. [[CAUSE (x), BECOME [DOWN (*de kerstspullen*)]], BY {prijzen (x)}]
 'to cause the Christmas stuff to become down by pricing'
- c. [BECOME [DOWN (*de minister*)], BY {treden (*de minister*)}]
 'the minister becomes down by stepping'

The SCV classes in (59)b-c contain many more SCVs than the ones given here. The resultative particle *af* may also express other results, besides 'down' and 'away'. It may, for instance, have the meaning 'bounded', as in *het gebied afbakenen* 'lit. off-beacon, to mark out the area' and *een deel van de kamer afschermen* 'lit. off-screen, to screen off part of the room', or the meaning 'cancelled', as in *de afspraak afzeggen* 'lit. off-say, to cancel the appointment' and *zich afmelden* 'lit. off-report, to

check/sign oneself out'. These different senses of the particle are generally related to one another by mechanisms of semantic extension.

5.5.4 *Door* 'through, on'

Some semantic classes of SCVs with the particle *door* 'through, on' are given in (62).

- (62) a. *urenlang doorfietsen* 'lit. through-bike, to continue cycling for hours', *de hele nacht doorlezen* 'lit. through-read, to continue reading all night long', *urenlang doorbranden* 'lit. through-burn, to continue burning for hours' [unergative];
- b. *de hele Benelux doorfietsen* 'lit. through-bike, to travel through the entire Benelux', *het script doorlezen* 'lit. through-read, to read through the script', *de stukken doorwerken* 'lit. through-work, to plough through the documents' [transitive];
- c. *direct doorfietsen* 'lit. through-bike, to ride on immediately', *het nummer doorgeven* 'lit. through-give, to pass on the number', *de klant doorverbinden* 'lit. through-connect, to put the customer through', *de boeken doorverkopen* 'lit. through-sell, to resell the books (to a third party)' [transitive or unaccusative];
- d. *doorbranden (het touw)* 'lit. through-burn, to burn in two (the rope)', *het touw doorknippen* 'lit. through-cut, to cut the rope in two', *de taart doorsnijden* 'lit. through-cut, to cut the cake in two' [transitive or unaccusative].

The SCVs in (62)a being unergative, the particle *door* can be either a modifying particle or an Aktionsart particle (continuative particle or inceptive particle) in these SCVs. These SCVs express the unbounded continuation of the activity denoted by the verb, which suggests that *door* functions as a continuator in these SCVs. Like other continuative particles, *door* in (62)a blocks the presence of direct objects that are licensed by the base verb in isolation: *de hele nacht (*het boek) doorlezen* 'to continue reading (the book) all night long' (cf. 5.3.5). We thus see that the transitivity properties of the base verb are not inherited by these SCVs, which means that *door* in these SCVs cannot be a modifying particle.

The SCVs in (62)b are transitive and have either transitive (*lezen* 'to read') or unergative base verbs (*fietsen* 'to cycle', *werken* 'to work'). The particle, then, appears to license a participant in these SCVs, which indicates that it is either a resultative or a relator particle. Since these SCVs are telic (cf. *hij had de stukken in een uur doorgewerkt* 'he had ploughed through the documents in an hour'), their particle cannot be a relator 1 particle. This is because relator 1 particles express, in combination with their Ground participant, a modifier that does not alter the telicity properties of the verb (cf. Table 5.1). This leaves two possibilities: *door* is either a resultative particle or a relator 2 particle (path particle) in (62)b. Resultative particles express a change of state/location affecting the participant they license, which is their Figure and is syntactically realised as the direct object referent. But *door* in (62)b does not appear to express a change of state/location affecting the direct object referent: the results of the events expressed by the constructions in (62)b are not captured by the copula constructions in (63).

- (63) *THE BENELUX IS THROUGH
 *THE SCRIPTS ARE THROUGH
 *THE DOCUMENTS ARE THROUGH

These results are, instead, captured by the constructions in (64).

- (64) [SUBJECT] IS THROUGH THE BENELUX
 [SUBJECT] IS THROUGH THE SCRIPTS
 [SUBJECT] IS THROUGH THE DOCUMENTS

The paraphrases in (63)-(64) illustrate that the direct object referents do not undergo a change of state/location expressed by the particle *door* (cf. (63)), but express with this particle a path (e.g. 'through the Benelux') that is followed by the subject referent (cf. (64)). This means that the direct object referent is the Ground of *door* at LCS. This particle, then, must be classified as a path particle (cf. 5.3.4), which means that the SCVs in (62)b have the semantic structure in (65).

- (65) a. [*door-V*⁰]_V:
 [GO [(THROUGH (y)) (x)], BY {V (x)}]
 'to go through Y by V-ing'
 b. *de stukken doorwerken*:
 [GO [(THROUGH (*de stukken*)) (x)], BY {werken (x)}]
 'to go through the documents by ploughing'

The SCVs in both (62)c and (62)d are either transitive or unaccusative. Table 5.1 shows that this implies that these SCVs have either a modifying particle or a resultative particle. The base verbs of these SCVs, however, are transitive or unergative, which indicates that these SCVs do not inherit the transitivity properties of the verb, and thus that their particles do not function as modifiers. This suggests that the particle *door* in (62)c and (62)d is a resultative particle. Resultative particles express a change of state/location affecting a participant. Such particles license a participant at LCS (the particle's Figure), which causes SCV constructions with such particles to be either transitive or unaccusative. The change of state/location causes such SCV constructions to be telic (e.g. *de klant in een minuut doorverbinden* 'to put the customer through in a minute', *het touw was in een minuut doorgebrand* 'the rope was burnt through in a minute').

The result expressed by the particle *door* in the SCVs in (62)c is 'on to the next point'. These SCVs have the LCS in (66)a, which is illustrated in (66)b. 'THROUGH' in these LCSs refers to the meaning of the particle *door* in this subclass of SCVs: 'on to the next point'.

- (66) a. [*door-V*⁰]_V:
 [[CAUSE (x), BECOME [THROUGH (y)]], BY {V (x)}]
 'to cause Y to become on to the next point by V-ing'
 b. *de klant doorverbinden*:
 [[CAUSE (x), BECOME [THROUGH (*de klant*)]], BY {verbinden (x)}]
 'to cause the customer to become on to the next point by connecting'

The result expressed by the particle *door* in the SCVs in (62)d is 'in two'. These SCVs, then, have the LCS in (67)a, as illustrated in (67)b; 'THROUGH' stands for 'in two'.

- (67) a. $[door-V^0]_{V'}$:
 [[CAUSE (x), BECOME [THROUGH (y)]], $_{BY}\{V(x)\}$
 'to cause Y to become in two by V-ing'
- b. *het touw doorknippen*:
 [[CAUSE (x), BECOME [THROUGH (*het touw*)]], $_{BY}\{knippen(x)\}$
 'to cause the rope to become in two by cutting'

In sum, the classification of the SCV constructions with the particle *door* in (62) proposed here accounts for the divergent transitivity properties and telicity properties of these constructions. It should be noted that each of these SCV classes contains many more members than the SCVs given here.

The examples in (62) above illustrate that SCVs with the same form may have different meanings, their particles performing different functions at LCS. Such forms, then, may be ambiguous (e.g. a form like *doorbranden* 'lit. through-burn', which may mean either 'to continue burning' or 'to burn in two').³⁷ In concrete SCV constructions, however, such SCVs are disambiguated by the information provided by the other elements of the construction; the function of the particle follows from this information (cf. *het vuur heeft urenlang doorgebrand* 'the fire continued burning for hours (continuative particle) vs. *het touw was doorgebrand* 'the rope was burnt in two' (resultative particle)).

5.5.5 In 'in(to)'

Some subclasses of SCVs with the particle *in* 'in(to)' are given in (68).

- (68) a. *inademen* 'lit. in-breathe, to breathe in', *inregenen* 'lit. in-rain, to rain in' [unergative];
- b. *het boek inkijken* 'lit. in-look, to look into the book', *de stukken inzien* 'lit. in-see, to have a look at the documents' [transitive];
- c. *indommelen* 'lit. in-doze, to doze off', *indutten* 'lit. in-snooze, to doze off' [unaccusative];
- d. *de leken inwijden* 'lit. in-consecrate, to initiate the laymen', *de burgemeester inhuldigen* 'lit. in-pay-a-tribute, to inaugurate the mayor', *intreden (de nonnen)* 'lit. in-step, to enter a convent (the nuns)' [transitive or unaccusative];
- e. *zich inlezen* 'lit. in-read, to read up (on)', *de schoenen inlopen* 'lit. in-walk, to wear in the shoes', *de auto inrijden* 'lit. in-drive, to run in the car', *een collega inwerken* 'lit. in-work, to train a colleague' [transitive or unaccusative].

The SCVs in (68)a are unergative and contain unergative base verbs, which suggests that they contain a modifying particle (cf. Table 5.1). This particle has the meaning 'to the inside', the SCVs in (68)a instantiating the pattern $[in-V^0]_{V'}$ 'to V to the inside'.

³⁷ Such SCV forms instantiate either polysemy or homonymy, cf. note 50.

The SCVs in (68)b are transitive, but one of them contains an unergative base verb (*kijken* 'to look'). The particle in this SCV, then, introduces a participant, which suggests that these SCVs contain either a resultative particle or a relator particle. The atelicity of the SCVs in (68)b (cf., e.g., *het boek een uur lang inkijken* 'to look into the book for an hour') indicates that the particle *in* in these SCVs is a relator 1 particle (orienting particle): resultative particles and relator 2 particles (path particles) form telic SCVs (cf. Table 5.1). These SCVs, then, instantiate the pattern $[in-V^0]_{V^0}$ 'to V into Y'.

The SCVs in (68)c are unaccusative (*hij is ingedommeld* 'he has dozed off'), but their base verbs are unergative (*hij heeft even gedommeld* 'he has been dozing for a while'). This implies that the particle *in* introduces a Theme participant in these SCVs; this Theme participant undergoes the change of state expressed by *in* 'to sleep, asleep' (*in slaap* 'into sleep' in Dutch). We can conclude that *in* functions as a resultative particle in these SCVs. These SCVs have the LCS in (69), in which 'IN' refers to the meaning of the particle *in* in these SCVs: 'to sleep, asleep'.

- (69) a. $[in-V^0]_{V^0}$:
 [BECOME [IN (x)], BY {V (x)}]
 'X becomes asleep by V-ing'
- b. *indommelen*:
 [BECOME [IN (x)], BY {dommelen (x)}]
 'X becomes asleep by dozing'
- c. *indutten*:
 [BECOME [IN (x)], BY {dutten (x)}]
 'X becomes asleep by snoozing'

The analysis of *in* in these SCVs as a resultative particle accounts for the unaccusativity and the telicity of these SCVs.

The SCVs in (68)d and (68)e are either transitive or unaccusative and are telic. Their base verbs are either transitive or unergative. This suggests that the particles in both groups of SCVs can be analysed as resultative particles, expressing a change of state/location affecting the Theme of the SCV construction (that is, the direct object in transitive SCV constructions and the subject in unaccusative SCV constructions). The change of state expressed by the particle *in* in (68)d is something like 'in a certain social position/community/function'. The SCVs in (68)d, then, have the semantic structure in (70)a, in which 'IN' stands for 'in a certain social position/community/function', cf. (70)b.

- (70) a. $[in-V^0]_{V^0}$:
 [[CAUSE (x), BECOME [IN (y)]], BY {V (x)}]
 'to cause Y to become in a certain social position/community/function by V-ing'
- b. *de burgemeester inhuldigen*:
 [[CAUSE (x), BECOME [IN (de burgemeester)]], BY {huldigen (x)}]
 'to cause the mayor to become in its function by paying a tribute'

The change of state expressed by the particle *in* in the SCVs in (68)e can be paraphrased as 'into the desired shape/state'. This means that SCVs belonging to this class have the semantic structure in (71)a, cf. (71)b.

- (71) a. [*in-V⁰*]_V:
 [[CAUSE (x), BECOME [IN (y)]], BY {V (x)}]
 'to cause Y to become in the desired shape/state by V-ing'
- b. *de schoenen inlopen*:
 [[CAUSE (x), BECOME [IN (*de schoenen*)]], BY {*lopen* (x)}]
 'to cause the shoes to become in the desired shape by walking'

It has to be noted, however, that there are a few unergative SCVs in which *in* appears to have a similar lexical-semantic content. This is illustrated in (72).

- (72) a. We hebben al *ingelopen*.
 'We have already warmed up.'
- b. We zijn al *ingespeeld*. / We hebben al *ingespeeld*.
 'We have already played ourselves in/warmed up.'

What seems to be the case is that the resultative construction has, in the domain of sports, been reinterpreted as expressing an activity, so that SCVs with this particle mean 'to V in order to get into the desired shape/state'. The change of state ('to become into the desired shape/state') thus appears to be reinterpreted as a purpose modifier ('in order to get into the desired shape/state') in these constructions.³⁸ This kind of reinterpretation seems to be restricted to the use of these SCVs in the domain of sports. The SCV *inrijden* 'to run in', for instance, can not generally be used unergatively (cf. (73)a), but it can be used as such in the context of a Formule-1 race, as in (73)b.³⁹

- (73) a. Wat een mooie auto! Heb je *(hem) al *ingereden*?
 'What a beautiful car! Did you run *(it) in yet?'
- b. Michael Schumacher had al *ingereden* en stond te wachten tot zijn race begon.
 'Michael Schumacher had already warmed up and was waiting for his race to start.'

These examples illustrate that resultative particles may lose their predicative function and become modifiers. Nevertheless, the original, resultative function generally also remains available for such particles (the development, then, leads to *layering*, cf. 2.3). It has to be noted that such a development appears to take place only incidentally. Resultative particles, then, generally retain their resultative, predicative function, all that changes being their lexical-semantic content (which may undergo semantic extension).

The SCV classes in (68)c-e, in which *in* functions as a resultative particle, contain many more SCVs than the ones given here. The resultative particle *in* may

³⁸ The counterpart of *inlopen* 'to warm up', *uitlopen* 'to run easy (to cool down/to recover)', also expresses an activity. It appears to be formed analogously to *inlopen*, instantiating paradigmatic word formation (cf. 8.2.3).

³⁹ Another linguistic domain where such reinterpretation of resultative particles as modifying particles appears to occur is that of computer-related language, cf. (i)a-b.

- (i) a. Marie is al *ingelogd/uitgelogd*. Mary has already logged on/logged off.
 b. Marie heeft al *ingelogd/uitgelogd*. Mary has already logged on/logged off.

furthermore have other meanings, in addition to those in (68)c-e, forming additional classes of SCVs. The particle *in* may, for example, express the result 'enclosed', e.g. *het park inbouwen* 'lit. in-build, to build in the park' and *insneeuwen (het dorp)* 'to be enclosed with snow (the village)', or it may express the result 'moved/displaced to the inside', e.g. *een knop indrukken* 'lit. in-press, to press a button' and *ingroeien (de nagel)* 'to grow in (the nail)'.

5.5.6 *Mee* 'along, with'

SCVs with the particle *mee* 'along, with' fall neatly into two semantic subclasses. Some examples of SCVs from these two categories are given in (74)a-b.

- (74) a. *het liedje meezingen* 'lit. with-sing, to sing the song along with others', *het verhaal meelezen* 'lit. with-read, to read the story together', *over de zaak meepraten* 'lit. with-talk, to join in the conversation about the case', *meewerken* 'lit. with-work, to cooperate' [transitive or unergative];
 b. *het boek meenemen* 'lit. with-take, to take the book along', *iemand meevragen* 'lit. with-ask, to ask someone to come along', *even meelopen* 'lit. with-walk, to walk along', *meekomen (de kinderen)* 'lit. with-come, to come along (the children)' [transitive or unaccusative].

Mee does not influence the transitivity properties and the telicity properties of the base verb in the SCV constructions in (74)a. This particle adds the meaning 'along with others/together/simultaneously with' to the meaning of the event denoted by the verb and its argument(s). It thus functions as a modifier, so that these SCV constructions fit the pattern in (75). This is illustrated in (75)b-c. 'WITH' in these LCSs refers to the meaning of the particle *mee* in this class of SCVs: 'along with, together, simultaneously with'. The double parentheses around *y* (and the parentheses around the corresponding NP) in (75)a indicate the optionality of this participant: the modifying particle *mee* may combine with both transitive and unergative verbs, cf. (75)b-c (cf. 5.3.2).

- (75) a. [*mee-V*⁰]_v:
 [V (x), ((y)) {WITH}]
 'to V (NP) along with/together/simultaneously with'
 b. *het verhaal meelezen*:
 [*lezen* (x), (*het verhaal*) {WITH}]
 'to read the story together/simultaneously with'
 c. *meewerken*:
 [*werken* (x) {WITH}]
 'to work along with/together'

Unlike the SCV constructions in (74)a, those in (74)b all contain a Theme (being either transitive or unaccusative). These constructions express the fact that the Theme ends up being 'along' as a result of the action denoted by the verb. In *het boek meenemen* 'to take the book along', for instance, the book ends up being 'along' as a result of the taking. Similarly, in the unaccusative SCV construction *dat de kinderen meekomen* 'that the children come along', the children end up being 'along'

as a result of the coming. *Mee* thus expresses a change of state/location affecting the Theme participant in these SCVs; it functions as a resultative predicate. This means that SCVs belonging to this class have the semantic structures in (76), in which 'ALONG' refers to the meaning of the particle *mee* in these SCVs.

- (76) a. $[mee-V^0]_{V^0}$:
 [[CAUSE (x), BECOME [ALONG (y)]], BY {V (x)}]
 'to cause Y to become along by V-ing'
- b. *het boek meenemen*:
 [[CAUSE (x), BECOME [ALONG (*het boek*)]], BY {*nemen* (x)}]
 'to cause the book to become along by taking'
- c. *meekomen (de kinderen)*:
 [BECOME [ALONG (*de kinderen*)], BY {*komen (de kinderen)*}]
 'the children become along by coming'

The analysis of the SCVs with the particle *mee* in (74) as having either a modifying particle ((74)a) or a resultative particle ((74)b), then, provides an account of the divergent transitivity properties and telicity properties of the SCVs this particle forms. It should be noted that each of these two classes contains many more SCVs than the ones given here.

The examples in (74) illustrate that the function of *mee* in a particular SCV construction follows from the information provided by the verb and the arguments in the SCV construction. Similar properties hold for an adverb such as *boven* 'upstairs', which may also function as a modifier or as a resultative predicate. If it functions as a modifier, it indicates the location where the event takes place, as illustrated in (77)a. If, on the other hand, it functions as a resultative predicative, it denotes the end location of the direct object referent, as illustrated in (77)b.

- (77) a. modifier: *het boek boven lezen*
 the book upstairs read
 'to read the book upstairs'
- b. resultative predicate: *het boek boven brengen*
 the book upstairs bring
 'to take the book upstairs'

Like the constructions in (74)a-b, then, the constructions in (77)a-b have different semantic structures, given in (78)a-b.

- (78) a. *het boek boven lezen* (modifier):
 [[*lezen* (x) (*het boek*) {UPSTAIRS}]
 'to read the book upstairs'
- b. *het boek boven brengen* (resultative predicate):
 [[CAUSE (x), BECOME [UPSTAIRS (*het boek*)]], BY {*brengen* (x)}]
 'to cause the book to become upstairs by taking'

The form of the particle *mee* does not correspond to a prepositional form, but is the postpositional/predicative form of the preposition *met*, compare *met/*mee John* 'with John', *met Jan mee* 'along with John' (cf. 5.3.3).

Like other particles, the particle *mee* 'along, with' appears along with the verb in the verb cluster and after *aan het* in the progressive *aan het*-construction, as shown in (79)a-b. The resultative predicate *mee* 'along', however, may also be realised as an XP instead of a particle (cf. the remarks on *af* 'finished' in 4.5). This appears from the fact that *mee* 'along' may be used in the copula construction, as illustrated in (79)c. *Mee* 'along', then, may show up both in typical XP positions and in typical particle positions; it exhibits layering (cf. 4.3.3, 4.3.5, 4.5, see also 5.6).

- (79) a. dat Jan niet wilde meewerken
'that John did not want to cooperate'
dat Jan het boek niet wilde meebrengen
'that John did not want to bring the book along'
- b. Jan was aan het meezingen.
'John was singing along.'
Jan was actief aan het meepraten.
'John was joining in the conversation energetically.'
- c. Jan is ook *mee*.
'John has also joined.'

5.5.7 *Na* 'after, behind'

Some semantic subclasses of SCVs with the particle *na* 'after, behind' are given in (80).

- (80) a. *de film nabespreken* 'lit. after-discuss, to discuss the film afterwards', *de tekst nalezen* 'lit. after-read, to read the text afterwards, to check the text', *nog lang nagalmen (het geluid)* 'lit. after-resound, to echo for a long time (the noise)', *nakomen (de kinderen)* 'lit. after-come, to come later (the children)' [transitive, unergative, or unaccusative];
- b. *de jongen nakijken* 'lit. after-look, to follow the boy with one's eyes', *de jongen nafluiten* 'lit. after-whistle, to whistle at the boy after he has passed', *de man navijzen* 'lit. after-point, to point at/after the man' [transitive];
- c. *de tekst nalezen* 'lit. after-read, to read the text afterwards, to check the text', *het bedrag narekenen* 'lit. after-count, to check the sum', *de regel nakijken* 'lit. after-look, to check the rule', *de oorzaak naspeuren* 'lit. after-search, to investigate the cause' [transitive].

The SCVs in (80)a have the same transitivity properties and telicity properties as their base verbs. In these SCVs the particle *na* expresses the fact that the event denoted by the verb and its arguments takes place after some other event (or afterwards). It thus functions as a modifier. This means that these SCVs fit the pattern in (81)a, as illustrated in (81)b-c ('AFTER' in these LCSs refers to the meaning of *na* in the SCVs belonging to this class: 'after event E/afterwards', cf. 5.3.2).

- (81) a. [*na*-V⁰]_v:
[V (x), ((y)) {AFTER}]
'to V (NP) after event E/afterwards'

- b. *de film nabespreken*:
 [bespreken (x), (de film) {AFTER}]
 'to discuss the film after event E/afterwards'
- c. *nagalmen (het geluid)*:
 [galmen (het geluid) {AFTER}]
 'the noise resounds after event E/afterwards'

The SCVs in (80)b are different. This appears immediately from their transitivity properties: the direct object referents of these SCVs are not licensed by their base verbs (e.g. **de jongen kijken* 'to look the boy'). The particle *na*, then, introduces a participant in these SCVs, which implies that the SCVs in (80)b have a resultative particle or a relator particle. Since these SCVs are atelic (e.g. *de jongen urenlang nakijken* 'to follow the boy with one's eyes for hours'), the particle *na* must be a relator I particle (orienting particle) in these SCVs (cf. Table 5.1). This particle indeed expresses the direction toward which the event denoted by the verb is oriented: 'to look at the boy after he has passed'. The SCVs in (80)b fit the pattern in (82)a, in which 'AFTER (y)' stands for 'at Y after Y has passed'.

- (82) a. [na-V⁰]_v:
 [V (x) {AFTER (y)}]
 'to V at Y after Y has passed'
- b. *de jongen nakijken*:
 [kijken (x) {AFTER (de jongen)}]
 'to look at the boy after he has passed'

The SCVs in (80)c are also transitive, but these SCVs do not fit the pattern in (82). That is, the meaning of *de regel nakijken* 'to check the rule' cannot be paraphrased as 'to look at the rule after it has passed'. The particle *na*, then, does not express a direction in these SCVs. Instead, it appears to express the result 'checked (afterwards)': *de regel nakijken* means 'to cause the rule to become checked by looking'. I propose the resultative semantic structures in (83) for the SCVs in (80)c. The element 'CHECKED' in these semantic structures refers to the meaning of the particle *na* in these SCVs: 'checked (afterwards)'.

- (83) a. [na-V⁰]_v:
 [[CAUSE (x), BECOME [CHECKED (y)]], BY {V (x)}]
 'to cause Y to become checked (afterwards) by V-ing'
- b. *de regel nakijken*:
 [[CAUSE (x), BECOME [CHECKED (de regel)]], BY {kijken (x)}]
 'to cause the rule to become checked (afterwards) by looking'
- c. *het bewijs naspeuren*:
 [[CAUSE (x), BECOME [CHECKED (het bewijs)]], BY {speuren (x)}]
 'to cause the evidence to become checked (afterwards) by searching'

Note that the SCVs in (80) represent only a subset of the SCVs belonging to each of the three classes.

As illustrated in (80), SCVs with a transitive base verb such as *nalezen* may be interpreted either as containing the modifying particle 'after event E/afterwards' (cf. (80)a) or as containing the resultative particle 'checked (afterwards)' (cf. (80)c).

This seems to indicate the source of the resultative function of the particle *na*. That is to say, the fact that the modifier *na* 'afterwards' may in SCV constructions such as *de tekst nalezen* be interpreted as denoting the result 'checked afterwards' appears to have led to the development of a new SCV pattern for this particle: $[na-V^0]_V$ 'to cause Y to become checked (afterwards) by V-ing'. SCVs with *na* 'checked (afterwards)' could be formed by inserting verbs into the verbal slot of this new pattern.

Like other resultative particles, the resultative particle *na* 'checked (afterwards)' introduces a participant at LCS. This means that combining this particle with a verb may have a transitivity effect. SCVs with the resultative particle *na* 'checked (afterwards)' may, indeed, contain unergative base verbs (e.g. *de regel *(na)kijken* 'to check the rule (afterwards)', *de oorzaak *(na)speuren* 'to investigate the cause (afterwards)'). It is obvious that such SCVs cannot be formed on the basis of the (presumably older) SCV pattern $[na-V^0]_V$ 'to V (NP) after event E/afterwards', in which *na* functions as a modifier: modifiers do not introduce a participant, hence SCVs with this modifying particle inherit the transitivity properties of the base verb. Such SCVs, then, could not be formed until after the reinterpretation of *na* in SCVs like *nalezen* ('afterwards' > 'checked') and the subsequent formation of the new SCV pattern.

To illustrate the hypothesis described in the foregoing paragraphs, according to which the modifying particle *na* 'afterwards' has, in particular SCV constructions, been interpreted as denoting the result *na* 'checked (afterwards)', the relevant examples and patterns are given in (84)-(86).

- (84) Modifying particle *na* 'afterwards' (or 'after event E'):
- a. SCVs: *de film nabespreken* 'to discuss the film afterwards', *de tekst nalezen* 'to read the text afterwards', *nagalmen* 'to resound afterwards', etc.
 - b. pattern: $[na-V^0]_V$ 'to V (NP) afterwards'
(transitivity properties inherited from V)
- (85) Reinterpretation of SCV constructions such as *de tekst nalezen*:
'to read the text afterwards' > 'to cause the text to become checked afterwards
by reading'
- (86) Resultative particle *na* 'checked (afterwards)':
- a. pattern: $[na-V^0]_V$ 'to cause Y to become checked (afterwards) by V-ing'
(participant introduction)
 - b. SCVs: *de tekst nalezen* 'to check the text', *de regel nakijken* 'to check the rule', *de oorzaak naspeuren* 'to investigate the cause', etc.

Modifying particles may thus incidentally develop into resultative particles. The development of the particle *na* described here mirrors that of the particle *in* described in 5.5.4, whereby the resultative particle *in* 'in the desired shape/state' has lost its predicative function and has developed into the modifier 'in order to get into the desired shape/state'. In both developments, however, the older function has also remained available, which means that these developments have led to layering (since both functions of *na* are still present in SCVs like *nalezen*, such 'bridging' SCVs can

be classified in both categories). It has to be noted that both types of development appear to take place only incidentally; in general, the functions that particles perform in the LCS of the SCV construction and the corresponding participant-licensing properties remain the same (changes, however, may occur in the lexical-semantic content of particles, which develop extended senses, see also chapter 7).

5.5.8 *Om* 'around, down'

Some subclasses of SCVs with the particle *om* 'around, down' are given in (87).

- (87) a. *even omkijken* 'lit. around-look, to look back for a moment', *even omzien* 'lit. around-see, to look back for a moment' [unergative];
 b. *de fles omgooien* 'lit. down-throw, to knock down/over the bottle', *een baken omvaren* 'lit. down-sail, to run over a beacon' [transitive];
 c. *de zoom omvouwen* 'lit. around-fold, to fold over the hem', *het ijzerdraad ombuigen* 'lit. around-bend, to bend round the wire' [transitive];
 d. *de boot omdopen* 'lit. around-baptise, to rename the boat', *de gegevens omnummeren* 'lit. around-number, to renumber the data', *iemand ompraten* 'lit. around-talk, to talk round/persuade someone' [transitive].

In the SCVs in (87)a the particle *om* indicates the direction of the activity denoted by the verb. This particle does not alter the transitivity properties or the telicity properties of the base verb. On the basis of this it can be classified as a modifying particle. The pattern for these SCVs is given in (88); 'AROUND' refers to the meaning of *om* in these SCVs: 'back(ward)'.
 (88) a. $[om-V^0]_{V^0}$:
 $[V(x) \{AROUND\}]$
 'to V back'
 b. *omkijken*:
 $[kijken(x) \{AROUND\}]$
 'to look back'

In the SCVs in (87)b the particle *om* expresses the change of state '(fallen) down/over', the result of the events expressed by these two SCV constructions being that the bottle/beacon is down or over. *Om* thus appears to function as a resultative particle in these SCVs. Being a resultative particle, *om* in (87)b licenses a participant. This accounts for the fact that both of the SCV constructions in (87)b are transitive, that is, contain a Theme, although the first one has an unergative base verb (*varen* 'to sail'). The constructions in (87)b are assumed to have the semantic structures in (89), in which 'DOWN' refers to the meaning of the particle *om* in SCVs belonging to this class: 'down, over'.
 (89) a. $[om-V^0]_{V^0}$:
 $[[CAUSE(x), BECOME [DOWN(y)], BY\{V(x)\}]$
 'to cause Y to become down/over by V-ing'
 b. *de fles omgooien*:
 $[[CAUSE(x), BECOME [DOWN(de fles)], BY\{gooien(x)\}]$
 'to cause the bottle to become down/over by throwing'

- c. *een baken omvaren*:
 [[CAUSE (x), BECOME [DOWN (*een baken*)]], BY {varen (x)}]
 'to cause the beacon to become down/over by sailing'

Like other SCVs with resultative particles, the SCVs in (87)b are telic (cf. *hij had de fles in een minuut omgegooid* 'he had knocked down the bottle in a minute').

In the SCVs in (87)c and (87)d *om* also functions as a resultative predicate. In (87)c, *om* means 'folded over', e.g. *het ijzerdraad ombuigen* 'to cause the wire to become folded over by bending'. In (87)d, *om* expresses the fact that the Theme undergoes a change, the type of change following from the information provided by the verb and this Theme (which is realised as the direct object NP). In *de boot omdopen* 'to cause the boat to become changed by naming', for example, the change that affects the boat is interpreted as a change in its name. I propose the semantic structure in (90) for the SCVs in (87)c and the semantic structure in (91) for those in (87)d. The elements 'OVER' and 'AROUND' in these structures stand for the meaning of the particle *om* in these two classes of SCVs, which is, respectively, 'folded over' and 'changed'.

- (90) a. [*om-V*⁰]_V:
 [[CAUSE (x), BECOME [OVER (y)]], BY {V (x)}]
 'to cause Y to become folded over by V-ing'
 b. *het ijzerdraad ombuigen*:
 [[CAUSE (x), BECOME [OVER (*het ijzerdraad*)]], BY {buigen (x)}]
 'to cause the wire to become folded over by bending'
- (91) a. [*om-V*⁰]_V:
 [[CAUSE (x), BECOME [AROUND (y)]], BY {V (x)}]
 'to cause Y to become changed by V-ing'
 b. *de boot omdopen*:
 [[CAUSE (x), BECOME [AROUND (*de boot*)]], BY {dopen (x)}]
 'to cause the boat to become changed by naming'

The classification of the particles in (87)c and (87)d as resultative particles accounts for the fact that the SCVs (87)c and (87)d are transitive and telic (e.g. *hij had het ijzerdraad in een minuut omgebogen* 'he had bended round the wire in a minute', *hij had Marie in een minuut omgepraat* 'he had talked Mary round in a minute'). Each of these classes contains many other SCVs in addition to the ones given here. *Om* may also express other results, thus forming additional SCV classes.

5.5.9 *Onder* 'under, below'

Some classes of SCVs with the particle *onder* 'under, below' are given in (92).

- (92) a. *de baby onderdompelen* 'lit. under-dip, to dip the baby in the water', *onderlopen* (*de uiterwaarden*) 'lit. under-run, to be flooded (the river foreland)' [transitive or unaccusative];
 b. *de baby onderdekken* 'lit. under-cover, to cover/tuck in the baby', *de baby onderstoppen* 'lit. under-put, to tuck in the baby' [transitive].

In the SCVs in (92)a *onder* means 'under water', and the SCV constructions refer to the baby/the river foreland ending up under water as a result of dipping/running. *Onder*, then, expresses a result that affects the direct object referent of a transitive construction or the subject referent of an unaccusative construction; it functions as a resultative particle. The semantic structure that I propose for these SCV constructions is given in (93)a; (93)b gives the semantic structure for the first example in (92)a ('UNDER' stands for the meaning of the particle *onder* in this SCV class: 'under water').

- (93) a. [*onder-V*⁰]_V:
 [[CAUSE (x), BECOME [UNDER (y)]], BY {V (x)}]
 'to cause Y to become under water by V-ing'
- b. *de baby onderdompelen*:
 [[CAUSE (x), BECOME [UNDER (*de baby*)]], BY {*dompelen* (x)}]
 'to cause the baby to become under water by dipping'

Since resultative particles license at LCS a Figure participant that is affected by the change of state/location expressed by the particle, this analysis of the SCVs in (92)a accounts for their transitivity/unaccusativity (cf. **de baby dompelen* 'to dip the baby').

In the SCVs in (92)b *onder* has a similar function, but here the result expressed by *onder* is not 'under water' but 'under blankets': *de baby onderdekken* means 'to cause the baby to become under blankets by covering'. The semantic structure that I propose for these SCV constructions is given in (94)a. In (94)b this semantic structure is applied to the first example in (92)b ('UNDER' stands for 'under blankets, under covering').

- (94) a. [*onder-V*⁰]_V:
 [[CAUSE (x), BECOME [UNDER (y)]], BY {V (x)}]
 'to cause Y to become under blankets by V-ing'
- b. *de baby onderdekken*:
 [[CAUSE (x), BECOME [UNDER (*de baby*)]], BY {*dekken* (x)}]
 'to cause the baby to become under blankets by covering'

Here, too, the classification of the particle as a resultative particle accounts for the transitivity properties of the SCVs: the direct object referent is licensed by the particle at LCS, being the participant undergoing the change of state/location expressed by the particle (cf. **de baby dekken* 'to cover the baby').

5.5.10 *Op* 'up, on high'

Some semantic subclasses of SCVs with the particle *op* 'up, on high' are given in (95).

- (95) a. *uit het boek opkijken* 'lit. up-look, to look up from the book', *tegen iemand opkijken* 'lit. up-look, to look up to someone' [unergative];

- b. *de tafel optillen* 'lit. up-lift, to lift up the table', *het tegoed opwaarderen* 'lit. up-value, to upgrade the credit', *opstuiven (het zand)* 'lit. up-blow/make dust, to bank up (the sand)' [transitive or unaccusative];
- c. *het zilver oppoetsen* 'lit. up-polish, to polish up the silver', *opbloeien* 'lit. up-bloom/flourish, to flourish', *zich opfrissen* 'lit. up-fresh, to freshen up oneself' [transitive or unaccusative];
- d. *de ballon opblazen* 'lit. up-blow, to blow up the balloon', *het luchtbed oppompen* 'lit. up-pump, to inflate the airbed', *opzwellen (de enkel)* 'lit. up-swell, to swell up (the ankle)' [transitive or unaccusative].

The SCV constructions in (95)a being unergative, the particle *op* must be a modifying particle in these SCV constructions (cf. Table 5.1 in appendix 1). *Op* indeed modifies the activity denoted by the verb in these SCV constructions, specifying its direction ('upwards').

The SCV constructions in (95)b-(95)d are either transitive or unaccusative, thus containing a Theme participant. This suggests that the particle *op* functions as a resultative particle in these constructions (cf. Table 5.1). *Op* appears to express a different result in each of these groups of SCVs.

In the first and the last SCV in (95)b *op* expresses its basic, directional sense 'up, on high': *de tafel optillen* means 'to cause the table to become on high'. In the second SCV in (95)b *op* means 'up, on high' in a more metaphorical sense. The LCSs for the SCVs belonging to this class are given in (96); 'UP' refers to the meaning of the particle *op* in this SCV class: 'up(wards), on high, in the air'.

- (96) a. [*op-V⁰*]_v:
[[CAUSE (x), BECOME [UP (y)]], BY {V (x)}]
'to cause Y to become up/on high/in the air by V-ing'
- b. *de tafel optillen*:
[[CAUSE (x), BECOME [UP (*de tafel*)]], BY {*tillen* (x)}]
'to cause the table to become up/on high by V-ing'
- c. *het tegoed opwaarderen*:
[[CAUSE (x), BECOME [UP (*het tegoed*)]], BY {*waarderen* (x)}]
'to cause the credit to become up by valuing'
- d. *opstuiven (het zand)*:
[BECOME [*op (het zand)*], BY {*stuiven (het zand)*}]
'the sand becomes up/in the air by banking'

In the SCVs in (95)c *op* expresses the result 'in a better state'. This is illustrated in (97).

- (97) a. [*op-V⁰*]_v:
[[CAUSE (x), BECOME [UP (y)]], BY {V (x)}]
'to cause Y to become in a better state by V-ing'
- b. *het zilver oppoetsen*:
[[CAUSE (x), BECOME [UP (*het zilver*)]], BY {*poetsen* (x)}]
'to cause the silver to become in a better state by polishing'

The third SCV in (95)c illustrates that SCVs in this group may also have an adjectival base. The adjective is converted into a verb and combined with a particle

in such SCVs (see 3.2, 5.5.15.1, and 8.2.3). The semantic structure for *zich opfrissen* is given in (98).

- (98) *zich opfrissen*:
 [[CAUSE (x), BECOME [UP (*zich*)]], BY {*frissen* (x)}]
 'to cause oneself to become in a better state by freshening'

Other examples of SCVs with *op* 'in a better state' and an adjectival base are *het feest opleuken* 'lit. up-nice, to brighten up the party', *de patient opvrolijken* 'lit. up-cheerful, to cheer up the patient' and *het eten opwarmen* 'lit. up-warm, to warm up the food'.

In the SCVs in (95)d *op* expresses the result 'bulged': *de ballon opblazen* means 'to cause the balloon to become bulged by blowing'. The semantic structures for the SCVs in (95)d are given in (99); 'UP' stands for 'bulged'.

- (99) a. [*op*-V⁰]_v:
 [[CAUSE (x), BECOME [UP (y)]], BY {V (x)}]
 'to cause Y to become bulged by V-ing'
- b. *de ballon opblazen*:
 [[CAUSE (x), BECOME [UP (*de ballon*)]], BY {*blazen* (x)}]
 'to cause the balloon to become bulged by blowing'
- c. *het luchtbed oppompen*:
 [[CAUSE (x), BECOME [UP (*het luchtbed*)]], BY {*pompen* (x)}]
 'to cause the airbed to become bulged by pumping'
- d. *opzwellen (de enkel)*:
 [BECOME [UP (*de enkel*)], BY {*zwellen (de enkel)*}]
 'the ankle becomes bulged by swelling'

The particle *op*, then, may express different results, which can generally be characterised as sense extensions of the basic, spatial meaning of *op* 'up, on high'. Note that the SCV classes in (95)b-d contain many more members than the SCVs given here. The particle *op* may, furthermore, express many other results, such as 'accessible' (e.g. *de informatie opvragen* 'lit. up-ask, to ask for/retrieve the information', *het woord opzoeken* 'lit. up-search, to look up the word') and 'together' (*het tafeltje opklappen* 'lit. up-clap, to fold up the table', *de slaapzak oprollen* 'lit. up-roll, to roll up the sleeping bag').

5.5.11 Over 'over, across'

Some classes of SCVs with the particle *over* 'over, across' are given in (100).

- (100) a. *uren overwerken* 'lit. over-work, to work hours overtime' [unergative];
 b. *de brief overlezen* 'lit. over-read, to read the letter again', *het hek overschilderen* 'lit. over-paint, to repaint the fence', *de brief overschrijven* 'lit. over-write, to rewrite/copy the letter', *overstemmen* 'lit. over-vote, to vote again' [transitive or unergative];

- c. *de brief overlezen* 'lit. over-read, to read/glance over/through the letter', *de tekst overkijken* 'lit. over-look, to look/glance over/through the text'⁴⁰, *het Kanaal overzwemmen* 'lit. over-swim, to swim the Channel' [transitive];
- d. *het bericht overbrengen* 'lit. over-carry, to carry over/convey the message', *de melk overgieten (in de mok)* 'lit. over-pour, to pour the milk (into the mug)', *de directeur overhalen* 'lit. over-pull, to persuade the manager', *overlopen (de soldaat)* 'lit. over-walk, to go over/desert (the soldier)' [transitive or unaccusative];
- e. *de melk overgieten* 'lit. over-pour, to pour in too much milk, to spill the milk', *overkoken (de melk)* 'lit. over-boil, to boil over (the milk)' [transitive or unaccusative].

The transitivity properties of the base verb are preserved in the SCVs in (100)a and (100)b, which suggests that the particle *over* functions as a modifier in these SCVs.

In the SCV in (100)a *over* expresses the meaning 'more than intended/agreed'. Since this SCV seems to be the only one in which *over* performs this function, no pattern appears to be involved here (for apparent SCVs with *over* 'too much' such as *overbelichten* 'to overexpose', see section 6.3).

In the SCVs in (100)b *over* expresses the meaning 'again'. I propose the semantic structure in (101) for these SCVs ('OVER' stands for the meaning 'again').

- (101) a. [over-V⁰]_v:
 [V (x), ((y)) {OVER}]
 'to V (NP) again'
- b. *het hek overschilderen*:
 [schilderen (x), (het hek) {OVER}]
 'to paint the fence again'

Over 'again' could have developed out of the path particle 'over Y' (cf. 5.3.4 and below). Support for this hypothesis comes from the fact that the particle *over* may still be classified in both categories in the case of some SCVs (e.g. *overlezen*, cf. (100)b-c). These SCVs, then, can be characterised as 'bridging' SCVs. Such a diachrony would also account for the fact that most SCVs with the particle *over* 'again' are transitive; unergative SCVs like *overstemmen* 'to vote again' appear to be rare. Nevertheless, such unergative SCVs exist, which illustrates that *over* 'again' does not license a participant and, thus, functions as a modifier synchronically.⁴¹

The SCVs in (100)c are transitive, but have either transitive or unergative base verbs. The particle *over*, then, introduces a participant in these SCVs, which implies that it is a resultative particle or a relator particle (cf. Table 5.1). The SCVs in (100)c being telic and some of their base verbs being atelic, *over* cannot be a

⁴⁰ This SCV is not listed in *Van Dale* (1996) with this meaning.

⁴¹ The fact that (i)a below is grammatical does not necessarily imply that *over* 'again' is a resultative predicate. If it did, the adverb *opnieuw* 'again' would also have to be analysed as a resultative predicate, witness the equal grammaticality of (i)b.

(i) a. Dat moet *over*. 'That has to be done again.' (lit. that must again)
 b. Dat moet *opnieuw*. 'That has to be done again.' (lit. that must again)

An analysis of *opnieuw* as a resultative predicate, however, seems to be unlikely (e.g. *het boek opnieuw lezen* does not mean 'to cause the book to become again by reading').

relator 1 particle, since relator 1 particles do not alter the telicity of the verb (cf. Table 5.1). We are left with two options: *over* is either a resultative particle or a relator 2 particle (path particle) in (100)c.

Resultative particles express a change of state/location affecting a Figure, which is syntactically realised as the direct object NP. Analysing *over* in (100)c as a resultative particle, then, would imply that, for instance, *de tekst overkijken* 'to look/glance over/through the text' means that the text ends up being over, and that *het Kanaal overzwemmen* 'to swim the Channel' means that the Channel ends up being over. This, however, is not what is expressed in the SCV constructions in (100)c; these constructions express the fact that the subject referent proceeds OVER/THROUGH THE TEXT and OVER/ACROSS THE CHANNEL while performing the action denoted by the verb. These meanings indicate that the particle and the direct object NP together express the path that is followed by the subject referent, which implies that the direct object referent is the particle's Ground. This is expressed in the semantic structures in (102) ('OVER' stands for the meaning of the particle *over* in this class of SCVs: 'over, through, across').

- (102) a. $[over-V^0]_V$:
 $[GO [(OVER (y)) (x)], BY \{V (x)\}]$
 'to go over Y by V-ing'
- b. *de tekst overkijken*:
 $[GO [(OVER (de tekst)) (x)], BY \{kijken (x)\}]$
 'to go over/through the text by looking'
- c. *het Kanaal overzwemmen*:
 $[GO [(OVER (het Kanaal)) (x)], BY \{zwemmen (x)\}]$
 'to go over/across the Channel by swimming'

Instead then of being the Figure that is affected by a result expressed by the particle, the direct object referent of these constructions is the particle's Ground. This implies that *over* functions as a path particle in the SCVs in (100)c. Since path particles license a Ground participant at LCS, they form transitive SCVs, and since the path expressed by a path particle and its Ground is telic, the SCV constructions that path particles form are also telic (e.g. *hij heeft het Kanaal al twee keer in vijf uur overgezwommen* 'he has swum the Channel twice in five hours already') (see 5.3.4).⁴²

⁴² In addition to selecting the perfect auxiliary *hebben* 'have' (*hij heeft het Kanaal overgezwommen* 'he has swum across the Channel'), *overzwemmen* and similar combinations of *over* and a motion verb may select the auxiliary *zijn* 'be' (*hij is het Kanaal overgezwommen* 'he has swum across the Channel'). The endpoint of the swimming activity is in focus in such unaccusative constructions, whereas the swimming activity itself is in focus in transitive constructions. Such unaccusative constructions cannot be analysed syntactically as containing the SCV *overzwemmen* 'to swim across' (i.e. *het Kanaal [over-zwemmen]_V*), since this would imply *het Kanaal* to be the direct object NP of this SCV, which it cannot be: unaccusative constructions do not contain direct objects. Instead, such constructions contain a postpositional PP and a verb: [*het Kanaal over*]_{PP} *zwemmen* (cf. 4.5 and 5.3.4). Section 7.3.2.3 will show that such PP-V constructions represent the historical source of SCV constructions with path particles.

The SCVs in (100)d and (100)e are either transitive or unaccusative and their base verbs are either transitive or unergative. The particle *over* in (100)d expresses something like 'at the other side, at the destination'. *Het bericht overbrengen* 'to carry over/convey the message', for instance, means that the message ends up being at its destination as a result of the carrying. Similarly, *de melk in de mok overgieten* 'to pour the milk into the mug' means that the milk ends up being in the mug as a result of the pouring, and *de directeur overhalen* 'to persuade the manager' means that the manager figuratively ends up at its destination as a result of the pulling. The particle *over* thus appears to be a resultative particle in these SCVs. The relevant semantic structures are given in (103); 'OVER' refers to the meaning 'at the other side/at the destination'.

- (103) a. $[over-V^0]_{V^0}$:
 [[CAUSE (x), BECOME [OVER (y)]], $BY\{V(x)\}$
 'to cause Y to become at the other side/at its destination by V-ing'
- b. *het bericht overbrengen*:
 [[CAUSE (x), BECOME [OVER (*het bericht*)]], $BY\{brenge(n)\}$
 'to cause the message to become at the other side/at its destination by carrying'
- c. *overlopen (de soldaat)*:
 [BECOME [OVER (*de soldaat*)], $BY\{lopen\}$ (*de soldaat*)]
 'the soldier becomes at the other side by walking'

The analysis of *over* in the SCVs in (100)d as a resultative particle accounts for the transitivity properties of these SCVs (cf. Table 5.1) as well as for the fact that these SCVs are telic (e.g. *hij had het bericht in een kwartier overgebracht* 'he had carried over the message in 15 minutes'). This class contains many more SCVs than the ones give here.

A similar resultative analysis applies to the SCVs in (100)e, in which the particle *over* expresses the result 'over the edge'. This is illustrated in (104).^{43,44}

- (104) a. $[over-V^0]_{V^0}$:
 [[CAUSE (x), BECOME [OVER (y)]], $BY\{V(x)\}$
 'to cause Y to become over the edge by V-ing'
- b. *de melk overgieten*:
 [[CAUSE (x), BECOME [OVER (*de melk*)]], $BY\{gieten\}$ (x)
 'to cause the milk to become over the edge by pouring'
- c. *overkoken (de melk)*:
 [BECOME [OVER (*de melk*)], $BY\{koken\}$ (*de melk*)]
 'the milk becomes over the edge by boiling'

⁴³ A comparison of (100)d and (100)e illustrates that *over* in the SCV *overgieten* may express two different results: 'at the other side/at its destination' (*giet de melk maar over in een andere mok* 'please pour the milk over into another mug') and 'over the edge' (*pas op dat je de melk niet overgiet* 'watch out that you do not pour in too much milk'). As in similar cases (cf. the remarks on *doorbranden* in 5.5.4), the context ensures disambiguation.

⁴⁴ See 5.5.15.3 for SCV constructions such as *dat de emmer overstroomt* 'that the bucket runs over'.

5.5.12 *Toe* 'at, to, closed'

Some classes of SCVs with the particle *toe* 'at, to, closed' are given in (105).

- (105) a. *de winnaar toejuichen* 'lit. to-cheer, to cheer to the winner', *de winnaar toezingen* 'lit. to-sing, to sing to/for the winner', *het kind toelachen* 'lit. to-smile, to smile at the child' [transitive];
 b. *goederen toeleveren* 'lit. to-deliver, to supply goods', *toetreden (nieuwe leden)* 'lit. to-step, to join (new members)', *toestromen (het publiek)* 'lit. to-stream/flow, to come flocking (the audience)' [transitive or unaccusative];
 c. *de gordijnen toedoen* 'lit. to-do, to close the curtains', *de ogen toedrukken* 'lit. to-press, to shut the eyes', *toeslaan (de deur)* 'lit. to-slam, to slam shut (the door)' [transitive or unaccusative].

The SCVs in (105)a are transitive, but contain either a transitive or an unergative base verb. The particle *toe*, then, licenses a participant in these SCVs. This implies that it functions as a resultative particle or as a relator particle. Since, however, the SCVs in (105)a are atelic, *toe* cannot be a resultative particle or a relator 2 particle (path particle, cf. Table 5.1). *Toe* thus functions as a relator 1 particle in these SCVs. It expresses, in combination with its Ground, the direction toward which the action denoted by the verb is oriented. The SCVs in this class fit the pattern in (106), in which 'TO' refers to 'oriented toward' (cf. 5.3.3).

- (106) a. $[toe-V^0]_{V^0}$:
 $[V(x) \{TO(y)\}]$
 'to V oriented toward Y'
 b. *de winnaar toejuichen*:
 $[juichen(x) \{TO(\textit{the winner})\}]$
 'to cheer oriented toward the winner'

The SCVs in (105)b and (105)c are either transitive or unaccusative. In the class of SCVs in (105)b, *toe* expresses the result 'at the destination'. This is illustrated in (107).

- (107) a. $[toe-V^0]_{V^0}$:
 $[[CAUSE(x), BECOME [TO(y)]]], BY \{V(x)\}$
 'to cause Y to become at the destination by V-ing'
 b. *de goederen toeleveren*:
 $[[CAUSE(x), BECOME [TO(\textit{de goederen})]]], BY \{leveren(x)\}$
 'to cause the goods to become at the destination by delivering'
 c. *toestromen (het publiek)*:
 $[BECOME [TO(\textit{het publiek})], BY \{stromen(\textit{het publiek})\}]$
 'the audience becomes at the destination by flocking'

In the SCVs in (105)c *toe* expresses the result 'closed'. This is illustrated in (108).

- (108) a. $[toe-V^0]_{V^0}$:
 $[[CAUSE(x), BECOME [TO(y)]]], BY \{V(x)\}$
 'to cause Y to become closed by V-ing'

- b. *de ogen toedrukken*:
[[CAUSE (x), BECOME [TO (*de ogen*)]], BY {*drukken* (x)}]
'to cause the eyes to become closed by pressing'
- c. *toeslaan (de deur)*:
[BECOME [TO (*de deur*)], BY {*slaan* (*de deur*)}]
'the door becomes closed by slamming'

Especially the first two classes in (105) contain many more SCVs than the ones given here.

It has to be noted that *toe* 'closed' (in contrast to *toe* 'at the destination') may also be used as a phrase instead of a particle. This appears from the copula construction *de deur is toe* 'the door is closed'. *Toe* 'closed', then, exhibits layering (see also 4.5 and 5.6).

A final remark is that like *mee*, *toe* has a postpositional/predicative form instead of a prepositional form (the prepositional form being *tot*, cf. 5.3.3).

5.5.13 *Uit* 'out (of)'

Some semantic subclasses of SCVs with the particle *uit* 'out (of)' are given in (109).

- (109) a. *uitademen* 'lit. out-breathe, to breathe out' [unergative];
b. *de lonen uitbetalen* 'lit. out-pay, to pay out the wages', *eten uitdelen* 'lit. out-share, to hand out/distribute food', *uitlekken (het plan)* 'lit. out-leak, to leak out (the plan)' [transitive or unaccusative];
c. *het picknickkleed uitspreiden* 'lit. out-spread, to spread out the picnic rug', *de zonnebrandcrème uitsmeren* 'lit. out-spread, to spread the sun cream', *uitvloeien (de inkt)* 'lit. out-flow, to flow/spread out (the ink)' [transitive or unaccusative];
d. *groepen mensen uitsluiten* 'lit. out-shut, to shut out groups of people', *de vluchtelingen uitwijzen* 'lit. out-point/show, to expel the refugees', *uitvallen (de deelnemer)* 'lit. out-drop, to drop out (the participant)' [transitive or unaccusative].

The SCV in (109)a being unergative, *uit* appears to function as a modifier with the meaning 'to the outside' in this SCV. Since this SCV seems to be the only one in which *uit* performs this function, no pattern appears to be involved here.

The SCVs in (109)b are either transitive or unaccusative. In other words, these SCV constructions contain a Theme participant. This participant appears to be affected by the change of state/location expressed by the particle *uit* 'out to others': in *de lonen uitbetalen* 'to pay out the wages' the wages go to others, in *eten uitdelen* 'to hand out food' the food goes to others, and in *dat het plan uitlekt* 'that the plan leaks out' the plan goes to others. The particle *uit*, then, functions as a resultative particle in this SCV class, meaning 'out to others'. The semantic structures that I propose for these SCV constructions are given in (110).

- (110) a. [*uit*-V⁰]_v:
[[CAUSE (x), BECOME [OUT (y)]], BY {V (x)}]
'to cause Y to become out to others by V-ing'

According to the second meaning in (113)a, however, *uitgeslapen* is an adjective with the meaning 'wide awake'. This adjective may also occur in unambiguously adjectival positions, such as in *ik voel me uitgeslapen* 'I feel wide awake, rested' (in which the verbal meaning 'to finish sleeping' is not available).

The example in (113)b illustrates that *uitslapen* may also be interpreted as an SCV expressing an activity with the meaning 'to sleep late', and this use seems to be the most frequent one. *Uit* does not express a result in this SCV, but appears to be interpreted as a modifier with the meaning 'late'. It has to be noted, however, that *uitslapen* seems to be the only SCV in which *uit* expresses this meaning.

Some other examples of constructions that contain adjectival participles with *uit* (cf. (113)a, 2) are given in (114) ((114)c is copied from Booij 2004, who found it in a newspaper).

- (114) a. De patiënt is *uitbehandeld*.
the patient is out-treated
'The patient's treatment is finished.'
- b. Jan is eindelijk *uitgestudeerd*.
John is finally out-studied
John has finally finished his studies.'
- c. (...) totdat haar dochter *uitgekleuterd* was
... until her daughter out-toddlered was
'(...) until her daughter had finished being a toddler' (i.e. 'until her daughter had outgrown toddler behaviour')

The constructions in (114) express the state of having finished with or having had enough of the event denoted by the verb. The examples in (115) illustrate that verb-particle combinations such as *uitstuderen* do not behave like genuine SCVs.

- (115) a. ??De arts *behandelde* de patiënt *uit*.
the doctor treated the patient out
'The doctor was finishing the patient's treatment.'
- b. *Jan *studeerde uit*.
John studied out
'John was finishing his studies.'
- c. *Zij *kleuterde uit*.
she toddlered out
'She was finishing being a toddler.'

The ungrammaticality of the constructions in (115) implies that the past participles in (114) are not based on SCVs consisting of the particle *uit* and a verb (e.g. *uit + studeer* > [*uitstudeer*]_{V'} > *uitgestudeerd*). Instead, they appear to be formed by adding the particle *uit* to a past participle form (*uit + gestudeerd*), which results in adjectival participles that combine with the verb *zijn* 'to be'. These adjectival participles express the state of having finished with or having had enough of the event denoted by the verb. It thus appears that the combinations in (114) instantiate the construction in (116)a, cf. (116)b.

- (116) a. [[*uit-V*_{pastptc}]_A *zijn*] 'to have finished with/have had enough of V'
b. [[*uit-gestudeerd*]_A *zijn*] 'to have finished with/have had enough of studying'

The formation of adjectival participle constructions such as (114)a-c appears to be very productive, especially in oral language. Much more can be said about these constructions, but the main point for now is that combinations like *uitbehandelen* do not instantiate regular SCV formation (see also 6.3 and Coppen 2001a, b, who discusses various other properties of participles like *uitbehandeld*).⁴⁵

5.5.14 *Voor* '(be)fore, for'

Some classes of SCVs with the particle *voor* '(be)fore, for' are given in (117) (cf. note 8).

- (117) a. *het gat voorboren* 'lit. for-drill, to rough-drill the hole', *het eten voorverwarmen* 'lit. for-heat, to preheat the food', *voorgloeien (de motor)* 'lit. for-glow, to glow beforehand (the engine)' [transitive or unergative];
 b. *de sonate voorspelen* 'lit. for-play, to play the sonata demonstratively', *de som voorrekenen* 'lit. for-count, to work out the sum demonstratively' [transitive];
 c. *de leerling de sonate voorspelen* 'lit. for-play, to play the sonata to the student', *de student de som voorrekenen* 'lit. for-count, to work out the sum for the student' [ditransitive];
 d. *de klok voorzetten* 'lit. for-put, to put the clock ahead', *de verdachte voorleiden* 'lit. for-bring, to bring up the defendant', *voordringen (de klant)* 'lit. for-push, to push ahead (the customer)' [transitive or unaccusative].

Voor does not alter the transitivity properties of the base verb in the SCVs in (117)a and (117)b, which suggests that it functions as a modifier here. In the SCVs in (117)a, *voor* expresses the meaning 'beforehand' or 'before some other event' (cf. 5.3.2). These SCVs, then, have the semantic structure (118), in which BEFORE refers to the meaning of the particle *voor* in this SCV class: 'before event E/beforehand'.

- (118) a. $[voor-V^0]_{V'}$:
 [V (x), ((y)) {BEFORE}]
 'to V (NP) before event E/beforehand'
 b. *het gat voorboren*:
 [boren (x), (het gat) {BEFORE}]
 'to drill the hole before event E/beforehand'

In the SCVs in (117)b, *voor* expresses the meaning 'demonstratively' (i.e. 'to demonstrate, as an example'), which can be seen as an extension of the meaning 'before event E/beforehand' (cf. 5.3.6). The semantic structure for the SCVs in (117)b is given in (119).

- (119) a. $[voor-V^0]_{V'}$:
 [V (x), (y) {DEMONSTRATIVELY}]
 'to V NP demonstratively'

⁴⁵ In addition to stative past participle forms, infinitival forms with *laten* 'to let' (e.g. *laat haar maar rustig uitkleuteren* 'let her take her time to finish being a toddler, allow her to finish being a toddler at her own pace') appear to be available for these combinations.

- b. *de sonate voorspelen*:
 [spelen (x), (de sonate) {DEMONSTRATIVELY}]
 'to play the sonata demonstratively'

The SCVs in (117)c are similar to those in (117)b, except for the fact that in the SCVs in (117)c the particle *voor* introduces a Ground participant. In combination with this Ground the particle modifies the event denoted by the verb and its arguments. This implies that the particle *voor* functions as a relator 1 in these SCV constructions, which fit the pattern in (120) (cf. Table 5.1).

- (120) a. [voor-V⁰]_V:
 [V (x), (y) {DEMONSTRATIVELY FOR/TO (z)}]
 'to V NP demonstratively for/to Z'
 b. *de leerling de sonate voorspelen*:
 [spelen (x), (de sonate) {DEMONSTRATIVELY TO (de leerling)}]
 'to play the sonata demonstratively to the student'

The only difference between the SCV constructions in (117)b and those in (117)c is that those in (117)c contain an extra participant. This participant is licensed by the particle *voor* at LCS, which is expressed in (120). By classifying the particle *voor* in (117)b as a modifying particle and the particle *voor* in (117)c as a relator particle, we account for just this difference in participant-licensing properties: unlike relators, modifiers do not license a participant.

In the SCV constructions in (117)d, which are either transitive or unaccusative, the particle expresses the result 'forward, ahead'. In *de klok voorzetten* 'to put the clock ahead', for instance, the clock ends up being ahead, and in *dat de klant voordringt* 'that the customer pushes ahead', the customer ends up being ahead. The LCSs that I propose for the SCV constructions in (117)d are given in (121); 'FORWARD' stands for the meaning of the particle *voor* in these SCVs: 'forward, ahead'.

- (121) a. [voor-V⁰]_V:
 [[CAUSE (x), BECOME [FORWARD (y)], BY {V (x)}]
 'to cause Y to become forward/ahead by V-ing'
 b. *de klok voorzetten*:
 [[CAUSE (x), BECOME [FORWARD (de klok)], BY {zetten (x)}]
 'to cause the clock to become ahead by putting'
 c. *de verdachte voorleiden*:
 [[CAUSE (x), BECOME [FORWARD (de verdachte)], BY {leiden (x)}]
 'to cause the defendant to become forward by bringing'
 d. *voordringen (de klant)*:
 [BECOME [FORWARD (de klant)], BY {dringen (de klant)}]
 'the customer becomes ahead by pushing'

Note that (117) lists only a subset of the SCVs that belong to each class.

5.5.15 Further issues

5.5.15.1 SCVs with deadjectival and denominal verbs

It was illustrated in section 5.5.10 that the particle *op* 'up' forms SCVs with deadjectival verbs (e.g. *opfrissen* 'lit. up-fresh, to freshen up'). Other particles that combine with deadjectival verbs are *af* 'down, off', *in* 'in(to)', and *uit* 'out (of)'. Examples of SCVs with these particles and deadjectival verbs are given in (122) (the SCVs in (122)a-b may be used either causatively or inchoatively, cf. (123)a-b below).

- (122) a. $[af-[A]_V^0]_{V'}$: *af-zwakken* 'lit. off-weak, to weaken' (**zwakken*_V)
 b. $[in-[A]_V^0]_{V'}$: *in-dikken* 'lit. in-thick, to thicken' (**dikken*_V)
 c. $[uit-[A]_V^0]_{V'}$: *uit-diepen* 'lit. out-deep, to deepen' (**diepen*_V)

Some particles may combine with denominal verbs. Examples of SCVs with denominal verbs are given in (123).

- (123) a. $[af-[N]_V^0]_{V'}$: *af-beelden* 'lit. off-image, to represent' (**beelden*_V)
 b. $[in-[N]_V^0]_{V'}$: *in-polderen* 'lit. in-polder, to drain, to impolder' (**polderen*_V)
 c. $[op-[N]_V^0]_{V'}$: *op-hopen* 'lit. up-pile, to pile up' (**hopen*_V)
 d. $[uit-[N]_V^0]_{V'}$: *uit-huwelijken* 'lit. out-marriage, to marry off' (**huwelijken*_V)
 e. $[na-[N]_V^0]_{V'}$: *na-apen* 'lit. after-ape, to ape' (**apen*_V)

The particle *op* in *opfrissen* functions as a resultative particle with the meaning 'in a better state', which is a function that *op* may also perform in SCVs with non-converted verbs (e.g. *het zilver oppoetsen* 'lit. up-polish, to polish up the silver', see 5.5.10). The same holds for the other particles that combine with deadjectival/denominal verbs. *Af* in *afzwakken* 'to weaken', for instance, expresses the result 'less in substance/quality', as illustrated in (124)a-b. The same meaning of *af* is present in SCVs such as *afbrokkelen* (*de muur*) 'to crumble off (the wall)' and *het bot afschrappen* 'to scrape off the bone', which do not have a deadjectival verb. This is illustrated in (124)c-d ('OFF' refers to 'less in substance/quality').

- (124) a. $[af-V^0]_{V'}$:
 [[CAUSE (x), BECOME [OFF (y)]], BY {V (x)}]
 'to cause Y to become less in substance/quality by V-ing'
 b. *de lage tonen afzwakken*:
 [[CAUSE (x), BECOME [OFF (*de lage tonen*)]], BY {*zwakken* (x)}]
 'to cause the low tones to become less loud by weakening'
 c. *afzwakken (de wind)*:
 [BECOME [OFF (*de wind*)], BY {*zwakken* (*de wind*)}]
 'the wind becomes less (strong) by weakening'
 d. *afbrokkelen (de muur)*:
 [BECOME [OFF (*de muur*)], BY {*brokkelen* (*de muur*)}]
 'the wall becomes less in substance by crumbling'
 e. *het bot afschrappen*:
 [[CAUSE (x), BECOME [OFF (*het bot*)]], BY {*schrappen* (x)}]
 'to cause the bone to become less in substance by scraping'

The same point is illustrated by *ophopen* 'to pile up', in which *op* means 'together/on a pile': *op* performs the same function in, for example, *opbinden* 'lit. up-bind, to tie up' and *opladen* 'lit. up-load, to pile/heap up', which do not have denominal verbs. Likewise, *na* in *naäpen* 'to ape' means 'after someone, like someone' (cf. section 5.3.6), and the same function of *na* is present in *de man napraten* 'lit. after-talk, to echo the man' and *de dichter navolgen* 'lit. after-follow, to imitate the poet'. I will illustrate in section 8.2.3 that the properties of SCVs with deadjectival and denominal verbs are accounted for by assuming that the verbs in such SCVs are converted adjectives and nouns whose conversion is dependent on the cooccurrence with the particles in question (see also 3.2).

5.5.15.2 SCVs with 'pleonastic' particles

There are many SCVs in which the particle appears to express a meaning that is already present in the meaning of the verb. Some examples of SCVs with such 'pleonastic' particles are given in (125), the first of which has already briefly been discussed in section 5.5.7.

- (125) a. de gegevens *nachecken*
 the data after-check
 'to check (off) the data'
- b. de documenten *uitprinten*
 the files out-print
 'to print out the files'

Although the term "pleonastic particles" suggests otherwise, these particles do contribute meaning to the SCV construction, the SCV and the corresponding base verb not being exact synonyms (cf. Hampe 1997 and McIntyre 2001b: 19-21). These particles also add expressiveness (Hampe 1997).

The formation of SCVs with pleonastic particles appears to be based on existing SCVs in which the particle in question expresses the same meaning but is not pleonastic. In the case of *nachecken*, for instance, the existence of SCVs such as *nazoecken* 'to cause Y to become checked by searching' and *nakijken* 'to cause Y to become checked by looking' appears to have played a role. That is, language users may derive SCV patterns (or templates) such as [*na-V⁰*]_V 'to cause Y to become checked by V-ing' from the semantic and formal correspondences in such existing SCVs. These templates may then be used to form new SCVs such as *nachecken* (see also 8.2.3). This illustrates that the formation of SCVs with so-called pleonastic particles is 'particle-driven': a particular particle (*na*) is linked to a particular semantic component ('checked') and the language user is inclined to mark other verbs that already contain this semantic component also with this particle. The formation of SCVs with pleonastic particles, then, can be seen as a reflection of the tendency to have one form corresponding with one meaning.⁴⁶ What is crucial is that

⁴⁶ Compare derived words such as *UHD-er* 'university head teacher' and *Dominicaner* 'Dominican': despite the fact that the bases of these words (*UHD* = *universitair hoofd-docent*

in order for such particle-driven SCV formation to be possible, the particle in question must have semantic (and/or pragmatic) content. The particle-driven formation of SCVs with pleonastic particles thus illustrates that such particles are indeed meaningful.

Pleonastic particles generally denote results (e.g. 'checked (afterwards)'). Since, however, these results are already implied by the verbal base, pleonastic particles are often reinterpreted as denoting more general results like 'completely done'. As such, these particles highlight the endpoint or completion of the event denoted by the verb, cf. (126).

- (126) a. *de gegevens nachecken*:
na 'checked (afterwards)' (cf. *nazoeken* 'to investigate')
 [[CAUSE (x), BECOME [CHECKED (AFTERWARDS) (*de gegevens*)]],
 BY {*checken* (x)}]
 'to cause the data to become checked (afterwards) by checking'
 > 'to cause the data to become completely done by checking'
- b. *de documenten uitprinten*:
uit 'out of the printer, printed' (cf. *uitdraaien* 'lit. out-screw, to print')
 [[CAUSE (x), BECOME [OUT (*het document*)]], BY {*printen* (x)}]
 'to cause the file to become out of the printer by printing'
 > 'to cause the file to become completely done by printing'

It is striking that SCVs with pleonastic particles appear to occur in all languages that have a productive SCV system. Examples of English SCVs with pleonastic particle are *to check off*, *to abstract away (from X)*, and *to phone up* (note the unacceptability of the Dutch counterpart of this last example: **optelefoneren* 'lit. up-phone'), and examples of Hungarian SCVs with pleonastic particles are *leérzéstelenít* 'to anaesthetise down' and *kiértékel* 'to evaluate out' (Kiss, p.c.). What we see is that (a) all languages with an SCV system have resultative particles, (b) all of these languages have resultative particles that express results that are already implied by the verb's meaning (pleonastic particles), and (c) in all of these languages descriptive grammarians advise against the use of SCVs with pleonastic particles, but such SCVs are nevertheless formed productively.

5.5.15.3 SCVs corresponding to PP-V constructions: Figure vs. Ground

The SCVs in (127) have resultative particles, the meanings of which are indicated at the right-hand side of each example.

'university head teacher' and *Dominicaan* 'Dominican') already contain the semantic component 'person', the denominal suffix *-er*, which forms names of persons belonging to a geographical entity, an institution, or an organisation, is added to these bases. This illustrates that Dutch speakers are inclined to mark the concept 'person' systematically with *-er*, which can also be seen as a reflection of the tendency to have one form corresponding with one meaning (Booij 2002a: 123-124).

- | | | |
|----------|---|--|
| (127) a. | <i>de borden afspoelen</i> | <i>af</i> 'free from' > 'clean' |
| | 'lit. off-rinse, to rinse off the plates' | |
| b. | <i>de borden afdrogen</i> | <i>af</i> 'free from' > 'dry' |
| | 'lit. off-dry, to dry (up) the plates' | |
| c. | <i>de plank afschuren</i> | <i>af</i> 'free from' > 'bold' |
| | 'lit. off-scour, to scour off the plank' | |
| d. | <i>het doekje uitspoelen</i> | <i>uit</i> 'free from' > 'clean' |
| | 'lit. out-rinse, to rinse out the cloth' | |
| e. | <i>de wond uitzuigen</i> | <i>uit</i> 'free from' > 'empty' |
| | 'lit. out-suck, to suck out the wound' | |
| f. | <i>je haar insmeren</i> | <i>in</i> 'full with' > 'covered with' |
| | 'lit. in-smear, to rub one's hair (with...),
to put (...) in one's hair' | |

The LCS that I assume for, for instance, (127)a is (128).

- (128) [[CAUSE (x), BECOME [OFF (*de borden*)]], BY {*spoelen* (x)}]
 'to cause the plates to become clean by rinsing'
 (OFF 'clean')

This LCS indicates that the referent of the direct object NP in the SCV constructions in (127) is the Figure that undergoes the change of state expressed by the particle.

The SCVs in (127) appear to be related to PP-V constructions. The SCV constructions in (127)a, (127)d, and (127)f, for example, appear to be related to the PP-V constructions in (129)a-c.

- | | |
|----------|--|
| (129) a. | het vuil [<i>van</i> de borden <i>af</i>] _{PP} <i>spoelen</i> |
| | the dirt from the plates of rinse |
| | 'to rinse the dirt off the plates' |
| b. | het vuil [<i>uit</i> het doekje] _{PP} <i>spoelen</i> |
| | the dirt out the cloth rinse |
| | 'to rinse the dirt out of the cloth' |
| c. | shampoo [<i>in</i> je haar] _{PP} <i>smeren</i> |
| | shampoo in your hair rub |
| | 'to rub shampoo in one's hair' |

The prepositions in these PP-V constructions license both a Figure (e.g. the referent of *het vuil* 'the dirt' in (129)a) and a Ground (e.g. the referent of *de borden* 'the plates' in (129)a). Unlike prepositions, particles are assumed to be able to license at most one participant (cf. Svenonius 2003a, but see section 5.5.15.4 below for particles that turn out to contradict this assumption). Crucially, the participants that are the Figures of the resultative particles in (127) (e.g. the referent of *de borden* 'the plates' in (127)a) correspond to the Grounds of the prepositions in (129) (e.g. the referent of *de borden* 'the plates' in (129)a). The particles in these SCV constructions can thus be seen as reinterpretations of the corresponding prepositions as change of state predicates. A change of state predicate licenses a participant that is affected by the change it expresses, which is its Figure. The change of state expressed by the particles in (127)a-e is 'free from some substance', whereas that expressed by the particle in (127)f is the reverse, namely 'full with some substance' (as is the case

with other SCVs, this change of state receives a more specific interpretation based on the information provided by the verb and the direct object NP in the respective SCV constructions).

Support for the claim that the particles in the SCV constructions in (127) function as resultative predicates licensing a Figure participant (and not as relators licensing a Ground participant) is provided by the examples in (130). These examples show SCV constructions that are similar to the ones in (127)a, (127)d, and (127)f in the sense that their particles perform the same functions, but do *not* have corresponding PP-V constructions; compare the examples on the right-hand side.

- | | | |
|----------|--|--|
| (130) a. | <i>af</i> 'bold'
<i>het bos afbranden</i> (lit. off-burn)
'to burn off the forest' | <i>*de bomen <u>van</u> het bos af branden</i>
'to burn the trees off the forest' |
| b. | <i>uit</i> 'clean'
<i>de schaar uitkoken</i> (lit. out-cook)
'to scald the scissors' | <i>het vuil *uit/van de schaar koken</i>
'to boil the dirt out of/off the scissors' |
| c. | <i>in</i> 'covered with'
<i>de kinderen insmeren</i> (lit. in-smear)
'to rub the children (with cream),
to put (cream) on the children' | <i>crème *in/op de kinderen smeren</i>
'to put cream in/on the children' |

This suggests that particles such as *af* 'bold' are used to form new SCVs directly, that is, without making reference to the corresponding PP-V construction in which the relevant NP is the Ground of an adposition. Templates such as [*af-V*⁰]_v 'to cause Y to become bold by V-ing' thus appear to be used to form SCVs such as *afbranden* 'to burn off'. The particles in (130), then, function as resultative predicates, and correspondingly license a Figure participant (cf. Svenonius 2003a, who proposes a similar analysis for English constructions similar to (127)a-c, but a different analysis for the Dutch construction in (127)f).

Additional support for the analysis given here comes from similar SCVs in German, such as *den Eimer ausschütten* 'lit. out-pour, to empty the bucket', in which the particle *aus* 'out' functions as a resultative predicate with the meaning 'empty'. The direct object NP in this SCV construction (*den Eimer*) bears accusative case. The corresponding preposition *aus*, however, licenses dative case (cf. Zeller 2001: 220). If *aus* in *den Eimer ausschütten* were a particle that licensed a Ground participant (that is, a relator particle), we would expect this particle to license the same case as the corresponding preposition (cf. the discussion of SCV constructions with the German orienting particles *an* 'at' and *zu* 'to' in section 5.3.3: (*den Jungen*)_{ACC} *anlachen* 'to laugh at the boy' vs. (*dem Jungen*)_{DAT} *zunicken* 'to nod to the boy'). In that case, we would expect the direct object of *ausschütten* to be *dem Eimer* (dative) instead of *den Eimer* (accusative). The fact then that this direct object bears accusative case instead of dative case indicates that *aus* in this SCV functions as a resultative particle, meaning 'empty': SCVs with resultative particles license accusative case (cf. (*die Schuhe*)_{ACC}/*(*den Schuhe*)_{DAT} *einlaufen* 'to wear in the shoes').

Another example of an SCV construction with a resultative particle whose Figure corresponds to the Ground of the preposition in the corresponding PP-V construction is (131)a, which contains the particle *over* 'over the edge' (cf. 5.5.11).

This SCV does not correspond to the PP-V construction in (131)b, but to that in (131)c, in which *de emmer* is the Ground of the preposition *over*.

- (131) a. *dat de emmer overstroomt*
'that the bucket runs over'
- b. **dat de emmer over de rand stroomt* (de emmer = Figure)
'that the bucket runs over its edge'
- c. *dat het water over (de rand van) de emmer stroomt* (de emmer = Ground)
'that the water runs over (the edge of) the bucket'

In SCV constructions like (131)a, in which the direct object NP refers to the container instead of to the substance contained in it, the particle *over* 'over the edge' appears to be reinterpreted as 'too full': *dat de emmer overstroomt* means 'that the bucket becomes too full by pouring'.

5.5.15.4 SCVs with relator particles that license both a Figure and a Ground

It appears that there is another relator function that particles may perform, in addition to the relator 1 function, exemplified in (132)a, and the relator 2 function, exemplified in (132)b.

- (132) a. relator 1 (orienting particle):
het publiek toespreken 'to talk to the audience'
[*spreken* (x) { TO (*het publiek*)}]
'to talk to the audience'
- b. relator 2 (path particle):
de sonate doorspelen 'to play through the sonata'
[GO [(THROUGH (*de sonate*)) (x)], BY {*spelen* (x)}]
'to go through the sonata by playing'

Particles performing the relator 1 function express, in combination with their Ground, a modifier (cf. 5.3.3) and particles performing the relator 2 function express, in combination with their Ground, the change of location (telic path) of the subject referent (cf. 5.3.4). The particles in (132), however, perform another function.

- (133) a. *de manager het document aanreiken* (lit. at-reach)
'to hand the file to the manager'
- b. *de baby een luier omspelden* (lit. around-pin)
'to put a nappy on the baby'
- c. *de keeper de bal toespelen* (lit. to-play)
'to play the ball to the goalkeeper'

The SCV constructions in (133) contain both a direct object (e.g. *het document* in (133)a) and an indirect object (e.g. *de manager* in (133)a). The indirect object is not licensed by the verb (the same holds for the direct object in most of the SCV constructions belonging to this class, see below), compare **de manager reiken* 'to reach the manager', **de baby spelden* 'to pin the baby', and **de keeper spelen* 'to play the keeper'. This suggests that the referents of these indirect objects are licensed

by the particle at LCS. The English translations of the examples in (133) illustrate that these referents are the Ground participants of the particles: in (133)a the file goes to the manager, in (133)b the nappy goes around the baby, and in (133)c the ball goes to the goalkeeper. The particles in (133), then, license a Ground participant; these particles function as relators.

It was noted above, however, that these particles do neither have the function of the relator 1 particle in (132)a, nor that of the relator 2 particle in (132)b. That is, *aan de manager* 'to the manager' in (133)a does not indicate the direction of the activity denoted by the verb (cf. (132)a) or some other modifier of this activity, and does not indicate the path that is followed by the subject referent (cf. (132)b) either. Instead, *aan de manager* denotes the change of location of the direct object referent: the file goes 'to the manager'. Similarly, in (133)b the nappy comes around the baby, and in (133)c the ball goes to the goalkeeper. These relator particles, then, denote, in combination with their Ground participant, the change of location of the direct object referent. This is expressed in the LCSs in (14).⁴⁷ 'TO' in (14)a and (14)c refers to the meaning of the particles *aan* and *toe* in this SCV class ('to'), and 'AROUND' in (14)b refers to the meaning of the particle *om* in this SCV class ('around').

- (134) a. [[CAUSE (x), BECOME [(TO (*de manager*)) (*het document*)]], BY {*reiken* (x)}]
 'to cause the file to become to the manager by reaching'
 b. [[CAUSE (x), BECOME [(AROUND (*de baby*)) (*de luijer*)]], BY {*spelden* (x)}]
 'to cause the nappy to become around the baby by pinning'
 c. [[CAUSE (x), BECOME [(TO (*de keeper*)) (*de bal*)]], BY {*spelen* (x)}]
 'to cause the ball to become to the goalkeeper by playing'

These LCSs indicate that both the referent of the indirect object NP and that of the direct object NP are licensed by the particle. This accounts for the fact that many SCVs with this type of relator particle contain unergative verbs: **het document reiken* 'to reach the file' and **een luijer spelden* 'to pin a nappy'. I thus claim that the particles in (133)a-c license two participants: a Figure and a Ground. This is illustrated in (135)a-c.

(135)	<i>Figure</i>	<i>particle</i>	<i>Ground</i>
a.	the file	to	the manager
b.	the nappy	around	the baby
c.	the ball	to	the goalkeeper

The particles in (133) appear to contradict the assumption that particles may license at most one participant (as opposed to prepositions, cf. Svenonius 2003a). Because of their exceptional participant-licensing properties I will label these relator 3 particles *double-participant particles*. It is striking that double-participant particles do not seem to exist in Germanic VO languages such as English. Chapter 9 will present a possible explanation for this difference among the Germanic languages.

⁴⁷ See the remarks under (3) in 5.2 and note 5 in 5.2 for more on the BECOME predicate in this LCS.

Constructions like (133) may contain both a direct object and an indirect object, but the indirect object may also be left implicit, which results in the constructions in (136).

- (136) a. *het document aanreiken* (lit. at-reach)
'to pass the file'
b. *een luijer omspelden* (lit. around-pin)
'to put on a nappy'
c. *de bal toespelen* (lit. at-play)
'to play the ball'

In these constructions, *aan* means 'to someone', *om* means 'around someone', and *toe* means 'to someone'. This suggests that these constructions have the semantic structures in (137), in which 'TO' refers to the meaning of *aan* and *toe* in this class of SCVs ('to someone') and 'AROUND' refers to the meaning of *om* in this class of SCVs ('around someone').

- (137) a. [[CAUSE (x), BECOME [TO (*het document*)]], BY {*reiken* (x)}]
'to cause the file to become to someone by reaching'
b. [[CAUSE (x), BECOME [AROUND (*de luijer*)]], BY {*spelden* (x)}]
'to cause the nappy to become around someone by pinning'
c. [[CAUSE (x), BECOME [TO (*de bal*)]], BY {*spelen* (x)}]
'to cause the ball to become to someone by playing'

The semantic structures in (137) indicate that the particles in (136) only license a Figure participant, and this Figure participant undergoes a change of state/location expressed by the particle. The particles in (136), then, function as resultative particles.

The SCV constructions in (133) differ from those in (136) in terms of the presence vs. absence of the Ground participant. It is exactly this difference that is accounted for by classifying the particles in (133) as relator particles and the particles in (136) as resultative particles: relator particles license a Ground participant, but resultative particles do not do so (cf. (134)-(137)).

Additional examples of SCVs with double-participant particles are *iemand iets aansmeren* 'lit. at-smear, to palm something off on someone', *iemand iets influisteren* 'lit. in-whisper, to whisper something in someone's ear', *iemand een touw ombinden* 'lit. around-tie, to tie a rope around someone', *iemand iets toeschuiven* 'lit. at-slide, to push something over to someone' and *iemand iets toedienen* 'lit. at-serve, to administer something to someone'.⁴⁸

⁴⁸ SCVs like *aanreiken* contrast with SCVs like *voorzingen* in (*de kinderen*) *het liedje voorzingen* 'to sing the song demonstratively (to the children)' (cf. 5.3.6), in which the direct object referent is licensed by the verb, and the particle and its Ground do not express a change of state/location affecting this referent (which does not proceed along a path). The differences between the two types of SCV are accounted for by assuming that *voor* in *voorzingen* expresses, in combination with its Ground, a modifier (thus being a relator 1 particle, cf. the discussion of *de spelers aanwijzingen toeroepen* 'to call out instructions to the players' in

5.5.15.5 Stative SCVs with predicative particles

Some constructions with stative SCVs are given in (138).

- (138) a. *onder* 'under water':
 1. *lang onderblijven (de duiker)*
 long under-stay (the diver)
 'to stay under (the water) for a long time (the diver)'
 2. *iemand lang onderhouden*
 someone long under-hold
 'to keep someone under (water) for a long time'
- b. *op* 'up, in the air':
een streng wol ophouden
 a skein wool up-hold
 'to hold up a skein of wool'
- c. *over* 'over the edge' + extension:
overhellen (het schip)
 over-slope (the ship)
 'to lean over (the ship)'

The meanings of *onder*, *op*, and *over* in (138) are similar to the meanings these particles express in non-stative SCVs, in which these particles function as resultative predicates (cf. 5.5.9, 5.5.10, and 5.5.11). As they do in these non-stative SCVs, the particles in (138) denote predicates that affect the direct object referent (in the transitive constructions) or the subject referent (in the intransitive constructions). In (138)a, for instance, THE DIVER/SOMEONE IS UNDER ('under water') and in (138)b, THE SKEIN OF WOOL IS UP (in the air). The verbs in the SCVs in (138), however, do not express a process, but express a state (e.g. *blijven* 'to stay, remain', *houden* 'to hold, keep'). The effect of this is that the particles in (138) do not denote a *change of state/location* that affects a participant and results from the *event* expressed by the verb, but denote a *state/location* of a participant that is maintained by the *state* expressed by the verb.

Since the particles in (138) function as predicates, they license a Figure participant. This means that the participant-licensing properties of these SCVs are similar to those of SCVs with resultative particles. But whereas SCVs with

5.3.3) and that *aan* in *aanreiken* expresses, in combination with its Ground, a result (thus being a double-participant particle). This is illustrated in (i)a-b.

- (i) a. *de kinderen het liedje voorzingen*
 'to sing the song demonstratively to the children'
 [zingen (x), (het liedje) {DEMONSTRATIVELY (TO (de kinderen))}]
- b. *de manager het document aanreiken*
 'to cause the file to become to the manager by reaching'
 [[CAUSE (x), BECOME [(TO (de manager)) (het document)], BY {reiken (x)}]

This classification accounts for the lexical-aspectual differences between the two types of SCV construction: whereas SCV constructions with relator 1 particles inherit the lexical-aspectual properties of the base (thus being \pm telic), SCV constructions with relator 3 particles are necessarily telic. (Cf. the discussion of the two functions of the adverb *boven* 'upstairs' (locational modifier vs. resultative predicate) in 5.5.6.)

resultative particles are either transitive or unaccusative (cf. 5.2), stative SCVs with a predicative particle may also be unergative (e.g. *overhellen* 'to lean over').⁴⁹ Due to their stativity the lexical-aspectual properties of stative SCV constructions with predicative particles are also different from those of SCVs with resultative particles: stative constructions cannot be telic. It has to be noted that stative SCVs with predicative particles are not very frequent.

5.5.15.6 *The distribution of the semantic content of SCVs among the particle and the verb*

Especially in SCVs with resultative particles, the verb may have a very general, 'light verb-like' meaning (e.g. 'go' or 'make'). This is for instance the case in the SCVs in (139).

- (139) a. *dat de vraag afneemt* 'that demand slackens' (lit. off-take)
af 'down', *nemen* interpreted as 'go'
 b. *dat de bal doorschoot* 'that the ball shot through' (lit. through-shoot)
door 'on to the next point', *schieten* interpreted as 'go'
 c. *dat Jan de snelheid opvoert* 'that John raises the pace' (lit. up-carry)
op 'higher', *voeren* interpreted as 'make/drive/push'

The particles appear to express the lexical-semantic core in the SCVs in (139). This can be related to the semantic structures of these SCV constructions, given in (140).

- (140) Resultative LCS:
 a. unaccusative: [BECOME [W (x)], BY {V (x)}]
 b. transitive: [[CAUSE (x), BECOME [W (y)]], BY {V (x)}]

The particle ("W") is part of the core predication ('X becomes W' or 'X causes Y to become W'), whereas the verb appears as a manner/means modifier ('by V-ing') in the LCSs in (140). The particle and the verb thus have an unequal status in the LCS, the particle being dominant.

The semantic dominance of the particle over the verb is also apparent from the different SCVs formed with a verb like *vallen* 'to fall', some of which are given in (141). The semantic constant that can be attributed to *vallen* across these SCVs is no more than a very general directed motion/change component, the specific content of which is filled in by the semantics of the particle (cf. Booij 2002a: 208).

- (141) *aanvallen* 'lit. at-fall, to attack', *afvallen* 'lit. off-fall, to drop out', *invallen* 'lit. in-fall, to come in, to invade', *meevallen* 'lit. with-fall, to turn out better than expected', *omvallen* 'lit. down-fall, to fall down', *toevallen* 'lit. to-fall, to come into the possession of', *uitvallen* 'lit. out-fall, to drop out', *voorvallen* 'lit. for-fall, to occur'

⁴⁹ Stative SCVs with predicative particles are unergative if their base verb is unergative. Otherwise, they are transitive (e.g. *onderhouden* 'to keep under') or unaccusative (e.g. *onderblijven* 'to stay under').

The particle-driven character of SCV formation (cf. 5.5.15.2 and 8.2.3) can also be related to the semantic dominance of particles over verbs in SCVs.

5.5.16 To conclude

The data discussion in this section illustrates that the classification of particles proposed in the sections 5.2 through 5.4 is effective and insightful. According to this classification, particles function as (mostly resultative) predicates, modifiers, relators, or Aktionsart markers (marking continuation or inception), and these different functions have been shown to instantiate clear-cut categories. In particular, the different particle functions account for the divergent argument-structural and lexical-aspectual properties of SCV constructions.

The data also illustrate that SCVs are indeed generally both compositional and conventionalised (cf. 4.2). That is, SCVs fall into semantic classes in which a specific particle contributes a specific meaning, but this meaning is usually not available outside the SCV construction. The particle *af*, for instance, may express the meaning *af* 'away' (in *de gewonden afvoeren* 'to move away the injured', *afbuigen (de weg)* 'to bear off (the road)', etc., cf. 5.5.3), the particle *op* may express the meaning 'bulged' (in *de ballon opblazen* 'to blow up the balloon', *het luchtbed oppompen* 'to inflate the airbed', etc., cf. 5.5.10), and the particle *uit* may express the meaning 'spread/stretched out' (in *het picknickkleed uitspreiden* 'to spread out the picnic rug', *de zonnebrandcrème uitsmeren* 'to spread the sun cream', etc., cf. 5.5.13). These meanings, however, are not available when *af*, *op*, and *uit* are used outside the SCV construction. In other words, they are construction-specific; conventionalised.

It has to be noted that most of the semantic classes of SCVs distinguished in the subsections of 5.5 contain many more SCVs than the ones given there. Most particles (especially *aan* 'at, to', *af* 'down, off', *in* 'in(to)', *op* 'up, on high', and *uit* 'out (of)') may furthermore express many other results, forming many other classes of SCVs in which these particles function as resultative predicates (with, in general, extended meanings). The SCVs given in 5.5, then, constitute only a small subset of the SCVs formed with these particles. This also appears from (142), which gives the numbers of SCV entries per particle that are listed in the *Van Dale* (1996) dictionary, from which I took the data discussed in the previous sections.

- (142) *aan* 'at, to' (205), *af* 'down, off' (330), *door* 'through, on' (109), *in* 'in(to)' (213), *mee* 'along, with' (40), *na* 'after, behind' (59), *om* 'around, down' (98), *onder* 'under, below' (20), *op* 'up, on high' (270), *over* 'over, across' (73), *toe* 'at, to, closed' (83), *uit* 'out (of)' (315), *voor* '(be)fore, for' (55)

Van Dale (1996) gives in total 1870 entries for SCVs with the thirteen particles discussed in 5.5.

We have seen that the particle of a particular SCV form may perform more than one function (e.g. *door* in *doorbranden* 'lit. through-burn', see 5.5.4), as a consequence of which such SCVs may have various argument structures and various lexical-aspectual structures. In concrete SCV constructions, however, the function of the particle is not ambiguous, compare *het vuur heeft urenlang doorgebrand* 'the fire

continued burning for hours' (continuative particle) and *het touw was doorgebrand* 'the rope was burnt in two' (resultative particle). Crucially, the two SCVs *doorbranden* 'to continue burning' and *doorbranden* 'to burn in two' are listed under one entry *doorbranden* (which, however, lists the separate meanings) in a dictionary. This single SCV entry thus represents two functions of the particle *door*, and the same holds for many entries of SCVs with other particles.^{50, 51}

It appears that the majority of Dutch SCVs have a resultative particle. This may account for the fact that analyses of SCVs tend to disregard non-resultative particles, such as modifier particles and relator particles: most analyses only discuss resultative particles.^{52, 53} We have seen, however, that SCVs with non-resultative particles are far from marginal; these SCVs constitute a non-negligible part of the SCV system. Chapter 7 will illustrate that the recognition of this part of the SCV system throws new light on the diachrony of SCVs.

The thirteen particles in (142) seem to exhibit large differences in terms of the proportion of the SCVs they form that has a resultative particle. There are particles like *af*, *op*, and *uit*, all of which occur in about 300 SCV entries in *Van Dale* (1996), as indicated in (142). These three particles almost exclusively function as resultative particles; they function as modifiers or relators in only a few SCVs. The same appears to hold for the particle *in*, occurring in well over 200 SCV entries, and for the particle *onder*, occurring in only 20 SCVs. The particles *na*, *mee*, *toe*, and *voor*, on the other hand, appear to function more often as non-resultative particles than as resultative particles. *Mee*, *na*, and *voor* often function as modifiers (cf. 5.5.6, 5.5.7, and 5.5.14), and *toe* often functions as a relator (cf. 5.5.12 and 5.5.15.4). It is my impression that the particle *door* forms about as many SCVs in which it functions as a resultative particle as it forms SCVs in which it functions as a non-resultative particle. The particles *om* and *over*, finally, seem to function as resultative particles

⁵⁰ The different functions of a particular particle may instantiate either polysemy or homonymy. The resultative functions of *op* 'up(wards)' (*de bal opgooien* 'to throw the ball up(wards)') and *op* 'together on a pile' (*de bagage opbinden* 'to tie up the luggage'), for instance, are related through polysemy, but the orienting function of *toe* 'toward y' (*het publiek toespreken* 'to talk to the audience') and the resultative function of *toe* 'closed' (*de ogen toedrukken* 'to shut the eyes') instantiate homonymy. Two resultative functions may also be related to one another through homonymy, e.g. *op* 'used up' (*de melk opdrinken* 'to drink up the milk') and *op* 'bulged' (*de ballon opblazen* 'to blow up the balloon').

⁵¹ Dictionaries may also list combinations that are actually not SCVs. *Van Dale* (1996), for instance, lists some combinations of postpositions and verbs as SCVs, such as *inrijden* 'to drive into', giving the example *hij is het water ~ 'he has driven into the water'*. I have illustrated in section 4.5 that constructions such as *het water in rijden* are PP-V constructions (*[het water in]_{pp} rijden*) instead of SCV constructions (*het water [inrijden]_v*), and that such PP-V constructions can be distinguished from SCV constructions on various grounds (since postposition-verb combinations such as *inrijden* 'to drive into' are not SCVs, they are not included in the numbers in (142)).

⁵² Important exceptions are Lüdeling (2001) and Stiebels (1996), both of which discuss German SCVs, and the work of Andrew McIntyre (2001a, 2002, 2003, 2004), which discusses German and English SCVs.

⁵³ Another factor that appears to play a role here is that not all non-resultative particle types are represented in all languages that have an SCV system (see section 9.3).

in about two thirds of the SCVs they form. These approximate numbers illustrate that non-resultative particles constitute a category that should be taken into account in analysing the SCV system.

Table 5.2 in appendix 1 gives an overview of the particle functions that have been distinguished in this chapter. In addition to the particle functions discussed in the sections 5.2 and 5.3 (cf. Table 5.1 in appendix 1) this table contains the relator 3 function discussed in section 5.5.15.4 and the stative predicative function discussed in section 5.5.15.5.

5.6 Morphosyntactic properties of SCVs: additional data

It was illustrated in section 4.3 that particles can generally not be used in topicalisation, modification, and copula constructions. Nevertheless, SCVs with these particles are compositional and can be formed productively. Another property of SCVs is that particles are separated from the verb by Verb Second movement (V2) and (optionally) in the verb cluster (e.g. *op wilde zoeken* 'wanted to look up'). Particles may also occur along with the verb in the verb cluster (*wilde opzoeken* 'wanted to look up'), and furthermore occur along with the verb in the progressive *aan het*-construction (*Jan is het woord aan het opzoeken* 'John is looking up the word'). We have seen that these properties of SCVs are accounted for if we analyse particles as non-projecting words that form a phrase with the verb: $[X-V^0]_V$ (section 4.5).

This section provides additional data to illustrate these morphosyntactic properties of SCVs. I will present only particle topicalisation data and data in which particles show up in the copula construction (which will appear to be ungrammatical), and no data instantiating particle modification. This is because examples with modifiers that unambiguously modify the particle (semantically) are difficult to find. The modifiers *hard* 'hard/firmly', *recht* 'straight', and *netjes* 'neatly' in the constructions in (143), for example, can be said to modify the SCVs *opblazen*, *aanstaren*, and *omvouwen* instead of the particles *op*, *aan*, and *om* (cf. 4.3.1).

(143) Particle modification

- | | | |
|----|--|--------------------------------------|
| a. | de ballon <u>hard</u> <i>opblazen</i> | 'to blow up the balloon hard/firmly' |
| b. | de actrice <u>recht</u> <i>aanstaren</i> | 'to gaze straight at the actress' |
| c. | de zoom <u>netjes</u> <i>omvouwen</i> | 'to fold over the hem neatly' |

Because of the difficulty in finding data in which modifiers unambiguously modify the particle (which are expected to be ungrammatical), modification data will not be discussed any further in this section.

The examples in (144)-(145) contain SCVs with resultative particles (see 5.5) and illustrate that these particles cannot undergo topicalisation (144) and cannot be used in the copula construction (145).

(144) Particle topicalisation

- a. *de kerstspullen afprijzen* 'to reduce the Christmas stuff':
*Maar *af* heb ik de kerstspullen niet *geprijsd*.
'But I have not reduced the Christmas stuff.'
- b. *de boot omdopen* 'to rename the boat':
*Maar *om* hebben we de boot niet *gedoopt*.
'But we did not rename the boat.'
- c. *de vluchtelingen uitwijzen* 'to expel the refugees':
*Maar *uit* heeft de minister de vluchtelingen niet *gewezen*.
'But the minister did not expel the refugees.'
- d. *toetreden (de nieuwe leden)* 'to join (the new members)':
*Maar *toe* zijn de nieuwe leden niet *getreden*.
'But the new members did not join.'

(145) Copula construction

- a. *de boeken doorverkopen* 'to resell the books (to a third party)':
*De boeken zijn *door*.
'The books are through.'
- b. *de klok voorzetten* 'to put the clock ahead':
*De klok is *voor*.⁵⁴
'The clock is ahead.'
- c. *het zilver oppoetsen* 'to polish up the silver':
*Het zilver is *op*.
'The silver is polished up.'
- d. *het baken omvaren* 'to run (sail) over the beacon':
*Het baken is *om*.
'The beacon is over.'

The impossibility of appearing in these constructions turns out to hold for resultative particles in general (and also for non-resultative particles, see below). Resultative phrases such as *oranje* 'to paint the fence orange', however, may appear in these constructions without any problems. This is illustrated in (146).

- (146) a. Maar *oranje* heeft Jan het hek niet geverfd.
'But John did not paint the fence orange.'
- b. Het hek is *oranje*.
'The fence is orange.'

The failure of particles to appear in these constructions can thus be attributed to their non-projecting status.

⁵⁴ The grammaticality of the sentences in (i) might, at first sight, seem to provide counterevidence to the claim that the particle *voor* 'ahead' cannot be used in the copula construction.

- (i) a. *De klok loopt voor*. 'The clock is fast/ahead.'
b. *De klok staat voor*. 'The clock is fast/ahead.'

These examples, however, contain the SCVs *voorlopen* 'lit. for-run, to be fast/ahead' and *voorstaan* 'lit. for-stand, to be fast/ahead', their verbal bases having undergone verb second movement. The grammaticality of these sentences, then, does not imply that *voor* 'ahead' can be used in the copula construction.

The examples in (147)-(148) contain similar examples of SCVs with non-resultative particles (see 5.5).

(147) Particle topicalisation

- a. *het gat voorboren* 'to rough-drill the hole':
*Maar *voor* heeft Jan het gat niet *geboord*.
'But John did not rough-drill the hole.'
- b. *de winnaar toejuichen* 'to cheer at the winner':
*Maar *toe* hebben we de winnaar niet *gejuicht*.
'But we did not cheer at the winner.'
- c. *uren doorfietsen* 'to continue cycling for hours':
*Maar *door* hebben we niet uren *gefietst*.
'But we did not continue cycling for hours.'
- d. *het verhaal meelesen* 'to read the story together':
*Maar *mee* heeft hij het verhaal niet *gelesen*.
'But he did not read the story together.'

(148) Copula construction

- a. *de stukken doorwerken* 'to plough through the documents':
*De stukken zijn *door*.
'The documents are through.'
- b. *de film nabespreken* 'to discuss the film afterwards':
*De film is *na*.
'The film is afterwards.'
- c. *de actrice aanstaren* 'to gaze at the actress':
*De actrice is *aan*.
'The actress is at.'
- d. *het hek overschilderen* 'to paint the fence again':
*Het hek is *over*.
'The fence is over.'

Since non-resultative particles do not function as resultative predicates, the failure of these particles to be used in copula constructions can not only be attributed to their non-projecting status, but also to their semantic properties (that is, to the fact that there is no predicative relation between these particles and the referents of the direct object NPs of the SCV constructions). The failure of such particles to appear in topicalisation constructions, however, must be due to their non-projecting status. This appears from the fact that semantically similar phrases, such as the modifiers *van tevoren* 'beforehand' and *naderhand* 'afterwards', do allow such constructions, as illustrated in (149)a-(150)a; (149)b-(150)b illustrates the failure of the corresponding particles to undergo topicalisation.

- (149) a. Maar *van tevoren* moet je de groenten even koken.
'But beforehand you have to cook the vegetables for a while.'
- b. *Maar *voor* moet je de groenten even *koken*.
'But beforehand you have to cook the vegetables for a while.'
- (150) a. Maar *naderhand* hebben we de film niet meer besproken.
'But afterwards we have not discussed the film anymore.'

- b. *Maar *na* hebben we de film niet meer *besproken*.
'But afterwards we have not discussed the film anymore.'

In sum, neither resultative particles, nor non-resultative particles participate in topicalisation and copula constructions, which can be attributed to the fact that particles are not phrases, but non-projecting words. Although I have illustrated the impossibility of using particles in these XP constructions with only a small subset of the functions they perform (e.g. only the resultative functions *af* 'down' in (144)a, *om* 'changed' in (144)b, *om* 'down, over' in (145)d, and *toe* 'at the destination' in (145)d, the modifying function *voor* 'before' in (147)a, and the orienting function *toe* 'to' in (147)b), this generalisation holds for the vast majority of the particle functions that are present in the 1870 SCVs listed in *Van Dale* (1996).

It was noted in section 4.5, however, that there are a few resultative predicates that may, in addition to being realised as a particle, be realised as a phrase (XP) (e.g. *af* 'finished'). Particles being grammaticalised phrases (see chapter 7), such elements can be said to exhibit *layering*, which is the coexistence of older and newer forms (see 2.3). As a consequence of their dual structural status such elements may show up both in typical XP positions and in typical particle positions. They may thus be topicalised and be used in the copula construction (= XP positions, (151)-(152)), but they may also appear along with the verb in the verb cluster and after *aan het* in the progressive *aan het*-construction (= particle positions, (153)-(154)).

(151) Topicalisation

- a. *af* 'finished':
Maar *af* heeft Jan zijn huiswerk niet *gemaakt*.
'But John did not finish his homework.'
- b. *op* 'used up':
Maar *op* heeft Jan de taart niet *gegeten*.
'But John did not eat up the cake.'
- c. *aan* 'working/burning':
Maar *aan* heeft Jan de radio niet *gezet*.
'But John did not turn on the radio.'

(152) Copula construction

- a. Het huiswerk is *af*.
'The homework is finished.'
- b. De taart is *op*.
'The cake is finished.'
- c. De radio is *aan*.
'The radio is on.'

(153) Verb cluster construction

- a. dat Jan zijn huiswerk niet wilde *afmaken*
'that John did not want to finish his homework'
- b. dat Jan de taart niet wilde *opeten*
'that John did not want to eat up the cake'
- c. dat Jan de radio niet wilde *aanzetten*
'that John did not want to turn on the radio'

'up/on high/in the air' cannot be used in the copula construction in other contexts, as illustrated in (156)b-c.⁵⁵

- (156) b. *de tafel optillen* 'to lift up the table':
 *De tafel is *op*.
 'The table is up/on high.'
 c. *opstuiven (het zand)* 'to bank up (the sand)':
 *Het zand is *op*.
 'The sand is up/in the air.'

So although the particle *op* 'up, in the air' may in the context of the rising of the sun also function as an XP, this is not the case for the particle *op* 'up, in the air' in general (which, like other particles, is a non-projecting word). The same holds for the particle *onder* 'under, down' in *ondergaan* 'lit. under-go, to set (the sun)'

What we see is that the SCVs with particles that exhibit layering constitute a small minority of the Dutch SCVs. The resultative particle *af*, for example, may express many different results, all of which form large numbers of SCVs, and none of these SCVs has a particle that exhibits layering. The only exceptions are the SCVs with *af* 'finished' and *af* 'off one's head' (cf. (151-152)a-(155)c). In the vast majority of the SCVs with *af*, then, *af* does not exhibit layering, and the same holds for SCVs with other particles. The data discussed in this section are thus accounted for by positing the SCV structure in (157), and by positing layering for a small subset of the particles.

- (157) [X-V⁰]_V

This structure accounts for the distributional differences between particles and semantically similar phrases: unlike such phrases, particles cannot be used in topicalisation and copula constructions. Particles furthermore differ from such phrases in that they usually have construction-specific meanings, which are not available outside the SCV construction (cf. the meanings of the SCVs discussed in 5.5). I will come back to these two properties of particles in chapter 8.

⁵⁵ Similar facts hold for *in*, *uit*, and *over* in constructions like *de bal was in/uit/over* 'the ball was in/out of play/over the goal', which are specific to the domain of sports. The elements *in*, *uit*, and *over* in this construction may form SCVs with verbs like *slaan* 'to strike' and *schieten* 'shoot'. Importantly, the particles *in* 'within the boundaries', *uit* 'outside the boundaries', and *over* 'across the boundaries' may not generally be used as phrases (cf. *de vluchtelingen uitwijzen* 'to expel the refugees' - **de vluchtelingen zijn uit* 'the refugees are out', see (144)c above and section 5.5.13). Instead, the phrasal use of these elements appears to be restricted to their specific use in the domain of sports (which may be related to the very frequent and specific use of PP constructions such as *de bal uit het veld slaan* 'to strike out the ball, to strike the ball outside the boundaries of the playing field' in this domain).

5.7 Summary

Particles may perform various functions in the LCS of the SCV construction, such as that of modifier, relator, or resultative predicate. These different functions correspond to different participant-licensing properties, as a consequence of which SCVs with these particles have divergent argument-structural properties: SCVs may be transitive, unergative, or unaccusative. The different particle functions also lead to SCVs having different lexical-aspectual properties: they may be telic or atelic. These divergent argument-structural and lexical-aspectual properties of SCVs, however, are not unpredictable, but follow from the function their particles perform (sections 5.2 and 5.3).

Notwithstanding their divergent semantic properties, all SCVs behave the same syntactically. That is, all SCVs form, with their arguments, a simple clause, taking a single subject. Similarly, all SCVs are syntactically separable, but form a syntactic unit in constructions like the progressive *aan het*-construction. The fact that SCVs behave as syntactic units illustrates that they are structurally different from combinations of a phrase (e.g. a resultative phrase) and a verb. This structural difference also appears from the fact that particles, unlike phrases, are generally excluded from topicalisation, modification, and copula constructions. The semantic diversity of SCVs in combination with their morphosyntactic uniformity suggests that we should allow for non-isomorphism in the semantics-syntax mapping (section 5.4).

The merits of the semantic analysis of SCVs proposed in the sections 5.2 through 5.4 were illustrated in section 5.5 by discussing additional data. It turned out that SCVs can indeed effectively and insightfully be classified according to this analysis, which accounts for the divergent argument-structural and lexical-aspectual properties of SCVs. It furthermore appeared that SCVs are usually both compositional and conventionalised (as claimed in chapter 4): the particles in the SCV classes discussed in section 5.5 generally express meanings that are specific to the SCV construction.

Section 5.6 presented topicalisation and copula construction data. These data illustrated that particles do generally not participate in these constructions. It was shown in chapter 4 that this can be accounted for by analysing SCVs as consisting of a non-projecting word and a verb. There are a few particles that may also be used as phrases, and chapter 7 will illustrate that the synchronic dual structure of this small set of particles can be related to their diachrony. First, however, chapter 6 will discuss the semantic properties of inseparable complex verbs (ICVs), which consist of a prefix (instead of a particle) and a verb, as well as the restrictions on the cooccurrence of particles and prefixes.

ICVs and other prefixed verbs

6.1 Introduction

The previous chapter discussed the semantics of SCVs with particles that formally correspond to prepositions and/or postpositions, such as *door* 'through', *op* 'up', and *toe* 'to, at'. Dutch also has prefixes that are formally similar to prepositions and/or postpositions, such as *door-* 'through' and *over-* 'over'. These prefixes form Inseparable Complex Verbs (ICVs), examples of which are given in (1) (cf. (7) and (10) in chapter 1).

- (1) a. *het huis doorzóeken* 'to search the house' (through-search)
b. *het land overspóelen* 'to wash over the land' (over-wash)

ICVs are morphologically complex words consisting of a prefix (also called an ICV preverb) and a verbal head: [prefix-V⁰]_v⁰.

It has been hypothesised in previous work that ICVs with prefixes such as *door-* and *over-* are diachronically related to SCVs with the corresponding particles, ICVs representing a stage beyond that of SCVs in the grammaticalisation of constructions with resultative phrases. Both SCVs and ICVs, then, have been hypothesised to be historically related to syntactic constructions with resultative secondary predicates (cf. 3.6.1). It was shown in chapter 5, however, that SCV particles may perform both resultative and non-resultative functions, and this will, in chapter 7, lead to an alternative hypothesis about the diachrony of SCVs. The first part of the current chapter (section 6.2) will investigate the semantics of ICVs. The central question in this section will be whether, as implied by the original diachronic hypothesis, ICV prefixes indeed generally function as resultative predicates, or whether they also have non-resultative functions (and if so, which non-resultative functions). We will see that the answer to this question sheds light on the diachrony of both SCVs and ICVs.

Section 6.2 will focus on the semantics of ICVs, which I have defined as verbs with prefixes that correspond to prepositions and/or postpositions (see section 1.1). I will thus leave aside verbs with prefixes such as *be-*, *ver-*, and *ont-* in this section. This is because my central concern is with the semantic similarities and differences between separable and inseparable complex verbs with formally similar preverbs (e.g. the SCV *dóorlezen* 'to read through' and the ICV *doorzóeken* 'to search') and the implications thereof for our assumptions about the diachronic relationship between such formally similar SCVs and ICVs.

Section 6.3 will discuss verbs that at first sight seem to be SCVs or ICVs, but by a closer look turn out not to qualify as such. Their specific behaviour will be

related to their source: these verbs appear to be back formations of adjectives and nouns.

ICVs with prefixes such as *be-*, *ver-*, and *ont-* will be discussed in section 6.4, which focuses on the possible and impossible cooccurrences of particles, prefixes, and resultative and modifier phrases within a single VP. It will be argued that the semantic and morphosyntactic analysis of SCVs and ICVs proposed in this study provides an effective account of the possible and the impossible cooccurrences of these elements.

Section 6.5 will summarise the results of the chapter.

6.2 The semantics of ICVs

6.2.1 ICVs with productive prefixes

There are only three Dutch prefixes that formally correspond to adpositions (prepositions and/or postpositions) and productively form ICVs: *door-* 'through', *om-* 'around', and *over-* 'over' (productivity being defined as the possibility to form new ICVs in a systematic way, i.e. by actualising some form-meaning systematicity). An examination of the compositional ICVs with these prefixes in *Van Dale* (1996) shows that in most cases, the prefix expresses a path in combination with the referent of the direct object NP. These prefixes are thus semantically similar to the path particles discussed in section 5.3.4. Some examples of ICVs with path prefixes are given in (2).

(2)	ICV	gloss	meaning
	het huis <i>doorzöeken</i>	through-search	'to search (through) the house'
	het kasteel <i>omgéven</i>	around-give	'to surround the castle'
	het land <i>overspöelen</i>	over-wash	'to wash over the land'

There is no predicative relation between the prefixes and the direct object referents in these ICV constructions: the copula constructions in (3) below do not capture the intended meanings (cf. 5.2 and 5.3).

- (3) a. dat Jan het hele huis *doorzöekt*
 that John the whole house through-searches
 'that John searches the whole house'
 *THE WHOLE HOUSE IS THROUGH
- b. dat de slotgracht het kasteel *omgéeft*
 that the castle-moat the castle surrounds
 'that the castle-moat surrounds the castle'
 *THE CASTLE IS AROUND
- c. dat de rivier het land *overspöelt*
 that the rivier the land over-washes
 'that the river washes over the land'
 *THE LAND IS OVER

It is thus not the case that, in (3)a, the house ends up being THROUGH, which means that *door-* does not express a change of state affecting the house. Instead, the construction expresses the fact that John moves THROUGH THE WHOLE HOUSE. Similarly, the result of *dat de rivier het land overspóelt* in (3)c is not that THE LAND IS OVER, but is that the river comes OVER THE LAND. This illustrates that the prefixes in (2)-(3) do not express resultative predicates that affect the referent of the direct object NP. The direct object NPs in (3), then, are not the conceptual Figures of the prefixes, but are their Grounds. It thus appears that these prefixes are conceptualised as relators that license a Ground participant and express, in combination with this Ground, the telic path of the subject referent. In other words, these prefixes function as path preverbs (relator 2 preverbs). The semantic structure of the ICVs in (3) can be represented as in (4) (cf. (33)-(34) in 5.3.4).¹

- (4) [GO [(THROUGH/AROUND/OVER (y)) (x)], BY {V (x)}]
- a. dat Jan het hele huis *doorzóekt*
'that John searches the whole house'
[GO [(THROUGH (y)) (x)], BY {V (x)}]
[GO [(THROUGH (*het hele huis*)) (*Jan*)], BY {zoeken (*Jan*)}]
- b. dat de slotgracht het kasteel *omgéeft*
'that the castle-moat surrounds the castle'
[GO [(AROUND (y)) (x)], BY {V (x)}]
[GO [(AROUND (*het kasteel*)) (*de slotgracht*)], BY {geven (*de slotgracht*)}]
- c. dat de rivier het land *overspóelt*
'that the river washes over the land'
[GO [(OVER (y)) (x)], BY {V (x)}]
[GO [(OVER (*het land*) (*de rivier*)], BY {spoelen (*de rivier*)}]

Path preverbs are not conceptualised as change of state predicates. It was noticed in section 5.3.4, however, that constructions with path preverbs do express results: they express the change of location of the subject referent. The result of the event expressed in (4)a, for instance, is that John has gone THROUGH THE WHOLE HOUSE. The result in such path constructions, then, is expressed by the path preverb in combination with its Ground participant and is predicated of the subject referent.

Path preverbs combine with both transitive and intransitive bases, and since they license a Ground participant (which is realised as the direct object of the construction), path preverbs form transitive ICVs. If the base verb is transitive and licenses a participant that cannot be the Ground of the prefix, this participant is suppressed or demoted to a PP. This is illustrated in (5): (5)a, (5)b, and (5)c are fine, but (5)d is not (cf. Yumoto 1997: 190 for similar data with the English prefix *over-*).

- (5) a. dat Jan wapens *zoekt*
'that John searches weapons'

¹ Like the semantic structures for SCV constructions given in the previous chapter, the semantic structures for ICV constructions given in this chapter serve to indicate the semantic patterns in ICVs with a particular preverb (or with particular preverbs), and do not in themselves make any claims about the lexical representation of ICVs (cf. 5.3.2).

- b. dat Jan het huis *doorzóekt*
'that John searches the house'
- c. dat Jan het huis *doorzóekt* op wapens
'that John searches the house for weapons'
- d. *dat Jan wapens het huis *doorzóekt*
'that John searches the house weapons'

The examples in (2)-(4) illustrate that ICV preverbs may have spatial meanings and that they do not generally have less lexical content than SCV preverbs, contrary to what may be hypothesised on the basis of the literature on grammaticalisation phenomena in general (cf. section 2.3 and 3.6.1, see also 7.2). We will see below, however, that the semantics of SCVs with path preverbs and ICVs with path preverbs differs in other respects.

All 31 compositional ICVs with *door-* in *Van Dale* (1996), listed in appendix 2, express paths that extend completely through the direct object participant (which is the Ground of the prefix). The path involves actual motion in most of these ICVs, although the base verb is not a motion verb in all cases (it is, for instance, not a motion verb in *doorzóeken* 'to search'). The path may also be more abstract.² Other examples of ICVs with *door-* are *doorlôpen* 'to walk/go through completely' and *doorzien* 'to see through completely' (cf. Haeseryn et al. 1997: 616, de Vries 1975: 137).

In all 48 compositional ICVs with *om-* 'around', the prefix expresses a path of the subject referent extending completely around the direct object referent, which is the Ground of *om-* (cf. (3)b above). Some examples are *omstúwen* 'to crowd around completely', *omringen* 'to surround completely', and *omgrénzen* 'to enclose, fence in' (see appendix 2, cf. Haeseryn et al. 1997: 622, de Vries 1975: 140). These examples show that ICVs with *om-* may have a nominal base. These ICVs may, furthermore, have a stative reading that is derived from an eventive reading: *omgéven* 'to surround' in (3)b does not express that the castle-moat is coming around the castle, but that it is lying (being) around it.³

The prefix *over-* 'over, across' has a path function in most ICVs (in 49 out of 62 compositional ICVs), expressing the literal/figurative path of the subject referent extending completely over/above the direct object referent, which is the Ground of *over-* (cf. *het land overspóelen* 'to wash over the land' in (3)c). Here, too, the path can be concrete, involving actual motion (*het land overspóelen* 'to wash over the land completely'), or more abstract (*het probleem overdenken* 'to think over the problem completely') (cf. de Vries 1975: 142-143). Some of these ICVs have a stative reading instead of an eventive reading. This is for instance the case with the

² We have seen that abstract paths may also be expressed by SCVs with path particles. Examples are *het boek dóorlezen* 'to read through the book', *het boek dóorkijken* 'to look through the book' and *de sonate dóorspelen* 'to play through the sonata'.

³ Whether the path expressed in a construction with a path preverb is *going*, *coming*, or *being* around (or through or over) the Ground participant seems to follow from the semantic properties of the base verb: [+dynamic,+volitional] verbs form [+dynamic,+volitional] paths (*going*), [+dynamic,-volitional] verbs form [+dynamic,-volitional] paths (*coming*), and [-dynamic] verbs form [-dynamic] paths (*being*).

ICV in (6). This example also illustrates that ICVs with *over-* may have a nominal base.

- (6) dat de weg de rivier *overbrúgt*
 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), which is more or less prominently present (cf. *overbieden* 'to overbid, outbid', *overtróeven* 'to overtrump, outdo'). This meaning can be seen as an interpretation of the path in contexts where *x* and *y* in the semantic structure (cf. (4)c above) refer to entities of the same kind: in that case, the path of *x* over *y* is interpreted as involving a comparison between *x* and *y*. This is illustrated in (7).

- (7) a. Jans geluk *overstráalde* zijn vioolspel.
 John's luck over-shined his violin play
 'John's luck shined over his violin play.'
 b. Maries roem *overstráalt* die van haar collega.
 Mary's fame over-shines that of her colleague
 'Mary's fame far outshines that of her colleague.'

The construction in (7)a conceptualises the (stative, figurative) path of John's luck over his violin play, and that in (7)b conceptualises the path of Mary's fame over that of her colleague. The latter path involves two entities of the same kind (Mary's fame and the fame of her colleague), which results in this path being interpreted as a comparison between these two entities. This brings about the meaning according to which Mary's fame exceeds that of her colleague. The exceeding interpretation, then, can be seen as a concrete instantiation of the general semantic scheme, given in (4)c above, which is the effect of a so-called rule of inference (cf. Jackendoff 1990, chapters 5-6, 1997a: 17-18).

A second, quantificational (or degree) function, 'more than *y* can stand, too much for *y*', has developed from the path function 'over *y*' (cf. Haeseryn et al. 1997: 625, de Vries 1975: 143; as noted above, the path function 'over *y*' may in concrete instantiations be interpreted as 'exceeding *y*'). Examples of ICVs in which *over-* performs this quantificational function are given in (8).

- (8) a. De vloeistof *overprikkel*t de zenuwen.
 the liquid over-stimulates the nerves
 'The liquid over-stimulates the nerves, the liquid stimulates the nerves more than they can stand.'
 b. Jan *overvóedt* de puppies.
 John over-feeds the puppies
 'John overfeeds the puppies, John feeds the puppies more than they can stand.'

In (8)a, the liquid does not come over the nerves (nor does it exceed the nerves), but stimulates the nerves more than they can stand. Similarly, in (8)b, John does not come over the puppies (nor exceed the puppies), but feeds the puppies more than

they can stand. When performing this quantificational function, *over-* also licenses a Ground participant *y*. But instead of conceptualising, in combination with its Ground, a (literal or figurative) path, quantificational *over-* conceptualises, in combination with its Ground, a modifier. The semantic structure for ICVs with this prefix is given in (9) (cf. the semantic structures for SCVs with *voor* and *na* in (50) in section 5.3.6).

- (9) [V (x) {MORE THAN (y) CAN STAND / TOO MUCH FOR (y)}]

This structure illustrates that the quantificational prefix *over-* licenses a participant *y*, thus forming transitive ICVs. All 13 ICVs with this prefix are, indeed, transitive.⁴ The Ground participant licensed by the prefix may be coreferential with the subject referent, in which case the Ground is syntactically realised as a reflexive. This is the case in the ICVs in (10), all three of which are obligatorily reflexive.⁵

- (10) a. dat Jan *zich overéet*
that John himself over-eats
'that John overeats, that John eats more than he can stand'
b. dat Jan *zich overtilt*
that John himself over-lifts
'that John lifts too much, that John lifts more than he can stand'
c. dat Jan *zich overwérkt*
that John himself over-works
'that John overworks (himself), that John works more than he can stand'

As has been mentioned above for the path prefixes, the participant-licensing property of quantificational *over-* may also lead to the suppression of the Theme participant that is licensed by the verbal base. That is, the participant that is the Ground of *over-* must be syntactically realised as the direct object, and if the base verb is transitive and licenses a Theme participant that cannot be the Ground of *over-*, this Theme is suppressed or demoted to a PP. This is, for instance, the case in (11).⁶

⁴ This fact would be unaccounted for if ICVs with this prefix were assumed to have the semantic structure in (i).

(i) [V (x), (y) {TOO MUCH}]

As in the case of SCV constructions with path particles, the participant that is licensed by the preverb may also be licensed by the verb in isolation: *de puppies voeden* 'to feed the puppies' (cf. note 15 in 5.3.4).

⁵ De Vries (1975: 144) claims that similar reflexive ICVs with *over-* may be formed with other verbs, resulting in, e.g., *zich overjagen* 'to over-rush (oneself)', *zich overspannen* 'to overstrain (oneself)', and *zich overpákken* 'to overtake (oneself)', all of which are unknown to me. Van Dale (1996) only gives the three reflexive ICVs listed here. Some of the ICVs given by de Vries might be back formations of adjectives, compare (i) (cf. (13) below and 6.3).

(i) a. *overspannen zijn* 'to be overstrained, overworked'
b. **?Ik overspánde me.* 'I overstrained.'

⁶ Cf. Yumoto (1997: 190-191) on the English prefix *over-* and the same construction in English (*John overate (*apples)*), which lacks a reflexive.

- (11) *dat Jan zich appels *overéet*
 that John himself apples over-eats
 'that John overeats apples'

The same quantificational function is present in the ICV in (12), which may license either a participant that is coreferential with the subject referent, resulting in a reflexive in the syntactic structure ((12)a), or another participant ((12)b).

- (12) a. Je moet *je* niet *overháasten*.
 you must you not over-rush
 'You should not rush yourself; you should not rush yourself more than you can stand.'
 b. We moeten *hem* niet *overháasten*.
 we must him not over-rush
 'We must not rush him; we must not rush him more than he can stand.'

The two functions of *over-* are closely related to one another, but can be clearly distinguished in concrete ICV constructions. A prefix-verb combination in which *over-* may have either of the two functions is given in (13) (where Q-function stands for the quantificational function).

- (13) a. path function: De brug *overspánt* de rivier.
 the bridge over-strains the river
 'The bridge spans the river.'
 [GO [(OVER (*de rivier*)) (*de brug*)], BY {*spannen (de brug)*}]
 b. Q-function: Jan *overspánt* de boog.
 John over-strains the bow
 'John overbends the bow.'
 [*spannen (Jan), (de boog)* {TOO MUCH FOR (*de boog*)}]

In (13)a, *over-* conceptualises, in combination with its Ground, the (stative) path of the bridge OVER THE RIVER, whereas in (13)b, it conceptualises, in combination with its Ground, the quantificational modifier TOO MUCH FOR THE BOW OR MORE THAN THE BOW CAN STAND. This example illustrates that *over-* unambiguously performs only one of the two functions in a particular construction, and that especially the properties of the direct object referent, which is licensed by *over-*, are informative with respect to the function *over-* performs in a particular construction. So although the two functions of the prefix *over-* are closely related to one another, they can be distinguished by their different participant-licensing properties, which argue for different semantic structures.⁷

It is striking that Slavic prefixes similar to the Dutch prefix *over-* show the same combination of functions: these prefixes, too, have both a path function and a quantificational function (Filip 2003, p.c.).⁸ I noted above that these two functions may be diachronically related to one another.

⁷ Yumoto (1997: 185-193), however, posits one single LCS for the two functions of the English prefix *over-*.

⁸ A difference between the Slavic prefixes and the Dutch prefixes is that Slavic prefixes always express quantification (and never express paths) when combined with verbs that are

The Dutch example in (14) illustrates that a sentence with the quantificational prefix *over-* and a Theme that is licensed by the verb, which is demoted to a PP, may be ambiguous: *over-* quantifies either this Theme (reading 1), or the event denoted by the verb and this Theme (reading 2).

- (14) De mannen *overlâden* het schip met hout.
 the men overload the ship with wood
 'The men overload the ship with wood.'
 reading 1: 'The men load *more wood* than the ship can stand.'
 reading 2: 'The men load the ship with wood *more* than it can stand.'

Slavic prefixes are also similar to Dutch *over-* in this respect (Filip p.c.).

In addition to the 13 ICVs with quantificational *over-* there are six apparent ICVs in which *over-* performs a similar function. These verbs are listed in (15).

- (15) *overbelasten* 'to overload', *overbelichten* 'to overexpose', *overbemesten* 'to overfertilise, to top-dress', *overcompenseren* 'to overcompensate', *oververhitten* 'to overheat', *overwaarden* 'to overvalue'

Section 6.3 will show that these verbs behave differently from ICVs in general.

The prefix *over-*, then, performs one of two non-resultative functions in the 62 compositional ICVs with this prefix: it functions as a path prefix ('to go completely over *y* by V', which may be extended to 'to exceed *y* by/in V') or as a quantificational prefix ('to V more than *y* can stand, to V too much for *y*').

To sum up the results of this section so far, productively used ICV preverbs are generally conceptualised as relators that, in combination with the Ground participant they license, express a telic path that is followed by the subject referent. The prefix *over-* may also, in combination with its Ground, be conceptualised as a modifier with the quantificational meaning 'more than *y* can stand'. Since these prefixes license a Ground participant, they form transitive ICVs. It thus appears that all productively used ICV preverbs have non-resultative functions. The ICV system is very different from the SCV system in this respect; the majority of SCVs have a resultative preverb (cf. 5.5.16).⁹

not inherent verbs of motion (cf. Filip 2003), whereas Dutch prefixes may express paths in such cases (e.g. *het land overspóelen* 'to wash over the land', *het huis doorzóeken* 'to search the house').

⁹ There are three ICVs with non-existent bases in which the prefix *over-* seems to function as a resultative predicate with the meaning 'at the other side', as it does in SCVs like *óverbrenge*n 'to carry over' and *óverhalen* 'to persuade' (cf. 5.5.11). These ICVs are *overhândigen* 'to hand over' (**handigen* is related to *hand* 'hand'), *overréden* 'to persuade' (**reden* is related to Middle Dutch *reden* 'to reason, speak'), and *overtúigen* 'to persuade' (**tuigen* is related to Middle Dutch *tugen* 'to testify'). Like SCVs such as *óverbrenge*n, these ICVs appear to express the meaning 'to cause Y to become at the other side by V-ing' (the etymology of **tuigen*, however, reveals that *overtúigen* originally had a different meaning, cf. appendix 2, note 3). These three ICVs with non-existent bases are the only ones in which the prefix *over-* performs this resultative function, and we cannot form new ICVs with the prefix *over-* 'at the other side'. Contrary then to what is the case for the particle *over*, the prefix *over-* does not productively form complex predicates in which it performs a resultative function.

An important question is whether there is a systematic semantic difference that correlates with the difference in separability between SCVs and ICVs with path preverbs. There is indeed such a difference: whereas the path expressed by an SCV is one-directional (to be visualised as a line), the path expressed by an ICV is multidirectional (extending from one point into multiple directions). To see this, compare the SCV and ICV constructions in (16).

- (16) a. SCV: *de sonate dóorspelen*
 'to play through the sonata'
 ICV: *het huis doorzóeken*
 'to search the house, to search through the house completely'
- b. SCV: *de brief óverlezen*
 'to read over/through the letter'
 ICV: *de situatie overzien*
 'to survey the situation, to see completely over the situation'

The paths conceptualised by the SCV constructions in (16) (i.e. the paths of the subject referents through the sonata and over/through the letter) could be visualised as lines through/over these Grounds. Conversely, the paths conceptualised in the ICV constructions in (16) (extending completely through the house and over the situation) do not represent such lines, but are multidirectional. That is, the subject referents following these paths call at every spot in/on the Grounds, the ICV constructions expressing the extension of the paths through/over the whole substance or surface of these Grounds.¹⁰

Such complete-extension interpretations also distinguish ICV constructions from constructions with locative PPs, with which ICVs may alternate (thus showing the locative alternation), as illustrated in (17)-(18).¹¹

- (17) a. PP: *dat Jan water [over de rozen]_{PP} giet*
 that John water over the roses pours
 'that John pours water over the roses'

¹⁰ In both the SCVs and the ICVs, the path is an incremental path (Dowty 1991): we can monitor the progression of the event by looking at the progression of the subject referent along the path through/over the direct object referent.

¹¹ Both ICVs and SCVs with path preverbs may have a *met*-PP, such as the ICVs in (17)b-(18)b (and the SCV in *de buis dóorspoelen met water* 'to flush the pipe with water'). Such constructions contain three participants: the Agent (initiator of the event), which is realised as the subject NP, the Figure moving along the path through/around/over the Ground, which is realised as the NP in the *met*-PP, and the Ground, which is realised as the direct object NP. It is thus the NP in the *met*-PP, and not the subject NP, that refers to the Figure following the path in such constructions. Since, however, the subject NP refers to this Figure in the majority of the constructions with path preverbs, which contain only two participants, I refer to the path expressed in constructions with path preverbs in general as *the path followed by the referent of the subject NP*. The important property common to all constructions with path preverbs is that, irrespective of the presence of a third participant, the Ground is syntactically realised as the direct object NP, so that the path extends through/around/over the referent of this NP.

- b. ICV: dat Jan de rozen *overgiet* met water
that John the roses over-pours with water
'that John suffuses the roses with water'
- (18) a. PP: dat Jan kleden [*om* het beeld]_{pp} *hangt*
that John garments around the statue hangs
'that John hangs garments around/over the statue'
- b. ICV: dat Jan het beeld *omhángt* 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 (17)b-(18)b 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 (17)a-(18)a (cf. Booij 1992 on Dutch prefixes and Stiebels 1996: 105 on German prefixes). In the ICVs with path preverbs under discussion here, this 'complete affectedness' 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. ICV constructions with the quantificational preverb *over-* also express the complete affectedness of the direct object (cf. the examples in (8) above). ICVs, then, generally have 'holistic' meanings.

Despite this semantic difference, however, the alternating constructions in (17)-(18) describe similar events. That is to say, the semantic relation between the referent of a path preverb 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. We thus see that the results of the events expressed in (19)a and (19)b below are similar: water has come OVER THE ROSES. By contrast, the semantic relation between the referent of a resultative preverb and the participant it licenses is different: this is a predicate-Figure relation. The result of the event in (19)c is, correspondingly, not that something has come OVER THE ROSES, but that THE ROSES ARE OVER 'at the other side'.

- (19) a. path preverb: dat Jan de rozen *overgiet* met water
that John the roses over-pours with water
'that John suffuses the roses with water'
- b. PP: dat Jan water [*over* de rozen]_{pp} *giet*
that John water over the roses pours
'that John pours water over the roses'
- c. result. preverb: dat Jan de rozen *óverpoot* (naar een andere plaats)
that John the roses over-plants (to another location)
'that John transplants the roses (to another location)'

This semantic similarity between path preverbs and prepositions is accounted for in an analysis according to which path preverbs function as relators that license a

Ground at LCS (cf. 5.3.4, see also Dewell 1996 and Stiebels 1996: 103 on the German prefixes/particles *durch* 'through' and *über* 'over').

In sum, all productively used ICV preverbs function as relators, licensing a Ground participant. Most of these preverbs express a path in combination with this Ground (*door-*, *om-*, and *over-*), but *over-* may also express a modifier with quantificational meaning in combination with its Ground. Productively used ICV preverbs, then, do not function as resultative predicates. The next subsection will briefly discuss those ICV preverbs that do not show any productive patterns.

6.2.2 ICVs with unproductive prefixes

There are four other prefixes corresponding to prepositions and/or postpositions, but these appear not to form ICVs in a productive way (that is, by actualising some form-meaning systematicity).

The prefix *onder-* 'under' is present in 43 ICVs in *Van Dale* (1996) (listed in appendix 2). There is, however, generally no systematic semantic difference that corresponds with the formal difference between the ICV with *onder-* and the base verb. If a semantic contribution can be assessed for *onder-*, it is usually present in only one or two ICVs and we cannot form new ICVs in which *onder-* expresses this meaning (cf. Haeseryn et al. 1997: 623, de Vries 1975: 147).

Those meanings of *onder-* that we can assess are generally non-resultative. A path meaning, for instance, referring to the complete extension of the subject referent under the direct object referent, is present in *ondergráven* 'to undermine'. *Onder-* may also express a modifier with various meanings, such as 'from under the direct object referent' (*onderstéunen* 'to support') or 'halfway, amid the process of, intermediately' (*onderbréken* 'to interrupt'). But as noted in the previous paragraph, each function is present in only one or two ICVs.

Onder- has a resultative function in two ICVs, the meaning of which can be paraphrased as 'to cause Y to become under something by V-ing': *het volk onderdrukken* 'to oppress the people' and *het volk onderwérpen* 'to subject the people' ('to cause the people to become under one's authority/power by pressing/throwing'). This function of *onder-* only occurs in these two ICVs, but occurs frequently in SCVs, such as *iemand ónderduwen* 'to push someone under (water)' and *de baby ónderdekken* 'to tuck in the baby' (cf. 5.5.9). The resultative preverb *onder-/onder*, then, does not systematically form ICVs, but does systematically form SCVs (cf. note 9).

Van Dale gives seven verbs with *onder-* 'too little for y', but only one of these verbs qualifies as a genuine ICV. That is, the finite forms of only one of these verbs, *onderschátten* 'to underestimate', may appear in V2 position non-separately. The other six combinations with *onder-* 'too little for y' are given in (20).

- (20) *onderbelichten* 'to underexpose', *onderbetalen* 'to underpay', *onderkoelen* 'to supercool', *onderverdelen* 'to subdivide', *onderverhuren* 'to sublet, to sublease', *onderwaarderen* 'to undervalue'

I will illustrate in section 6.3 that these combinations do not behave as ICVs (nor as SCVs). In contrast then to what is the case for the prefix *over-* (cf. (8) in 6.2.1), the

prefix *onder-* does not systematically form ICVs in which it has a quantificational function.¹²

In short, there are quite a few ICVs with *onder-*, but most of these are non-compositional in the sense that there is no systematicity in the semantic contribution of *onder-* in these ICVs. With Haeseryn et al. (1997: 623) and de Vries (1975: 147-149) I conclude that there are no productive patterns among the ICVs with *onder-*.

There are three other prefixes that formally correspond to prepositions and/or postpositions, but these occur in only a few ICVs: *aan-* 'at, to' (occurring in three ICVs in Van Dale 1996), *achter-* 'behind, after' (occurring in two ICVs), and *voor-* '(be)fore, for' (occurring in six ICVs).¹³ All of these ICVs are listed in (21).

- (21) a. *aanbidden* 'lit. at-pray, to worship, to adore', *aanschouwen* 'lit. at-inspect/survey, to behold, to observe', *aanvaard* 'lit. at-**vaarden*, to accept, to agree, to begin, to set out on'
- b. *achterhalen* 'lit. after/behind-fetch, to recover, to find out', *achtervólg* 'lit. after-follow 'to pursue, to chase after, to follow'
- c. *voorkómen* 'lit. for-come, to prevent', *vooronderstellen* 'lit. for-suppose, to presuppose', *voorspéllen* 'lit. for-spell, to predict', *voorvóelen* 'lit. for-feel 'to sense beforehand', *voorzégg* 'lit. for-say, to predict', *voorzien* 'lit. for-see, to foresee'¹⁴

All prefixes in (21) of which the function can be assessed are non-resultative; these prefixes qualify as orienting preverbs (*aanbidden*, *aanschouwen*, cf. 5.3.5) or modifying preverbs (*voorkómen*, *vooronderstellen*, *voorspéllen*, *voorvóelen*, *voorzégg*, *voorzien*, cf. 5.3.2, and also *achterhalen* and *achtervólg*, in which *achter* has, respectively, the modifier functions 'from behind' and 'at the backside, afterward').¹⁵ Since the prefixes *aan-*, *achter-*, and *voor-* only occur in a few ICVs and new ICVs with these prefixes are not formed productively (cf. Haeseryn et al. 1997: 611-612, 629, de Vries 1975: 151-152), no conclusions can be drawn with respect to the semantics of the ICV system on the basis of the ICVs with these prefixes.

¹² De Vries (1975: 153) notices that a new productive type of ICV with the prefix *onder-* 'too little for y' might develop under the influence of the prefix *over-* 'too much for y', semantically opposing this productively used prefix.

¹³ *Achter-/achter* does not form part of the set of thirteen preverbs investigated in this book (no SCVs with *achter* were investigated).

¹⁴ Throughout this book I gloss the preverb *voor* as 'for', although in some cases 'fore' might seem to be a more appropriate gloss. See note 8 in chapter 5 for the motivation behind this choice.

¹⁵ *Vooronderstellen*, which contains two prefixes (*voor-* and *onder-*), will be discussed in 6.3.

6.2.3 Summary

The investigation of the semantics of the ICV system has shown that productively used ICV preverbs do not function as resultative predicates. The three productive ICV preverbs *door-* 'through', *om-* 'around', and *over-* 'over' function as path preverbs: these prefixes express, in combination with their conceptual Ground, a multidirectional path followed by the subject referent and extending completely through/around/over this Ground (which is syntactically realised as the direct object referent). These path preverbs generally have spatial meanings. In addition to expressing this path function, the prefix *over-* may also express a quantificational modifier in combination with its Ground.

The data show that the ICV system is semantically very different from the SCV system: whereas SCVs have either resultative or non-resultative preverbs, ICVs do not have (productively used) resultative preverbs at all. This implies that SCV preverbs may license either Figure participant or a Ground participant, but that ICV preverbs generally license a Ground participant. These synchronic semantic differences between the SCV system and the ICV system lead me to propose that resultative and non-resultative preverbs follow a different diachrony (chapter 7).

6.3 Apparent SCVs/ICVs: back formations

Van Dale (1996) lists six verbs with one of the two quantificational preverbs *onder-* 'under' and *over-* 'over' followed by one of the two preverbs *be-* and *ver-*. *Onder-* and *over-* are stressed in these verbs and conceptualise, in combination with their Ground participant, a modifier with the meaning 'too little for y' (in the case of *onder-*) or 'too much for y' (in the case of *over-*, cf. 6.2.1). The fact that *onder-* and *over-* are stressed in these verbs seems to suggest that they are SCVs. The relevant verbs are, provided with accents to indicate their stress pattern, listed in (22) (cf. appendix 3a).¹⁶

- (22) a. *ónderbelichten* 'to underexpose', *ónderbetàlen* 'to underpay'
 b. *óverbelàsten* 'to overload', *óverbelichten* 'to overexpose', *óverbemèsten* 'to over-fertilise, to top-dress', *óververhitten* 'to overheat'

Despite their stress pattern, however, the verbs in (22) do not qualify as SCVs. This appears from the general impossibility of splitting these verbs in clauses with V2, which is illustrated in (23).

¹⁶ For some speakers, the stress pattern of (some of) these verbs seems to be the reverse of what is indicated in (22) (and in some other examples in this section), e.g. *ónderbelichten* instead of *ónderbelichten*. What is relevant to the discussion here, however, is that the first syllable of these verbs receives stress in both patterns (secondary stress in the first pattern and primary stress in the second pattern), so that these verbs exhibit the desired trochaic alternation of stressed and unstressed syllables. These verbs differ from ICVs with the preverbs *onder-* and *over-* in this respect.

- (23) a. *??De directeur *betaalde* zijn personeel *onder*.
 the manager paid his employees under
 'The manager underpaid his employees.'
 b. *??Jan *belichtte* de foto *over*.
 John exposed the picture over
 'John overexposed the picture.'

One might suggest that these verbs should be analysed as ICVs instead of SCVs. In that case, their stress pattern and their (in-)separability properties do not correlate, as opposed to what is the case for SCVs and ICVs in general. It was illustrated in section 6.2.1 that the preverb *over-* 'too much for *y*' occurs, indeed, frequently in ICVs, such as *de zenuwen overprikkelen* 'to over-stimulate the nerves'. It does not occur in SCVs (the preverb *onder-* 'too little for *y*', however, forms neither ICVs (cf. 6.2.2), nor SCVs in a productive way).

If we analyse the verbs in (22) as ICVs, their stress pattern could be accounted for by the generalisation that a sequence of unstressed syllables at the beginning of a word is highly dispreferred in Dutch (Booij 2001, Schultink 1975). Words containing both one of the prefixes *onder-* and *over-* and one of the prefixes *be-* and *ver-* contain such a sequence, and in order to avoid the dispreferred prosodic structure, the (alleged) prefixes *onder-* and *over-* are assigned rhythmic stress. This leads to the stress on the second syllable of the base being reduced to secondary stress, so that we achieve the desired trochaic alternations of stressed and unstressed syllables: *ónderbetàlen*, *óverbelichten* (see also note 16).

Support for the claim that the stress on *onder-/over-* is related to the tendency to avoid a sequence of unstressed syllables at the beginning of a word is provided by the following: *onder-* and *over-* also receive stress in verbs such as *ónderwaardèren* 'to undervalue' and *óvercompensèren* 'to overcompensate', which consist of the quantificational preverbs *onder-* and *over-* and a non-prefixed verb with an unstressed first syllable (*waardèren*, *compensèren*), but *onder-* and *over-* cannot be separated from the verb under V2 in these verbs either. This is illustrated in (24).

- (24) a. *Hij *waardeerde* zijn zoon *onder*.
 he valued his son under
 'He underappreciated his son.'
 b. *Zij *compenseerde* het tekort *over*.
 she compensated the deficit over
 'She overcompensated the deficit.'

The fact that *onder-/over-* are stressed in the verbs in (22), then, could be analysed as a purely prosodic property. Such an analysis would imply that the stress pattern of these verbs does not tell us anything about the morphosyntactic status of their preverbs, so that these preverbs could be analysed as prefixes instead of particles.

There is, however, a problem for an analysis according to which the preverbs in (22)-(24) are treated as prefixes and the verbs as ICVs: sentences in which the non-split finite forms of these verbs appear in V2 position are generally not fully acceptable either (although such sentences seem to be slightly better than the ones with the split forms). There is much variation regarding this issue, both among the different verbs and among speakers, as indicated by the question marks in (25).

- (25) a. ??De directeur *onderbetaalde* zijn personeel.
the manager underpaid his employees
'The manager underpaid his employees.'
- b. ??Jan *overbelichtte* de foto.
John overexposed the picture
'John overexposed the picture.'
- c. ??Hij *onderwaardeerde* zijn zoon.
he underappreciated his son
'He underappreciated his son.'
- d. ??Zij *overcompenseerde* het tekort.
she overcompensated the deficit
'She overcompensated the deficit.'

The consequence of this seems to be that speakers avoid forms of these verbs that require a separability choice, and use, instead, past participles and infinitives, such as (26)a-b (cf. de Vries 1975: 144-148, see also below).¹⁷

- (26) a. New Yorkse taxichauffeurs worden *onderbetaald*.
New York taxi drivers are underpaid
'New York taxi drivers are underpaid.'
- b. Je moet de foto niet *overbelichten*.
you must the picture not overexpose
'You should not overexpose the picture.'

These facts are unaccounted for if the verbs in (22) and (24) are analysed as genuine ICVs.

De Vries notices that the formal variation among these verbs is reflected in dictionaries. *Van Dale* (1996), for instance, gives a past tense form and a past participle form for *onderwaarderen* and *overcompenseren*, but only gives a past participle form for *overwaarderen*:

- (27) a. *onderwaarderen*: *onderwaardeerde*, *h. ondergewaardeerd*
'to undervalue' 'undervalued, has undervalued'
- b. *overwaarderen*: *h. overgewaardeerd*
'to overvalue' 'has overvalued'
- c. *overcompenseren*: *overcompenseerde*, *h. overgecompenseerd*
'to overcompensate' 'overcompensated, has overcompensated'
- (Source: *Van Dale* 1996)

¹⁷ Past participle forms of prefixed verbs are never prefixed with *ge-* in Dutch, e.g. (**ge-*)*bebouwd* 'built on', (**ge-*)*verbrand* 'burnt down'. Past participle forms of verbs with unstressed first syllables that do *not* have prefix status, on the other hand, are prefixed with *ge-*, e.g. *ge-verbaliseerd* 'verbalised' (Dutch differs from German in this respect: in German *ge-* is absent in the past participle form of any verb in which the first syllable does not bear main stress, cf. Booij 2002a: 73-74). In conformity with this rule, the past participle forms of verbs with *onder-/over-* and *be-/ver-* lack the past participle prefix *ge-*, e.g. *onderbelicht* 'underexposed', *oververhit* 'overheated'.

The forms in (27) illustrate that there is even inconsistency among the forms belonging to one single verb. The non-split past tense forms (*onderwaardeerde*, *overcompenseerde*) suggest that *onder-/over-* must be analysed as prefixes (cf. the split past tense forms for SCVs such as *óverbrengen – bracht over* 'to carry over – carried over'). But the past participle forms, in which the past participle prefix *ge-* separates *onder-/over-* from the verb (*ondergewaardeerd*, *overgecompenseerd*), suggest that these preverbs must be analysed as particles (cf. the separated past participle forms for SCVs such as *óverbrengen – h. overgebracht* 'to carry over – has carried over'). *Van Dale* (1996) furthermore gives split past tense forms for some of the verbs in (22), but non-split past tense forms for some other ones. These forms are given in (28) (to me, however, neither the split, nor the non-split forms are perfectly acceptable for these combinations).

- (28) a. split past tense forms: *belichtte onder* 'underexposed', *belichtte over* 'overexposed', *bemestte over* 'over-fertilised'
 b. non-split past tense forms: *onderbetaalde* 'underpaid', *overbelastte* 'overloaded', *oververhitte* 'overheated'
 (Source: *Van Dale* 1996)

In addition to verbs with variable forms and missing forms (e.g. (27)b), dictionaries give adjectives and nouns with quantificational *onder-/over-* and *be-/ver-* that lack a corresponding infinitive. Some examples of such adjectives and nouns from *Van Dale* (1996) are given in (29) (cf. de Vries 1975: 148).

- (29) a. *onderbezet* 'undermanned', *de onderbezetting* 'the undermanning', *onderverzekerd* 'underinsured'
 b. *overbevolkt* 'overpopulated', *de overbevolking* 'the overpopulation', *overbezet* 'overcrowded', *de oververzadiging* 'the surfeit'

Infinitives such as *onderbezetten* 'to underman' and *overbevolken* 'to overpopulate' are thus not listed in *Van Dale* (1996). The adjectives and nouns in (29) are traditionally analysed as compounds, since *onder-/over-* correspond to lexemes (cf. note 2 in chapter 3). There are also adjectival and nominal compounds with quantificational *onder-/over-* that lack the prefixes *be-/ver-*, such as *overgevoelig* 'oversensitive', *overrijp* 'overripe', *overcapaciteit* 'overcapacity', and *onderproductie* 'underproduction'. The existence of such adjectives and nouns illustrates that the forms in (29) are not necessarily based on verbs (e.g. *onderbezetten*).¹⁸ Verbs like *onderbetalen* 'to underpay' could be formed on the basis of such adjectival and nominal compounds, being back formations of such compounds. The fact that these verbs are back formations can then be assumed to account for their various

¹⁸ Such nouns and adjectives with *over-* 'too much for y' are more frequent than those with *onder-* 'too little for y'. The nouns and adjectives with *onder-* are probably formed paradigmatically, that is, through comparison with the nouns with *over-*: *overproductie – onderproductie* 'overproduction – underproduction'. Adjectives with *onder-* 'too little for y' and without a second prefix (*be-/ver-/ont-*) are virtually non-existent, the only examples being *onderkoeld* 'supercooled' and *ondervoed* 'undernourished', which have past participle forms. Adjectives such as *onderrijp* 'underripe', then, do not exist.

properties, discussed above. The reanalysis patterns for these back formations are given in (30) (cf. 6.3.2, see McIntyre 2002 on similar verbs in German).

- (30) a. adjective: onderbetaald 'underpaid'
 reanalysis: [onder [[betaal]_{V-d}]_A] $>$ [[onder [betaal]_V]_{V-d}]_A
 back-formed verb: [onder[betaal]_V]_V
 b. noun: overbelasting 'overload'
 reanalysis: [over [[belast]_{V-ing}]_N] $>$ [[over [belast]_V]_{V-ing}]_N
 back-formed verb: [over[belast]_V]_V

The reanalysis has led to the formation of verbs, i.e. ICVs. The rhythmic stress on the preverb, however, may lead people to assume that these verbs are separable, thus patterning with SCVs instead of ICVs. The effect of this is that there is uncertainty among language users whether to analyse these verbs as SCVs or as ICVs, that is, whether or not to separate them in contexts that require a separability choice. This results in variation in forms requiring a separability choice and leads speakers to avoid such forms (which is not the case for forms that do not require such a choice, e.g. finite forms in subordinate clauses). If, however, a speaker has to make a choice and uses the separated form of, say, *overbelichten* 'to overexpose', s/he can be said to analyse this combination as an SCV (and *over* as a particle). If, on the other hand, a speaker uses the non-separated form (which may be the same speaker on a different occasion), s/he can be said to analyse it as an ICV (and *over-* as a prefix).

Either the separated or the non-separated form may, through frequent use, gradually become more generally accepted. Stiebels and Wunderlich (1994: 946) observe that the process whereby back formations come to be used in more and more verbal contexts typically follows a systematic pattern: first, we only use infinitives without the infinitival marker *te* (which do not require a separability choice), after which we start to use infinitives with this marker (which separates SCVs, cf. (9)b-(10)b in chapter 1), which are followed by finite forms in subordinate clauses, and, finally, by finite forms in main clauses. The effect of this is that these verbs show variation in terms of the forms that are used at a particular point in time during this development.

The variable behaviour of verbs like *onderbetalen* 'to underpay' and *overbelichten* 'to overexpose' is thus related to their source (i.e. to the way they have been formed) in combination with their prosodic properties. As for their source, these verbs are not formed syntagmatically (e.g. by combining *over-* with the verb *belichten* 'to expose'), but are back formations of adjectives (such as *overbelicht* 'underpaid'). The result of this seems to be that the meaning of *onder-/over-* in these verbs is related both to that of the verbal prefixes *onder-* and *over-* (respectively 'too little for y' and 'too much for y') and to that of *onder-* and *over-* as they are used in adjectival and nominal compounds such as *onderproductie* 'underproduction' and *overrijp* 'overripe' (respectively 'very/too little' and 'very/too much', cf. note 18). As for the prosodic properties of these verbs, the stress on the preverbs *onder-* and *over-*

in these verbs appears to be rhythmic stress and does not in itself tell us anything about the separability of these preverbs.¹⁹

Although there are quite a few verbs that appear to be back formations, back formation of SCVs/ICVs does not happen systematically, but only incidentally. It thus leads to *incidental diachronic SCV/ICV formation*. Stiebels and Wunderlich (1994: 944), on the other hand, claim that back formation is the *primary source of synchronic SCV formation*. This claim is problematic in three respects (cf. 3.6.2). A first problem is that back formations gradually develop into verbs over time, which means that their formation must be seen as a *diachronic* instead of a *synchronic* process.²⁰ Secondly, back formations do not always develop into *SCVs*, but may also become *ICVs*, as illustrated above. A third problem is that back formation does not appear to be the *primary* source of SCV formation (neither that of synchronic SCV formation, nor that of diachronic SCV formation). As noted above, it only occurs incidentally, and newly formed SCVs such as *oppiepen* 'to beep up' (cf. 3.2) do not show the typical behaviour of back formations, which are (temporarily) unable to appear finitely in main clauses. So although some SCVs may have been formed through back formation, there must be additional processes of SCV formation. We will see that the primary source of *synchronic* SCV formation involves the application of phrasal lexical templates (chapter 8), whereas the primary process behind *diachronic* SCV formation is grammaticalisation (chapter 7).

The back formation analysis given above also appears to apply to some other verbs, such as the two verbs in (31)a (cf. appendix 3a). *Van Dale* (1996) treats these verbs as ICVs, giving the non-split past tenses in (31)b, but de Vries (1975: 147) reports (oral) data that are heterogeneous with respect to separability for these verbs (for instance *verdeelde onder* 'subdivided'). The nouns and adjectives in (31)c correspond to these verbs.

¹⁹ Zeller (2001: 76-80) proposes a somewhat different analysis of back formation. He claims that back formations are licensed under two conditions: (1) the non-head of such verbs must be analysed as a particle ('the particle condition'), and (2) the syntactic representation of the back-formed verb must create a phonological string that mirrors the phonological structure of the original nominal compound ('the phonological condition'). So whereas I claim that there might be a *tendency* to treat the preverbs of back formations as particles as a consequence of their stress properties (i.e. the presence of rhythmic stress on these preverbs may lead people to assume that they are separable, i.e. that they are particles), Zeller posits a particle *condition*. Zeller's phonological condition is not met in clauses in which the back-formed verb is separated by V2 movement, which is supposed to account for the ungrammaticality of such clauses. Zeller notices that some back-formed verbs may appear separately in such clauses and claims that the phonological condition is overridden by the particle condition in these cases (Zeller 2001: 79, note 14). There are, however, also back-formed verbs that may appear non-separately in V2 position (and which may develop into ICVs). Zeller would probably have to assume that in these cases the particle condition is overridden by the phonological condition. Another issue not discussed by Zeller is the variation that back-formed verbs exhibit regarding their separability, which would in his proposal probably be accounted for by assuming competition between the two conditions.

²⁰ The structural reanalysis itself, illustrated in (30), is an abrupt step in this development, but it is followed by the back formation gradually acquiring more verbal properties.

- (31) a. infinitives: *ónderverdèlen* 'to subdivide', *ónderverhùren* 'to sublet, to sublease'
 b. past tense forms: *onderverdeelde* 'subdivided', *onderverhuurde* 'sublet, subleased'
 c. nouns/adjectives: *de onderverdeling* 'the subdivision', *onderverdeeld* 'subdivided', *onderverhuurd* 'sublet', *de onderverhuurder* 'the sublessor', *de onderverhuur* 'the sublet, sublease'

Onder- functions as a modifier (with the meaning 'sub(sidiary)') in these two verbs. The stress on the preverb *over-* appears to be rhythmic stress, resulting from the tendency to avoid a sequence of two unstressed syllables at the beginning of a word.

A modifying preverb with rhythmic stress is also present in another verb listed in *Van Dale* (1996): *vooronderstellen* 'lit. for-under-put, to presuppose'. This verb is possibly a back formation of the noun *vooronderstelling* 'presupposition' or the adjective *voorondersteld* 'presupposed'.²¹ It is used non-separately in V2 position, thus behaving as an ICV that contains two prefixes (cf. *Van Dale* 1996).

A similar analysis might apply to the prefix *her-* 're', which may also receive rhythmic stress (cf. de Vries 1975: 131-137). *Her-* may attach to SCVs, such as in *hérindèlen* 'to redivide', *héruitzènden* 'to rebroadcast', and *héropvoeden* 'to re-educate'. These combinations do not occur finitely in main clauses (**mijn ouders voeden ons kind herop*/**mijn ouders heropvoeden ons kind* 'my parents re-educate our child', cf. Booij 2002a: 223, referring to Koopman 1995) and contain a clear prosodic break between *her-* and the subsequent syllable. Although some of these combinations might be back formations of nouns (*de herindeling* 'the redivision', *de heruitzending* 'the rebroadcast', *de heropvoeding* 'the re-education'), *her-* also seems to combine with SCVs directly (the prefix *mis-* behaves similarly to *her-* in many respects, cf. de Vries 1975: 149-150).

There is one apparent SCV with two particles, which also appears to be a back formation: *vooraanmelden* 'lit. for-at-report, to apply beforehand', consisting of the SCV (V) *aanmelden* 'lit. at-report, to announce' and *voor*, which seems to resemble the modifying particle *voor* 'beforehand' in *voorkoken* 'to cook beforehand' (cf. 5.3.2, see also note 14 above). This verb, which is not contained in all standard dictionaries (it is, for instance, not listed in *Van Dale* 1996), is not a genuine SCV, as its finite forms do not occur separately in main clauses, as illustrated in (32)a-b. But the finite forms of this verb do not occur non-separately in such clauses either. This is illustrated in (32)c.

- (32) a. *Hij *aan-meldde* zich *voor*.
 he at-announced himself for
 b. *Hij *meldde* zich *vooraan*.
 he announced himself for-at
 c. *Hij *voor-aan-meldde* zich.
 he for-at-announced himself
 All meaning 'he applied beforehand, he pre-applied'.

However, the past participle form of *vooraanmelden*, which does not occur very frequently, is separated by the past participle marker *ge-* (*vooraangemeld* 'pre-

²¹ See note 14 for more on the gloss of *vooronderstellen*.

applied'). Similarly, the scarcely encountered infinitival forms are separated by the infinitival marker *te* (*vooraan te melden*, *voor aan te melden* 'to pre-apply') (source: *Google*).

I claim that the variability in separability among the different forms of *vooraanmelden* is related to the fact that this verb is a back formation (cf. Zeller 2001: 76-77, who makes the same claim for the German counterpart of this verb, *voranmelden*). That is to say, the compound noun [*voor*[[*aanmeld*]_V-*ing*]_N]_N 'lit. for-at-announce, pre-application' has been reanalysed as [[*voor*[*aanmeld*]_V]-*ing*]_N, which could lead to the derivation of the verbal base [*voor-aan-meld*]_V.²²

Zeller (2001: 76-77) claims that *voor* and *aan* have been reanalysed as a single particle in the German counterpart of this back formation, *voranmelden*, which resulted in the SCV [*voran*[*melden*]_V]_V. Past participle and infinitival forms similar to the Dutch ones given above could then be formed on the basis of this SCV. Unlike other SCVs, however, this back-formed SCV cannot be used finitely in main clauses (cf. (32)). Zeller claims that this is due to the fact that the syntactic representation of back formations must create a phonological string that mirrors the phonological structure of the original nominal compound. This requirement is not met when a back-formed SCV is used finitely in a main clause, since in that case it must be split into two parts.

It is, however, far from certain that *voor* and *aan* have been reanalysed as a single particle. Evidence against such a reanalysis hypothesis can be found in the prosody of *vooraanmelden*: there is a prosodic break in between *voor* and *aan*, main stress on *voor*, and secondary stress on *aan* (*vóoraanmelden*). This prosodic structure differs from that of other combinations containing reanalysed, (formally) complex preverbal elements, such as *vooráanlopen* 'lit. for-at-walk, to walk up front', *vooróplopen* 'lit. for-up-walk, to walk in front' and *voorúitrijden* 'lit. for-out-drive, to drive forward'.²³ Instead of containing one reanalysed preverbal element *vooraan*, *vooraanmelden* appears to contain the particle *aan* and an element *voor* of which the structural status is uncertain. This element is, in any case, not a genuine (modifier) phrase, since if it were, a clause with V2 such as **hij meldde zich voor*

²² Both *aanmelden* and *vooraanmelden* are phrases (SCVs, cf. the past participle and infinitival forms given above), which is why I use the subscript V' to label them. The first step in the change described here possibly involves the mere substitution of *-ing* for the infinitival marker *-en*, which does not yet represent structural reanalysis, but is an instantiation of paradigmatic word formation. A similar kind of substitution is assumed to have occurred in the case of English gerunds that have been modified to function as Dutch infinitives, such as *aquaplaning* – *aquaplanen* 'to do aquaplaning' (Booij 2002a: 164, referring to Posthumus 1991).

²³ Formally complex preverbal elements such as *voorop* 'lit. for-up, in front' in *vooroplopen* 'lit. for-up-walk, to walk in front' may not appear in the verb cluster (*dat Jan *niet wilde vooroplopen/niet voorop wilde lopen* 'that John did not want to walk in front'). This might suggest that these elements are not non-projecting words. Their phonological properties, however, also seem to play a role: these elements contain two full vowels, and only elements that consist of one syllable or of two syllables one of which is headed by a schwa may appear in the verb cluster (see 4.3.5, where it is also illustrated that not all elements that fulfil this phonological requirement may appear in the verb cluster, but that only non-projecting elements that fulfil this requirement may do so).

aan 'he applied beforehand' would be syntactically well-formed (cf. *hij meldde zich [van tevoren]_{AdvP} aan* 'he applied beforehand').²⁴

In the analysis proposed here, the particle status of *aan* accounts for the separated past participle and infinitival forms given above. The two orthographically different infinitival forms that we find (*vooraan te melden*, *voor aan te melden*) illustrate the uncertainty of language users about the structural status of *voor*, and, consequently, about that of the combination *voor-aan*. *Vooraan*, then, is not a genuine particle, so that *vooraanmelden* is not a genuine SCV (that is, a phrase consisting of a non-projecting word and a verbal head). If it were, (32)b would be syntactically well-formed (the unacceptability of the other V2 structures in (32) follows from the fact that these either treat *aan* as a prefix and *voor* as a particle ((32)a), or treat *vooraan* as a prefix ((32)c)).

In sum, I claim that the unacceptability of main clauses in which *vooraanmelden* is used finitely is due to uncertainty about the structural status of *voor*. This uncertainty results from the fact that *vooraanmelden* is a back formation of the noun *vooraanmelding*. *Vooraanmelden*, then, is not an SCV with one particle (*vooraan*), nor an SCV with two particles (*voor* and *aan*).

Van Dale (1996) lists another combination of a particle and a prefix that does not qualify as an SCV: *uitbehandelen* 'lit. out-treat, to treat until the treatment is finished'. This combination has already been discussed in section 5.5.13. It is mainly used in the past participle form, either predicatively, as in (33)a, or attributively, as in (33)b, and does not seem to be used finitely in main clauses (i.e. separately). Sentences such as (33)c, then, do not seem to occur.

- (33) a. De patiënt is *uitbehandeld*.
the patient is out-treated
'The patient's treatment is finished.'
- b. *uitbehandelde* patiënten
out-treated patients
'patients whose treatments are finished'
- c. *??De arts *behandelde* de patiënt *uit*.
the doctor treated the patient out
'The doctor finished the patient's treatment.'

²⁴ Support for the claim that *voor* in *vooraanmelden* is not a modifier phrase can be found in progressive *aan het*-constructions and verb cluster constructions, compare (i)a-b and (ii)a-b.

- (i) a. ?*dat Jan zich aan het vooraanmelden is*
'that John is pre-applying'
- b. ?*dat Jan zich niet meer kon vooraanmelden*
'that John could not pre-apply anymore'
- (ii) a. *??*dat Jan zich voor aan het aanmelden is*
'that John is pre-applying'
- b. *??*dat Jan zich niet meer voor kon aanmelden*
'that John could not pre-apply anymore'

I have shown in section 4.3.5 that only non-projecting elements may appear after *aan het*/the modal in (standard) Dutch. Although the constructions in (i)a-b are not perfectly acceptable, they appear to be much better than the alternative forms in (ii)a-b (this might be related to Zeller's prosodic restriction, mentioned in note 19).

I have argued in section 5.5.13 that forms such as *uitbehandeld* are not based on SCVs such as *uitbehandelen*, but are adjectival participles that are formed directly, on the basis of the construction in (34).

- (34) a. [[*uit-V_{pastptc}*]_A *zijn*] 'to have finished with/have had enough of V'
 b. [[*uit-behandeld*]_A *zijn*] 'to have finished with the treatment'

Uitbehandelen, then, does not instantiate regular SCV formation.

The same appears to apply to *uitverkiezen* 'to choose, to select' and *uitverkopen* 'to sell off/out', the finite forms of which are generally not used in main clauses either (cf. *??*God verkoos het volk van Israël uit* 'God chose the people of Israel', ??**deze winkel verkoopt alle schoenen uit* 'this shop sells off all shoes'). These combinations appear to be back formations of, respectively, the past participle *uitverkozen/uitverkoren* 'chosen' and the past participle *uitverkocht* 'sold out' or the noun *uitverkoop* 'sale'.

Similar facts seem to hold for two alleged ICVs with *onder-*, which also appear to be back formations of adjectives: *onderkóelen* 'to supercool' and *ondervóeden* 'to under-nourish' (*ondervóeden* is not listed in *Van Dale* 1996). As illustrated in (35)-(36), these verbs cannot generally be used in V2 position, but can be used as adjectival participles.

- (35) a. *??*De onderzoeker onderkoelde de vloeistof.*
 the researcher under-cooled the liquid
 'The researcher supercooled the liquid.'
 b. *De drenkeling was onderkoeld.*
 the person-rescued-from-drowning was under-cooled
 'The person rescued from drowning suffered from hypothermia.'
- (36) a. *??*De moederpoes ondervoedde haar jongen.*
 the mother-cat under-fed her young
 'The mother cat underfed her young.'
 b. *De jongen waren ondervoed.*
 the young were underfed
 'The young were underfed.'

These combinations, then, do not appear to be verbs either, but are adjectives. These adjectives are probably back formations of the nouns *onderkoeling* 'supercooling, hypothermia' and *ondervoeding* 'undernourishment' (cf. the remarks on *vooraanmelden* 'to apply beforehand' above).

To sum up, the combinations discussed in this section do neither qualify as genuine SCVs, nor as genuine ICVs; main clauses with the finite forms of these combinations (be it the split forms or the non-split forms) are generally ungrammatical. These combinations seem to be structurally ambiguous between representing an SCV ([X-V⁰]_V) and representing an ICV ([prefix-V⁰]_{V⁰}). This ambiguity appears to result from their diachrony: these combinations are back formations of adjectives and nouns that have not developed into SCVs/ICVs of full value.

The next section will investigate the systematic semantic and structural properties of SCVs that contain both a particle and a prefix (e.g. *door-ver-wijzen* 'to refer further'). Because of the fact that the combinations discussed in the foregoing (e.g. *over-be-lichten* 'to overexpose') do not behave as SCVs, these combinations are excluded from this investigation.

6.4 Cooccurrence restrictions on particles, prefixes, and resultative phrases

6.4.1 Introduction

It has been noticed in the literature that particles and resultative phrases are mutually exclusive (see, among others, Hoekstra, Lansu, and Westerduin 1987, Lüdeling 2001, Neeleman 1994, chapter 6, Neeleman and Weerman 1993). Neeleman and Weerman (1993: 438) give the example in (37), containing the resultative phrase *gek* 'crazy' and the particle *op* 'up', to illustrate this point.

- (37) dat Jan het meisje *gek op*-belt
 that John the girl crazy up-calls
 'that John calls the girl up crazy'

Some linguists have claimed that the mutual exclusiveness of particles and resultative phrases argues for an analysis according to which particles and resultative phrases have the same syntactic structure (see the references in 3.3.2). We have seen in the previous two chapters, however, that such an analysis cannot account for the particle data satisfactorily, since particles and resultative phrases have a different syntactic distribution (see section 4.3). These distributional differences have led me to posit a structural difference between particles and resultative phrases.

In addition to being structurally different from resultative phrases, many particles are also semantically different from resultative phrases (see section 5.3). These non-resultative particles cannot cooccur with resultative phrases either (cf. Neeleman and Weerman 1993: 449). This is illustrated in (38), which contains the modifying particle *na* 'after' and the resultative phrase *gaar* 'done'.

- (38) *het vlees *gaar* laten *na-sudder*
 the meat done let after-simmer
 'to have the meat simmer afterwards/a bit longer until it is done, to cause the meat to become done by having it simmering afterwards/a bit longer'

Particles, then, are structurally and, in many cases, also semantically different from resultative phrases. This implies that we need another account for the mutual exclusiveness of particles and resultative phrases. I will show in this section that the proposed morphosyntactic and semantic analysis of SCVs provides such an account. I will also show that this analysis explains the possible and impossible cooccurrences of particles and non-resultative phrases (modifier phrases), of two particles, and of particles and prefixes within a single VP.

The relevant assumptions on the morphosyntax and the semantics of the particles, prefixes, and phrases investigated in this section are stated in section 6.4.2. On the basis of these assumptions predictions can be made about the possible and impossible cooccurrences of these elements. This is done in section 6.4.3. The predictions are checked against the data in section 6.4.4, which is followed by a conclusion in section 6.4.5.

6.4.2 *The morphosyntax and semantics of particles, prefixes, and resultative phrases*

I have argued in chapter 4 that particles are non-projecting words that combine with a verbal head, thus forming a phrase: $[X-V^0]_V$. Being phrases, SCVs are split by inflectional material attaching to V^0 and by V2 in finite forms in main clauses (cf. section 4.5).

As for the semantics of particles, we have seen in the previous chapter that particles may be conceptualised as resultative predicates (resultative particles), modifiers (modifying particles), relators with various functions (relator particles), or Aktionsart markers (continuative particles, inceptive particles). The contrast that is of central concern in this section is that between particles that express a result and particles that do not express a result. I will focus on resultative particles, modifying particles, and orienting particles (relator 1 particles) (but see section 6.4.5 for some remarks on the other particle types). We have seen that these three types of particle have different participant-licensing properties, which correspond to different argument-structural properties and different lexical-aspectual properties for the SCVs they form (cf. Table 5.2 in appendix 1). These differences, as well as an example of each of the three particle types, are listed in Table 6.1.

TABLE 6.1. PROPERTIES OF RESULTATIVE PARTICLES, MODIFYING PARTICLES, AND ORIENTING PARTICLES.

type of particle	participant-licensing properties	argument-structural properties	lexical-aspectual properties
resultative	licenses Figure	forms transitive/ unaccusative SCVs	forms telic SCVs
modifying	example: <i>de schoenen inlopen</i> 'to wear in the shoes' does not license a participant	inheritance from V	inheritance from V
orienting	example: <i>de groenten voorkoken</i> 'to cook the vegetables beforehand' licenses Ground	forms transitive SCVs	inheritance from V
	example: <i>het publiek toespreken</i> 'to talk to the audience'		

In contrast to what is the case for particles, prefixes are not words, but are elements below the X^0 -level. Like particles, prefixes attach to a verbal head, but unlike particles, they form with this verbal head a word, that is, a morphologically complex V^0 : $[\text{prefix-}V^0]_V^0$. Since they constitute words, prefixed verbs are not separable in syntax.

I will focus on the prefixes *be-*, *ver-*, and *ont-* in this section. Examples of verbs with these prefixes are *be-lopen* 'lit. *be-walk*, to walk (a road/a distance)', *ont-*

rollen 'lit. *ont*-roll, to unroll', and *ver-branden* 'lit. *ver*-burn, to burn down/up'. Following claims made in the literature, I assume that these prefixes express resultative predicates (changes of state) of various kinds (cf. Booij 1992: 56-57, 2002a: 113, Haeseryn et al. 1997: 596-597, 600-605, Lieber and Baayen 1993: 54-62, de Vries 1975: 116-129, 169-174). The change of state generally expressed by the prefix *be-* is that the action denoted by the base verb is directed towards a participant such that this participant is completely affected. *Be*-prefixed verbs with nominal bases mean, more specifically, 'to provide with N', and *be*-prefixed verbs with adjectival bases mean 'to make A' (*be*-prefixed verbs with adjectival bases are not productive, cf. Haeseryn et al. 1997: 597). The prefix *ver-* also expresses the fact that the action denoted by the base verb is directed towards a participant such that this participant is affected. In this case, however, the affectedness specifically involves the partial or complete destruction, damaging, or wasting of the participant in question (but various other, more or less productive, change of state meanings have also been distinguished for *ver-*). *Ver*-prefixed verbs with nominal and adjectival bases mean 'to make/become N/A'. The prefix *ont-* generally expresses an inchoative, reversative, or separative change of state (*ont*-V 'to start V-ing', 'to become undone by V-ing', or 'to become away from by V-ing', all unproductive, cf. Haeseryn et al. 1997: 600). *Ont*-prefixed verbs with nominal bases mean 'to dispose of N' and those with adjectival bases mean 'to cause something to be not A'.²⁵

De Vries (1975: 116-129) points out that there are also many prefixed verbs with *be-*, *ver-*, and *ont-* in which the formal difference between the base verb and the prefixed verb does not correspond to a systematic semantic difference. This is for instance the case in the prefixed verb *bestellen* 'to order' (de Vries 1975: 118). Many prefixed verbs furthermore contain non-existent bases, such as *verdedigen* 'to defend' (**dedigen*), and *vertellen* 'to tell' (**tellen*, de Vries 1975: 125-126).²⁶

We will, additionally, investigate resultative phrases and modifier phrases (adverbial phrases). These phrases represent XPs; they are syntactically independent of the verb, and are, consequently, movable in syntax (e.g. they can be topicalised without the verb). The semantics of resultative phrases and modifier phrases is self-evident: these two types of XP are conceptualised as, respectively, resultative predicates and modifiers.

²⁵ See Lieber and Baayen (1993), Hoekstra, Lansu, and Westerduin (1987), and Michaelis and Ruppenhofer (2000) for different formalisations of these prefix functions. Hoekstra, Lansu, and Westerduin (1987) claim that the fact that these prefixes express results is evidence for a syntactic SC-analysis of constructions with such prefixes, according to which they are not only semantically, but also structurally similar to constructions with resultative phrases. Conversely, I assume (with many others) that the distributional differences between resultative prefixes and resultative phrases point to different structures for constructions with these two types of element: unlike combinations of resultative phrases and verbs, combinations of resultative prefixes and verbs represent morphological units.

²⁶ The verb *tellen* 'to count' does exist in Dutch, but this verb is not related to the prefixed verb *vertellen* 'to tell' in any way, neither synchronically, nor diachronically. (A systematic semantic difference between the base verb and the complex verb may also be absent in SCVs (e.g. *zich aanstellen* 'lit. oneself at-put, to put on airs') and SCVs may also contain non-existent bases (e.g. *nabootsen* 'lit. after-?, to imitate'), cf. section 8.2.1.)

The morphosyntactic and semantic properties of the prefixes, particles, and phrases that are investigated in this section are summarised in Table 6.2.

TABLE 6.2. STRUCTURAL AND SEMANTIC PROPERTIES OF THE PREFIXES, PARTICLES, AND PHRASES UNDER INVESTIGATION.

element	structure	semantics (conceptualisation)
prefix (<i>be-</i> , <i>ver-</i> , <i>ont-</i>)	[... [prefix-V ⁰] _V] _{VP}	resultative predicate
particle	[... [X-V ⁰] _V] _{VP}	resultative predicate, modifier, relator (indicating an orientation)
phrase	[... XP V] _{VP}	resultative predicate, modifier

Table 6.2 illustrates that all three types of element that are under investigation here, which represent three different X-bar levels, may be conceptualised as resultative predicates.

Before I proceed to the predictions about the possible and impossible cooccurrences of the particles, prefixes, and phrases in Table 6.2, two other, independently motivated assumptions have to be made here.

The first assumption is that there is a semantic restriction that says that the LCS of a simple clause may contain only one resultative predicate (that is, one change of state predicate or one change of location predicate). This restriction is assumed to be related to the fact that the event described by a verb can be delimited only once (cf. Tenny 1994: 78-81 and others). A resultative predicate expresses a result that affects an entity and is brought about by the process denoted by the verb. The addition of another result affecting the same entity and also being brought about by the process in question appears to lead to conceptual incompatibility (compare the resultative LCS, given in (1) in 5.2).

One might, alternatively, ask whether a second result could be added to an event that already contains a resultative predicate if this second result is predicated of another entity, resulting in an LCS with two resultative predicates affecting different entities. This, however, is not possible either, for the entity that is affected by a resultative predicate is syntactically realised as the direct object and a simple clause may contain only one direct object (cf. 5.2).²⁷ A clause may thus contain at most one resultative predicate (whereas such a restriction does not hold in principle for modifiers).²⁸

²⁷ In the case of unaccusatives the entity that is affected by the resultative predicate is syntactically realised as the subject (e.g. *de kosten zijn uit de hand gelopen* 'the costs have gotten out of hand', containing a resultative phrase, and *de kosten zijn opgelopen* 'the costs have risen', containing a resultative particle). Since a clause can have only one subject, the addition of a second result affecting another entity that must be syntactically realised is also excluded for unaccusatives.

²⁸ See, however, den Dikken (1995, chapter 2), who argues that resultative phrases may be embedded under other resultative phrases. In such cases a single VP contains more than one resultative predicate, but these two predicates are hierarchically ordered, both semantically and syntactically.

Resultative predicates are expressed by resultative phrases, resultative particles, and resultative prefixes (cf. Table 6.2). These elements are therefore expected to be unable to cooccur in a single VP.

The second assumption is that there is a restriction on the syntactic realisation of elements expressing resultative predicates in Dutch (and other languages): elements conceptualising resultative predicates are generally realised more closely to the verb than elements conceptualising modifiers. As for Dutch, elements conceptualising resultative predicates immediately precede the verb in OV contexts (cf. Neeleman and Weerman 1993: 436).²⁹ This restriction on the linearisation of elements conceptualising resultative predicates and elements conceptualising modifiers accounts for the contrast in (39), which distinguishes resultative phrases (both APs and PPs) from modifier phrases (AdvPs) and PP-adjuncts (cf., among others, and Neeleman and Weerman 1993: 436).

- (39) a. resultative AP + AdvP
 dat Jan de fiets (*snel*) *oranje* (**snel*) verfdde
 that John the bike quickly orange quickly painted
 'that John painted the bike quickly orange'
- b. resultative PP + PP-adjunct
 dat Jan de fiets (*met plezier*) *naar buiten* (**met plezier*) gooide
 that John the bike with pleasure to outside with pleasure threw
 'that John threw out the bike happily'

Phrases conceptualising resultative predicates must thus be realised more closely to the verb than phrases conceptualising modifiers. I assume that this restriction does not only hold for phrases, but also for other elements in syntax, such as non-projecting words; particles.

In sum, the following assumptions and generalisations are expected to restrict the cooccurrence of the particles, prefixes, and phrases under investigation:

- (40) a. *Syntax*:
 Particles combine with V⁰ to form a V'; prefixes combine with V⁰ to form a V⁰.
- b. *Semantics*:
 A single clause may contain only one resultative predicate.
- c. *Semantics-syntax linking*:
 Elements conceptualising resultative predicates are syntactically realised more closely to the verb than elements conceptualising modifiers.

²⁹ Certain elements, however, may intervene between a resultative predicate and a verb, such as the adpositional parts of R-pronouns like *waarmee* 'with which': *de kwast waar Jan de deur groen mee verft* 'the brush with which John the door green paints' (cf. Neeleman and Weerman 1993: 436, note 3).

6.4.3 Predictions

The assumptions discussed above make the following predictions about the possible and impossible cooccurrences of particles and phrases (I), of two particles (II), and of particles and prefixes (III).

I. Particle + phrase

Since the LCS of a simple clause may contain only one resultative predicate, resultative particles are expected to be semantically incompatible with resultative phrases. Non-resultative particles, on the other hand, are expected to be semantically compatible with resultative phrases, as the LCS of constructions with a non-resultative particle and a resultative phrase contains only one resultative predicate. Combinations of a resultative phrase and a modifying or orienting particle, then, are predicted to be semantically well-formed.

Resultative phrases license a Figure participant and modifying particles do not license a participant, so that combinations of a resultative phrase and a modifying particle are expected to be transitive. As for combinations of a resultative phrase and an orienting particle, both of these elements license a participant. This is why constructions with both a resultative phrase and an orienting particle are expected to be ditransitive: the Figure licensed by the resultative phrase is expected to be realised as the direct object NP, and the Ground licensed by the orienting particle is expected to be licensed as the indirect object NP (cf. the construction *de spelers aanwijzingen toeroepen* 'to call out instructions to the players', discussed in section 5.3.3, in which the direct object referent is licensed by the verb and the indirect object referent is licensed by the particle). Constructions with a resultative phrase and a modifying or orienting particle are thus not expected to cause any problems in terms of the participant-licensing properties at LCS and the corresponding realisation of the participants in syntax.

However, the combination of a resultative phrase and a modifying or orienting particle is expected to be excluded for structural reasons. This is because the particle must combine with V^0 to form a phrase (cf. (40)a), but according to the linking constraint in (40)c, the resultative phrase must be syntactically realised more closely to the verb than the (non-resultative) particle. The phrase and the particle, then, are predicted to compete for the same syntactic position, which is to the immediate left of the verb (in OV contexts). This is expected to lead to combinations of these elements not being syntactically well-formed.

Unlike resultative phrases, modifier phrases are predicted to combine with both resultative particles and non-resultative particles (modifying and orienting particles). Constructions with a modifier phrase and a particle belonging to any of the three different types are predicted to be both semantically and syntactically well-formed: such combinations contain at most one resultative predicate (in case the particle is a resultative particle) and the phrase and the particle do not compete for the same syntactic position.

The predictions are summarised in Table 6.3.

TABLE 6.3. (IM)POSSIBLE COMBINATIONS OF PARTICLES AND PHRASES.

semantics phrase	semantics particle	prediction ±possibility	factor of influence
modifying	all particle types	possible	-
resultative	modifying, orienting	impossible	<u>syntax</u> : resultative elements must be closer to the verb than non-resultative elements (semantically compatible)
resultative	resultative	impossible	<u>semantics</u> : only one resultative predicate <u>syntax</u> : resultative elements must be closer to the verb than non-resultative elements

II. Two particles

Combinations of two particles are semantically well-formed if only one of the two conceptualises a resultative predicate, that is, is a resultative particle. This implies that constructions with a resultative particle and a modifying particle and constructions with a resultative particle and an orienting particle are predicted to be semantically well-formed. The same holds for combinations of two non-resultative particles: combinations of two modifying particles and combinations of a modifying particle and an orienting particle are also predicted to be semantically well-formed (combinations of two orienting particles, however, are excluded for conceptual reasons: it does not make sense to specify two different orientations for a single event or to specify the same orientation twice). As for the participant-licensing properties of particles, there do not seem to be any problems involved in combining a resultative particle with a particle belonging to either of the two other particle types, in combining two modifying particles, or in combining a modifying particle and an orienting particle (cf. the remarks on combining resultative phrases and modifying/orienting particles above).³⁰

None of the combinations of two particles, however, is predicted to be syntactically well-formed. This is because particles must combine with V^0 , and if the first particle does so and thereby forms a V' , the second particle cannot combine with V^0 anymore. Clauses with two particles are therefore predicted to be non-existent.³¹

The predictions and the factors of influence are summarised in Table 6.4.

³⁰ Combinations of two orienting particles would be problematic, since both particles would license a Ground participant. But as noted above, such combinations are conceptually excluded anyway.

³¹ Combining two prefixes does not pose any structural problems: the first prefix forms, with V^0 , a new, morphologically complex V^0 , to which the second prefix may attach. Verbs starting with two prefixes, then, are structurally well-formed, and if the two prefixes are semantically compatible, such verbs are also semantically well-formed. Since, however, most prefixes express results, this is generally not the case. Verbal prefixes are, furthermore, unstressed, so that verbs containing two prefixes start with two unstressed syllables. This means that such verbs are prosodically suboptimal (cf. 6.3).

TABLE 6.4. (IM)POSSIBLE COMBINATIONS OF PARTICLES (ABSTRACTING AWAY FROM THEIR LINEAR ORDERING).

semantics particles	prediction ±possibility	factor of influence
modifying + orienting	impossible	<u>syntax</u> : particles must be adjacent to V ⁰ (semantically compatible)
modifying + modifying	impossible	<u>syntax</u> : particles must be adjacent to V ⁰ (semantically compatible)
orienting + orienting	impossible	<u>syntax</u> : particles must be adjacent to V ⁰ <u>semantics</u> : conceptually excluded + two Grounds
resultative + modifying	impossible	<u>syntax</u> : particles must be adjacent to V ⁰ (semantically compatible)
resultative + orienting	impossible	<u>syntax</u> : particles must be adjacent to V ⁰ (semantically compatible)
resultative + resultative	impossible	<u>semantics</u> : only one resultative predicate <u>syntax</u> : particles must be adjacent to V ⁰

III. Particle + prefix

This combination, too, is expected to be semantically well-formed if at least one of the two elements does not lead to the conceptualisation of a resultative predicate. The prefixes *be-*, *ver-*, and *ont-* generally express results, which implies that they are semantically incompatible with resultative particles, but not with modifying and orienting particles.

As for the participant-licensing properties, resultative prefixes license a Figure, thus forming transitive prefixed verbs. Modifying particles do not license any participant, but orienting particles license a Ground. This Ground is predicted to be syntactically realised as the indirect object NP.

Combinations of a particle and a prefix are expected to be syntactically well-formed: the prefix attaches to V⁰, thereby forming a (morphologically complex) V⁰, after which the particle can combine with this V⁰ to form a V'.

Prefixed verbs are thus predicted to combine with modifying particles and orienting particles. The predictions are summarised in Table 6.5.

TABLE 6.5. PARTICLE TYPES COMBINING WITH PREFIXED VERBS.

particle type	prediction ±possibility	factor of influence
modifying	possible	-
orienting	possible	-
resultative	impossible	<u>semantics</u> : only one resultative predicate

Note that it is not the case that resultative particles are unable to combine with any telic base. On the contrary, such combinations are perfectly possible, as the (simple) SCVs in (41) illustrate.

- (41) *aankomen* 'lit. at-come, to arrive', *afbreken* 'lit. off-break, to break off', *nachecken* 'lit. after-check, to check (afterwards)', *omvallen* 'lit. down-fall, to fall down/over', *uitprinten* 'lit. out-print, to print'

In some of the SCVs in (41) the particle further specifies a result that is already implied by the verb and in other SCVs it emphasises or highlights such a result (being a 'pleonastic' particle, cf. section 5.5.15.2). What is expected to be excluded, however, is that the particle and the prefix in a single SCV denote separate results (changes of state/location).

6.4.4 Results

In order to check the predictions, I searched *Van Dale* (1996) for SCVs with either two of the particles in (42)a or one of the particles in (42)a and one of the prefixes in (42)b.

- (42) a. Particles (cf. chapter 5): *aan* 'at, to', *af* 'down, off', *door* 'through, on', *in* 'in(to)', *mee* 'along, with', *na* 'after, behind', *om* 'around, down', *onder* 'under, below', *op* 'up, on high', *over* 'over, across', *toe* 'at, to, closed', *uit* 'out (of)', *voor* '(be)fore, for'.
- b. Prefixes: *be-*, *ont-*, *ver-*.

I checked the predictions about combinations of particles and resultative and modifier phrases (which are, of course, not listed in dictionaries) through introspection.

I. Particle + phrase

Combinations of a resultative phrase and a resultative particle were predicted to be ungrammatical, since a clause may contain only one resultative predicate. This prediction is borne out, as illustrated in (43).³²

- (43) a. **de schoenen aan flarden uit-lopen*
the shoes to shreds out-walk
'to wear out the shoes to shreds'
- b. **de taart in stukken door-snijden*
the cake in pieces through-cut
'to cut the cake in two into pieces'

Combinations of a modifier phrase and a resultative particle, on the other hand, were predicted to be fine. This prediction is also borne out, as shown in (44).

³² Neeleman and Weerman (1993: 437, note 4) observe that the construction *de deur groen bij-verven* 'to touch up the door green' is fine. They claim that this is due to the fact that *groen* does not function as a resultative predicate in this construction, but as an adverbial modifier ('with green paint'), so that *bij* is the only element that expresses a result (cf. also Lüdeling 2001: 125). Although I agree with Neeleman and Weerman's analysis of *groen* as conceptualising an adverbial modifier, I disagree with their analysis of *bij* as expressing a result: *bij* in *bijverven* is not a resultative particle, but a modifying particle (cf. 5.3.2). The impossibility of interpreting *groen* in this construction as a resultative predicate, then, is due to the same factor that is responsible for the ungrammaticality of the examples in (46) below, which is a conflict between two requirements: (1) elements expressing resultative predicates must be closer to the verb than elements expressing modifiers, and (2) particles must be adjacent to V⁰ (regardless of the fact whether they are resultative or not).

- (44) modifier phrase + resultative particle
- a. de schoenen *snel in*-lopen
the shoes quickly in-walk
'to wear in the shoes quickly'
 - b. de borden *zorgvuldig af*-wassen
the plates carefully off-wash
'to wash up the plates carefully'

Combinations of a modifier phrase and a non-resultative particle were also predicted to be fine. The examples in (45) illustrate that this prediction, too, is borne out.

- (45) modifier phrase + modifying/orienting particle
- a. de groenten *snel voor*-koken
the vegetables quickly for-cook³³
'to cook the vegetables quickly beforehand'
 - b. het publiek *vriendelijk toe*-spreken
the audience friendly to-speak
'to talk to the audience in a friendly way'

Finally, combinations of a resultative phrase and a modifying/orienting particle were predicted to be semantically compatible, but to be excluded for a structural reason: elements conceptualising resultative predicates must be closer to the verb than non-resultative elements. This prediction is also borne out, as shown in (46).³⁴

- (46) a. *de kopjes *schoon voor*-spoelen
the cups clean for-wash
'to wash the cups beforehand until they are clean, to cause the cups to become clean by washing them beforehand'
- b. *de rijst *gaar na*-bakken
the rice done after-cook
'to cook the rice afterwards until it is done, to cause the rice to become done by cooking it afterwards'
- c. *de jongen het lied *stuk toe*-zingen
the boy the song broken to-sing
'to sing the song to the boy until it is ruined, to cause the song to become ruined by singing it to the boy'
- d. *de jongen *verlegen aan*-kijken
the boy shy at-look
'to look at the boy until he gets shy, to cause the boy to become shy by looking at him'

³³ See note 14 for more on the gloss of *voor*.

³⁴ I assume that the resultative phrase (RUINED) and the orienting particle (TO) in (46)c each license their own participant (respectively THE SONG and THE BOY), but that both the resultative phrase (SHY) and the particle (AT) in (46)d license the participant THE BOY. These examples illustrate that both options lead to ungrammaticality: resultative phrases cannot combine with orienting particles.

The combinations of the resultative and non-resultative elements in (46) are semantically compatible, which appears from the fact that we can interpret the English translations. But as indicated by the asterisks, the constructions in (46) do not give us these intended interpretations; they are not syntactically well-formed.

It was noted above that I assume that the syntactic ungrammaticality of the constructions in (46) is due to a conflict between two requirements: (1) a resultative phrase must be closer to the verb than a particle that is not conceptualised as a resultative predicate, since elements conceptualising resultative predicates must be realised more closely to the verb than non-resultative elements in general, and (2) a particle, being a non-projecting word, must attach to V^0 for structural reasons (regardless of the fact whether it is conceptualised as a resultative predicate or not). As expected, then, the resultative phrase and the particle compete for the same syntactic position, immediately adjacent to the verb; the resultative phrase because of its function and the particle because of its 'impoverished' structure.

II. Two particles

Combinations of two particles were predicted to be excluded for structural reasons: although the English translations illustrate that we can interpret the intended meanings of the Dutch constructions in (47), which contain a resultative particle (*af*, *op*, *uit*) and a modifying/orienting particle (*na*, *voor*, *toe*), these Dutch constructions are not syntactically well-formed.

- (47) a. *de broodjes *na-af*-bakken/*af-na*-bakken
the rolls after-off-bake/off-after-bake
'to heat up the rolls afterwards, to cause the rolls to become done by baking them afterwards'
- b. *het eten *voor-op*-warmen/*op-voor*-warmen
the food for-up-warm/up-for-warm
'to heat up the food beforehand, to cause the food to become done by heating it beforehand'
- c. *de winnaar het lied *uit-toe*-zingen/*toe-uit*-zingen
the winner the song out-to-sing/to-out-sing
'to sing the song to the winner completely, to cause the song to become completed by singing it to the winner'

The same structural problem plays a role in combinations of two modifying particles and in combinations of a modifying particle and an orienting particle, such as (48).

- (48) a. **na-op*-kijken/*op-na*-kijken
after-up-look/up-after-look
'to look up afterwards'
- b. *het publiek *voor-toe*-spreken/*toe-voor*-spreken
the audience for-to-speak/to-for-speak
'to talk to the audience beforehand'

I assume that the ungrammaticality of the constructions in (47)-(48) is due to the fact that a particle must combine with a verbal head to form a phrase. This is possible for the right-hand particles in the combinations in (47)-(48), but not for the left-hand

particles in these combinations, since the constituent formed by the right-hand particle and the verb is a phrase (V') instead of a verbal head (V⁰). The two particles, then, compete for the same, unique syntactic position, which is immediately adjacent to V⁰.³⁵

III. Particle + prefix

Combinations of a particle and a prefix were not predicted to pose any structural problems, since the prefix forms a V⁰ with the verbal head, after which the particle can combine with this V⁰ to form a V'. These combinations were predicted to be semantically compatible if at most one of the two elements leads to the conceptualisation of a resultative predicate. Since the prefixes *be-*, *ver-*, and *ont-* express results, they were predicted to combine with only modifying and orienting particles in a systematic way.

In order to check this prediction, I searched the *Van Dale* (1996) dictionary for all verbs consisting of a verb, a prefix (*be-*, *ver-*, or *ont-*), and one of the thirteen particles in (42)a (the SCV system is productive, but SCVs are nevertheless listed in dictionaries due to their lexical properties, SCVs being both compositional and conventionalised, cf. section 4.2). This search resulted in a total of 34 SCVs (the complete list of these verbs is given in appendix 3b).³⁶ Compared to the number of 'simple' SCVs we found with the same particles (1870 SCVs, cf. 5.5.16), this number is extremely small. This suggests that the semantic restriction of at most one resultative predicate in a clause is indeed a very strong one: both prefixes and the majority of particles express results, so that the number of semantically possible combinations of prefixes and particles is relatively small.

Many of these SCVs contain, indeed, a modifying particle or an orienting particle; these two particle types are present in more than half of the SCVs (20 SCVs, representing 59%). The relevant SCVs are listed in (49), classified according to the function of their particle (see also appendix 3b).³⁷

- (49) a. SCVs with modifying particles: 12
doorbetalen 'to pay consecutively', *meebeslissen* 'to decide with the others',
nabespreken 'to discuss afterwards', *navertellen* 'to tell afterwards',
oververtellen 'to repeat, to tell again', *voorbereiden* 'to prepare (beforehand)',
voorbeschikken 'to predestine', *voorbeschouwen* 'to preview', *voorbestemmen* 'to
 predestine', *voorbewerken* 'to pre-treat', *voorverkopen* 'to sell in advance',
voorverwarmen 'to preheat'

³⁵ For more on the combination *vooraanmelden* 'lit. for-at-report, to apply beforehand', which appears to contain two particles, see section 6.3.

³⁶ Apparent SCVs with a particle and a prefix such as *overbelichten* 'to overexpose' were excluded from the data reported in this subsection, which focuses on the systematic properties of SCVs containing both a particle and a prefix. As illustrated in section 6.3 (see also appendix 3a), combinations such as *overbelichten* are back formations of nouns/adjectives and do not behave as SCVs (nor as ICVs).

³⁷ For more on the SCV *doorbetalen* 'to pay consecutively', see note 38.

- b. SCVs with orienting particles (and other relator 1 particles): 8
aanbelangen 'to concern', *aanbevelen* 'to recommend', *toebedelen* 'to assign',
toebedenken 'to intend for', *toebehoren* 'to belong to', *toebereiden* 'to prepare to',
toevertrouwen 'to entrust/confide to someone', *voorbehouden* 'to reserve for'

Although the numbers of SCVs with each of the particles in (49) are not very large, we can detect systematic patterns among the functions these particles perform, since *mee* 'with', *na* 'after', *over* 'again', *voor* '(be)fore, for', *aan* 'at, to', and *toe* 'at, to' perform the same functions in 'simple' SCVs, that is, in SCVs consisting of a particle and a morphologically simplex verb (cf. 5.3.2, 5.3.3, 5.3.6, and 5.5).³⁸

Like orienting particles in simple SCVs, the orienting particles in the SCVs in (49)b license a Ground participant (cf. 5.3.3 and 5.3.6). Since the prefixed verbs with which these particles combine license a Theme participant, the Ground participant licensed by the particle is syntactically realised as the indirect object NP, e.g. *iemand iets toebedenken* 'to intend something for someone', *iemand iets voorbehouden* 'to reserve something for someone'.

The SCVs in (49) constitute almost 60% of the SCVs containing both a particle and a prefix that are listed in *Van Dale* (1996). In contrast, the majority of the SCVs that do not contain a prefix have a resultative particle (cf. 5.5.16). The semantic restriction of at most one resultative predicate per clause (which is a specification of the more general restriction that says that an event can be delimited only once), then, appears to be a very strong one indeed. That is to say, the cooccurrence of particles and prefixes is structurally possible, but since prefixes generally express results, particles that systematically combine with prefixes do in general not express results. These particles express, instead, modifiers or orientations, as illustrated by (49).

Remaining are 14 SCVs that contain a resultative particle and a prefix. These are listed in Table 6.6.

³⁸ The only exception is *doorbetalen* 'to pay consecutively', since I know of only two other SCVs in which *door* has the modifier function 'consecutively': *doornummeren* 'to number consecutively' and *doortellen* 'to count/add up consecutively'. *Door* is not a continuative particle in these three SCVs, since unlike continuative *door*, it does not block the presence of a direct object (cf. 5.3.5). Instead, it leaves the argument structure of the base intact, thus forming transitive/unaccusative SCVs: *de premie doorbetalen* 'to pay the premium consecutively', *de documenten doornummeren* 'to number the files consecutively', *dat de verlofdagen doortellen* 'that the holidays count/add up consecutively'. *Door* expresses the modifier 'consecutively' in these SCVs.

TABLE 6.6. SCVS WITH A RESULTATIVE PARTICLE AND A PREFIX.

SCV	meaning SCV	function particle
aan-be-landen	to land, to end up	resultative, 'at the destination'
aan-be-steden	to put out to contract, to tender	resultative, 'to someone'
aan-be-talen	to pay a deposit	resultative, 'be partly done'
af-be-stellen	to cancel an order for	resultative, 'annulled'
af-be-talen	to pay off	resultative, 'to the end'
door-be-rekenen	to pass on (e.g. the purchase tax to the customers)	resultative, 'on to the next point'
door-ver-binden	to put through (to the next person/ point)' (phone)	resultative, 'on to the next point'
door-ver-kopen	to resell (to a third party)	resultative, 'on to the next point'
door-ver-tellen	to pass on, to tell to a third person	resultative, 'on to the next point'
door-ver-wijzen	to refer to someone else	resultative, 'on to the next point'
uit-be-steden	to board out, to farm out	resultative, 'out, to others'
uit-be-talen	to pay out	resultative, 'out, to others'
uit-ver-dedigen	to play it out, to counter-attack	resultative, 'out, away'
uit-ver-groten	to enlarge, to print enlarged	resultative, 'out, on print' (?)

It is important to note that no less than nine of these SCVs have a non-compositional prefixed verb (cf. the remarks in the sections 6.4.2 referring to de Vries 1975: 116-129). There are seven combinations in which the prefixed verb has a non-existent base (e.g. *aan-be-steden* 'lit. at-be-?') and two combinations in which the prefixed verb has an existent base but in which there is no systematic synchronic semantic difference between this base and the prefixed verb (*aanbelanden* (see below), *afbestellen*). The nine relevant SCVs are listed in (50) (cf. appendix 3b).

- (50) *aanbelanden* 'to land', *aanbesteden* 'to put out to contract', *aanbetalen* 'to pay a deposit', *afbestellen* 'to cancel an order for', *afbetalen* 'to pay off', *doorvertellen* 'to pass on, to tell to a third person', *uitbesteden* 'to board out', *uitbetalen* 'to pay out', *uitverdedigen* 'to play it out'

In the case of *aanbelanden* 'to land' there does not seem to be a systematic synchronic semantic difference between the base verb *landen*, the prefixed verb *belanden*, the SCV with the prefix *aanbelanden*, and the SCV without the prefix *aanlanden*: the semantic differences between all of these forms, listed in (51), appear unclear.

- (51) *landen* 'to land', *belanden* 'to land, to end up', *aanbelanden* 'to land, to end up', *aanlanden* 'to land, to end up'

Without doubt there are semantic and pragmatic differences between the base verb, the prefixed verb, and the SCV in (51), since they are used in slightly different contexts. The particle *aan* expresses a result (which is possibly pleonastic, cf. 5.5.15.2) in (51), but I am not sure about the semantic contribution of the prefix *be-* in (51). *Landen* 'to land' and *belanden* 'to land' are used in contexts such as (52).

- (52) a. De Boeing is op Schiphol *geland*.
the Boeing is on Schiphol landed
'The Boeing has landed at Schiphol.'
- b. De studenten *belandden* alle drie in het water.
the students *be*-landed all three in the water
'All three students landed in the water.'
- c. De studenten *belandden* alle drie op het politiebureau.
the students *be*-landed all three on the police station
'All three students found themselves at the police station.'

The only semantic difference between *landen* 'to land, to touch down' and *belanden* 'to end up' seems to involve metaphor and a difference in control: both verbs describe the event of arriving at some location, but whereas this involves literally arriving on land or on the ground in the case of *landen* ((52)a), it involves ending up at some location by chance in the case of *belanden* ((52)b-c).

Since it is not certain that the prefixes *be-/ver-* in the prefixed verbs in (50) function as resultative predicates, the analysis does not make any predictions about the particle types with which these prefixed verbs may combine: they may combine with either resultative or non-resultative particles, because in either case the SCV that is formed contains at most one element of which we can be certain that it is conceptualised as a resultative predicate.

We are left with five SCVs containing a compositional prefixed verb and a resultative particle. The relevant SCVs are listed in (53).

- (53) *doorberekenen* 'to pass on', *doorverbinden* 'to put through', *doorverkopen* 'to resell',
doorverwijzen 'to refer further', *uitvergroten* 'to enlarge'

The prefix *ver-* of one of these SCVs, *doorverkopen* 'to resell', does not express a change of state that affects a Theme, but expresses causation and licenses a causer participant: selling something causes someone else to buy it (cf. Lieber and Baayen 1993: 59-60, who also note that others have claimed that *verkopen* 'to sell' is purely idiosyncratic (p. 55)). Since the prefix *ver-* in this verb does not conceptualise a resultative predicate, no predictions are made about the types of particle this prefixed verb may combine with: regardless of the type of particle, the resulting SCV will contain at most one resultative predicate.

Remaining are only four SCVs in which both the particle and the prefix express a result. This is an extremely small group of SCVs, which indicates that there is, indeed, a strong restriction on the cooccurrence of two resultative predicates. In combination with the semantic classification of particles proposed in chapter 5, then, this restriction can be said to account for the data: it accounts for the fact that (1) there are only a few SCVs that contain both a particle and a prefix, (2) of those SCVs that are found relatively many contain non-resultative particles, and (3) those SCVs that contain a resultative particle generally contain a prefixed verb that is non-compositional and/or in which the prefix does not conceptualise a resultative predicate.

Although they form a very small class, the existence of the four SCVs that contain both a resultative particle and a resultative prefix asks for an explanation. The relevant SCVs are, provided with a direct object NP, given in (54).

- (54) a. de klant *doorverbinden*
 the customer through-connect
 'to put the customer through to the next person/point'
- b. de klant *doorverwijzen*
 the customer through-refer
 'to refer the customer further to the next person/point'
- c. de belasting *doorberekenen*
 the tax through-compute
 'to pass on the purchase tax to the next person/point (to the customers)'
- d. de foto *uitvergroten*
 the picture out-enlarge
 'to enlarge the picture, to print the picture enlarged, to make an enlarged print of one part of the picture'

The resultative particle *door* 'through', which expresses the change of location 'on to the next point', is present in three of the four cases. This function of *door* is also present in many simple SCVs, such as *het boek doorgeven* 'to pass on the book' and *de bal doorspelen* 'to pass the ball on to someone else' (cf. 5.5.4). The element 'on' appears to be crucial in this meaning: the particle *door* here typically expresses a result affecting an entity that follows some other result affecting the same entity and that is distinct from but compatible with previously attained results. *Doorverbinden*, for instance, which expresses the event of establishing a further connection for a person, is typically used to refer to a situation in which a first connection has already been made for this person. Similarly, *het boek doorgeven* 'to pass on the book to someone else' presupposes a previous event of passing the book. It thus appears that *door* 'on to the next point' combines with verbs denoting events that imply the attainment of some result (i.e. with verbs denoting telic events). Since prefixed verbs with resultative prefixes express results (and are, thus, telic), *door* 'on to the next point' may combine with such verbs. This particle, then, turns out to be exceptional in that it expresses a result but may nonetheless combine with bases that also express results. In other words, this particle appears to be barred from the generalisation that the LCS of a simple clause may contain at most one resultative predicate, which seems to be related to its specific lexical-semantic content.

Our last verb is *uitvergroten* 'to enlarge'. Unlike the other SCVs in (54), this is an isolated case; the function of *uit* in this SCV cannot straightforwardly be linked to other SCVs with *uit* (except for, perhaps, *uitprinten* 'to print out', cf. 5.5.15.2). A *Google* search reveals that the forms in which this combination is used are typically non-separated forms, such as infinitives, past participles, and, in particular, adjectives. Some examples of contexts in which these non-separated forms of *uitvergroten* occur are given in (55)a-c. Even more frequent than the use of the forms in (55)a-c, however, is the use of the noun *uitvergrotting* 'enlargement', illustrated in (55)d.

- (55) a. Die foto zou ik laten *uitvergroten*.
 that picture would I let out-enlarge
 'I would have that picture enlarged.'

- b. De mooiste foto's werden *uitvergroot*.
the most beautiful pictures were out-enlarged
'The most beautiful pictures were enlarged.'
- c. de *uitvergrote* versie
the out-enlarged version
'the enlarged version'
- d. De *uitvergrotting* van de foto was goed gelukt.
the enlargement of the picture was good succeeded
'The enlargement of the picture turned out well.'

What we see is that separated forms of *uitvergroten* (e.g. (?)*Jan vergrootte de mooiste foto's uit* 'John enlarges the most beautiful pictures') are not categorically excluded (unlike the separated forms of a combination such as *uitbehandelen* 'to finish the treatment', cf. 6.3), but are in any case very infrequent. These properties suggest that the verb *uitvergroten* might be a back formation of the noun *uitvergrotting* 'enlargement', the relevant back formation scheme being given in (56).

(56) [uit [[vergroot]_V ing]_N]_N → [[uit [vergroot]_V ing]_V]_N

The SCV *uitvergroten*, then, behaves exceptionally in various respects.³⁹ I conclude that there are, with the exception of *door* 'on to the next point', no resultative particles that systematically combine with prefixed verbs containing a resultative prefix.

In sum, the SCVs containing both a particle and a prefix that are listed in *Van Dale* (1996) confirm the generalisation that resultative particles do not combine with prefixed verbs in a systematic way. Such SCVs are very few in number compared to the overall number of SCVs, and of the SCVs that we found, relatively many contain a modifying or an orienting particle (i.e. a non-resultative particle). These particles were predicted to be the only particles that combine with prefixed verbs in a systematic way (cf. (49) in 6.4.4). There are also SCVs with a resultative particle and a prefix, but the majority of these SCVs contain a non-compositional prefixed verb (e.g. *aanbetalen* 'lit. at-be-?, to pay a deposit', *uitverdedigen* lit. 'out-ver-?, to play it out, to counter-attack'). In the remaining SCVs, the prefix does not appear to express a change of state/location. These SCVs, then, indeed contain only one element that conceptualises a resultative predicate. There is, however, one particle that appears to by-pass this semantic restriction, which is the particle *door* 'on to the next point'. This particle systematically combines with bases denoting results, and since prefixed verbs denote results, it may also combine with prefixed verbs. The exceptional behaviour of this particle appears to be related to its specific lexical-semantic content; it makes reference to a previously attained result.⁴⁰

³⁹ *Uitvergroten* is the only SCV listed in *Van Dale* (1996) that contains a deadjectival prefixed verb; SCVs like **inverkleinen* 'lit. in-ver-small, to reduce' and **opverwarmen* 'lit. up-ver-warm, to warm up' do not occur (which is assumed to be a consequence of the semantic restriction that a clause may contain at most one change of state predicate).

⁴⁰ I only investigated combinations of particles and the prefixes *be-*, *ver-*, and *ont-*. A search for SCVs containing a particle and an ICV prefix (cf. 6.2) revealed that such SCVs are virtually non-existent, the only token being *meeondertekenen* 'to sign with the others'.

I checked the data from *Van Dale* (1996) with those reported by Emiliano Guevara (2002), who uses CELEX. Guevara reports the same set of SCVs plus eight more: *aanbehoren* 'to belong to', *aanbesterven* 'to fall to by inheritance', *inberekenen* 'to reckon in', *inverdiene* 'to work off', *nabestellen* 'to repeat an order for', *nabezorgen* 'to deliver later', *uitvertellen* 'to finish telling'. None of these, however, constitutes a genuine SCV that contains both a resultative particle and a resultative prefix (*aanbesterven*, *inberekenen*, and *uitvertellen* are not used finitely in main clauses).

Using the *Morfologische Gegevensbank van het Nederlands* ('Morphological Database Dutch', MGBN 2002), Oele Koornwinder (Koornwinder p.c., cf. Koornwinder to appear) reports 39 combinations in addition to mine, six of which are back formations with *onder-/over-* that do not behave as genuine SCVs (cf. 6.3). In conformity with my predictions, most of the remaining 33 combinations (25 in total) contain a modifying particle (*mee* 'along, with', *na* 'after, behind', *voor* '(be)fore, for') or an orienting particle (*aan* 'at, to', *toe* 'at, to'). This shows that an enlargement of the data set leads to more SCVs with precisely those types of particle that I predict to combine with prefixed verbs in a systematic way. Resultative particles are present in only eight of the 33 combinations (*aanverdiene* 'to settle a debt by working for it', *afvertellen* 'to finish telling', *inberekenen* 'to reckon in', *inbesteden* opposite of *uitbesteden* 'to put out to contract', *inverdiene* 'to work off (a debt)', *uitverdiene* opposite of *inverdiene* 'to work off (a debt)', *uitvertellen* 'to finish telling', *uitverzoeken* 'to ask/invite someone out'), but these combinations do either not behave as normal SCVs or contain a prefixed verb with a non-existent base.

6.4.5 Conclusion

Various semantic and structural assumptions together appear to account for the possible and impossible cooccurrences of resultative and non-resultative particles, prefixes, and phrases within a single VP. These assumptions make reference to, among other things, the semantic differences among particles discussed in chapter 5 and the SCV structure discussed in chapter 4.

To start with the SCV structure, the analysis of SCVs as phrases that consist of a non-projecting word and a V^0 explains why an iteration of particles is impossible: the first particle combines with V^0 to form a V' , after which the second particle cannot combine with V^0 anymore.

A second assumption is that elements conceptualising resultative predicates must be syntactically realised more closely to the verb than elements

Combinations of modifying particles and path prefixes (e.g. **het huis vóor-door-zòeken* 'to search the house beforehand', **het land ná-over-spòelen* 'to wash over the land afterwards') and combinations of modifying particles and the quantificational prefix *over-* (e.g. **de zenuwen vóor-over-prikkelen* 'to over-stimulate the nerves beforehand'), which are expected to be well-formed, do thus not occur. I have to leave the explanation of the non-existence of such SCVs as a topic for further research (the formal similarity of SCV preverbs and ICV preverbs corresponding to adpositions may play a role here).

conceptualising modifiers. This assumption was shown to account for the fact that non-resultative particles cannot combine with resultative phrases.

The central semantic assumption is that the LCS of a VP may contain at most one resultative predicate. The hypothesis derived from this semantic restriction is that resultative particles do not systematically combine with prefixed verbs containing the resultative prefixes *be-*, *ver-*, and *ont-*. The results show that the number of SCVs consisting of a particle and a prefixed verb is relatively small, which can be related to the semantic restriction in question: the majority of particles express results (as do the prefixes *be-*, *ver-*, and *ont-*). Of those SCVs that do contain a prefixed verb, relatively many have a modifying or an orienting particle (that is, a non-resultative particle). Resultative particles do indeed not appear to combine with prefixed verbs in a systematic way. However, there appears to be one exception to this generalisation: the resultative particle *door* 'on to the next point' combines with bases denoting telic events, among which prefixed verbs.

Particles belonging to the other non-resultative particle types that have been distinguished in chapter 5 do not seem to combine with prefixed verbs either. That is, no combinations of a prefixed verb and a path particle (relator 2 particle), a double-participant particle (relator 3 particle), or an Aktionsart particle (continuative particle or inceptive particle) were found among the data. This, too, can be related to the semantic properties of the particles in question. Path particles and double-participant particles express, in combination with their Ground, a change of location. This means that constructions with such particles conceptualise resultative predicates (cf. 5.3.4 and 5.5.15.4). Since a clause may contain at most one resultative predicate, such particles are predicted to be unable to combine systematically with prefixed verbs that contain resultative prefixes. Aktionsart particles are semantically incompatible with the presence of a Theme (cf. 5.3.5), and since resultative prefixes license a Theme, these particles are unable to combine with prefixed verbs containing such prefixes. Both types of Aktionsart particle are, furthermore, semantically incompatible with obligatorily telic, durative bases (accomplishments), which prefixed verbs with a resultative prefix generally are: continuative particles are compatible only with bases denoting atelic, durative events (activities) and inceptive particles are compatible only with bases denoting telic, punctual events (semelfactives) (cf. 5.3.5).

These results illustrate that the semantic classification of particles proposed in chapter 5 is a useful one: of the particle types that have been distinguished, only modifying particles and orienting particles combine with prefixed verbs in a systematic way. These are the only particle types that do not lead to the conceptualisation of a resultative predicate and are semantically compatible with telic events containing a Theme (cf. 5.3.2, 5.3.3, and 5.3.6).

6.5 Summary and conclusions

The first part of this chapter discussed the semantics of ICVs, which turned out to be different from that of SCVs: whereas SCVs have preverbs that may perform various functions, the most frequent of which is that of a resultative predicate, none of the productively used ICV preverbs functions as a resultative predicate. ICV preverbs

mainly function as path preverbs, licensing a Ground participant. These ICV preverbs are thus semantically similar to the path particles discussed in section 5.3.4, although constructions with path prefixes differ from constructions with path particles in the type of path that they express. The next chapter will relate these results to the diachrony of SCVs and ICVs.

The second part of this chapter focused on the cooccurrence of particles, prefixes, and resultative phrases within a single VP. It was shown that the structural analysis of SCVs proposed in chapter 4 and the semantic analysis of SCVs proposed in chapter 5, in combination with two independent generalisations, account for the possible and impossible cooccurrences of particles and resultative phrases, of two particles, and of particles and prefixes within a single VP. The analysis proposed in this book, then, turns out to be capable of accounting for these cooccurrences (other analyses, however, might also be capable of doing so).

It was shown that resultative predicates, which license an affected participant, may be expressed by phrases, by particles, and by prefixes such as *be-* and *ver-*, that is, by elements representing different X-bar levels. The same holds for relators licensing a Ground, which may be realised by prepositions and postpositions, path particles, and path prefixes, and also for modifiers, which may be realised by modifier phrases, modifying particles, and modifying prefixes (the latter of which, however, appeared to be unproductive, cf. 6.2.2). A particular function may thus be realised by a phrase (XP), by a non-projecting word (X), or by a bound morpheme (an element below the X^0 level), in other words, by elements with different structures. Conversely, elements with the same structural status may perform various functions. Particles, for instance, may function as resultative predicates, as modifiers, or may have yet other functions, but all particles have the structural status of a non-projecting word that combines with a verb to form a phrase. This illustrates that we must allow for structure-function non-isomorphism in the grammar; for a non-isomorphic mapping between the c(onstituent)-structural status of an element and its function in the LCS of the construction (cf. 2.2.1 and 5.4). This will be worked out in chapter 8. First, however, chapter 7 will discuss the diachrony of SCVs and ICVs.

Chapter 7

The diachrony of SCVs and ICVs

7.1 Introduction

Chapter 5 and chapter 6 showed that there are systematic semantic differences between SCVs and ICVs: whereas SCV preverbs (particles) productively function as resultative predicates, modifiers, relators (denoting orientations or paths), and Aktionsart markers (denoting continuation or inception), the only function that is productively performed by ICV preverbs is that of relator denoting a path. I will show in this chapter that these results pose a problem for previous hypotheses about the diachrony of SCVs and ICVs. I will put forward an alternative hypothesis and present historical data supporting this hypothesis.

The chapter is structured as follows: section 7.2 summarises the core properties of the previous hypotheses about the grammaticalisation of SCVs and ICVs and the problems associated with these hypotheses, which have been discussed in section 3.6.1. The alternative grammaticalisation hypothesis is also laid out in this section. Section 7.3 and section 7.4 discuss two successive steps in this grammaticalisation development: the step of phrases developing into particles (7.3) and the step of particles developing into prefixes (7.4). Both sections present historical support for the development they discuss. Section 7.5 relates the results of the previous sections and provides some further discussion on the diachrony of SCVs and ICVs. Section 7.6 summarises the results of this chapter.

7.2 The grammaticalisation hypothesis

It was noticed in section 3.6.1 that both SCVs and ICVs have been hypothesised to represent stages in the grammaticalisation of resultative phrases into morphologically complex words, ICVs being assumed to represent a stage beyond that of SCVs (cf. the references in 3.6.1). The structural development implied by this hypothesis can be represented as in (1) (cf. (29) in 3.6.1).¹

- (1) a. structural pattern: ...- $\mathbf{XP}_{\text{RES}}\text{-V}^0$ > ... $[\mathbf{X}\text{-V}^0]_{\text{V}}$ > ... $[\text{prefix}\text{-V}^0]_{\text{V}}^0$
b. preverb cline: phrase > particle > prefix

¹ The VP-brackets are omitted in (1) and the other reanalysis patterns given in this chapter. I represent the resultative phrase as \mathbf{XP}_{RES} to distinguish it from the non-resultative phrases in the reanalysis patterns in this chapter (cf. 7.5.4).

The literature on grammaticalisation phenomena leads us to the hypothesis that the structural development in (1) is accompanied by semantic changes, more specifically by the loss of lexical meaning and the development of more abstract, metaphorical meanings (semantic bleaching). Prefixes can thus be hypothesised to have less concrete meanings than the corresponding particles. That is to say, the spatial meanings of the corresponding prepositions/postpositions can be hypothesised to be less clearly present in prefixes than in particles (cf. 3.6.1 and the references given there).

We have seen, however, that there are many particles that have figurative, non-spatial meanings. Some examples are given in (2) (the particles in (2) contribute meaning to the SCV compositionally, cf. 4.2 and 5.2).

(2)	SCV	gloss	meaning
	de informatie <i>ópzoeken</i>	up-search	'to look up the information'
	je schoenen <i>inlopen</i>	in-walk	'to wear in one's shoes'
	de bestelling <i>áfleveren</i>	down/off-deliver	'to deliver the order'
	het oude jaar <i>úitluiden</i>	out-ring	'to ring out the old year'

There are, furthermore, many prefixes that express spatiality. Some examples of ICV constructions in which this is the case are given in (3) (cf. 3.6.1 and 6.2.1).

(3)	ICV	gloss	meaning
	het huis <i>doorzóeken</i>	through-search	'to search (through) the house'
	het huis <i>omgéven</i>	around-give	'to surround the house'
	het land <i>overspóelen</i>	over-wash	'to wash over the land'

The meanings of the prefixes in (3) do not appear to be less spatial than those of the formally corresponding particles in (4) either.

(4)	SCV	gloss	meaning
	de taart <i>dóorsnijden</i>	through-cut	'to cut the cake in two'
	een bladzijde <i>óm slaan</i>	around-strike	'to turn over the page'
	het bericht <i>óverbrengen</i>	over-carry	'to carry over/convey the message'

As opposed to what we would expect, then, the ICV preverbs in (3) do not have less lexical content than the SCV preverbs in (4). The same holds for SCVs and ICVs with the same preverb and the same base verb, such as the SCV in *dóorsnijden* 'to cut in two' in (4) and the ICV *doorsnijden* 'to cut through', used in *de rivieren doorsnijden het land* 'the rivers cut through the country'. The prefix *door* expresses its spatial meaning 'through' in this ICV.² I will argue in the remainder of this

² It is true that the verb *snijden* 'to cut' has a metaphorical meaning in this ICV (a 'light verb-like' meaning, 'to go'), as opposed to what is the case for the SCV *dóorsnijden* 'to cut in two'. This, however, does not constitute a systematic difference between SCVs and ICVs; a similar 'light verb-like' meaning can be observed for, for instance, the verb *slaan* 'to strike' in the SCV *óm slaan* 'to turn over' in (4). See also section 5.5.15.6 and the SCVs with the verb *vallen* 'to fall' given there, such as *invallen* 'to invade', *toevallen* 'to fall to, to accrue to', and *uitvallen* 'to drop out'.

chapter that these data are explained by assuming that the SCV preverbs in (2)-(4) and the ICV preverbs in (3) do not form part of the same historical development. I will also illustrate that preverbs of SCVs and ICVs that do form part of the same development exhibit the expected semantic difference.

A second, related problem for the original diachronic hypothesis, according to which both SCVs and ICVs are historically related to syntactic constructions with resultative predicates, appears from the results of chapter 5 and chapter 6.

It has been illustrated in chapter 5 that not all productively used SCV preverbs function as resultative predicates: although a large part of these preverbs indeed function as such and exhibit the accompanying properties of licensing a Figure participant and forming transitive/unaccusative and telic SCVs, SCV preverbs may also have other functions. That is, they may also be conceptualised as modifiers, relators, or continuators, and, correspondingly, exhibit different semantic properties, including different participant-licensing properties. SCV preverbs functioning as modifiers, for example, do not license any participant and do not influence the argument-structural properties and the lexical-aspectual properties of the base verb. Preverbs functioning as relators, on the other hand, license a Ground participant and form transitive SCVs, which may either inherit the telicity properties of the verb or be necessarily telic depending on the type of relator they express. Preverbs that are conceptualised as continuators form unergative and atelic SCVs. Since preverbs belonging to these categories do not function as resultative predicates (which is reflected by the divergent argument-structural and lexical-aspectual properties of the SCV constructions they form), it does not seem very plausible to hypothesise that SCV constructions with such preverbs have developed out of constructions with resultative phrases.

We have seen in section 6.2.1 that the same holds for ICV preverbs: productively used ICV preverbs are not conceptualised as resultative predicates, but as relators that license a Ground participant (and express a path or, in the case of the quantificational prefix *over-* (which also licenses a Ground participant), a quantificational meaning, cf. 6.2.1). This is why it does not seem plausible to hypothesise that constructions with such ICV preverbs have developed out of constructions with resultative predicates.

In short, the semantic properties of Modern Dutch SCVs and ICVs make it unlikely that all types of SCV and ICV are historically related to constructions with resultative phrases. This hypothesis appears to be plausible only for SCVs with resultative preverbs, since these preverbs indeed function as resultative predicates (with metaphorical or otherwise extended meanings), having the same participant-licensing properties as resultative phrases. These preverbs, correspondingly, form SCV constructions that are argument-structurally and lexical-aspectually similar to constructions with resultative phrases (but, like SCV constructions with other preverbs, SCV constructions with resultative preverbs are *syntactically* different from constructions with resultative phrases, cf. chapter 4). A diachronic relationship with resultative phrases seems implausible for the other types of SCV preverb that have been distinguished in chapter 5, as well as for the ICV preverbs. Turning to the structural pattern in (1)a, the development illustrated here appears not to hold for SCVs and ICVs in general. The first step indeed appears to occur, resulting in SCVs with resultative particles. But unlike what is implied by the second step in (1)a, such

SCVs do not seem to develop further into ICVs (as ICVs do generally not contain resultative prefixes). ICVs instead seem to develop out of other types of SCV, which, in turn, seem to develop out of constructions other than those with resultative phrases. This alternative hypothesis is summarised in (5).

- (5) a. Grammaticalisation of resultative preverbs:
 constructions with > resultative
 resultative phrases SCV preverbs
- b. Grammaticalisation of non-resultative preverbs:
 constructions with > non-resultative > ICV preverbs
 non-resultative phrases SCV preverbs

The developments represented in (5) correspond to two different structural developments and to two different preverb clines, instead of one of each (cf. (1)). These separate patterns are given in (6).

- (6) a. Constructions with resultative phrases:
 structural pattern: ...-**XP**_{RES}-V⁰ > ...[**X-V**⁰]_V⁰
 preverb cline: phrase > particle
- b. Constructions with non-resultative phrases:
 structural pattern: ...-**XP**_{NON-RES}-V⁰ > ...[**X-V**⁰]_V⁰ > ...[**prefix-V**⁰]_V⁰
 preverb cline: phrase > particle > prefix

The structures in (6) illustrate that the grammaticalisation development is assumed to involve the structural reanalysis of the preverbal element and the verb, which are structurally adjacent, as a syntactic unit (SCV). The effect of this reanalysis is that the preverbal element can no longer project its own phrase. In the case of (6)b we see the further development of this syntactic unit into a morphological unit, whereby the preverbal element develops into a prefix. The changes thus imply the loss of structure in the preverbal element (XP > X > prefix). These structural developments are expected to be accompanied by various semantic changes. That is to say, although particles and preverbs are claimed to generally preserve the participant-licensing properties of their historical sources, they develop extended meanings (see also 7.3.3, 7.4.3, and 7.5.1). I furthermore claim that the developments represented in (5)-(6) are unidirectional. This means that I do not expect to find patterns of ICVs systematically developing into SCVs or patterns of SCVs systematically developing into syntactic constructions with resultative and non-resultative phrases (cf. 2.3).³

The claims represented in (5)-(6) differ from the claims made in the literature (see the references in 3.6.1) in the following respects: (a) not only resultative phrases, but also non-resultative phrases may develop into particles, and (b) only non-resultative particles may develop further into prefixes (more specifically, the development of particles into prefixes seems to affect only one subtype of the non-resultative particles). Crucially, resultative phrases and ICV preverbs are claimed not to be part of the same historical development (cf. (5)).

³ I do not claim that every Modern Dutch SCV and every Modern Dutch ICV has passed through the previous historical stages; SCVs and ICVs may also be formed synchronically (see 8.2.3).

The hypothesis in (5)-(6) is based on the assumption that the systematic synchronic semantic correspondences between different preverbs and different phrases reflect diachronic relationships: the different preverb types are semantically similar to different phrases, and these different phrases represent the historical sources of these different preverb types. Resultative preverbs, for instance, are semantically similar to resultative phrases, and I claim that this synchronic semantic similarity is due to a diachronic relationship between resultative preverbs and resultative phrases: constructions with resultative preverbs have developed out of constructions with resultative phrases. Similarly, I claim that the semantic similarity between modifying preverbs and phrasal modifiers reflects a diachronic relationship according to which such preverbs have developed out of phrasal modifiers. Relator preverbs are, likewise, claimed to have developed out of phrasal elements that function as relators (prepositions and postpositions), and continuative preverbs are claimed to have developed out of phrasal continuators (see 7.3.2.4). These hypotheses, accompanied by examples of SCV constructions with the different types of preverb, are represented in (7).⁴

- (7) Grammaticalisation of different types of preverb
- a. resultative phrases > resultative preverbs
SCV: *de schoenen inlopen* 'to wear in the shoes'
 - b. phrasal modifiers > modifying preverbs
SCV: *de groenten voorkoken* 'to cook the vegetables beforehand'
 - c. pre-/postpositions > relator preverbs
SCV: *het publiek toespreken* 'to talk to the audience' (orienting preverb)
SCV: *de sonate doorspelen* 'to play through the sonata' (path preverb)
 - d. phrasal continuators > continuative preverbs
SCV: *uren doorlezen* 'to continue reading for hours'

In order to find out whether the changes implied in (5)-(7) represent plausible changes, we will look more closely at these changes in the next subsections. Section 7.3 discusses the development of phrasal combinations into SCVs and section 7.4 discusses the development of SCVs into ICVs. Historical data supporting these developments will be presented in both sections.

7.3 The grammaticalisation of XP-V combinations into SCVs

7.3.1 Structural reanalysis

The development in (6)a and the first step in the development in (6)b represent the structural reanalysis of the preverbal element with the verb as a syntactic unit and the concomitant loss of structure in this preverbal element. It is generally assumed that reanalysis may take place between elements that are adjacent in certain contexts (cf. Harris and Campbell 1995, Hopper and Traugott 2003, see also 2.3). The

⁴ This chapter will not discuss the diachrony of the inceptive particle *toe* 'to', which has to remain as a topic for further research. For the diachrony of double-participant particles (cf. 5.5.15.4), see note 11 in 7.3.2.2.

question that needs to be answered, then, is whether the historical sources postulated for the different types of particle, given on the left-hand side in (7), immediately precede the verb in certain contexts: only in that case, the developments represented in (7) imply plausible reanalysis patterns.

As for the pattern for *resultative particles* ((7)a), the question that needs to be answered is whether resultative phrases may immediately precede the verb. This is indeed the case: resultative phrases such as *oranje* 'orange' in (8) immediately precede the verb in OV contexts, that is, in subordinate clauses and in main clauses with more than one verb (cf. 6.4.2).

- (8) dat Jan zijn fiets *oranje* verft
 that John his bike orange paints
 'that John paints his bike orange'

A word such as *af* 'finished' may also function as a resultative phrase (cf. 4.5). We can posit the reanalysis pattern in (9) for constructions with *af* 'finished' (cf. Booij 2002a: 217-218; the subject NP is not represented in (9)b and the other structures given in this chapter).

- (9) a. dat Jan zijn huiswerk *af maakt* > dat Jan zijn huiswerk [*af-maakt*]
 'that John finishes his homework'
 b. NP-XP_{RES}-V⁰ > NP-[X-V⁰]_V

The reanalysis pattern in (9)b indicates that a phrasal resultative predicate that is left-adjacent to the verb is reanalysed with this verb as a syntactic unit. The effect of this is that the resultative predicate can no longer project its own phrase (XP > X) and that the NP preceding this predicate is reinterpreted as the direct object of the reanalysed complex predicate.⁵ These examples illustrate that a plausible reanalysis pattern is available for resultative particles.

The new structure may develop its own specific semantic properties. One such property is that the newly formed syntactic unit generally has a unitary meaning, in which the preverbal element, which is no longer a syntactically independent constituent, may have an extended meaning. The meaning 'finished' of *af* may, for instance, develop into the more abstract meaning 'completely done (by V-ing)', present in the SCV *aflopen* in (10) (cf. Booij 2002a: 212).

- (10) a. de straten *aflopen*
 'lit. the streets off/down-walk, to tramp the streets'
 b. alle winkels *aflopen*
 'lit. all shops off/down-walk, to do all the shops, to check all the shops'

⁵ The NP *zijn huiswerk* and the XP *af* do not form a constituent (a Small Clause, SC) in (9). This, however, is not essential to the analysis presented here. If we assume an SC-analysis for constructions with resultative phrases, the relevant structures would be as in (i).

- (i) a. dat Jan [zijn huiswerk *af*] *maakt* > dat Jan zijn huiswerk [*af-maakt*]
 'that John finishes his homework'
 b. [NP-XP_{RES}]_{SC}-V⁰ > NP-[X-V⁰]_V

I will show in section 8.2 that new SCVs in which particles express extended meanings such as *af* 'completely done' appear to be formed directly, that is, on the basis of templates like [*af*-V]_v, 'to cause Y to become completely done by V-ing' (where Y refers to the referent of the direct object NP). So although SCV constructions with resultative particles such as *af* 'completely done' are claimed to be historically related to the construction with a resultative phrase, which represents their historical source, I do not claim that every single Modern Dutch SCV has developed out of an instantiation of this construction. New SCVs can, instead, also be formed synchronically, and such synchronic SCV formation appears to be based on phrasal lexical templates.

It has been argued in section 4.5 that the word *af* 'finished' is structurally ambiguous in Modern Dutch; it may have either the structural status of a phrase (XP) or that of a non-projecting word (a particle). This dual structural status of *af* 'finished' (and of some other particles, cf. 4.5 and 5.6) can now be related to their diachrony: it is a manifestation of *layering*, which is the situation, typical of grammaticalisation developments, that older and newer forms coexist for shorter or longer periods (cf. the references in section 2.3, see also 7.5.3).

In sum, a plausible reanalysis pattern is available for resultative particles, because their putative historical sources (resultative phrases) may appear left-adjacent to the verb. It has to be noted that the claim that there is a historical relationship between resultative phrases and resultative particles is not new, but has also been made by others (cf. the references in 3.6.1).

Next, we look at the reanalysis patterns implied by the developments postulated for the non-resultative particles (cf. (6)b, (7)b-d). Particles that are conceptualised as *modifiers* are claimed to be historically related to phrases functioning as (adverbial) modifiers. Examples with such phrasal modifiers are given in (11).

- (11) a. dat Jan het boek [*gisteren*]_{AdvP} las
 that John the book yesterday read
 'that John read the book yesterday'
- b. dat Jan de groenten [*van tevoren*]_{AdvP} kookt
 that John the vegetables beforehand cooks
 'that John cooks the vegetables beforehand'

The examples in (11) illustrate that phrasal modifiers may also appear left-adjacent to the verb in OV contexts. Middle Dutch examples with the modifier *voer/vore* 'beforehand' are given in (12).

- (12) a. *Ic gruete u vrouwen (...) die waert maghet voer ende na.*
 I greet you lady (...) who were virgin before and after
 'I greet you, lady (...), who were a virgin both beforehand and afterwards.'
 (I.e. both before and after pregnancy; addressing the Blessed Virgin Mary.)
 (*Marialegenden en -exempelen*, 2-176, 1500)

- b. *Ende als de wonde genayt es. so stroyt opten naet dit pulver dat gi vore*
and if the wound sewed is. then sprinkle on-the suture this powder that you fore
gemaect selt hebben.
made shall have
'And when the wound has been sewed, then sprinkle at the suture this powder
that you will have made beforehand.' (*Cyurgie*, 1, cap. 5-15, 1351)
- c. *Siet, ic sende minen inghel vore dijn ansichte, die vore bereiden sal dinen wech*
see, I send my angel for your face, who fore prepare shall your way
vore di.
for you
'See, I send my angel in front of your face, who will prepare your way for you.'
(*De vier evangeliën* – Marcus, 42, 1380-1400)

In (12)a, *vore* 'beforehand' is a phrasal modifier, but in (12)b-c, it is ambiguous between being a phrasal modifier and being a particle. The constructions in (12)b-c, then, contain a potential for the reanalysis of constructions with modifier phrases into SCV constructions with modifying particles. A construction like (12)c could, in other words, be reanalysed according to the pattern in (13) (the auxiliary *sal* is left out in (13) and the extraposed direct object NP occurs in its base position, preceding the verb, cf. 7.3.2.1). A similar reanalysis pattern could be assumed for (12)b.

- (13) *dinen wech vore bereiden* > *dinen wech [vore-bereiden]*
NP-XP_{ADV}-V⁰ > NP-[X-V⁰]_V

The pattern in (13) indicates 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). The structural reanalysis represented in (13), then, seems to have led to the formation of the SCV *voorbereiden* 'to prepare beforehand'.⁶ (That *voorbereiden* is a proper SCV in Modern Dutch is clear from the fact that it may occur in typical SCV positions, such as the position inside the verb cluster, which are unavailable to combinations of a phrasal modifier and a verb, cf. chapter 4 and 5.6.) We can conclude that the diachronic relationship we have posited between phrasal modifiers and modifying preverbs implies a plausible reanalysis pattern: phrasal modifiers are adjacent to the verb in certain contexts.

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 (as '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 diachronic hypothesis represented by (7)b, then, is not very controversial.

The hypotheses about the grammaticalisation of the remaining three particle types, represented in (7)c-d, are possibly more controversial. I hypothesise in (7)c that relator particles have developed out of elements functioning as relators; out of

⁶ There is no SCV *voormaken* 'to make beforehand' in Modern Dutch (cf. (12)a), but this SCV did exist in Middle Dutch (cf. the lemma *voremaken* in the Middle Dutch dictionary on the CD-Rom *Middelnederlands* 1998).

prepositions and/or postpositions. Continuative particles are hypothesised to have developed out of so-called phrasal continuators ((7)d). I will now discuss these developments.

SCV constructions with *path* particles (*de sonate doorspelen* 'to play through the sonata') express the telic path of the subject referent through/over the direct object referent (cf. 5.3.4). I hypothesise that such SCV constructions are historically related to 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. The semantic similarity between postposition constructions with motion verbs and constructions with path particles is illustrated in (14) (cf. (31)-(33) in 5.3.4).

- (14) a. SCV with path particle:
 dat Jan de sonate [*doorspeelt*]_V
 that John the sonata through-plays
 'that John plays through the sonata'
 [GO [(THROUGH (*de sonate*)) (*Jan*)], BY {*spelen* (*Jan*)}]
- b. postposition construction:
 dat Jan [*Azië door*]_{PP} reist
 that John Asia through travels
 'that John travels through Asia'
 [GO [(THROUGH (*Azië*)) (*Jan*)], BY {*reizen* (*Jan*)}]

The examples in (14) indicate that both constructions with the path particle *door* and constructions with the postposition *door* express the telic path of the subject referent through the other referent, which is the Ground of *door*.⁷ I claim that this semantic similarity between the two types of construction reflects a diachronic relationship: constructions with path particles have developed out of constructions with postpositions. Since postpositions may occur left-adjacent to the verb, this diachronic hypothesis implies a plausible reanalysis pattern. This is illustrated in (15).

- (15) a. dat Jan [*Azië door*] reist > dat Jan Azië [*door-reist*]
 'that John travels through Asia'
- b. [NP-P]_{PP}-V⁰ > NP-[X-V⁰]_V

Constructions with path particles strongly resemble postposition constructions with respect to their semantic and lexical-aspectual properties (cf. 5.3.4), but there is also an important difference between the two construction types: whereas postpositional constructions with motion verbs are unaccusative (selecting the perfect auxiliary *zijn* 'be'), constructions with path particles are transitive (selecting the perfect auxiliary *hebben* 'have'). This is illustrated in (16).

⁷ Both SCV constructions with path particles and constructions with postpositions, then, express directional paths. 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)'.

- (16) a. SCV with path particle: dat Jan de sonate [*doorgespeeld*]_V *heeft*
 'that John has played through the sonata'
 b. postposition construction: dat Jan [*Azië door*]_{PP} *gereisd is*
 'that John has travelled through Asia'

I will come back to this auxiliary difference in section 7.3.2.3, in which I will present historical data clarifying the development of the path particle *door*.

Constructions with **orienting** particles are semantically similar to preposition constructions instead of postposition constructions: like prepositions, orienting particles license a participant with which they form a PP that expresses the direction toward which the event is oriented, and like preposition constructions with atelic verbs, orienting SCV constructions with atelic bases denote atelic events (cf. 5.3.3). The semantic similarity between SCV constructions with orienting particles and preposition constructions is illustrated in (17).

- (17) a. SCV with orienting particle:
 dat Jan het publiek [*toe-spreekt*]_V
 that John the audience to-speaks
 'that John talks to the audience'
 [*spreken (Jan) {TO (het publiek)}*]
 b. preposition construction:
 dat Jan [*tot het publiek*]_{PP} *spreekt*
 that John to the audience speaks
 'that John talks to the audience'
 [*spreken (Jan) {TO (het publiek)}*]

As noted above, events expressed by preposition constructions like (17)b are atelic. These preposition constructions contrast, in this respect, with postposition constructions such as (16)b, which express the telic path of the subject referent. An example of a postposition construction with *toe* is given in (18).

- (18) dat Jan [*naar de man toe*]_{PP} *loopt*
 that John at the man to walks
 'that John walks up to the man'

Toe in (18) is part of the circumpositional PP *naar de man toe*, which expresses the telic path of the subject *Jan* (cf. *dat Jan in een minuut/*urenlang naar de man toe was gelopen* 'that John had walked up to the man in a minute/*for hours'). A comparison of (17)a-b and (18) illustrates that the semantic and lexical-aspectual properties of SCV constructions with orienting particles are similar to those of preposition constructions, but are different from those of postposition constructions. Assuming that such synchronic semantic similarities reflect diachronic relationships, we may hypothesise that orienting particles have developed out of constructions with prepositions, such as (17)b. This hypothesis, however, runs into a problem, which is illustrated in (19)-(20).

- (19) a. dat Jan [*tot* het publiek]_{PP} *sprak* (OV)
 that John to the audience spoke
 b. Jan *sprak* [*tot* het publiek]_{PP}. (VO)
 John spoke to the audience
 Both meaning '(that) John talked to the audience'.

The examples in (19) show that prepositions licensing a Ground participant are not left-adjacent to the verb, neither in OV contexts, nor in VO contexts. Since only elements that are left-adjacent to the verb can be reanalysed with this verb as an SCV, there is no plausible reanalysis pattern for the development of preposition constructions into SCV constructions with orienting particles. The relevant structural patterns are given in (20).

- (20) a. [*tot* het publiek] *spreken* <> het publiek [*toe-spreken*]
 'talk to the audience'
 [P-NP]_{PP}-V⁰ <> NP-[X-V⁰]_V
 b. *spreken* [*tot* het publiek] <> het publiek [*toe-spreken*]
 'talk to the audience'
 V⁰-[P-NP]_{PP} <> NP-[X-V⁰]_V

As for (20)a, it is unclear how the preposition and the verb could be reanalysed as a unit while excluding the intervening NP. As for (20)b, it is unclear how the reanalysis of the verb-preposition sequence could lead to the formation of a syntactic unit with the word order particle-verb. So although the semantic and lexical-aspectual properties of orienting particles suggest that they are historically related to prepositions (and not to postpositions), prepositions constitute implausible historical sources of SCVs, since they are not left-adjacent to the verb, neither in OV contexts, nor in VO contexts.

Recall, however, that the orienting particle *toe* formally resembles a postposition instead of a preposition: there is no preposition *toe* in Dutch, *toe* being the postpositional (and predicative) form of the preposition *tot* (cf. 5.3.3). It was illustrated in (18) above that postpositions are left-adjacent to the verb, which means that postpositions represent plausible particle sources. But it was also illustrated above that the function of the Modern Dutch postposition *toe* is radically different from that of the orienting particle *toe* (and from that of the preposition *tot*), constructions with the Modern Dutch postposition *toe* expressing telic path PPs, as in (18). This makes it unlikely that SCVs with the orienting particle *toe* have developed out of postposition constructions such as (18). Section 7.3.2.2 below will discuss Middle Dutch data with *toe* in order to assess the historical source of the orienting particles.

The last category is that of the *continuative* particles, such as *door* in *uren doorlezen* 'to continue reading for hours' and *uren doorwerken* 'to continue working for hours'. These particles appear to be semantically similar to continuative PPs like *in het rond* 'all around, about, left and right', expressing the goalless continuation of the event, as in (21) (cf. 5.3.5).

- (21) dat Jan maar een beetje *in het rond las*
 that John just a bit in the round read
 'that John just read about a bit'

The continuative PP in (21) is related to its spatial counterpart by metaphorical extension, and continuative particles seem to hold a similar metaphorical relation with their spatial counterparts (cf. McIntyre 2004). A possible historical source of SCV constructions with the continuative particle *door* is represented by constructions like (22), containing a postpositional PP.

- (22) a. dat Jan [het hele jaar *door*]_{PP} heeft gewerkt
 that John the whole year through has worked
 'that John has worked all year round'
 b. dat Jan de vakliteratuur [het hele jaar *door*]_{PP} heeft bijgehouden
 that John the professional-literature the whole year through has at-kept
 'that John has kept up with professional literature all year round'

Postpositional PPs in constructions such as (22) 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. This means that it could in principle be reanalysed with the verb as a unit. But unlike constructions with continuative particles, which show the "atransitivity effect" (cf. 5.3.5), such postpositional PP-V constructions may contain a direct object, as illustrated in (22)b. In order to find out whether it is plausible to hypothesise a diachronic relationship between postpositional PP-V constructions like (22) and SCV constructions with continuative particles, I collected Middle Dutch data with *door*. These data will be discussed in section 7.3.2.4.

To sum up, the historical sources postulated for resultative particles and modifying particles imply plausible reanalysis patterns, as both resultative phrases and modifier phrases may be adjacent to the verb. The diachronic hypotheses for these particles are not new, nor controversial, unlike those for orienting particles, path particles, and continuative particles. I hypothesise that SCV constructions with these latter three particle types are historically related to constructions with different PPs (that is, prepositional and/or postpositional phrases). In order to provide support for this hypothesis and to answer the questions that came up in this section, I collected historical data with *toe/to* and *door/doer/dore*, which are the allomorphs of the Middle Dutch counterparts of the Modern Dutch postpositions *toe* and *door*. The results of these data studies will be presented in the next subsections, discussing the diachrony of orienting particles (7.3.2.2), path particles (7.3.2.3), and continuative particles (7.3.2.4). First, however, section 7.3.2.1 will make some general remarks on Middle Dutch data.

7.3.2 *The grammaticalisation of orienting particles, path particles, and continuative particles*

7.3.2.1 *Middle Dutch data*

The term "Middle Dutch" is a collective term for all dialects spoken in the Low Countries (currently the Netherlands and the Belgian region called Flanders) between roughly 1200 and 1600. Middle Dutch rhyme texts appeared from 1200 onwards, but the dating of prose texts differs from genre to genre. The oldest prose texts appearing in Middle Dutch are legal documents, which appeared from 1200 onwards. Religious and scientific texts developed somewhat later, from 1300 onwards. Narrative prose texts did not appear in reasonable numbers until 1400. The result of this is that the various genres are not evenly distributed in the extant documents from the Middle Dutch subperiods.

There has been considerable debate on the OV/VO character of Middle Dutch.⁸ Although no one has hypothesised a strict VO grammar for Middle Dutch, it has often been reported that Middle Dutch texts contain VO constructions that are unacceptable in Modern Dutch: VO constructions in subordinate clauses and vVO constructions in main clauses (see, e.g., van den Berg 1980 and Neeleman and Weerman 1992).⁹ I have illustrated in Blom (2002) that these VO constructions can be related to three factors: (1) focus, (2) rhyme, and (3) the syntactic complexity of the direct object NP.

As for focus, typical Middle Dutch VO constructions are constructions like (23), which are taken from legal agreements (in these and the following examples, the direct objects are underlined).

- (23) a. (...) *dat dabt & conuent van Niniue hebben ghecoht terwet ene hofstat*
 (...) that the-abbot and convent from Ninive have bought at-the-law a farmstead
met allen ghelegen te Bochoute bouen hare hof ane de strate
 with all lied to Boechoute above their court at the street
 '(...) that the abbot and the convent of Ninive legitimately bought a farmstead
 with everything belonging to it, situated in Boechoute above their own land
 near the road' (*Corpus Gysseling*, text 0015, line 28)
- b. *Dat si sullen gheuen van elken ghemete iii. s. jarlich te Sainte martins-*
 that they shall give from each *gemet* 3 s. a-year to Saint Martin's-
messe (...)
mass (...)
 'That they will give for every *gemet* (measure of land) 3 sol a year on Saint
 Martin's Day (...)' (*Corpus Gysseling*, text 0017, line 34)

The direct object NPs in these constructions refer to the amount of money, quantity of land, or property that is bought, sold, or delivered. These NPs thus refer to the

⁸ I use the labels "OV" and "VO" as convenient shorthands to indicate the word order properties of languages; I do not intend to make any theoretical claims related to the Universal Base Hypothesis (cf. Kayne 1994 and Zwart 1997).

⁹ From here on, I will use the terms "VO constructions", "VO order", etc. to refer to just these patterns, that is, to VO patterns that are absent in an OV language like Modern Dutch.

object of the agreement, and this object generally appears in a postverbal focus position. This means that such constructions can be characterised as focus constructions (cf. Burridge 1993, de Meersman 1980). Focus can also account for the VO order in constructions such as (24), which comes from a religious text and contains a parallelism (the gloss of which is not even that bad in Modern Dutch).

- (24) *Ende ghelijckerwijs dat de coninc Saul scoerde den mantel des propheten Samuels,*
and likewise that the king Saul tore the coat of prophet Samuel,
alsoe pynen si hen te scoerne eenicheit kersten gheloefs, ende alle warachtighe
thus force they him to tear unity Christian beliefs, and all true
leeringhe, ende doechsam leven.
lessons, and virtuous life
'And likewise that King Saul tore apart Prophet Samuel's coat, in that way they force him to tear up the harmony of the Christian faith, and all truths of the Christian religion, and the virtuous life.' (*Boecksken der verclaringhe*, line 11)

A second type of VO construction in Middle Dutch is that in rhyme texts. An example of such a construction is given in (25).

- (25) *Om te weten daer af niemaren* / *Si hadden onverre gevaren*
for to learn there from news / they had un-far driven
Dat si ontmoetten ene ioncfrouwe / *op een part drivende groete rouwe.*
that they met a lady / on a horse driving big sadness
'To learn news from that / they had driven not far / when they met a lady / driving on a horse, very sad.' (*Roman of Lancelot*, line 1858)

The direct object NP *ene ioncfrouwe* appears postverbally in (25). Data such as (25) have been taken as evidence for a (morpho-)syntactic difference between Middle Dutch and Modern Dutch (e.g. a difference in case-assigning properties, cf. Neeleman and Weerman 1992). The VO word order in this construction, however, appears to result from the extraposition of the direct object NP in order to fulfil rhyme demands, which can be characterised as a stylistic factor.

A third type of VO construction in Middle Dutch consists of constructions with direct objects that contain a relative clause, such as (26).

- (26) (...) *dat si segghen souden die beste wareit, diese kinden van dien dat wouters recht*
(...) that they say would the best truth, that-they knew from that that Wouter's right
ware te duffle.
were to Duffel
'(...) that they would say the best truth they knew with respect to the question what Wouter's rights in Duffel would be.' (*Corpus Gysseling*, text 0120, line 37)

As illustrated in Blom (2002), it is not the case that heavy direct object NPs in general appear postverbally in Middle Dutch; only direct object NPs that contain a relative clause do so. It has to be noted that such direct object NPs are not positioned completely preverbally in Modern Dutch either. But instead of postponing the whole direct object, Modern Dutch opts for a different solution to lighten the complexity burden, which is a separation of the direct object in such a way that its head appears

preverbally and the relative clause complement appears postverbally (cf. Haeseryn et al. 1997: 1246). This is illustrated in (27).

- (27) *Ik heb eindelijk dat boek gelezen dat jij zo geweldig vindt.*
 I have finally that book read that you so fantastic find
 'I finally read that book that you think is so fantastic.'

A comparison of the VO constructions and the OV constructions in Middle Dutch prose texts reveals that VO order typically occurs in constructions that are marked in the sense that they contain focal direct objects or direct objects that contain a relative clause. OV order, on the other hand, does not seem to be bound to such specific conditions (and is, consequently, much more frequent than VO order). Middle Dutch can thus be characterised as an OV language, and the distributional differences between Middle Dutch and Modern Dutch appear to boil down to different conditions on the extraposition of direct object NPs.

The data presented above illustrate that caution should be applied when interpreting word orders found in Middle Dutch texts. This holds especially for data from administrative texts, which contain many formulas, and for data from rhyme texts. I have illustrated in Blom (2002) that data from narrative prose texts are more reliable.

This chapter presents Middle Dutch data to support the hypotheses about the diachrony of SCVs and ICVs. We will see that this means that we must be able to interpret a form like *toe* in a given text as a phrase, a particle, or a prefix. Put differently, we must be able to assess its structural status. Evidence for the structural status of such elements is provided by their (morpho)syntactic distribution: phrases, particles, and prefixes have a different distribution (which is a consequence of the fact that phrases do not form a syntactic unit with the verb, but particles do so, and prefixes form a morphological unit with the verb, cf. 1.1, 3.2, and 4.5). The distribution of these elements in a clause (in other words: the word order of the clause), then, provides us with crucial information about their structural status, which implies that we must be able to rely on the word order in the Middle Dutch texts we use.¹⁰ This is why the data were taken from narrative prose texts in particular. It was noted above, however, that narrative prose texts were written in reasonable numbers only from the 15th century onwards, and thus belong to the second part of the Middle Dutch period. In order to be able to include some older data as well, religious and scientific prose texts were included in the corpus in addition to the narrative texts.

The Middle Dutch data reported in this book are taken from texts on the *CD-Rom Middelnederlands* ('CD-Rom Middle Dutch', 1998). The next three subsections present Middle Dutch data that are hypothesised to represent the historical sources of orienting particles, path particles, and continuative particles.

¹⁰ This is especially the case since spaces between two free morphemes in Middle Dutch texts do not tell us anything about the (non-)word status of the constituent they form; there were no conventions on this issue at the time.

7.3.2.2 *Orienting particles*

Orienting particles such as *toe* in *het publiek toespreken* 'to talk to the audience' were shown to be semantically similar to prepositions that form, in combination with their Ground participant, a PP expressing the direction the event is oriented toward. Like SCV constructions with orienting particles, such preposition constructions denote atelic events; they differ from postposition constructions in this respect (cf. 7.3.1). But although orienting particles appear to be semantically related to prepositions, preposition constructions appeared to constitute implausible historical sources of constructions with orienting particles: unlike postpositions, prepositions are not left-adjacent to the verb. This means that there is no plausible reanalysis pattern to derive constructions with orienting particles from preposition constructions.

In order to find out more about the development of the orienting particle *toe*, I searched Middle Dutch texts for the combinations *toe/to segghen* 'to say to' and *toe/to spreken* 'to speak to'. Some of the data that came out of this search are given in (28) (in which SUBJ (subject), OBJ (direct object), and P-OBJ (pre-/postpositional object) refer to the syntactic function of the preceding NP and the numbers refer to the texts the constructions come from and the lines/sections in these texts, cf. appendix 4b).

- (28) a. *Altehant als dese coninck deze woorde desen goutsmet toe gheseyt*
 as-soon as this king (SUBJ) these words (OBJ) this goldsmith (P-OBJ) to said
hadde, ...
 had, ...
 'As soon as the king had spoken these words to the goldsmith, ...' (XIV-41d)
- b. *Haddestu dit enen anderen toe gheseyt, die dijn lose dasen niet en*
 had-you (SUBJ) this (OBJ) an other (P-OBJ) to said, who your silly tricks not NEG
kende, dan...
 knew, then...
 'If you had said this to another person, who did not know your silly tricks, in that case...' (V-146)
- 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 (P-OBJ) to said,
wert hi seer drovich.
 became he very sad
 'When he saw that she passed him and said such words to him, he became very sad.' (XV-2-258)

These data reveal two differences between the Middle Dutch combination *toe segghen* and its Modern Dutch SCV counterpart *toespreken* in (29).

- (29) a. *iemand (*iets) toespreken*
 someone something to-speak
 'to speak/talk (*something) to someone'
- b. *dat hij het publiek (*de volgende woorden) toesprak*
 that he the audience the following words to-spoke
 'that he spoke/talked (*the following words) to the audience'

The first difference is that the Middle Dutch constructions in (28) contain two object NPs (a direct object NP, referring to the words spoken, and a P-object NP, referring to the person those words are spoken to), but their Modern Dutch counterparts may generally contain only one object NP (referring to the person spoken to, cf. (29)). The second difference is the following: the NP referring to the person spoken to is syntactically realised as the object of *toe* in the Middle Dutch examples; it is a P-object, forming a PP with *toe* and receiving dative case, as illustrated in (30)a below. In the Modern Dutch example in (29) above, however, the NP *het publiek*, which also refers to the entity spoken to, is syntactically the direct object of the combination *toespreken*, and is not a P-object. The Middle Dutch examples in (28) resemble the Modern Dutch one in (30)b in this respect, in which *het publiek* is part of a PP headed by the prepositional counterpart of *toe*; *tot* (the Modern Dutch form *toe* cannot be used in constructions such as (30)b, since it is a postpositional form).

- (30) a. *Altehand als dese coninck deze woorde [desen goutsmet toe]_{pp} gheseyt*
 as-soon as this king (SUBJ) these words (OBJ) this goldsmith (P-OBJ) to said
hadde, ...
 had, ...
 'As soon as the king had spoken these words to the goldsmith, ...'
- b. *dat hij de volgende woorden [tot het publiek]_{pp} sprak*
 that he (SUBJ) the following words (OBJ) to the audience (P-OBJ) spoke
 'that he spoke the following words to the audience'

Gheseyt and *sprak* in (30) are monotransitive, their direct object refers to the words spoken, and the NP referring to the entity spoken to appears in a PP headed by *toe/tot*.

Starting from (30)a (= (31)a below), the reanalysis could proceed as illustrated in (31): the adjacency of *toe* and *segghen* in (31)a could lead to a reanalysis of these two words as a unit, resulting in *toe* no longer forming a PP with the NP *desen goutsmet*, but forming a syntactic unit (SCV) with the verb. The effect of this could be that the NP *desen goutsmet* was reanalysed as the indirect object (I-OBJ) of the complex verb *toesegghen* (it could not be reanalysed as its direct object, since the construction already contained a direct object. *Desen goutsmet* is, furthermore, conceptualised as a recipient/goal, which means that it is semantically a prototypical indirect object). The result, then, is a ditransitive structure, containing a direct object (OBJ) and an indirect object (I-OBJ): (31)b.

The construction in (31)b can be represented as NP1-NP2-*toe-segghen*. NP1, which refers to the words spoken, was presumably conceptually similar in all constructions with the combination NP1-NP2-*toe-segghen* (this NP was probably also formally often the same, namely 'this/that' or 'these/those/such word(s)'; see also the remark on *so* below). The result of this could be that NP1 became pragmatically optional and was, eventually, left out. This leaves us with (31)c.

Since (31)c contains only one non-subject NP (referring to the person spoken to), this NP could be reinterpreted as the direct object of the complex verb *toesegghen*, resulting in (31)d (the single object of a monotransitive verb in Dutch generally being a direct object and not an indirect object). This last construction

contains a monotransitive SCV and its direct object NP refers to the person spoken to, as is the case in the Modern Dutch example in (29)b above.

(31)

a.	...als	<i>dese coninck</i> (SUBJ)	<i>deze woorde</i> (OBJ)	[<i>desen goutsmet toe</i>] _{PP} (P-OBJ)	<i>gheseyt hadde</i>
b.	...als	<i>dese coninck</i> (SUBJ)	<i>deze woorde</i> (OBJ)	<i>desen goutsmet</i> (I-OBJ)	[<i>toe-gheseyt</i>] _V <i>hadde</i>
c.	...als	<i>dese coninck</i> (SUBJ)	∅	<i>desen goutsmet</i> (I-OBJ)	[<i>toe-gheseyt</i>] _V <i>hadde</i>
d.	...als	<i>dese coninck</i> (SUBJ)	<i>desen goutsmet</i> (OBJ)		[<i>toe-gheseyt</i>] _V <i>hadde</i>

After the reanalysis in (31) had taken place, the original direct object NP (referring to the words spoken) could not be added to the construction anymore, since the NP referring to the person spoken to had snapped up its syntactic position, leaving no position for the other NP. This accounts for the unacceptability of the Modern Dutch sentence in (29)b above that arises when we add the NP *de volgende woorden* 'the following words'. This NP, however, can be realised as the direct object of a construction with a simplex verb (instead of an SCV) and a *tot*-PP to host the NP referring to the person spoken to, as in (30)b.

It has to be noted that the concept of the words spoken could in constructions such as (30)a also be expressed by the Middle Dutch pronoun *so* 'this (thing)', e.g. *alēhant als dese coninck so desen goutsmet toe gheseyt hadde* 'as soon as the king had spoken this to the goldsmith'. Since *so* was actually ambiguous between being a pronoun and being an adverb (with the meaning 'like this'), such clauses were structurally ambiguous. That is, they could be analysed either as containing the direct object *so* and a PP, having the same structure as (31)a (...*dese coninck so* [*desen goutsmet toe*]_{PP} *gheseyt hadde* '...the king had spoken this to the goldsmith'), or as containing the adverb *so*, the direct object NP *desen goutsmet*, and an SCV, having the same structure as (31)d (...*dese coninck so* *desen goutsmet* [*toe gheseyt*]_{PP} *hadde* '...the king had spoken like this to the goldsmith'). Such constructions, then, contained a clear potential for reanalysis, and after the reanalysis had taken place, the older analysis also remained possible as long as constructions formed on the basis of the (new) SCV structure contained the adverb *so*. The effects of the reanalysis could in this way go unnoticed for a long time.

To conclude, there seems to be support for the claim that the orienting particle *toe* has developed out of a postposition that could appear adjacent to the verb and, as a consequence, could be reanalysed as a unit with this verb. Additional evidence for this claim is the following: both in Middle Dutch and in Modern Dutch the combination *toesegghen/toezeggen* has a second meaning; 'to promise', as exemplified in (32).

- (32) a. Middle Dutch:
Ende ick heb
 and I (SUBJ) have
desen ionghen Aymijn Malegijs neve u toe gheseyt, in dien dat
 this boy Aymijn Malegijs's cousin (OBJ) you (I-OBJ/P-OBJ) to said, in that that
Malegijs dese twee draken verwinnen can soe suldi hem trouwen
 Malegijs these two dragons conquer will so shall-you him 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)
- b. Modern Dutch:
dat het bestuur Jan de woning toegezegd heeft
 that the direction (SUBJ) John (I-OBJ) the house (OBJ) promised has
 'that the direction promised John the house'

The examples in (32) show that the relative order of the two objects is different in the two language stages: the direct object precedes the other object in Middle Dutch, but follows it in Modern Dutch.

The order of the objects in (32)b (I-OBJ – OBJ) is the canonical order of a direct object and an indirect object in Modern Dutch double object constructions (the alternative word order is not available in Modern Dutch, at least not with two full NPs: **dat het bestuur de woning Jan toegezegd heeft*). This construction is ditransitive, *toezeggen* being an SCV. A PP analysis according to which *toe* is a syntactically independent postposition forming a PP with *Jan* (cf. (31)a) is not available for (32)b, since *Jan* and *toe* are not adjacent, but are separated by the intervening direct object *de woning*.

The Middle Dutch example in (32)a, on the other hand, shows the alternative order, thereby allowing for a PP analysis: *ick heb desen ionghen (...) [u toe]_{PP} gheseyt*. The word order difference between (32)a and (32)b, then, provides us with an indication of the historical source of the Modern Dutch SCV construction.

The construction in (32)a, however, may also be analysed as containing a ditransitive SCV instead of a PP and a V: *ick heb desen ionghen (...) u [toe gheseyt]_V* (spaces between words are generally not reliable in Middle Dutch texts, cf. note 10). This construction is thus ambiguous between having the structure in (31)a above and having the structure in (31)b. The combination *toe segghen*, however, has an extended, unitary meaning in (32)a, just like its Modern Dutch counterpart, which suggests that *toe* and *segghen* already form a syntactic (and semantic) unit in this construction. This would imply that (32)a has been formed on the basis of the structure that resulted from only the first step in the reanalysis pattern in (31) ((31)a > (31)b).

After this first step had taken place, *toesegghen* 'to promise' appears to have followed a different developmental path from *toesegghen* 'to say to' in (31)c-d. Since the direct object NP was not conceptually similar across different constructions with *toesegghen* 'to promise' (which it was, in contrast, across different constructions with *toesegghen* 'say to', in which this NP generally referred to the words spoken), it remained informative and was unlikely to be left out. The effect of this is that both the direct object NP and the indirect object NP continued to be realised in such constructions. Their relative order, however, changed in the course of time (so that

these constructions converged to the canonical order of constructions with a direct object and an indirect object in Modern Dutch).

In sum, the orienting particle *toe* appears to have developed out of the Middle Dutch postposition *toe*, which indicates the direction toward which the action denoted by the verb is oriented.¹¹

7.3.2.3 Path particles

Constructions with path particles, such as *de sonate doorspelen* 'to play through the sonata', express the telic path of the subject referent through the direct object referent (cf. 5.3.4). The semantic and lexical-aspectual similarities between constructions with path particles and postposition constructions have led me to the hypothesis that constructions with path particles are historically related to postpositional PP-V constructions in which the postposition forms a telic PP with the participant it selects. Postpositions being adjacent to the verb in OV contexts, the plausible reanalysis pattern in (33) can be posited for the grammaticalisation of path particles.

- (33) a. dat Jan [Azië *door*]_{PP} *reist* > dat Jan Azië [*door-reist*]_V
 'that John travels through Asia'
 b. [NP-P]_{PP}-V⁰ > NP-[X-V⁰]_V

It was noted in 7.3.1, however, that there is a syntactic difference between these postpositional PP-V constructions and SCV constructions with path particles: whereas these PP-V constructions are unaccusative (selecting the perfect auxiliary *zijn* 'be'), SCV constructions with path particles are transitive (selecting the perfect auxiliary *hebben* 'have') (cf. McIntyre 2004 on similar data in German). This difference is illustrated in (34).

- (34) postpositional PP-V:
 a. dat Jan [Azië *door*]_{PP} *gereisd is*
 'that John has travelled through Asia'
 SCV with path particle:
 b. dat Jan (heel) Azië [*doorgereisd*]_V *heeft*
 'that John has travelled through (the whole of) Asia'
 c. dat Jan de sonate [*doorgespeeld*]_V *heeft*
 'that John has played through the sonata'

In order to investigate the development of path particles, I collected Middle Dutch data with *dore/doer/door*, which are the allomorphs of the Middle Dutch counterpart of Modern Dutch *door* 'through'. Some examples of the data that came out of this

¹¹ I hypothesise that the other orienting particle distinguished in section 5.3.3, *aan* 'at, to' (*de jongen aan-kijken* 'to look at the boy'), also has a postpositional source, and that the same holds for double-participant particles, discussed in section 5.5.15.4 (*de manager het document aan-reiken* 'to hand the file to the manager', *de keeper de bal toe-spelen* 'to play the ball to the goalkeeper', cf. the postpositional form *toe*). Further research is necessary in order to determine the possible source constructions of SCVs with these particles.

search are given in (35). These examples contain postpositional PPs that express the (telic) spatial path that is followed by the referent of the subject NP in an intransitive (or passive) construction ((35)a-c) or by the referent of the object NP in a transitive construction ((35)b). Intransitive constructions such as (35)a, then, are similar to the Modern Dutch construction in (33)a.¹²

- (35) a. *Ende hi voer alle dlant dore*
and he drove all the-land through
'And he drove through the whole country' (XVI, 4 Kon., 12-25, 1-498)
- b. *Ende si stroeyden hen alle die stat dore*
and they distributed themselves all the town through
'And they distributed themselves all over the city' (XVI, 1 Macab., 9-16, 3-368)
- c. *Dat sijn (...) die vij geeste Goods, die gesint sijn al erterike dore*
that are the seven ghosts God's, who sent are all earth through
'Those are (...) the seven ghosts of God, who have been sent all over the earth' (XVII-2, 116-1)

My hypothesis is that intransitive constructions like (35)a have developed into SCV constructions with the path particle *door*. I will now show how we could account for the auxiliary difference between these two types of construction.

The reanalysis that seems to have taken place is illustrated in (36), which gives the subordinate clause of (35)a, showing OV word order (like Modern Dutch, Middle Dutch is an OV language, cf. 7.3.2.1).

- (36) a. *Hi [alle dlant dore]_{PP} voer* > *Hi alle dlant [dore-voer]_{V'}*
'He drove through the whole country'
- b. [NP-P]_{PP}-V⁰ > NP-[X-V⁰]_{V'}

(36) shows how the adjacency of the postposition and the verb could lead to a reanalysis of these two elements as a syntactic unit; an SCV. The effect of the reanalysis is that the NP *alle dlant*, which appears before the SCV, could be reinterpreted as the direct object of that complex verbal unit. So although the referent of this NP is still the conceptual Ground of *dore*, its syntactic expression is no longer that of an NP forming part of a PP, but is that of a direct object NP: it is syntactically realised as the direct object of the transitive (complex) verbal predicate *dorevaren* 'to drive through'. The crucial parts of the semantic and the syntactic structure of the reanalysed construction (on the right-hand side in (36)a) are given in (37).

- (37) a. Semantic structure: $hi_{\text{FIGURE}} [[\text{alle dlant}]_{\text{GROUND}} \text{dore}]_{\text{PATH}} \text{voer}$
b. Syntactic structure: $hi_{\text{SUBJ}} [\text{alle dlant}]_{\text{OBJ}} [\text{dore-voer}]_{\text{V}'}$

¹² Such constructions are also unaccusative and also select the auxiliary *zijn* 'be' in the perfect tense in Middle Dutch, cf. (i).

(i) *Binnen dese tijt so zijn Malegijs ende Vivien al die cameran door gelopen.*
inside this time so are Malegijs and Vivien all the rooms through walked
'During this time Malegijs and Vivien had walked through all rooms.' (VI-87)

The result of the reanalysis, then, is that the semantic structure in (37)a may be mapped to two different syntactic structures: to the postpositional PP-V structure ($hi_{\text{SUBJ}} [alle\ dlant\ dore]_{\text{PP}}\ voer_v$) and to the SCV structure in (37)b (see also 8.3.1 and 8.4.2).

The *structural* reanalysis in (36) may have *semantic* consequences (although the relations in the LCS of the reanalysed construction remain the same). The referent of *alle dlant*, for instance, may acquire certain semantic properties typically associated with direct objects, such as the property of undergoing the action denoted by the verbal predicate in some sense: 'the whole country is being driven through' (which, importantly, does not change the fact that this referent is the conceptual Ground of *dore*). And the subject referent, which is the moving entity, may highlight more agentive properties, such as that of initiating and controlling the motion event.¹³ As constructions with (more) agentive subjects and direct objects select the auxiliary *hebben* 'have', an auxiliary change may eventually take place.

The auxiliary change results in the construction in (38), which still has the semantic structure in (37)a, according to which *alle dlant* is conceptualised as the Ground of *dore* and *hi* as the Figure moving along the path through this Ground participant, and the syntactic structure in (37)b, according to which *dorevaren* forms a transitive verbal predicate with *hi* as its subject and *alle dlant* as its direct object.

(38) *Hi heeft alle dlant [dore-gevaren]_V*

It follows from the foregoing discussion that I hypothesise that the auxiliary change results from changes in certain semantic properties. This implies that I assume that auxiliary selection is encoded syntactically, but determined semantically (cf. Levin and Rappoport Hovav 1995): subtle changes in the semantic properties of the participants or the predicate of an event may have the drastic consequence of an auxiliary change.¹⁴

After reanalysis had taken place, the resulting template [*door-V*]_V 'to go through Y by V-ing' could be generalised to constructions with non-motion verbs, which led to the formation of SCV constructions such as *het boek doorlezen* 'to read through the book' and *de sonate doorspelen* 'to play through the sonata'. For constructions expressing actual motion, however, the former PP construction also remained available. The result of this is that we can still form (unaccusative)

¹³ 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).

¹⁴ Compare Sorace (2000), who claims that the semantic determinants of unaccusativity are gradient, but its syntactic reflection is discrete (since a choice between the *be* auxiliary and the *have* auxiliary must be made in concrete constructions). 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. Compare also Lieber and Baayen (1997), who claim that auxiliary selection in Dutch is determined by the presence of a specific semantic feature (labelled *IEPS*), which a verb may exhibit or obtain compositionally in syntax. Although the authors mentioned here make different claims on the precise semantic properties that are relevant to auxiliary selection, they agree on the assumption that semantic differences may bring about differences in auxiliary selection.

postposition constructions expressing motion, but we can also use an SCV template to form constructions with slightly different semantic properties (but with the same conceptual structure, expressing a path followed by a participant through another participant), and, correspondingly, with different selectional restrictions (regarding the verbs that can be used and the selection of the auxiliary in the perfect tense). As is generally the case with grammaticalisation, then, old and new structures coexist: there is layering (cf. 2.3).

It must be noted that the construction in (35)a, which expresses motion and does not contain a perfect auxiliary, also exhibits layering: it can be analysed as containing a postposition or as containing a particle (the constructions in (35)b-c, however, are unambiguously postposition constructions). This construction, then, is structurally ambiguous, which means that it contains a potential for the reanalysis illustrated in (36) above.¹⁵

I have argued that a change in the auxiliary selection may result from very subtle changes in the semantic properties of a construction. The same can be observed for the Modern Dutch constructions in (39), containing a simplex verb whose subject referent is also a moving entity. Subtle semantic and pragmatic differences, involving a change in perspective (which puts a different part of the event into focus), give rise to synchronic variation in the auxiliary selection in these constructions (cf. Lieber and Baayen 1997, who present comparable examples with *volgen* selecting both *hebben* and *zijn*, taken from a Dutch newspaper).

- (39) a. dat Jan Marie tot aan haar huis *gevolgd heeft/is*
 that John Mary to at her house followed has/is
 'that John followed Mary home'
- b. dat Jan Marie de hele middag *gevolgd heeft/?is*
 that John Mary the whole afternoon followed has/is
 'that John followed Mary the whole afternoon'
- c. dat Jan Maries handelingen met zijn ogen *gevolgd heeft/*is*
 that John Mary's actions with his eyes followed has/is
 'that John followed Mary's actions with his eyes'

The *is*-variant of (39)a puts the endpoint of the event into focus, which is that John is at the end of his path (extending from Mary to her home, John ending up at Mary's home). This sentence expresses actual directed motion and is unaccusative. The *heeft*-variant of (39)a puts the activity of following Mary into focus, John being the Agent of this activity and Mary the Undergoer. The same holds for (39)b, in which the temporal modifier highlights the durativity of the activity (which has no explicitly mentioned endpoint). The use of *heeft* is more natural than the use of *is* in this construction. In (39)c, focus is also on the activity of following, but there is no actual motion of John involved here. Instead of John being the moving entity, only his eyes are moving and, in addition, John's agentivity seems to be highlighted by the PP *met zijn ogen*. The effect of this is that only *heeft* is acceptable here.

¹⁵ The presence of a perfect auxiliary would disambiguate the construction in (35)a: if the auxiliary is a form of *zijn* 'be', the construction must be a postposition construction, and if it is a form of *hebben* 'have', it must be an SCV construction (cf. (34)a-b).

The examples in (39) illustrate that constructions expressing similar events may show variation in the auxiliary selection as a consequence of semantic and pragmatic differences, involving a change in perspective. As synchronic variation is a possible source of diachronic change, such synchronically variable auxiliary selection may over time lead to changes in the auxiliary selection of a particular verb (cf. de Rooij 1988, discussing historical changes in the auxiliary selection of Dutch simplex verbs).

It was noted in 5.3.4 that McIntyre (2004) claims that path particles conceptualise, in combination with their Ground participant, the path of the event instead of the path of the subject referent, relating path particles to constructions with *prepositional* phrases instead of *postpositional* phrases. McIntyre's main argument against the latter analysis is that it would fail to capture the syntactic difference between unaccusative postposition constructions and transitive SCV constructions with path particles, which is reflected by the difference in auxiliary selection. I have illustrated, however, that such a syntactic difference can be motivated as follows: it is the syntactic reflection of subtle semantic and pragmatic differences that also play a role synchronically, resulting in synchronic auxiliary variation, and must be accounted for anyway.¹⁶

The postpositional analysis of path particles, according to which constructions with these particles have developed out of constructions with telic, spatial PPs, seems to be on the right track, since it accounts for the lexical-conceptual similarities between these two types of construction in a satisfactory way. Such an analysis also implies a plausible reanalysis pattern: unlike prepositions, postpositions may be left-adjacent to the verb. The postpositional analysis is furthermore supported by historical data. These data represent the source construction postulated for SCV constructions with path particles as well as constructions that contain a potential for the reanalysis postulated for these SCV constructions (that is, we found constructions that are structurally ambiguous between containing a postpositional PP and containing an SCV).¹⁷

A similar story can be told for the other path particle that was distinguished in section 5.3.4, *over* 'over', since *over* may perform the same postposition function and exhibit the same properties as *door* in all relevant respects. The Middle Dutch construction in (40), for instance, allows for both a postpositional PP analysis ((40)a) and an SCV analysis ((40)b). This construction, then, contains a potential for the reanalysis postulated for SCVs with path particles. *Ouer* in (41), however, is unambiguously part of a postpositional PP ((41)a); the NP *desen langen berch* cannot be the direct object of the SCV *over-senden* 'over-send', since *v* 'you' is the direct object in this construction ((41)b).

¹⁶ The framework adopted by McIntyre does not seem to allow for the combination of a lexical-conceptual similarity (both postposition constructions and SCV constructions with path particles expressing the telic path of the subject referent through the Ground participant) and a syntactic difference (postposition constructions being unaccusative, but SCV constructions with path particles being transitive), cf. 3.4.2.

¹⁷ See section 7.5.2 for more on the stress change implied by the grammaticalisation of (unstressed) postpositions into (stressed) particles.

- (40) *Sijn predicaren sullen alle die werelt over wanderen.*
 his preachers shall all the world over wander
 'His preachers will wander all over the world.' (XVIII, kap. 49, 620)
 a. Sijn predicaren sullen [[alle die werelt *over*]_{PP} wanderen]_{VP}
 b. Sijn predicaren sullen [[alle die werelt]_{NP} [*over* wanderen]_{V'}]_{VP}
- (41) *Ic en segghe hem des genen danc die v desen langen berch ouer ghesent heeft.*
 I NEG say him that-GEN no thank who you this long mountain over sent has
 'I do not thank him who sent you over this long mountain for that.' (V-16b)
 a. die [v [desen langen berch *ouer*]_{PP} ghesent heeft]_{VP}
 b. *die [[v]_{NP} [desen langen berch]_{NP} [*ouer* ghesent]_{V'} heeft]_{VP}

Path particles, then, appear to be historically related to postpositions.

7.3.2.4 Continuative particles

Continuative particles such as *door* in *uren doorlezen* 'to continue reading for hours' and *dóorwerken* 'to continue working for hours' function as continuators; they express the goalless continuation of an event. It was noticed in section 7.3.1 that a possible source of the continuative particle *door* is represented by constructions such as (42)a-b, which contain a postpositional PP that expresses the duration of the event denoted by the verb and its argument(s).

- (42) a. dat Jan [het hele jaar *door*]_{PP} heeft gewerkt
 that John the whole year through has worked
 'that John has worked all year round'
 b. dat Jan [het hele jaar *door*]_{PP} de vakliteratuur heeft bijgehouden
 that John the whole year through the professional-literature has at-kept
 'that John has kept up with professional literature all year round'

In order to verify the plausibility of the hypothesis that SCV constructions with continuative *door* developed out of postposition constructions such as (42), I collected Middle Dutch data with *door/doer/dore*, the allomorphs of the Middle Dutch counterpart of Modern Dutch *door*. In addition to data with postpositional PPs that express a spatial path, discussed in the previous subsection (cf. (35)), this search yielded many data such as (43), in which similar PPs express a temporal path.

- (43) a. *Ende si beeden al den nacht dore in der vergaderinghen*
 and they prayed all the night through in the assemblies
 'And they prayed all night long in the assemblies' (XVI, Tobias + Judith, 2-133)
 b. *Negheen vreemt gheborne en dede die ane, mer alleene sine sonen ende sine*
 no-one strange borne NEG did that at, but only his sons and his
neven alle den tijt dore
 cousins all the time through
 'No one strange ever put these (clothes) on, but only his sons and his
 cousins (did) all the time' (XVI, Jes. Sir., 26-51, 2-398)

Like the postpositional PPs in (42), 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 in (35) by the metaphorical extension from space to time. As opposed to intransitive constructions with spatial PPs like (35)a, which express the change of location of the subject referent, intransitive constructions with temporal PPs like (43)a, which express activities with a temporal modifier, are not unaccusative, but are unergative.

The hypothesis is that constructions such as (43) have developed into continuative SCVs. If such constructions have OV word order (cf. 7.3.2.1), the postposition and the verb are adjacent, so that these two elements could be reanalysed as a syntactic unit (an SCV). This is illustrated in (44).

- (44) *dat si [al den nacht dore]_{PP} beeden* > *dat si al den nacht [dore-beeden]_V*
'that they prayed all night long'

In the reanalysis represented in (44) the NP *al den nacht* that used to be part of the PP has been reinterpreted as an (optional) adverbial NP expressing the duration of the activity denoted by the SCV (such an adverbial NP functioning as a temporal modifier is also present in, for instance, *de hele dag werken* 'to work all day'). Its slot may also be filled with other temporal modifiers, such as the adverbial phrase (AdvP) *jarenlang* (lit. years-long) 'for years'.

The reanalysis resulted in the SCV template (XP) [*door-V*]_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 (*al den nacht dore* 'all night (long)', *al den tijd dore* 'all the time'), also expressed durativity. Certain semantic properties of the source construction have thus been preserved in the new construction, which is usually the case in grammaticalisation (cf. Hopper and Traugott 2003: 17).

It was noticed in section 7.3.1, however, that there is a difference between the participant-licensing properties of the source construction postulated for SCV constructions with continuative particles and those of these SCV constructions: whereas constructions with continuative postpositions may contain direct object NPs (e.g. (42)b-(43)b), this is impossible for constructions with continuative particles, which exhibit the "atransitivity effect" (cf. 5.3.5: *uren (*appels) dooreten* 'to continue eating (*apples) for hours'). I 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).

Constructions with temporal PP modifiers expressing durativity may thus have played a role in the development of continuative SCVs with *door*. The structural changes involved in this development are represented in (45). Since only adverbial NPs (e.g. *de hele nacht* 'lit. the whole night, all night (long)' and *uren* 'lit. hours, for hours'), and no other NPs, may occupy the pre-verbal slot in the new structure, I represent this slot as NP_{ADV} (in addition to adverbial NPs, adverbial phrases like *urenlang* 'lit. hours-long, for hours' may occupy this slot).

(45)

[NP-P] _{PP} -V ⁰ [al den nacht dore] _{PP} bidden all the night through pray 'to pray all night through'	> NP-[X-V ⁰] _V al den nacht [dore-bidden] _V all the night through-pray 'to continue praying all night'	> NP _{ADV} -[X-V ⁰] _V uren [dore-bidden] _V hours through-pray 'to continue praying for hours'
---	---	---

It must be noted that the Middle Dutch sentence in (43)a is actually ambiguous between containing a PP and containing an SCV, showing a potential for the reanalysis. The construction in (43)b, however, unambiguously contains a PP (there is no possible [dore-V] combination), which means that it has been formed on the basis of the structure that was already available before the reanalysis in (44) took place. Modern Dutch constructions such as *lang doorwerken* 'to continue working for a long time', on the other hand, unambiguously contain an SCV (such constructions cannot be analysed as containing a PP with the structure [NP *door*]_{PP}, since *lang* is not a noun, but an adverb). This means that such constructions have been formed on the basis of the structure that emerged from the reanalysis, that is, on the basis of the SCV template. The temporal PP construction, however, is also still available in Modern Dutch (the Modern Dutch counterpart of (43)a also being structurally ambiguous), which is a manifestation of layering (cf. 2.3).

In sum, historical data provide support for the claim that the continuative particle *door* has developed out of PP-V constructions with the postposition *door* in which the PP functions as a durative temporal modifier.¹⁸

7.3.2.5 Summary

There is historical support for the claim that Modern Dutch orienting particles, path particles, and continuative particles, which have different semantic properties, are historically related to postpositions.

The semantic properties of orienting particles suggest a prepositional source construction, but since prepositions are not left-adjacent to the verb (neither in OV contexts, nor in VO contexts), prepositional PP-V constructions do not constitute plausible sources for SCV constructions. Historical data illustrate that, unlike the Modern Dutch postposition *toe*, the Middle Dutch postposition *toe* is semantically similar to the orienting particle *toe*. Like the orienting particle *toe*, this Middle Dutch postposition may license a Ground with which it expresses the direction toward which the activity denoted by the verb is oriented. On the basis of this semantic similarity and the fact that postpositions may be left-adjacent to the verb, we can posit a plausible reanalysis pattern for the grammaticalisation of constructions with this Middle Dutch postposition into constructions with the orienting particle *toe*.

¹⁸ The other Dutch continuative particle, *rond* 'around', seems to have a different historical source, see note 38 in chapter 9. SCV formation with this particle appears to be somewhat different from (and much less productive than) SCV formation with continuative *door*, compare **urenlang rondlezen* 'to read around for hours', **de hele middag rondspelen* 'to play around the whole afternoon' and *urenlang rondlopen* 'to walk around for hours', *ergens de hele middag rondhangen* 'to hang around somewhere the whole afternoon'.

Historical data with *door/doer/dore* 'through' were collected in order to provide support for the hypothesis that path particles and continuative particles also have a postpositional source. These data fell into two types: those with spatial postpositional PPs and those with temporal postpositional PPs. The semantic and structural properties of these two types of construction suggest that spatial PP constructions constitute the historical source of SCV constructions with the path particle *door*, whereas temporal PP constructions constitute the historical source of SCV constructions with the continuative particle *door*.

There are indications that the grammaticalisation of postpositions into path particles is still taking place. For instance, there appears to be variation among speakers in the acceptability of the perfect auxiliary *hebben* 'have' in constructions such as (46)a-b (the use of the auxiliary *zijn* 'be' is acceptable in all cases).

- (46) a. ?Marie heeft het hele park *doorgerend*.
 Mary has the whole park through-run
 'Mary has run through the whole park.'
- b. ?Heeft Jan die drukke straat helemaal alleen *overgestoken*?
 has John that busy street all alone over-crossed?
 'Did John cross that busy street all alone?'

We have seen that the use of *hebben* in such constructions points to an SCV structure (whereas the use of *zijn* points to a postposition structure, cf. 7.3.2.3). Another indication is that postpositions sometimes appear in the verb cluster: speakers produce constructions such as (47)a-b, but generally reject such constructions when asked about their acceptability.

- (47) a. *??dat Jan de baby niet de trap wilde *op* dragen
 that John 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
 that John the stairs not could up walk
 'that John could not walk up the stairs'

The postposition *op*, which is part of the PP [*de trap op*] 'up the stairs', appears in the verb cluster in these constructions (cf. also 4.5).

The results of section 7.3.2 are summarised in (48), representing the grammaticalisation developments posited for the three particle types discussed in the previous subsections.

- (48) Grammaticalisation of orienting, path, and continuative particles:
- | | | |
|-----|---------------------------------------|--------------------------|
| a. | postpositions forming spatial PPs | > relator particles |
| a1. | spatial PPs expressing an orientation | > orienting particles |
| a2. | spatial PPs expressing a path | > path particles |
| b. | postpositions forming temporal PPs | > continuative particles |

7.3.3 *Semantic changes*

Semantic changes take place both before and after the structural reanalysis (cf. 2.3). Before the reanalysis, the two elements that come to be reanalysed as a syntactic unit must somehow already be interpreted as a unit, since otherwise, language users would never reanalyse the two elements as a unit. (cf. Hopper and Traugott 2003: 11, where it is claimed that the early stage of grammaticisation often, perhaps always, involves a shift in meaning). This is most clearly seen in SCV constructions with nominal particles, like those in (49) (cf. 4.5, see also 7.5.3).

- (49) a. dat Jan *niet kan *beddenopmaken* / geen *bedden* kan *opmaken*
 that John not can beds-make / no beds can make
 'that John cannot make beds'
- b. ?Ik vraag altijd of de hulp wil stofzuigen, ramenlappen en *beddenopmaken*.
 I ask always if the cleaner wants vacuum, window-chammy and beds-make
 'I always ask the cleaner to vacuum, to clean the windows, and to make the beds.'
- c. [*bedden*]_{NP} [*opmaken*]_V > [*bedden-opmaken*]_V

The example in (49)a illustrates that the combination *bedden opmaken* is an NP-V combination and does not have the structural status of an SCV (cf. 4.5, where it is illustrated that nominal constituents are negated with *geen* 'no' and verbal constituents, among which SCVs, are negated with *niet* 'not'). Nevertheless, this combination can be reanalysed as an SCV in contexts in which it is assigned a unitary meaning, denoting a (contextually dependent) institutionalised activity, such as (49)b. The relevant reanalysis pattern is given in (49)c. What we see is that the source construction must contain a potential for ambiguity and that the ambiguity may result from semantic or associative changes that arise in the context of the flow of speech (Hopper and Traugott 2003: 52, 76, but see also note 4 to chapter 3, referring to Harris and Campbell 1995: 71).

After reanalysis has taken place, the new structure may further develop its own semantic characteristics through semantic extension and inference (cf. the remarks on the meaning of *af* in 7.3.1). As a consequence of the changed semantic properties, the new construction may be generalised to inputs that were not available to the source construction, thus making the change apparent (see the discussion in the sections 7.3.2.3 and 7.3.2.4 and compare Hopper and Traugott 2003: 3). The result, then, of the semantic changes taking place in the development of SCVs is that the SCV formed in this way has specific semantic properties, which may differ from those of its source construction. The SCV system thus has its own semantic properties (as well as its own syntax, cf. 4.5).

The semantic changes occurring in the process of diachronic SCV formation may also play a role in constructions with simplex verbs. Changes in the semantic properties of a verb and its arguments, for instance, may lead to a change in the auxiliary selection of that verb (cf. de Rooij 1988), and the metaphorical extension of a verb's meaning may cause this verb to participate in constructions that were not available to it before. But since these changes do not generally involve a change in

the bracketing of the clause that leads to the formation of a new syntactic unit, they are usually less apparent than the changes discussed here.

Despite the semantic changes involved in the process of diachronic SCV formation, the semantic structure (LCS) of the event expressed by the source construction is claimed to be preserved during this process. The result of this is that particles perform the same function in the LCS and exhibit the same participant-licensing properties as the XPs that they are assumed to be historically related to. Resultative particles thus function as resultative predicates, modifier particles function as phrasal modifiers, orienting particles function as orienting postpositions (which exist in Middle Dutch, but do not appear to exist in Modern Dutch), path particles function as path postpositions, and continuative particles function as continuative postpositions.

In the case of continuative particles, however, there is a difference between the participant-licensing properties of the source construction postulated for the SCV construction and those of the SCV construction itself: unlike constructions with continuative postpositions, constructions with continuative particles exhibit the "atransitivity effect". This difference is motivated by the reanalysis involved in the grammaticalisation of continuative postpositions into continuative particles, according to which the NP that is part of the PP in the source construction is reinterpreted as an adverbial NP (cf. 7.3.2.4).

7.3.4 Conclusions

Particles appear to have developed out of different elements that may be left-adjacent to the verb and project a phrase: resultative phrases, modifier phrases, and postpositions. These results call for a modification of (7) in section 7.2: the non-resultative elements that may grammaticalise into particles are phrasal modifiers and postpositions. The diachronic relationships posited between the different particle types and their historical sources are represented in (50).

- (50) Particles and their historical sources:
- | | | | |
|----|---------------------|---|--|
| a. | resultative phrases | > | resultative particles |
| b. | modifier phrases | > | modifying particles |
| c. | postpositions | > | relator particles (orienting particles and path particles), continuative particles |

In addition to the reanalysis patterns posited for the development of resultative particles and modifying particles, discussed in section 7.3.1 and given in (51)a-b, the reanalysis patterns in (51)c-d can be posited for the development of, respectively, relator particles (orienting particles and path particles) and continuative particles.

- (51) Reanalysis and concomitant relabelling in the grammaticalisation of different particle types:
- | | | | | |
|----|-------------------------|--|---|---|
| a. | resultative particles: | ...-NP-AP/PP-V ⁰ | > | ...-NP-[X-V ⁰] _V ¹⁹ |
| b. | modifying particles: | ...-AdvP-V ⁰ | > | ...-[X-V ⁰] _V |
| c. | relator particles: | ...-[NP-P] _{PP} -V ⁰ | > | ...-NP-[X-V ⁰] _V |
| | | | | (PP: spatial PP expressing an orientation or path) |
| d. | continuative particles: | ...-[NP-P] _{PP} -V ⁰ | > | ...-NP _{ADV} -[X-V ⁰] _V |
| | | | | (PP: temporal PP) |

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: (1) these elements may not consist of more than one word, and (2) they must have a specific syllable 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.

Since the different preverbal elements that may grammaticalise into particles have different participant-licensing properties, the different particle types resulting from this grammaticalisation development also differ in this respect. The effect of this is that the SCVs formed with these particles have different argument-structural and lexical-aspectual properties (cf. 5.4). The synchronic result of the grammaticalisation developments described in this section, then, is the existence of various Modern Dutch 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 (cf. 4.5; these SCV templates will be further discussed in chapter 8).

7.4 The grammaticalisation of SCVs into ICVs

7.4.1 Introduction

I have shown in section 6.2 that productively used ICV preverbs have non-resultative functions. This has led me to the diachronic hypothesis represented in (52)-(53) (section 7.2).

- | | | | |
|------|---|---|-----------------|
| (52) | Grammaticalisation of resultative preverbs: | | |
| | constructions with | > | resultative |
| | resultative phrases | | SCV preverbs |
| (53) | Grammaticalisation of non-resultative preverbs: | | |
| | constructions with non- | > | non-resultative |
| | resultative phrases | | SCV preverbs |
| | | | > ICV preverbs |

¹⁹ See note 5.

This diachronic hypothesis can be formulated as follows: SCV preverbs may develop into ICV preverbs, but this development is only available to non-resultative SCV preverbs. The current section checks this hypothesis against historical data. Section 7.4.2 discusses the general properties of the development of SCVs into ICVs, after which section 7.4.3 presents the data. Section 7.4.4 summarises the results.

7.4.2 *The change from SCV into ICV*

Chapter 6 showed that the only Dutch prefixes that productively form ICVs are the path prefixes *door-* 'through', *om-* 'around', and *over-* 'over', and the quantificational prefix *over-*, which can be seen as an extension of the path function of *over-* (cf. 6.2.2).²⁰ The reanalysis pattern posited for the grammaticalisation of these prefixes is given in (54) (cf. (1) in 7.2).²¹

- (54) Constructions with path preverbs:
 structural pattern: [NP-**P**]PP-V⁰ > NP-[**X-V**⁰]_V > NP-[**prefix-V**⁰]_V⁰
 preverb cline: phrase > particle > prefix

The second step in this pattern involves the reanalysis of the syntactic unit (V') as a morphological unit (V⁰), entailing the reanalysis of the particle (a word) as a prefix (a bound morpheme). This development is hypothesised to be unidirectional: SCVs are expected to develop into ICVs, but ICVs are not expected to develop into SCVs.

The comparison of the semantics of SCVs with path particles and ICVs with path prefixes in section 6.2.1 leads us to the hypothesis that specific semantic changes occur during the development of SCVs grammaticalising into ICVs. We have seen that paths expressed by SCV constructions are one-directional, but paths expressed by ICV constructions are multidirectional, calling at every spot in/on the Ground and thus extending through/around/over the whole substance or surface of the Ground. The examples that were given in 6.2.1 to illustrate this difference are repeated in (55).

- (55) a. SCV: de sonate *dóorspelen*
 'to play through the sonata'
 ICV: het huis *doorzóeken*
 'to search the house, to search through the house completely'

²⁰ I have defined ICVs as verbs with a prefix that is homophonous with a preposition and/or postposition, thus excluding verbs with the prefixes *be-*, *ver-*, and *ont-* (see 1.1).

²¹ We also found quite a few ICVs with modifying preverbs (e.g. *voorvoelen* 'lit. for-feel, to sense, to anticipate', *voorzien* 'lit. for-see, to foresee', cf. 6.2.2, including note 14). The reanalysis pattern leading up to the formation of these ICVs is given in (i).

(i) structural pattern: ...-AdvP-V⁰ > ...[X-V⁰]_V > ...[**prefix-V**⁰]_V⁰

Since ICV formation with modifying preverbs is not productive, modifying particles do not seem to grammaticalise into modifying prefixes systematically. This is why this diachronic relationship is not discussed any further in this section, which focuses on the systematic changes in the SCV/ICV system (but see note 35).

- b. SCV: de brief *óverlezen*
 'to read over/through the letter'
 ICV: de situatie *overzién*
 'to survey the situation, to see completely over the situation'

On the basis of this synchronic semantic difference between SCV constructions with path preverbs and ICV constructions with path preverbs, the structural development of SCVs becoming ICVs is hypothesised to be accompanied by the following semantic change: the one-directional path becomes a path that is multidirectional in the sense that it calls at every spot in/on the Ground.

These hypotheses about the structural and semantic changes involved in the development of SCVs into ICVs will be checked against historical data in the next subsection.

7.4.3 Historical data

7.4.3.1 Hypotheses and general results

The discussion in this section is based on Blom and Booij (2003), in which we investigated the semantic and morphosyntactic properties of Middle Dutch SCVs and ICVs with *door* 'through' and *over* 'over'. We searched 13 Middle Dutch texts (text I-XIII in appendix 4b) for all SCVs and ICVs with *door/dore/doer* and *over/ouer*, which are the allomorphs of the Middle Dutch counterparts of the Modern Dutch preverbs *door* and *over*. This resulted in a collection of 46 complex verbs with *door* and 37 complex verbs with *over* (in total 83 complex verbs). These complex verbs were classified as SCV or ICV on the basis of various types of evidence, listed in (56) (cf. (6)-(7) and (9)-(10) in 1.1).

- (56) a. Evidence for SCV status: separation of the preverb and the verb by V2, by the infinitival marker *te*, by the past participle marker *ge-*, by the Middle Dutch negation marker *nelen*, or by auxiliaries in verb clusters.
 b. Evidence for ICV status: appearance of the whole complex verb in V2 position or after the infinitival marker *te*.

In Modern Dutch, the past participle marker *ge-* separates SCVs (e.g. *óp-zoeken* – *op-ge-zocht* 'to look up – looked up'), but is absent in ICVs (and in other complex verbs with unstressed prefixes, e.g. *door-zóeken* – *door-zocht* 'to search – searched'). In Middle Dutch, on the other hand, *ge-* is not used consistently, so that its absence cannot be taken as unambiguous evidence for the ICV status of a complex verb. If, however, the participle forms in a certain Middle Dutch text are consistently marked with *ge-*, the absence of *ge-* in a complex verb from that text is taken as evidence for the ICV status of the complex verb in question in Blom and Booij (2003).

There are also several contexts in which both SCVs and ICVs appear non-separated and which do, thus, not provide any evidence for the SCV/ICV status of a complex verb. The relevant contexts are listed in (57).

- (57) Contexts not providing any evidence for SCV/ICV status:
- a. verb clusters with the word orders auxiliary-preverb-verb and preverb-verb-auxiliary;
 - b. finite complex verb forms in subordinate clauses;
 - c. infinitival forms without *te*.

Since both SCVs and ICVs appear non-separated in the three contexts in (57), the only difference between SCVs and ICVs in these contexts is the difference in their stress pattern. Historical data being written data, there is no way to assess the SCV/ICV status of complex verbs in such contexts.

The results of the classification of the 83 complex verbs with *door/door/dore* and *over/ouer* based on (56)-(57) are represented in Table 7.1, giving the distribution of these complex verbs over SCVs, ICVs, verbs that show both explicit SCV evidence and explicit ICV evidence, and verbs that do not show any explicit SCV evidence or ICV evidence, as well as the horizontal percentages.

TABLE 7.1. DISTRIBUTION OVER SCVs, ICVs, SCV+ICVs, AND SCV/ICVs.

preverb	SCV	ICV	SCV+ICV*	?**	totals
<i>door</i>	10 (22%)	22 (48%)	2 (4%)	12 (26%)	46 (100%)
<i>over</i>	13 (35%)	9 (25%)	3 (8%)	12 (32%)	37 (100%)
totals	23 (28%)	31 (37%)	5 (6%)	24 (29%)	83 (100%)

*: Complex verbs that show explicit SCV evidence in some data and explicit ICV evidence in other data (cf. 7.4.3.4).

** : Complex verbs that cannot be classified as either SCV or ICV, since the data they appear in do not give explicit SCV evidence or explicit ICV evidence.

Table 7.1 illustrates that the 83 complex verbs with *door/over* contain 23 SCVs, 31 ICVs, and 5 complex verbs that behave as SCVs in some cases and as ICVs in other cases. All of these complex verbs, which will be discussed below, are listed in Table 7.2-7.6 in appendix 4a, provided with the number of the text they come from, which refers to the list of text titles in appendix 4b, and a line/section number, which refers to the location in the relevant text.

The diachronic hypothesis investigated in Blom and Booij (2003) is that the structural change from SCV into ICV is preceded by a semantic change, that is, by the development of a so-called holistic meaning in the complex verb. This holistic meaning involves the complete affectedness of the direct object referent. The hypothesis is based on the synchronic observation that, unlike Modern Dutch SCVs, Modern Dutch ICVs generally express such holistic meanings (cf. 7.4.2). It is furthermore based on the assumption that structural changes, in particular those whereby elements come to form a structural unit or develop into a tighter structural unit, are generally preceded by semantic (or interpretational) changes. Such semantic/interpretational changes lead to these elements being interpreted as a

(tighter) unit, and without such a 'unit interpretation', there does not seem to be a motivation for these structural changes (cf. Hopper and Traugott 2003: 11).²²

It was additionally hypothesised that the development in question tends to be unidirectional, in conformity with the unidirectionality tendency (cf. 2.3). Blom and Booij (2003: 75, 83) argue that this hypothesis can be motivated semantically, by relating it to the hypothesis discussed in the previous paragraph. That is, assuming that semantic change precedes structural change, a structural change from ICV into SCV would imply that prefixes, which together with the verb express holistic meanings, could develop a more independent semantic content and isolate this semantic content from that of the verb. After this process of developing more semantic independence, then, would follow a process of developing more morphosyntactic independence, resulting in the separability of the, formerly inseparable, preverb. A semantic development as described above, however, tends not to occur, which is why the structural development of ICVs becoming separable is expected to be generally excluded.

This unidirectionality hypothesis for SCVs/ICVs is not trivial: van Loey (1976) gives many Middle Dutch examples of preverb-verb combinations that are not separated, but correspond to Modern Dutch SCVs. Most of these examples come from the *Frensweger manuscript*, a religious text from the Eastern part of the Low Countries from about 1483. One of van Loey's (1976) examples is given in (58).

- (58) *Doe opstant Bernardus al stille zwigende.*
 then up-stand Bernard all silently being-silent
 'Then Bernard got up silently.' (van Loey 1976: 6)

The Modern Dutch complex predicate *opstaan* 'lit. up-stand, to stand/get up' is an SCV (as are all complex predicates with the particle *op*, cf. the chapters 5 and 6). The existence of data such as (58) might, at first sight, seem to suggest that *opstaan* was inseparable in Middle Dutch, which would imply that there are Middle Dutch ICVs that have developed into Modern Dutch SCVs. Van Loey notices, however, that most of the non-separated combinations such as *opstaan* appear separately in other verb forms/contexts in the same text. The constructions in (59)a-b, for instance, which contain separate forms of *opstaan*, are from the same text as (58) above.

- (59) a. ... *stont hi op met vuricheit* ...
 ... stood he up with passion...
 '(...) he stood/got up with passion (...)'
- b. *Mijn alre liefste broeder, staet op om Godes willen.*
 my all dearest brother, stand up for God's will
 'My very dearest brother, stand/get up for God's will.' (van Loey, *ibid.*)

This is why van Loey does not call combinations such as *opstaan* in (58) "inseparable", but calls these combinations "non-separated" (van Loey 1976: 61). He

²² Semantic changes also follow structural changes, cf. the remarks in the sections 2.3 and 7.3.3.

attributes the non-separation in constructions such as (58) to factors like stress, poetic necessity, rhythm, and the influence of Latin (the *Frensweger manuscript* is partly a translation and partly an adaptation of Latin texts). Duinhoven (1997: 112-120), however, claims that these factors cannot account for the full range of data and advances a pragmatic account of word orders such as in (58).

The foregoing discussion shows that it is unlikely that data such as (58) are evidence of a development of Middle Dutch ICVs into Modern Dutch SCVs. Nevertheless, the discussion of van Loey (1976) illustrates that the unidirectionality hypothesis for SCVs/ICVs is not trivial. In order to verify this hypothesis and the other hypotheses, we investigated the semantics of the Middle Dutch complex verbs that were classified as either SCV or ICV and compared the form of each of these Middle Dutch complex verbs to that of its Modern Dutch semantic counterpart (i.e. to that of the Modern Dutch SCV/ICV that expresses the same meaning).

7.4.3.2 Middle Dutch SCVs

The results in the Tables 7.2 and 7.3 in appendix 4a show that most of the Middle Dutch SCVs with *door* and *over* (and their Middle Dutch allomorphs, all of which are adapted to the Modern Dutch orthography in the Tables 7.2 and 7.3) correspond to Modern Dutch SCVs with the same meaning and often also the same form (19 of the 23 SCVs; some of these show a lexical change in the particle form or the verb form). Like their Modern Dutch counterparts, these Middle Dutch SCVs do not have the holistic meanings that are associated with ICVs. There are, however, four Middle Dutch SCVs that do express holistic meanings. The relevant constructions are given in (60) (the numbers refer to the texts the constructions come from and the lines/sections in these texts, cf. appendix 4b).²³

- (60) a. *Had een minsche al sijn leven door gelevet wael ende gotliken*
had a man all his life through *ge-lived* well and religiously
'If a man had lived through/spent all his life in a good and religious way'
(XIII, Traecheit, 180)
- b. *Doen Oriande den staet over had gesien, heeft si geseyt (...)*
when Oriande the situation over had *ge-seen*, has she said (...)
'When Oriande had surveyed the situation, she said (...)' (VI-203)
- c. *mer tis een flaute die hem over ghecomen is*
but it-is a swoon that him over *ge-come* is
'But it is a swoon that has happened to him' (VI-56a)
- d. *Eerweerdige vrouwe wat gaet u over dat ghi voor hem bidt die u ende my so*
respectable lady what goes you over that you for him pray who you and me so
veel spijs gedaen heeft (...)
much sorrow done has (...)
'Respectable lady, what happens to you, that you pray to him who has done so
much sorrow to you and me (...)' (VI-307a)

²³ Three of these constructions are from text VI, as indicated in (60). I assume that this is a coincidence (the constructions referred to in the sections 7.4.3.4 and 7.4.4 are from other texts).

The SCV constructions in (60) 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). The SCVs in (60)a and (60)c are separated by the past participle marker *ge-*. Since this marker is used consistently in the texts these examples come from, I take the separation of the complex verbs in (60)a-c by this marker as evidence for their SCV status.²⁴ The Modern Dutch counterparts of the Middle Dutch SCVs in (60), however, are ICVs. This is illustrated in (61).

- (61) a. Jan heeft veel angstige ogenblikken *doorlêefd*.
John has many anxious moments through-lived
'John has lived through/spent many anxious moments.'
- b. Marie *overzág* de situatie.
Mary over-saw the situation
'Mary surveyed/took stock of the situation.'
- c. Er is hem iets verschrikkelijks *overkómen*.
there is him something terrible over-come
'Something terrible happened to him.'
- d. Ik wist niet wat mij *overkwám*!
I knew not what me over-came
'I did not know what was happening to me!'

The Middle Dutch complex verbs in (60), then, already have the semantics typically associated with ICVs, but still have the structural status of SCVs. This temporary semantics-syntax 'mismatch' is eliminated in Modern Dutch, in which the structural status of these verbs is adapted to their already changed semantics: they have become ICVs. It thus appears that the semantic change of developing a holistic meaning indeed precedes the structural change of becoming inseparable.²⁵

The four preverbs in (60) can be classified as path preverbs: these preverbs conceptualise a path through/over the object referent that is followed by the subject referent. This is in accordance with the claims made here, according to which only path particles develop into prefixes systematically (cf. 7.4.2). Although the paths expressed by the constructions in (60) do not involve concrete motion, the spatial meanings of the corresponding adpositions are still present in the preverbs in these constructions (cf. also 7.5.1).

Among the data is the construction in (62), containing the SCV *overliden* 'lit. over-go, to pass/go by'.

²⁴ I refer to *door* and *over* in (60) as particles, but these elements can actually be either particles or postpositions (cf. 7.3.2.3). They are, in any case, not prefixes, since they are separated from the verb (by the past participle marker *ge-*, by an auxiliary, or by V2). The preverbal elements in (60), then, are indeed separable in Middle Dutch (being either particles or postpositions). We will see below that they have developed into inseparable Modern Dutch preverbs (see also 7.5.2).

²⁵ In addition to the change from SCV into ICV, the SCV in (60)d has undergone a change in its lexical form: *over-gaan* 'lit. over-go' > *over-komen* 'lit. over-come'.

- (62) *Ende hi alle dinc guetelic ouer laet liden.*
 and he all things well over let go
 'And he let pass all things well.' (II-35b)

The preverb *over* functions as a resultative predicate in this SCV, the result of (62) being that THE GOOD THINGS ARE OVER 'past'. The verb *liden/lijden* 'to go' does not exist in Modern Dutch, the Modern Dutch counterpart of the SCV in (62) being the SCV *óvergaan* 'lit. over-go' (or *voorbijgaan* 'lit. past-go').

The Middle Dutch SCV in (62) is a cognate of the Modern Dutch ICV *overlijden* 'to die', the meaning of which can be seen as an extension of the SCV meaning 'to pass/go by'. But since the verb *lijden* 'to go' does not exist in Modern Dutch, the meaning of the ICV *overlijden* cannot be said to be distributed among its parts. In other words, this ICV is not compositional, but is completely lexicalised, and there are no other ICVs with a resultative prefix *over-* 'past' either. We can conclude that the development of the ICV *overlijden* 'to die' is an isolated case; there is no systematic pattern whereby the resultative particle *over* 'past' has developed into a prefix with a similar function.

7.4.3.3 Middle Dutch ICVs

The Middle Dutch ICVs in the corpus all express the holistic meaning typical of ICVs, as Table 7.4 and 7.5 in appendix 4a show. The Modern Dutch counterparts of these Middle Dutch ICVs are also ICVs (but many of these ICVs show lexical changes, some Middle Dutch verb stems have, for instance, become obsolete and have been replaced with their Modern Dutch counterparts).

Table 7.5 in appendix 4a shows that the Modern Dutch counterparts of two Middle Dutch ICVs with the path prefix *over-* are prefixed verbs with *be-* (*overhángen* – *behángen* 'to hang with', *overspréken* – *bespréken* 'to discuss'). This suggests that the semantics of the prefix *be-* may, at least in some constructions, be similar to that of the path prefix *over-*, which means that the participant licensed by *be-* may be its Ground instead of its Figure, as is the case with path prefixes. Like ICV constructions with path prefixes ((63)a, cf. (17) in 6.2.2), such constructions with *be-*prefixed verbs ((63)b, (64)a, (65)a) may alternate with constructions with the preposition *over*, which also licenses a Ground participant ((63)c, (64)b, (65)b).²⁶

- | | | | |
|------|----|---------------|--|
| (63) | a. | ICV: | de rozen (met water) <i>over-gieten</i>
'to suffuse the roses with water' |
| | b. | <i>be-</i> V: | de rozen (met water) <i>be-gieten</i>
'to water the roses' |
| | c. | PP: | water <i>over</i> de rozen <i>gieten</i>
'to pour water over the roses' |

²⁶ The Figure of the preposition *over* in (63)c is *water*; (64)b and (65)b do not contain an NP referring to the Figure of the preposition *over*.

- (64) a. *be*-V: het probleem *be-spreken*
 'to talk about (discuss) the problem'
 b. PP: *over* het probleem *spreken*
 'to talk about the problem'
- (65) a. *be*-V: de zandweg *be-wandelen*
 'to walk (over) the sandy road'
 b. PP: *over* de zandweg *wandelen*
 'to walk over the sandy road'

The prefix *be-*, then, may license a Ground participant (which is syntactically realised as the direct object NP of the prefixed verb). There are, however, also constructions in which *be-* licenses a Figure participant, such as *zich be-drinken* 'lit. oneself be-drink, to get drunk' (in which the Figure is realised as a reflexive pronoun). In yet other constructions, the role of the participant licensed by *be-* is ambiguous, which is due to the vagueness of the lexical-semantic content of *be-* (this vagueness is related to the fact that *be-*, as opposed to *over-*, does not correspond to a free morpheme). This is especially the case with *be*-verbs that alternate with PPs with *op* 'up'. The examples in (66) illustrate that such *be*-verbs are often semantically similar to resultative constructions with *vol* 'full', which licenses a Figure participant (cf. Hoekstra, Lansu, and Westerduin 1987).

- (66) a. *op* de muur *plakken* 'to stick on the wall'
 de muur *be-plakken* 'to cover the wall by sticking'
 de muur *vol plakken* 'to cover the wall completely by sticking'
- b. *op* het terrein *bouwen* 'to build on the site'
 het terrein *be-bouwen* 'to build on/over the site'
 het terrein *vol bouwen* 'to build over the site'

Further research is necessary into this matter, but it must be noted that an analysis according to which *be-* functions as a path preverb in some constructions does not pose any problems for the claims made in section 6.4, which discussed restrictions on the cooccurrence of resultative phrases, particles, and prefixes. This is because both constructions with path preverbs and constructions with resultative preverbs conceptualise results, which is the property of preverbs that was of central concern in this section (cf. 6.4.2). The crucial difference between the two preverb types concerns the semantic role of the participant licensed by the preverb: whereas this participant is the preverb's Ground in the case of a path preverb, it is the preverb's Figure in the case of a resultative preverb (cf. 5.2 and 5.3.4). Although it remains to be seen whether this difference is relevant in the case of *be-*, I have illustrated in this chapter and in the previous ones that it is certainly relevant in the case of preverbs such as *over/over-*: it accounts for various synchronic as well as diachronic differences between complex predicates with path preverbs and complex predicates with resultative preverbs.

Table 7.4 in appendix 4a illustrates that the Modern Dutch counterpart of one Middle Dutch ICV with *door-* is a prefixed verb with *ver-* (*doorzénge*n – *verzenge*n 'to scorch'). This *ver-*-prefixed verb is not compositional, which means that it cannot be hypothesised on the basis of this verb that *ver-* may also express a path. By

contrast, this prefix generally seems to express results (cf. *verbranden* 'to burn down/up', *vergooien* 'to throw away', *verwaaien* 'to blow away', etc.).

We did not find any Middle Dutch ICVs that have developed into Modern Dutch SCVs, which is in accordance with the unidirectionality tendency. The explanation for this tendency can be found in the semantics: assuming that semantic changes precede (and motivate) structural changes, the structural change of ICVs becoming SCVs 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 was expected not to occur systematically either.²⁷

7.4.3.4 Middle Dutch SCVs/ICVs

The data contain five Middle Dutch complex verbs that show both SCV behaviour and ICV behaviour. These verbs are listed in Table 7.6 in appendix 4a. The finite forms of these complex verbs are, for instance, split in some main clauses, but occur non-split in V2 position in other main clauses, thus exhibiting structural variation (sometimes within one text). As for their semantics, one of these verbs has a holistic meaning (*doorzoeken* 'to search completely'). It thus appears that the semantic change of developing a holistic meaning has already occurred to this verb, but this has not yet led to a complete change in its structure, changing the separable verb into an inseparable one. Instead, there appears to be (temporary) structural variation: both the separable and the inseparable form are used in Middle Dutch. This variation, however, is eliminated in Modern Dutch: the Modern Dutch verb *doorzóeken* 'to search completely' is an ICV. The structural change from SCV into ICV, then, is completed for this verb.²⁸ This example nicely illustrates how synchronic variation may lead to diachronic change.

Some of the remaining verbs with variable SCV/ICV behaviour have more than one meaning (e.g. *overlezen* 'to read over/through' and 'to read aloud'), thus being polysemous. This polysemy appears to bring about formal variation, that is, the use of both SCV forms and ICV forms. This variation is, again, eliminated in Modern Dutch, as is the polysemy: the different meanings are paired with different Modern Dutch forms (e.g. *óverlezen* 'to read over/through' vs. *hardop lezen* 'to read aloud').

²⁷ The corpus contained only two complex verbs with the quantificational preverb *over-* 'too much for y', *overlâden* and *overlâechen*, both of which are ICVs, mean 'to overload', and correspond to the Modern Dutch ICV *overlâden* 'to overload'. This prefix is hypothesised to have developed out of the path prefix *over-* (cf. 6.2.1, Haeseryn et al. 1997: 625, and de Vries 1975: 143).

²⁸ The SCV *dóorzoeken* also exists in Modern Dutch, but this SCV has a completely different meaning (and a different diachrony), its particle being a continuative particle: 'to continue searching' (cf. *Van Dale* 1996).

7.4.4 Summary

The historical data support the hypotheses: we found Middle Dutch SCVs that actually show the hypothesised development into Modern Dutch ICVs, which illustrates that this development is a plausible one. If we can observe a development of a Middle Dutch SCV into a Modern Dutch ICV, the semantic change of developing a holistic meaning precedes the structural change of becoming inseparable. This semantic change, then, can be seen as a necessary condition for the structural change to take place. Those few Middle Dutch SCVs among the data that have developed into compositional Modern Dutch ICVs contain non-resultative preverbs (path preverbs), which is in accordance with the claims made here. We did not find any instances of the reverse of this change, which reflects the tendency of unidirectionality.²⁹

The precedence of the semantic change over the structural change may lead to temporary 'mismatches', that is, to the existence of Middle Dutch verbs that already have a typical ICV meaning but still have an SCV structure. In what presumably represents a later historical state, we may see structural variation, that is, Middle Dutch complex verbs that already have an ICV meaning and structurally already show ICV behaviour in some cases, but still show SCV behaviour in other cases. The complex verbs in question, however, do not exhibit any mismatches or structural variation in Modern Dutch; the change of SCV into ICV is completed for these verbs.

The data illustrate that the SCV system, which represents an *intermediate* stage in the development of syntactic constructions into morphologically complex words (cf. (54)), is a very stable system: most Middle Dutch SCVs still function as such in Modern Dutch, only a few Middle Dutch SCVs having developed into Modern Dutch ICVs. The corpus we used, however, was quite small, and an enlargement of it would without doubt result in more examples of Middle Dutch SCVs that correspond to Modern Dutch ICVs.³⁰ For instance, a search for SCVs/ICVs with the preverb *om(me)* 'around', which is the third productive Modern Dutch ICV preverb (cf. 6.2.1), in the same Middle Dutch texts yielded the separable combination *omme besluiten* in (67), which contains a path preverb and has developed into the Modern Dutch ICV *omslúiten* 'to enclose'.

- (67) *het casteel omme besluten*
 the castle around-close
 'to enclose the castle' (II-60a2)

Van der Horst and van der Horst (1999: 348) give comparable examples from the 18th and 19th century for *doorstaan* 'lit. through-stand, to endure, to go/come through'

²⁹ See section 7.5.2 for more on the phonological change involved in the grammaticalisation of SCVs into ICVs.

³⁰ It was noted in section 7.3.1 that some of the texts we used appeared relatively late in the Middle Dutch period. Older data might reveal more changes from SCV into ICV (the fact that we used these late Middle Dutch texts was a consequence of the criteria applied in selecting the texts, which were based on previous research (Blom 2002)).

(and also for *overzien* 'lit. over-see, to survey', cf. (60)b). Nevertheless, the stability of the SCV system appears to be a fact. This stability could be related to the productivity of the SCV system, which is far more productive than the ICV system (cf. 5.5 and 6.2).

7.5 Discussion: the diachrony of SCVs and ICVs

7.5.1 The diachronic hypothesis and the use of historical data

The diachronic hypothesis in (68) was put forward in this chapter on the basis of the systematically varying semantic properties of Modern Dutch SCVs and ICVs (cf. (5) in 7.2).

- (68) The grammaticalisation of particles and prefixes: both resultative and non-resultative phrases may grammaticalise into particles, leading to the formation of resultative and non-resultative particles, and only the latter type of particles may grammaticalise further into prefixes.

The hypothesis in (68) is schematically represented in Figure 1a, in which the arrows indicate the diachronic relationships posited in this chapter.

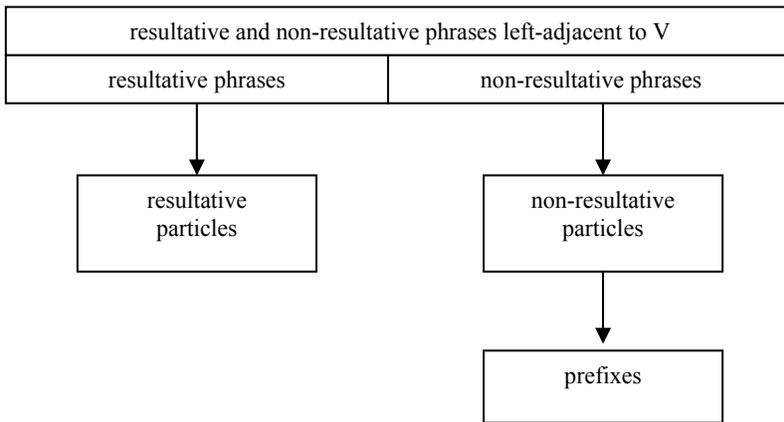


FIGURE 1A. THE GRAMMATICALISATION OF PARTICLES AND PREFIXES.

A closer examination of the changes involved in the grammaticalisation of non-resultative preverbs, in combination with an investigation of historical data, revealed a more elaborate picture for the development on the right-hand side in Figure 1a, which is represented in Figure 1b (here, too, the arrows indicate diachronic relationships; for the dotted arrow, see section 7.5.2 below). In this figure, the category of the non-resultative phrases is divided into phrasal modifiers and postpositions, both of which may grammaticalise into non-resultative particles: phrasal modifiers may develop into modifying particles and postpositions may

develop into relator particles and continuative particles. The relator particles, in turn, fall into two subtypes: orienting particles and path particles.³¹ Only path particles systematically develop further into ICV prefixes.

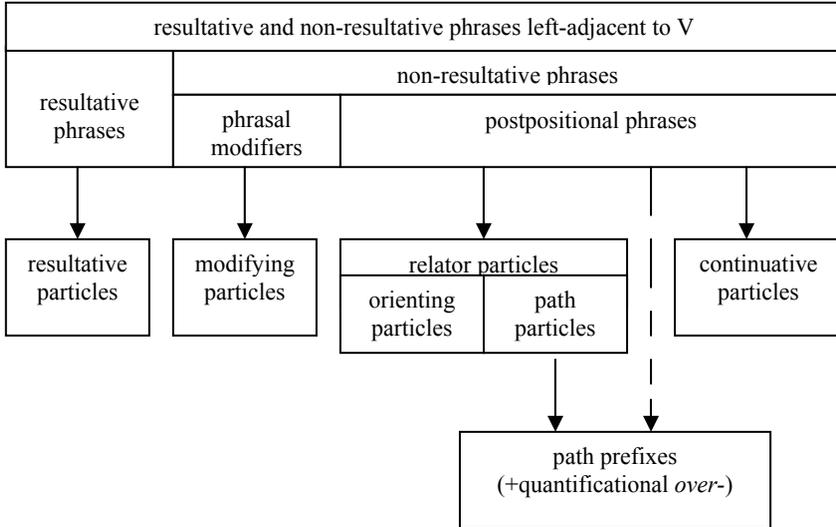


FIGURE 1B. THE GRAMMATICALISATION OF PARTICLES AND PREFIXES (ELABORATED).

According to the diachrony represented in the Figures 1a-b, particles have developed out of various source constructions. It is the historical relationship between these different source constructions and the different particle types that accounts for the divergent semantic properties of SCVs with different particles (cf. chapter 5).

The basic differences between the claims represented in Figure 1 and previous claims on the diachrony of SCVs and ICVs are the following: (a) not all (productively used) particles are historically related to resultative phrases; there are additional particles sources, and (b) productively used ICV prefixes are not historically related to resultative phrases at all. ICV prefixes have, instead, developed out of non-resultative particles, more specifically, out of path particles (the quantificational prefix *over-*, which also productively forms ICVs, is assumed to represent an extended path function, cf. 6.2.1).

The comparison of SCVs and ICVs with the same preverbs in section 7.2 showed that the basic, spatial meaning of the corresponding adpositions may be present both in particles and in prefixes. The examples given in section 7.2 to illustrate this are repeated in (69)-(70).

³¹ The double-participant particles, discussed in section 5.5.15.4, also belong to the class of relator particles and are also assumed to be diachronically related to postpositions (cf. note 11).

(69)	SCV	gloss	meaning
	de taart <i>dóorsnijden</i>	through-cut	'to cut the cake through/in two'
	een bladzijde <i>óm slaan</i>	around-strike	'to turn over the page'
	het bericht <i>óverbrengen</i>	over-carry	'to carry over/convey the message'
(70)	ICVs	gloss	meaning
	het hele huis <i>doorzóeken</i>	through-search	'to search the whole house'
	het land <i>doorsnijden</i>	through-cut	'to cut through the country'
	het huis <i>omgéven</i>	around-give	'to surround the house'
	het land <i>overspóelen</i>	over-wash	'to wash over the land'

The spatial meanings of *door-* 'through', *om-* 'around, and *over-* 'over' are no less clearly present in the ICVs in (70) than they are in the SCVs in (69). This poses a problem for the original diachronic hypothesis, according to which both SCVs and ICVs have grammaticalised out of constructions with resultative phrases and ICVs represent a diachronic stage beyond that of SCVs. That is, grammaticalisation is assumed to involve the loss of concrete meanings and the development of extended meanings, which means that the original hypothesis predicts that ICV preverbs have less concrete meanings than the corresponding SCV preverbs.

The diachrony of SCVs and ICVs postulated in this book, which is represented in Figure 1a-b above, provides an account of these facts: the SCV preverbs in (69) are resultative preverbs and the ICV preverbs in (70) are path preverbs. This implies that there is no direct historical relationship between the preverbs in (69) and those in (70). ICVs with the preverbs in (70), then, are not grammaticalisations of SCVs with the preverbs in (69).

The data in section 5.5 illustrate that non-spatial meanings are very frequent among the resultative particles; the majority of these particles express non-spatial, metaphorical results. Although path particles and path prefixes may also express metaphorical meanings, such meanings often preserve a spatial (or directional) component (cf. appendix 2).

If we compare SCVs and ICVs with preverbs that are part of the same grammaticalisation development, the expected semantic differences show up: path preverbs of ICVs have extended meanings in comparison to path preverbs of SCVs. To see this, compare the SCVs in (71), which have path preverbs, with the ICVs in (70).

(71)	SCVs	gloss	meaning
	de sonate <i>dóorspelen</i>	through-play	'to play through the sonata'
	de brief <i>óverlezen</i>	over-read	'to read over/through the letter'

These examples illustrate that both the paths expressed in SCV constructions and the paths expressed in ICV constructions may be metaphorical paths rather than actual paths involving concrete motion. But whereas the paths expressed in SCV constructions are one-directional (they can be visualised as a line), the paths expressed in ICV constructions are multidirectional in the sense that they call at every spot in/on the Ground. This means that the paths expressed in ICV constructions can be characterised as extended paths, expressing the holistic

meaning according to which the path extends completely through/around/over the substance or surface of the direct object referent.

The sections 7.3 and 7.4 show that the grammaticalisation developments we have postulated are supported by historical data. These data show the source constructions of SCVs with the various particle types, which contain a potential for reanalysis, as well as SCVs that have developed into ICVs. These data, then, lend plausibility to the diachronic hypotheses. Nevertheless, this does not mean that these data have *proved* that the changes indeed necessarily have taken place in the way described here. This, however, is a property of historical developments in general: we can never prove a historical development, since we can never actually observe a change in progress. The reason for this is that data of older stages of a language are, of course, also *synchronic* data, reflecting the state of affairs *at a particular moment* (in the case of a change being in progress, we can thus only observe synchronic variation).

The best we can do, then, is to compare those different synchronic reflections and make a rational reconstruction of the development in question, which defines a plausible pattern of change between the observed stages, illustrates that there was a potential for the structural reanalysis we postulate (that is, a surface string that could be assigned two possible syntactic structures), and shows how various factors have probably played a role in this development. Since, however, earlier functions may coexist with later ones, exhibiting layering, it is often not the case that a particular construction only belongs to a previous period and not to a later stage. The result of this is that the data do generally not fall into discrete, clear-cut stages (although the reanalysis itself is a discrete step in the grammaticalisation development).

What I hope to have shown by presenting the historical data is that there is convincing support for the central claim made in this book, which is that both resultative and non-resultative phrases may develop into semantically different particle types and that only non-resultative particles may develop further into prefixes.

7.5.2 Motivating the diachronic dichotomy

The basic claim represented in Figure 1a-b is that non-resultative elements may develop into separable preverbs and further into inseparable ones, but that resultative elements can take only the first step. These, then, will tend not to develop into productively used inseparable preverbs. An interesting question is why this diachronic dichotomy would be as it is represented in Figure 1a-b: why would it be the case that resultative particles, in contrast to non-resultative particles, do not develop further into prefixes? Although I have no final answer to this question, there are a few properties associated with resultative predicates (and with predicates in general) that might be relevant here.

To begin with, elements that conceptualise predicates, such as resultative phrases, are relatively heavily stressed in languages such as Dutch (compared to elements with non-predicative functions, such as phrasal modifiers and

prepositions/postpositions functioning as relators).³² If this is really a distinctive 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 separability 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 might probably lose their stress without any problem and might, consequently, develop into prefixes.

I hypothesise that postpositions, which are unstressed at the phrasal level, may develop into particles and then further into prefixes. The increase in stress and the subsequent loss of stress implied in this development (particles being stressed and prefixes being unstressed) might at first sight seem dubious. The change whereby postpositions develop into particles, however, involves a change in the syntactic configuration, and a different syntactic configuration may, of course, have a different stress pattern. The increase in stress may, furthermore, be related to the power of the SCV subsystem formed by SCVs with resultative particles, this system being very productive and all of its instantiations showing the same stress pattern correlating with separability. SCVs with path particles and other non-resultative particles, then, may be formed analogous to these SCVs, showing the same morphosyntactic properties and adopting the same stress pattern as these SCVs. Instead of analogy being the driving force behind SCVs with non-resultative particles developing the same stress pattern as SCVs with resultative particles, the output scheme of SCVs with resultative particles, given in (72), may become a productive pattern, on the basis of which we can form new SCVs. The non-projecting word is stressed in this output scheme (as indicated by underlining).

(72) [X-V⁰]_V

Since postpositions and adverbs contain a full vowel, they constitute potential locations for stress. But the fact that the particles that have developed out of these elements are not conceptualised as predicates apparently allows them to subsequently lose their stress again.³³

The loss of stress in the grammaticalisation of SCVs into ICVs could be characterised as a manifestation of phonological reduction. It was noted in section

³² This is related to the fact that predicative phrases are in the focus position in clauses with default focus. Particles (both the resultative and the non-resultative ones) are also in this position.

³³ The increase in stress involved in the grammaticalisation of postpositions into path particles, then, cannot be characterised as counterevidence to the unidirectionality hypothesis (cf. 2.3 and 7.2). That is, although grammaticalisation may involve phonological reduction, a manifestation of its opposite, say phonological increase, cannot be said to imply a structural and semantic development into the opposite direction, whereby the parts of a unit develop more syntactic and semantic independence. On the contrary, the change whereby postpositions in PP-V constructions grammaticalise into path particles involves the loss of syntactic and semantic independence of the postposition, which comes to be reanalysed with the verb as a unit.

2.3 that phonological reduction is a typical (but not a necessary) component of grammaticalisation.

There are indications, however, that the grammaticalisation of postpositions into prefixes does not necessarily pass through the intermediate (stressed) particle stage. This appears from the fact that there are, for instance, no Modern Dutch SCVs with the path particle *om*, having the meaning 'to go/come around Y by V-ing' (cf. 5.5.8), whereas Modern Dutch ICVs with the path prefix *om-* and the meaning 'to go/come completely around Y by V-ing' are formed productively. 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 (cf. 5.5.11). As indicated by the dotted arrow in Figure 1b, then, the intermediate stage of the (stressed) path particles may possibly be skipped in the development of (unstressed) postpositions into (unstressed) path prefixes (or, alternatively, path particles may tend not to stay in the particle stage too long, but to grammaticalise further into prefixes relatively quickly). These observations lend support to the role of stress in the diachrony of SCVs and ICVs with semantically different preverbs: whereas postpositions, which are unstressed, may develop into (unstressed) prefixes and thereby possibly skip (or speed up) the (stressed) particle stage, resultative predicates, which are stressed, may develop into (stressed) particles, but do not develop further into (unstressed) prefixes, thus remaining in the particle stage.

A second domain, besides the prosodic domain, in which predicates are more prominent than non-predicative elements is Lexical-Conceptual Structure. Resultative predicates select a participant with which they express the core event of the construction (cf. 5.2). Preverbs that are conceptualised as modifiers, however, express secondary information, and preverbs that are conceptualised as relators express relational information (cf. 5.3).

In sum, the high prosodic and lexical-conceptual prominence of resultative predicates compared to the low prominence of non-predicative elements (elements conceptualising modifiers or relators) in both domains might be related to the fact that resultative particles, unlike non-resultative particles, do not develop into prefixes.

Apparent exceptions to this dichotomy, however, are the resultative prefixes in Modern Dutch. We have seen that the prefixes: *be-*, *ver-*, and *ont-* function as resultative predicates (cf. 6.4, the prefix *be-* possibly also functions as a path prefix, cf. 7.4.3.2). The existence of these resultative prefixes might seem to suggest that resultative particles may eventually lose their stress and become prefixes, contrary to the claims made here (cf. van Kemenade and Los 2003).³⁴ The development of these prefixes, however, is a very old one, going back to older stages of the Germanic languages (new *be-*, *ver-*, and *ont-* verbs are only formed directly, i.e. synchronically), and is still obscured. Importantly, it took place at a stage in which there might have been other properties that distinguished predicates from non-predicative elements (besides predicative stress), such as case and agreement inflections. This means that at that time, the stress pattern of predicates was possibly

³⁴ *Be-*, *ver-*, and *ont-* are historically related to, respectively, the Gothic adpositions *bi* 'at' (*bij* in Modern Dutch), **fer/for/fra/fur* 'for' (*voor* in Modern Dutch), and *ant* 'against' (cf. van Kemenade and Los 2003, WNT 2000).

not crucial to their predicative status (the development of these prefixes might even go back to stages in which there was no V2 movement yet and resultative phrases (and particles) did not end up in the stressed, sentence-final focus position). In any case, resultative predicates tend not to develop into prefixes in the stages of Dutch subject to my investigations, and this might be related to the prosodic and semantic properties that distinguish predicates from non-predicative elements.³⁵

7.5.3 The diachrony of SCVs with nominal and adjectival particles

The diachrony of SCVs sketched in this chapter also applies to SCVs with nominal and adjectival particles, such as *ademhalen* 'lit. breath-take, to breathe', *koffiezetten* 'lit. coffee-put, to make coffee', *opensnijden* 'lit. open-cut, to cut open', and *schoonmaken* 'lit. clean-make, to clean'. Note that the formation of SCVs with nominal and adjectival particles is not productive across the board, although SCVs with certain adjectives can be formed productively (cf. section 1.1 and 4.5). The reanalysis pattern posited for the development of SCVs with nominal particles is given in (73).

- | | | | |
|------|----|---------------------------|---------------------------------------|
| (73) | a. | dat Jan <i>adem haalt</i> | > dat Jan [<i>ademhaalt</i>] |
| | | 'that John takes breath' | 'that John breathes' |
| | b. | ...-NP-V ⁰ | > ...[X-V ⁰] _V |

As we have seen for the other developments leading to diachronic SCV formation, the development schematised in (73) involves the reanalysis of the preverbal element with the verb as a syntactic unit, the concomitant loss of structure in the preverbal element (NP > N), and the development of a unitary meaning for the syntactic unit formed in this way. The result of these changes is that the N-V combination denotes an institutionalised activity, that it can be used after *aan het* in the progressive *aan het*-construction and after auxiliaries and modals in verb clusters (cf. (74)a-b), and that the nominal part of such combinations cannot have a modifier (cf. (74)c-d, which illustrates that the whole SCV can be modified by the adverb *goed* 'well', that the nominal particle *adem* 'breath' in *ademhalen* 'to breathe' cannot be modified by the adjective *veel* 'much', and that such modification is, on the other hand, possible for the NP *adem* 'breath' in the NP-V combination *adem krijgen* 'to get breath', cf. 4.5).

³⁵ A remaining question is why, among the non-resultative particles, only the path particles and not the modifying and the orienting particles develop into productively used prefixes. Assuming that semantic changes generally motivate structural changes, I suspect that this is due to the fact that there is no systematic semantic difference that could be associated with the separability difference between the separable and the few existing inseparable complex verbs with modifying and orienting preverbs (cf. *voorkoken* 'to cook beforehand' vs. *voorvoelen* 'to feel beforehand, to sense, to anticipate' and *áankijken* 'to look at' vs. *aanbidden* 'to worship, to adore'). It must be noted, however, that the absence of the change from particle into prefix for these preverbs illustrates a general property of historical change: although we may be able to motivate the occurrence of a particular change, we may be unable to account for the absence of that change in what seems to be a similar case; historical changes do not have to occur (cf. section 2.3 and Hopper and Traugott 2003: 130-131).

- (74) a. De patiënt was de hele dag al onregelmatig aan het *ademhalen*.
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 kon *ademhalen*
that John not good could breath-take
'that John could not breathe well'
- c. Marie kon niet *veel/goed *ademhalen*.
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.'

N-V combinations such as *ademhalen* pattern with SCVs in general with respect to these properties; these combinations are SCVs with nominal particles.

Similar facts hold for SCVs with adjectival particles, such as *schoonmaken* 'to clean', which also express unitary meanings (denoting institutionalised activities) and also appear after *aan het* in the progressive construction and after auxiliaries and modals in verb clusters (cf. 4.3.5 and 4.5). This is illustrated in (75).

- (75) a. Jan is het huis aan het *schoonmaken*.
John is the house at the clean-make
'John is cleaning the house.'
- b. dat Marie het huis niet wil *schoonmaken*
that Mary the house not wants clean-make
'that Mary does not want to clean the house'

The relevant reanalysis pattern for SCVs with adjectival particles is given in (76).

- (76) a. dat Jan het huis *schoon maakt* > dat Jan het huis [*schoonmaakt*]
'that John makes the house clean' 'that John cleans the house'
- b. NP-AP-V⁰ > NP-[X-V⁰]_{V'}

Both elements that are used as nominal particles (e.g. *adem* 'breath' in *ademhalen* 'to breathe') and elements that are used as adjectival particles (e.g. *schoon* 'clean' in *schoonmaken* 'to clean') may also be used outside the SCV construction, that is, as, respectively, nominal and adjectival phrases (NPs and APs). If used as such, these elements may, like other XPs, have modifiers, but may not appear in the position after *aan het* and inside the verb cluster. These elements are, in other words, structurally ambiguous between being phrases and being particles, which is the synchronic result of the diachronic development described above: after grammaticalisation, old and new forms and meanings typically coexist for shorter or longer periods, exhibiting layering (cf. 2.3 and 7.3.1).³⁶

³⁶ SCVs with nominal and adjectival particles do not appear to grammaticalise into ICVs in a systematic way. The relatively few ICVs with left constituents other than adpositions (that is, N-V and A-V compounds) that exist in Dutch, such as *blinddoeken* 'to blindfold' and *stofzuigen* 'lit. dust-suck, to vacuum', are not historically related to SCVs with nominal and

7.5.4 To conclude

A comparison of the various reanalysis patterns given in this chapter shows that elements of all major syntactic categories (except verbs, but see section 10.1) may grammaticalise into particles: they may be reanalysed with the verb as an SCV (V'), as a consequence of which they can no longer project their own phrase, thus becoming bare Xs. The relevant reanalysis patterns are given in Table 7.7.

TABLE 7.7. REANALYSIS PATTERNS FOR DIFFERENT XPS GRAMMATICALISING INTO PARTICLES.

XP category + subcategory	XP/particle function	particle type	reanalysis pattern
PP resultative phrase	resultative predicate	resultative	...-NP-PP- V^0 >...-NP-[P- V^0] V'
PP spatial postposition	relator	orienting/ path	...-[NP-P] $_{PP}$ - V^0 >...-NP-[P- V^0] V'
PP temporal postposition	continuator	continuative	...-[NP-P] $_{PP}$ - V^0 >...-NP $_{ADV}$ -[P- V^0] V'
AdvP modifier phrase	modifier	modifying	...-AdvP- V^0 >...-[Adv- V^0] V'
AP resultative phrase	resultative predicate	resultative (adjectival)	...-NP-AP- V^0 >...-NP-[A- V^0] V'
NP direct object noun phrase	Theme of V	nominal	...-NP- V^0 >...-[N- V^0] V'

Table 7.7 illustrates that diachronic SCV formation involves the reanalysis of different XPs with a (right-adjacent) verb as syntactic units. The right-most column of Table 7.7 gives the structures resulting from the various reanalysis patterns, all of which are instantiations of the structure in (77).

(77) ...-[X- V^0] V'

The different types of preverb-verb combination instantiating the structures in the right-most column of Table 7.7 all show the specific SCV semantics, expressing unitary meanings, and the specific SCV syntax. As for the specific SCV syntax, all of these combinations are separated by the typical SCV separators, are able to appear as a whole after the progressive marker *aan het* and inside verb clusters, and have left parts that are generally unable to undergo syntactic operations such as topicalisation (cf. 4.3). All of these syntactic properties can be related to the syntactic structure of these combinations, which represent phrases consisting of a non-projecting word (that is, a bare A, Adv, N, or P) and a verb (cf. 4.5).

The results of this chapter provide us with an account of why Modern Dutch particles corresponding to prepositions and/or postpositions perform the functions they do (which were discussed in chapter 5 and are listed in column 3 in Table 7.7); the functions of resultative predicate, relator, continuator, and modifier. Particles

adjectival particles. These verbs are thus not instantiations of the grammaticalisation of SCVs into ICVs, but have other sources, such as conversion (of nominal compounds) and back formation (cf. Booij 2002a: 161-165).

perform these functions as a result of the fact that phrases with these functions (i.e. resultative phrases, postpositions, and modifier phrases, cf. column 2 in Table 7.7) may be left-adjacent to the verb in an OV language like Dutch. This is also the case for direct object NPs, which may, indeed, grammaticalise into nominal particles, as discussed above. Chapter 9 will show that particles in other Germanic OV languages perform similar functions, whereas this is different for particles in some Germanic VO languages. This appears to be related to the fact that not all of the phrases listed in the second column in Table 7.7 could show up adjacent to the verb in older stages of these VO languages. This difference among the Germanic languages, then, supports the diachrony of SCVs proposed in this chapter.

7.6 Summary

Various elements that may be left-adjacent to the verb may grammaticalise with this verb into an SCV. These elements are resultative phrases (both PPs and APs), modifier phrases, and postpositions. These different source constructions grammaticalise into, respectively, SCVs with resultative particles, SCVs with modifying particles, and SCVs with relator particles (orienting particles, path particles) and continuative particles. Nominal phrases that are left-adjacent to the verb may grammaticalise into nominal particles. SCVs with path particles may grammaticalise further into ICVs with path prefixes.

The different source constructions lead to the formation of SCVs with different semantic properties. These different semantic properties of SCVs are reflected by the different argument-structural and lexical-aspectual properties of the constructions they form. This means that the argument-structural and lexical-aspectual differences among SCV constructions are not unpredictable, but are accounted for by relating the SCVs in these constructions to their different source constructions.

The diachronic hypothesis put forward in this chapter implies that the relations in the Lexical-Conceptual Structure (LCS) of the source construction are preserved during the grammaticalisation 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.

I have illustrated that plausible reanalysis patterns can be posited for the grammaticalisation developments hypothesised in this chapter and that there is historical support for the changes involved in these developments. Although the amount of data was too modest to tell us anything about the time, place, and scale of the changes discussed in this chapter, the data provide the diachronic relationships postulated between different phrases and semantically different preverbs with plausibility. In this way, they lend further support to the semantic classification of preverbs proposed in this book, according to which preverbs vary systematically in their participant-licensing properties and other semantic properties.

The synchronic analysis of SCVs

8.1 Introduction

This chapter discusses the synchronic analysis of Dutch SCVs. Section 8.2 presents my proposal for the representation of Dutch SCVs, which is based on the semantic and structural properties of SCVs discussed in the previous chapters. I will argue in this section that the majority of SCVs are not only intermediate in a grammaticalisation cline, in between syntactic constructions and morphologically complex words (cf. chapter 7), but are also in an intermediate position in a lexicalisation cline, in between lexically free combinations and lexically fixed combinations, SCVs being partly lexicalised phrases. I will illustrate how my analysis of SCVs accounts for the synchronic formation of various types of SCV. Section 8.3 discusses the implications of the analysis for our assumptions about the architecture of the grammar, after which section 8.4 provides a comparison of the analysis with some alternative analyses of SCVs. Section 8.5 summarises the results.

8.2 A constructional idiom analysis of SCVs

8.2.1 *The synchronic status of SCVs as the result of two distinct developments*

It was shown in section 4.4 that SCVs are similar to Idiomatically Combining Expressions (ICEs) such as *pull strings* 'be in charge' in various respects. Both SCVs and ICEs, for instance, show compositionality as well as conventionality. That is to say, the parts of both types of construction contribute their meaning to the meaning of the whole, but the meaning of the whole does not follow straightforwardly from the meanings that these parts have when used outside the SCV/ICE construction. This property of SCVs/ICEs is related to the fact that their parts express extended meanings that are dependent on their use in the specific construction; these meanings are lexicalised.

We have seen, however, that SCVs differ from ICEs in two important respects. A first difference is the following: parts of ICEs may undergo topicalisation and may have a modifier, but this is not possible for particles, that is, for parts of SCVs. It has been argued in the sections 4.4 and 4.5 that this is due to the fact that a particle, as opposed to an NP like *strings* in the ICE *pull strings*, does not project a phrase, but is a non-projecting word. A second difference between SCVs and ICEs is that SCVs, as opposed to ICEs, are formed productively (cf. the example in (46) in 4.4: *de chirurg oppiepen* 'to beep up the surgeon'). It was illustrated in section 4.4 that the productivity of SCVs can be accounted for by

assuming that SCVs, as opposed to ICEs, are *partly* lexicalised instead of completely lexicalised. SCVs, then, are phrases that consist of a fixed slot and an open slot (*op*-V 'to cause to become accessible by V-ing'). This means that SCVs are in an intermediate position in a lexicalisation cline, in between completely free phrases and completely lexicalised (fixed) phrases. This cline, which was given in (52) in 4.4, is copied in (1).

- (1) Lexicalisation cline of individual phrasal combinations:
- | | | | | |
|------------------------------|---|---------------------------|---|-------------------------------|
| completely free combinations | > | partly fixed combinations | > | completely fixed combinations |
|------------------------------|---|---------------------------|---|-------------------------------|

In addition to SCVs that are compositional and can be formed productively but have conventionalised meanings, which constitute the vast majority of SCVs (see chapter 5), there are SCVs in which the particle expresses its basic, spatial meaning. This is for instance the case in *opgooien* 'to throw up(wards)' and *opkijken* 'to look up(wards)', in which the particle *op* expresses its spatial meaning 'up(wards)' (cf. *op en neer* 'up and down', *op*, WNT 2000, subentry II.A). The meaning of these SCVs appears to follow straightforwardly from the meanings of their parts in isolation. In other words, the parts of these SCVs do not express meanings that are dependent on their occurrence in the SCV construction. What seems to be the case, then, is that these SCVs, as opposed to the majority of SCVs, do not represent partly lexicalised combinations, but represent completely free combinations.

There are also SCVs that are not compositional and do not instantiate productive patterns. An example is the SCV *zich aanstellen* 'lit. oneself at-put, to put on airs', the meaning of which is not distributed among its parts (cf. 4.4). Other examples are SCVs that have a particle or a verb the form of which does not occur as an independent word, such as *teleurstellen* 'lit. ?-put, to disappoint' and *nabootsen* 'lit. after-?, to imitate' (**teleur*, **bootsen*, cf. 3.3.2). These SCV are completely lexicalised: they do not contain a fixed particle slot and an open slot for the verb, but contain two fixed slots.

In sum, the lexicalisation cline in (2) can be posited for SCVs (cf. (54) in 4.4).

- (2) Lexicalisation cline of the pattern $[X-V^0]_V$:
- | | | | | |
|------------------------------|---|---------------------------|---|-------------------------------|
| completely free combinations | > | partly fixed combinations | > | completely fixed combinations |
| $[X-V^0]_V$ | | $[op-V^0]_V$ | | $[aan-stellen_V^0]_V$ |
| <i>opgooien</i> | | <i>opzoeken</i> | | <i>zich aanstellen</i> |
| 'to throw up(wards)' | | 'to look up' | | 'to put on airs' |

It was shown in chapter 7 that all SCVs represent an intermediate stage in another development: SCVs can be characterised as being halfway in the grammaticalisation of syntactic constructions into morphologically complex words. Although only a subset of the SCV types may indeed grammaticalise further into words, the structure of all SCVs, which are phrases consisting of a non-projecting word and a verbal head, can be situated in between the structure of 'normal' syntactic constructions and that of morphologically complex words. The relevant structural development, which has been discussed in the previous chapter, is given in (3) (cf. (1) in 7.2).

- (3) Grammaticalisation of the pattern XP-V into prefix-V:
 $\dots\text{-XP-V}^0 > \dots\text{-[X-V}^0\text{]}_V > \dots\text{-[prefix-V}^0\text{]}_V^0$

Section 4.5 showed that the SCV structure in (3) ($\text{[X-V}^0\text{]}_V$) accounts for the various syntactic characteristics of SCVs, such as their separability, their ability to appear as a whole after *aan het* in the progressive construction and after auxiliaries/modals in verb clusters, and the general inability of their particles to appear in modification, topicalisation, and copula constructions. These properties are shared by all SCVs, irrespective of their lexicalisation properties. They are, for instance, shared by the three SCVs in (2) above, as illustrated in (4)-(6) (see also 4.3).

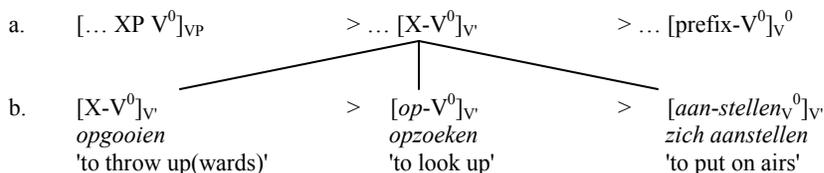
- (4) a. Jan *gooit* de bal *op*.
 'John throws up the ball.'
 b. Jan was de bal aan het *opgooien*.
 'John was throwing up the ball.'
 c. dat Jan de bal niet wilde *opgooien*
 'that John did not want to throw up the ball'
 d. *Maar *op* heeft Jan de bal niet *gegooid*.
 'But John did not throw up the ball.'
 e. *De bal is *op*.
 'The ball is up (in the air).'
- (5) a. Jan *zocht* de boeken *op*.
 'John looked up the books.'
 b. Jan was de boeken aan het *opzoeken*.
 'John was looking up the books.'
 c. dat Jan de boeken niet wilde *opzoeken*
 'that John did not want to look up the books'
 d. *Maar *op* heeft Jan de boeken niet *gezocht*.
 'But John did not look up the books.'
 e. *De boeken zijn *op*.
 'The books are up (accessible).'
- (6) a. Jan *stelde* zich *aan*.
 'John put on airs.'
 b. Jan was zich aan het *aanstellen*.
 'John was putting on airs.'
 c. dat Jan zich niet zo moet *aanstellen*
 'that John should not put on airs like that'
 d. *Maar *aan* heeft Jan zich niet *gesteld*.
 'But John did not put on airs.'
 e. *Zich/Jan is *aan*.
 'Himself/John is at (having airs).'

SCVs may thus be located at different positions in the lexicalisation cline, but all SCVs are located at the intermediate position in the grammaticalisation cline.¹ The

¹ Some SCVs (which are in the intermediate position in the grammaticalisation cline) can be said to be still in the first position in this cline, too (e.g. *afmaken* 'to finish', see 4.5 and 5.6). It

relationship between the different SCV types, XP-V combinations, and prefixed verbs is illustrated in (7), in which (a) gives the grammaticalisation cline (cf. (3)) and (b) gives the lexicalisation cline (cf. (2)).²

- (7) The relationship between the grammaticalisation of the pattern XP-V into prefix-V (a) and the lexicalisation of SCVs (b):



The result of the first step in the lexicalisation development is that SCV templates contain both a fixed slot (the particle slot) and an open slot (the verbal slot). Whereas the presence of the fixed slot accounts for the conventionalised (idiosyncratic) properties of SCVs, the presence of the open slot accounts for their productivity. We have seen that the vast majority of SCVs have these two characteristics (cf. 5.5). These SCVs, then, are in the intermediate position in both clines in (7), as is the case for *opzoeken* 'to look up'.

Besides accounting for their conventionalised properties, the analysis of SCVs represented in (7) accounts for other properties of SCVs that have previously been claimed to point to their word status (see 3.2), such as the fact that they may contain an adjectival or nominal base (see 8.2.3 below) and may serve as the input for derivational morphology. As for the latter property, it has been illustrated in section 3.2 that derivational affixes may attach to certain kinds of phrases. I thus claim that nouns and adjectives that are derived from SCVs have the structure in (8).

- | | |
|-----------------------------------|------------------------------------|
| (8) SCV | derivation |
| <i>op-roep-en</i> | $[\text{oproep-}]_{\text{baar}}$ |
| 'lit. up-call-INF, to call up' | 'lit. up-call-able, callable' |
| <i>in-schrijv-en</i> | $[\text{inschrijv-}]_{\text{ing}}$ |
| 'lit. in-write-INF, to subscribe' | 'lit. in-write-ing, subscription' |

was argued in chapter 7 that such combinations exhibit layering; the coexistence of old and new forms.

² It follows from section 4.4 that ICEs such as *pull strings* represent the third stage in the lexicalisation development, as do SCVs like *zich aanstellen* 'to put on airs' (cf. (2)). We have seen, however, that such ICEs are structurally different from the SCV *aanstellen* (and from SCVs in general) in that they represent V-XP combinations; they do not contain a non-projecting word. Like X-V combinations, then, XP-V/V-XP combinations may represent different degrees of lexicalisation.

Like ICEs, idiomatic phrases such as *kick the bucket* are completely lexicalised. The difference between these two types of idiom is that in ICEs, but not in idiomatic phrases, the meaning is distributed among the idiom's parts, which means that ICEs, as opposed to idiomatic phrases, are compositional (see also 4.4). For more on the relation between these two types of idiom and possible representational differences, see Nunberg, Sag, and Wasow (1994) and Jackendoff (1997a: 166-171).

Support for the structure in (8) is provided by the semantics: the (conventionalised) meanings of the SCVs are present in the derivations. The noun *inschrijving*, for instance, has the meaning that follows from combining the base *inschrijv-* 'subscribe' with *-ing* 'ing', and not the meaning that follows from combining *in* 'in' with *?schrijving* 'writing'. In other words, unlike structures such as [*in*]-[*schrijv-ing*], which are posited by Stiebels and Wunderlich (1994, see 3.3.1), the structures in (8) are semantically motivated (according to these structures, then, no bracketing paradox is involved in deriving adjectives and nouns from SCVs).³ The word-like behaviour of SCVs in the progressive *aan het*-construction and in verb clusters, in which the particle appears along with the verb in the position after *aan het* and in the verb cluster, is also accounted for by the SCV structure proposed here: XPs are excluded from this position, but particles, being non-projecting words, are not (cf. 4.3.5 and 4.5).

The phrasal property of SCVs being syntactically separable is accounted for in (7) by analysing SCVs as *phrasal* lexical units and not as morphological units (cf. 4.3.5). The answer, then, to the question whether SCVs are special words or special phrases (which is the central question in the SCV literature, see section 3.3), is that they are special phrases: SCVs are partly lexicalised phrases that consist of a non-projecting word and a verb.

It follows from the foregoing discussion that the majority of SCVs are *constructional idioms*: productive multi-word combinations that have specific idiosyncratic properties, to be represented as lexical templates with both fixed and variable positions. The fact that constructional idioms show various idiosyncrasies as well as productivity amounts to saying that they exhibit *restricted* or *partial productivity*. This property is generally attributed to word formation patterns (morphological patterns), which typically do not qualify as 100% working rules, but are subregular, showing idiosyncrasies of various kinds. With respect to the notion of productivity, then, constructional idiom formation (and more specifically, SCV formation) is similar to word formation (cf. Booij 2002b: 303, Jackendoff 1997a: 164-166, 174, Goldberg and Jackendoff 2004, section 8).

³ Inflected forms of SCVs, such as past participle and infinitival forms (e.g. *opgezocht* 'looked up', *op te zoeken* 'to look up'), do not exhibit a bracketing paradox either, at least not one that is exclusive to SCVs: tense and agreement affixes have, in general, larger scope than just the forms they attach to (e.g. the Dutch past tense morpheme *-de* attaches to the verb, but has scope over the entire clause). Müller (2002a, chapter 6, 2003) claims that a bracketing paradox is involved in German nominalisations with the derivational circumfix *Ge-e*, which attaches to atelic bases: *das Herumgerenne* 'the running around'. As is the case with its Dutch counterpart (the prefix *ge-*), however, the use of this affix appears to be extremely marked. This is illustrated in (i): both forms in which the affix follows the particle and forms in which it precedes the whole SCV are marked, infinitives being preferred instead.

(i) het ?rond-ge-ren /??ge-rond-ren /rond-rennen 'the running around'
 het ??door-ge-werk /??ge-door-werk /door-werken 'the working on'
 het ??na-ge-galm /??ge-na-galm /na-galmen 'the echoing'
 het ??toe-ge-spreek /??ge-toe-spreek /toe-spreken 'the talking to, the addressing'

The bracketing paradox that would result from the use of *Ge-e/ge-* with SCVs, then, seems to be avoided by using an alternative form.

Lexical properties such as restricted productivity, then, may be exhibited by words (morphological units) as well as by lexical phrases (non-morphological lexical units). The result of this is that lexical properties are sometimes mistaken for morphological properties, so that phrasal lexical units are mistaken for 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 for evidence for the word status of SCVs (on the basis of the assumption that syntactic constructions, as opposed to words, do not generally exhibit such idiosyncrasies, cf. 3.2). We have seen, however, that the property of showing such idiosyncrasies is not a morphological property, but a lexical property: it applies to lexical units, of which morphological units constitute a subtype (being lexical units with word status).

I have argued in this book that SCVs cannot be words because they are syntactically separable and words are not separable in general. The island behaviour of words in syntax is formulated in the Principle of Lexical Integrity, which says that syntactic rules cannot refer to parts of words. This definition illustrates that the principle would better be called the Principle of Word Integrity or the Principle of Morphological Integrity: 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 Webelhuth 1997, 1998: 18-19 and the papers by Ackerman and LeSourd and T. Mohanan in Alsina et al. 1997).

The upshot of the foregoing discussion is that I claim that the majority of SCVs are instantiations of phrasal lexical templates such as the one in (9) (cf. Booij 2002a: 213-216, b).

(9) $[op-V^0]_{VP}$

SCV templates such as (9) are associated with a unitary meaning, such as 'to cause to become accessible by V-ing', to which the meaning of the verb is added in a consistent way (cf. 4.4). These templates are derived from existing SCVs and are used to form new SCVs, such as *oppiepen* 'to beep up' (see also 8.2.2 and 8.2.3).

Phrasal lexical SCV templates have also been postulated by Jackendoff (2002a: 173). Jackendoff's SCV templates, however, do not contain an open particle slot and a fixed verbal slot (cf. (9)), but contain both a fixed particle slot and a fixed verbal slot. These templates furthermore contain an open NP slot, thus representing the whole VP. Examples of SCV templates postulated by Jackendoff are given in (10) (cf. 3.3.2).

(10) $[look\ NP\ up]_{VP}, [put\ NP\ off]_{VP}$

These templates suggest that the different SCVs with, for instance, the particle *op* 'accessible' are essentially unrelated and that the commonality in their meanings is merely accidental. In postulating such templates, then, Jackendoff disregards the existence of semantic classes of SCVs in which the same particle fulfils the same function. It is, furthermore, not clear how such templates could handle the productivity involved in SCV formation (the same holds for the analysis of Ackerman and Webelhuth 1998 for Hungarian SCVs, see 3.3.2). It therefore seems

better to postulate SCV templates such as the one in (9) above, which contain an open slot for the verb.

The postulation of SCV templates such as (9) accounts for the semantic and syntactic dependencies between the particle and the verb. These dependencies play a role in the failure of particles to be used in topicalisation and copula constructions (cf. 4.3.2 and 4.3.3): both of these constructions break up the SCV construction, thereby isolating the particle from the verb. We have seen that the use of these constructions is generally excluded for particles expressing meanings that are dependent on their occurrence in the SCV construction, as well as for particles not expressing such construction-specific meanings. This is why the failure of particles to participate in these constructions cannot be attributed to only the semantic dependencies between the particle and the verb; the syntactic dependencies (the fact that the particle is a non-projecting word that forms a phrase with the verb) also play a role.

According to the analysis proposed here, then, the lexicalisation properties of SCVs are independent of their syntactic structure: SCVs have different lexicalisation properties (SCV templates may or may not contain fixed slots, cf. (7)), but all SCVs consist of a non-projecting word and a verb. Thus, an SCV such as *opgooien* 'to throw up(wards)', which is based on a template without any lexically fixed slots, has the same syntactic structure as an SCV that is based on a template with fixed slots (e.g. *opzoeken* 'to look up' or *aanstellen* 'to put on airs', cf. (4)-(6)). This implies that the non-projecting status of an element (e.g. of *op* in *opgooien*) cannot be a *sufficient* condition for this element to become lexically fixed.⁴

By contrast, it could be the case that the non-projecting status of an element is a *necessary* condition for it to become lexically fixed. This would imply that all constructional idioms contain (a) non-projecting word(s). This implication is suggested in Booij (2002b: 326), where it is noticed that a recurrent property of constructional idioms is the non-projecting nature of the elements involved. There are, however, also constructional idioms in which the lexically fixed element is *not* non-projecting. An example is the *way*-construction, exemplified in (11), in which the lexically fixed element *one's way* contains a modifier, thus representing an NP and not a non-projecting N (cf. 3.2).

(11) He talked *his way* out of the assembly.

Constructional idioms like the *way*-construction illustrate that Booij's (2002b: 326) generalisation reflects at most a tendency: although many constructional idioms indeed contain (a) non-projecting word(s), this is not the case for all constructional idioms. The non-projecting status of an element is thus neither a sufficient, nor a necessary condition for this element to become lexically fixed. Instead, both phrases with projecting structures and phrases with non-projecting structures may lexicalise, and thereby develop into partly lexicalised phrases with, respectively, projecting structures and non-projecting structures (cf. note 2).

⁴ The fact that SCVs are semantic units, however, may facilitate the development of lexicalised meanings for their constituent parts, which may lead to these parts becoming lexically fixed.

The phenomenon of constructional idioms illustrates that both lexicalised phrases and morphological structures may express lexical information. This may lead to the blocking of one of the two means of expression (Ackerman and Webelhuth 1997, Booij 2002b).⁵ As for Dutch SCVs, Booij (2002b: 324) argues that the SCV system, which is very productive, seems to restrict the use of affixes to derive verbs, such as the use of the prefixes *be-* and *ver-*. The semantic similarity between particles and prefixes (both particles and the prefixes *be-* and *ver-* may express results, cf. 6.4.2), then, may be responsible for the fact that prefixed-verb formation is not very productive in Dutch: this morphological expression is blocked by the phrasal expression by SCVs.⁶ Since blocking is assumed to occur between forms that are stored in the lexicon, this observation supports an analysis according to which SCVs are lexical units (cf. Goldberg and Jackendoff 2004: 561).

8.2.2 SCV templates in a multiple-inheritance hierarchy

Some examples of SCV templates (all of which instantiate the most general SCV template $[X-V^0]_V$) are given in (12), provided with SCVs instantiating these templates. In these templates, *Y* stands for the referent of the direct object NP of the SCV construction.

- | | | | |
|------|----|--|--|
| (12) | a. | $[op-V^0]_V$
<i>de boeken opzoeken</i> | 'to cause Y to become accessible by V-ing'
'to cause the books to become accessible by searching, to look up the books' |
| | b. | $[op-V^0]_V$
<i>de boeken opbergen</i> | 'to cause Y to become together and away by V-ing'
'to cause the books to become together and away by stowing, to stow away the books' |
| | c. | $[voor-V^0]_V$
<i>de bal voorgeven</i> | 'to cause Y to become to the front by V-ing'
'to cause the ball to become to the front by passing, to pass the ball to the front' |
| | d. | $[voor-V^0]_V$
<i>de groenten voorkoken</i> | 'to V (Y) beforehand'
'to cook the vegetables beforehand' |
| | e. | $[na-V^0]_V$
<i>over de film napraten</i> | 'to V (Y) afterwards'
'to talk about the film afterwards' |
| | f. | $[door-V^0]_V$
<i>de taart doorsnijden</i> | 'to cause Y to become in two by V-ing'
'to cause the cake to become in two by cutting, to cut the cake in two' |
| | g. | $[door-V^0]_V$
<i>de sonate doorspelen</i> | 'to go through Y by V-ing'
'to go through the sonata by playing, to play through the sonata' |

⁵ Since the type of blocking discussed here is not between two morphological units, but between two lexical units (lexical units being either words or lexicalised phrases), this kind of blocking is called *lexical blocking* instead of *morphological blocking* (Ackerman and Webelhuth 1997).

⁶ Ackerman and Webelhuth (1997) claim that the morphological expression of lexical information is the unmarked case and therefore generally blocks the phrasal expression. This analysis would lead us to expect that the prefixed-verb system would block the SCV system, which is the reverse of what the Dutch data show.

- | | | |
|----|--|--|
| h. | [<i>door-V⁰</i>] _V
(<i>urenlang</i>) <i>doorlopen</i> | 'to continue V-ing'
'to continue walking (for hours)' |
| i. | [<i>aan-V⁰</i>] _V
<i>het touw aantrekken</i> | 'to cause Y to become tighter by V-ing'
'to cause the cord to become tighter by drawing,
to draw the cord tighter' |
| j. | [<i>aan-V⁰</i>] _V
<i>de jongen aankijken</i> | 'to V at Y'
'to look at the boy' |

The SCV templates in (12) are not unrelated, but can be grouped into categories, these templates being instantiations of more general templates and inheriting certain properties from the more general templates. There is, for instance, one general template for SCVs with resultative particles, which is based on the resultative LCS in (13)a (cf. 5.2) and is given in (13)b (in (13)b, X stands for the particle and PRT for its lexical-semantic content in the SCV construction).

(13) SCVs with resultative particles:

- | | | |
|----|----------------|--|
| a. | LCS (cf. 5.2): | [[CAUSE (x), BECOME [W (y)]], BY {V (x)}] |
| b. | template: | [X-V ⁰] _V 'to cause Y to become PRT by V-ing' |

The templates in (12)a-c, (12)f, and (12)i, containing the resultative particles *op* 'accessible', *op* 'together and away', *voor* 'to the front', *door* 'in two', and *aan* 'tighter', are instantiations of this template (cf. 5.5). This means that the templates in (12)a-c, (12)f, and (12)i inherit properties from the dominating template in (13)b, more specifically, they inherit all the properties that the two templates have in common (which are the predictable and thus redundant properties of the templates in (12)a-c, (12)f, and (12)i). The dominating template in (13)b is used to form SCVs such as *opgooien* 'to throw up(wards)', which has a resultative particle with a meaning that is not specific to the SCV construction (see 8.2.1). Like most SCVs, then, SCVs such as *opgooien* are formed on the basis of a template ((13)b, which is, in turn, linked to the resultative template in (15) below). Unlike most other SCV templates (such as that for *opzoeken* 'to look up', cf. (7) and (12)a), however, the template for SCVs such as *opgooien* does not contain any fixed slots (although language users may derive the template [*op-V⁰*]_V 'to cause Y to become up(wards) by V-ing' by generalising over SCVs with the resultative particle *op* 'up(wards)', see below).

Since resultative particles predicate of an affected Theme, SCV constructions with resultative particles are either unaccusative or transitive (cf. 5.2). Unaccusative SCV constructions, such as (14)a, lack a causer and a causative component; the meaning of such SCVs is not 'to cause Y to become PRT by V-ing', but 'Y to become PRT by V-ing', as indicated in (14)b (cf. (9) in 5.2 and the references given there).⁷

- | | |
|---------|---|
| (14) a. | dat het water <i>opborrelt</i>
'that the water bubbles up' |
| b. | 'Y to become PRT by V-ing' > 'the water becomes up by bubbling' |

⁷ The same holds for unaccusative constructions with a resultative phrase instead of a resultative particle, such as *dat de vaas in stukken viel* 'that the vase fell into pieces' > 'the vase becomes into pieces by falling' (see also 5.2).

The dominating template in (13)b is, in turn, linked to the resultative template in (15) (in which XP refers to a phrase that functions as a resultative predicate and XP refers to its lexical-semantic content, cf. Goldberg and Jackendoff 2004 and Jackendoff 2002a: 172-177).⁸

(15) [NP XP V]_{VP} 'to cause NP to become XP by V-ing'

In addition to a template for SCVs with resultative particles, there is a template for SCVs with modifying particles, given in (16)b, which is based on the semantic structure for such SCVs, given in section 5.3.2. The templates in (12)d and (12)e, containing modifying particles, are instantiations of this template and inherit certain properties from this template. The parentheses around *Y* indicate that both transitive SCVs ((12)d) and intransitive SCVs ((12)e) may be formed on the basis of this SCV template, depending on the transitivity properties of the base verb, which are inherited by the SCV.

(16) SCVs with modifying particles:

- a. LCS (cf. 5.3.2): [V (x), ((y)) {PRT}]
 b. template: [X-V⁰]_{V'} 'to V (Y) PRT_{Modifier}'

SCVs such as *opkijken* 'to look up(wards)', which has a modifying particle with a meaning that is not construction-specific, are formed on the basis of the template in (16)b, which does not contain any fixed slots. Although this template does not contain any fixed slots, I assume that it is stored, since its meaning, in particular the fact that the particle has a modifier function, does not follow straightforwardly from its form. Since, however, most of the properties of this template are predictable via the inheritance links it has with other templates, it does not contain much independent information.

Unlike the template for SCVs with resultative particles, the template for SCVs with modifying particles is not assumed to be linked to a template with a VP containing a semantically similar phrase (i.e. a modifier phrase, cf. (15) for VPs with a resultative phrase). This is because there do not appear to be any recurrent idiosyncrasies involved in the meaning of syntactic combinations of a verb and a modifier phrase (cf. 8.3.2).

In addition to a template for SCVs with resultative particles and a template for SCVs with modifying particles, there is a template for SCVs with path particles, given in (17)b below, which is instantiated in the templates in (17)c. These latter templates are, in turn, instantiated in the SCVs in (17)d (cf. (12)g). There is, furthermore, a template for SCVs with orienting particles, given in (18)b, which is instantiated in the two templates in (18)c. These two templates are, in turn, instantiated in the SCVs in (18)d (cf. (12)j). There is also a template for SCVs with the continuative particle *door*, given in (19)b. This template is instantiated in the

⁸ See the references given in the text for the motivation for positing a phrasal lexical template for the resultative construction. Although I posit a lexical template for this construction, I do not posit such templates for syntactic constructions in general; see the remarks in section 8.3.2 below.

SCVs in (19)c (cf. (12)h). (The templates in (17)b-c, (18)b-c, and (19)b are based on the semantic structures for SCVs with these different particles types, given in (17)a, (18)a, and (19)a (cf. 5.3). As in the templates above, *Y* stands for the referent of the direct object NP of the SCV construction.)

(17) SCVs with path particles:

- a. LCS (cf. 5.3.4):
[GO [(THROUGH/OVER (y)) (x)], BY {V (x)}]
- b. dominating template:
[X-V⁰]_{V'} 'to go [PRT Y]_{Path} by V-ing'
- c. lower templates:
[*door*-V⁰]_{V'} 'to go [through Y]_{Path} by V-ing'
[*over*-V⁰]_{V'} 'to go [over Y]_{Path} by V-ing'
- d. SCVs:
de sonate doorspelen 'to play through the sonata'
de brief overlezen 'to read over/through the letter'

(18) SCVs with orienting particles:

- a. LCS (cf. 5.3.3):
[V (x) {AT/TO (y)}]
- b. dominating template:
[X-V⁰]_{V'} 'to V [PRT Y]_{Orientation}'
- c. lower templates:
[*aan*-V⁰]_{V'} 'to V [at Y]_{Orientation}'
[*toe*-V⁰]_{V'} 'to V [to Y]_{Orientation}'
- d. SCVs:
de jongen aankijken 'to look at the boy'
het publiek toespreken 'to talk to the audience'

(19) SCVs with the continuative particle *door*:

- a. LCS (cf. 5.3.5):
[CONTINUE V_{ACTIVITY} WITHOUT INTENDED GOAL (x) ({for X time})]
- b. template:
[*door*-V⁰]_{V'} 'to continue V-ing'
- c. SCVs:
(urenlang) doorlopen 'to continue walking (for hours)'
(de hele nacht) doorlezen 'to continue reading (all night)'

The particles *door* 'through' and *over* 'over' are the only path particles in Dutch, and the particles *aan* 'at' and *toe* 'to' are the only orienting particles. The formation of SCVs with these particles, then, appears to be based on the templates in (17)c-(18)c. Since, however, these particles do not always have metaphorical meanings in SCVs, but may also express their basic, spatial meanings, SCVs with these particles may also be formed by directly inserting the particles into the dominating templates in (17)b-(18)b (cf. the remarks on the formation of SCVs like *opgooien* 'to throw up(wards)' and *opkijken* 'to look up(wards)' above). The instantiations in (17)c-(18)c, then, are assumed to be stored along with the templates in (17)b-(18)b that they are based on (see also below).

The templates in (17)-(19) are linked to various other lexical items, being part of a multiple-inheritance network. The template [*over*-V⁰]_{V'} in (17)c, for instance, is

linked to the lexical item *over* 'over', and the template $[toe-V^0]_V$ in (18)c is linked to the lexical item *toe* 'to(wards)'. Since these templates may inherit properties from other lexical items, not all of the information they convey has to be specified in the lexicon along with these templates. The only properties for which this is absolutely necessary are the properties that do not follow from the inheritance hierarchy or from the lexical sub-items of the template in question. These properties are the idiosyncratic properties of this template.

Inheritance relations such as the ones described above are not specific to SCV templates, but apply to lexical items in general. Subject nouns like *spreker* (*spreek-er*) 'speaker (speak-er)', for example, can be formed on the basis of a word formation template like $[V-er]_N$ 'one who V-s' (cf. 2.2.2). Such concrete instantiations of the template inherit properties from that template and from the dominating templates, such as $[V-affix]_N$ 'entity somehow related to V', on the basis of which different noun types can be derived from verbs. A subject noun such as *spreek-er* 'speak-er' also inherits properties from the lexical item *spreek* 'speak'. Since all of the inherited properties of a lexical item at a specific level of the inheritance tree (e.g. of the noun *spreek-er* 'speak-er') are predictable from the multiple-inheritance network, these properties do not have to be specified along with the lexical item in question. This is strictly speaking only necessary for the properties that are not predictable from the dominating templates (which are the idiosyncratic properties of the noun *spreker*). An example of an idiosyncratic property of the noun *spreker* 'speaker' is that its meaning is not just 'one who speaks', as would follow from the inheritance tree, but usually has to do with speaking to an audience, compare *hij is een goede spreker* 'he is a good platform speaker' (see 2.2.2).

In the case of a conventionalised deverbal noun like *spreker* 'speaker', then, the word formation template ($[V-er]_N$ 'one who V-s') is listed, as well as the concrete instantiation of this template (*spreker* 'speaker'). The assumption is that the same holds for the concrete instantiations of SCV templates: although an SCV like *opzoeken* 'to look up' is an instantiation of the lexical template $[op-V^0]_V$ 'to cause Y to become accessible by V-ing', from which it inherits most of its properties, the SCV *opzoeken* 'to look up' is also assumed to be listed individually. As argued above, this lexical item is linked to the SCV template in question as well as to the dominating templates and to the lexical subitems contained in it, from which we can predict many of its properties. The result of this is that the lexical entry for *opzoeken* does not contain much independent information: it is only the unpredictable properties of *opzoeken* that necessarily need to be specified in this entry (cf. Booij 2004, 2005b, Jackendoff 2002a: chapter 6, Riehemann 1998). So whereas the postulation of templates such as $[op-V^0]_V$ 'to cause Y to become accessible by V-ing', which formulate generalisations among SCVs, accounts for the compositionality of SCVs such as *opzoeken* 'to look up' and *oppiepen* 'to beep up', the assumption that such SCVs are listed individually accounts for their unpredictable properties.⁹

⁹ An interesting question is whether the dominance relations in the multiple-inheritance hierarchy are monotonous, that is, whether the lower nodes necessarily inherit all the properties that are present in the higher nodes. Monotonicity is posited by, for instance, Riehemann (1998), who works within the HPSG framework, which claims monotonicity. The

The individual listing of SCVs like *opzoeken* 'to look up' and *oppiepen* 'to beep up' also accounts for their actual existence. That is, although these SCVs are compositional (both parts contributing their meaning to the SCV meaning), the fact that these items are used to express the meanings they express is a conventionalised property. To see this, compare the Dutch SCV *opzoeken* 'lit. up-search, to look up' in (20) with the German SCV *aufsuchen* 'lit. up-search, to look up' in (21).¹⁰

- (20) a. vrienden *opzoeken*
'to look up friends, to visit friends'
b. de schaduw *opzoeken*
'to seek the shade'
c. het woord *opzoeken*
'to look up the word'
d. *de oogarts *opzoeken/naar de oogarts gaan*
'to visit the ophthalmologist, to go to the ophthalmologist'
- (21) a. Freunde *aufsuchen*
'to look up friends, to visit friends'
b. den Schatten *aufsuchen*
'to seek the shade'
c. *das Wort *aufsuchen/das Wort nachschlagen*
'to look up the word'
d. den Augenarzt *aufsuchen*
'to visit the ophthalmologist, to go to the ophthalmologist'

The examples in (20)-(21) illustrate that although *opzoeken* and *aufsuchen* are semantically and formally related to one another and both of these SCVs are compositional, not all contexts that are available to *opzoeken* in Dutch are also available to *aufsuchen* in German. These SCVs, then, are subject to language-specific conventions, which need to be stored in the lexicon along with the SCV in question.

The element *Y* in the SCV templates corresponds to the direct object NP of the SCV construction (or to the subject NP in the case of unaccusative SCV constructions, cf. (14)). The referent of *Y* performs different semantic roles in the different types of SCV template. It is, for instance, the entity undergoing the change

assumption of monotonicity, however, does not seem to do justice to the data. That is, although the meaning of, for example, *op* 'accessible' in SCVs can be seen as metaphorically related to the general meaning of *op* 'up(wards)' (cf. 3.2), the general meaning does not seem to be present in SCVs like *opzoeken* 'to look up' (cf. Booij 2005b). Goldberg and Jackendoff (2004: 542) and Jackendoff (2002a: 185, 352) claim that the lexical items in multiple-inheritance hierarchies form a family and share family resemblances in the sense of Wittgenstein (1955), which implies that there is not a single set of features that is shared by all members of the family. This point of view, then, implies the absence of monotonicity. See also the summary of Verspoor (1997), who posits multiple-inheritance hierarchies for the resultative construction that "[make] use of monotonicity to a limited degree to allow for generalisations to be stated despite the existence of exceptions".

¹⁰ The asterisks in these examples indicate that the SCV in question cannot be used to express the intended meaning. I am grateful to Jenny Audring for helping me with the German data.

of state indicated by the particle in the template for SCVs with resultative particles like *op* 'accessible' in (22) (cf. (13)b), but it is the Ground of the particle in the template for SCVs with the orienting particle *aan* 'at' in (23) (cf. (18)b-c).

- (22) a. $[op-V^0]_{V^r}$ 'to cause **Y** to become accessible by V-ing'
 b. *de boeken opzoeken* 'to cause **the books** to become accessible by searching, to look up the books'
- (23) a. $[aan-V^0]_{V^r}$ 'to V [at **Y**]_{Orientation}'
 b. *de jongen aankijken* 'to look at **the boy**'

The direct object NPs in SCV constructions are thus linked to different semantic roles in constructions with different types of SCV, and the linking in constructions with a specific type of SCV is indicated by the position of *Y* in (the semantic part of) the SCV template in question.

The foregoing discussion illustrates that the semantic parts of the templates for SCVs with different types of particle are different, but their formal parts are similar. Compare, for example, the template for SCVs with the resultative particle *op* 'up(wards)' in (24)a with that for SCVs with the modifying particle *op* 'up(wards)' in (24)b (which are instantiations of the templates in (13)b and (16)b above).

- (24) a. $[op-V^0]_{V^r}$ 'to cause Y to become up(wards) by V-ing'
de bal opgooien 'to cause the ball to go up(wards) by throwing, to throw up the ball'
- b. $[op-V^0]_{V^r}$ 'to V up(wards)'
opkijken 'to look up(wards)'

Both SCV templates in (24) have the form $[op-V^0]_{V^r}$, but these forms are associated with different meanings. These different meanings indicate different functions for the particles in these SCV templates, and these different functions are linked to different participant-licensing properties.^{11, 12}

¹¹ The transitivity difference between, for instance, the SCV templates in (24)a-b, which appears from the presence/absence of *Y* in the semantic parts of these templates, may also be lexically specified in the formal parts of these templates. This could, for example, be done as in (i).

- (i) a. $[op-V^0]_{V^r}$, [+transitive] 'to cause Y to become up(wards) by V-ing'
 b. $[op-V^0]_{V^r}$, [-transitive] 'to V up(wards)'

Alternatively, the relevant thematic roles could be assumed to be specified in these templates: [Agent, Theme_v] in (i)a and [Agent] in (i)b.

¹² These two templates appear to instantiate homonymy, the resultative template with the particle *op* 'upwards' not being related to the modifying template with this particle by means of semantic extension (despite the fact that the particles of these two templates express the same senses; these particles are synonymous). SCV templates may also instantiate polysemy, which appears to be the case for those in (i).

- (i) a. $[op-V^0]_{V^r}$ 'to cause Y to become upwards by V-ing'
 b. $[op-V^0]_{V^r}$ 'to cause Y to become accessible by V-ing'

SCVs instantiating the templates in (i)a-b are, respectively, *de bal opgooien* 'to throw up the ball' and *de boeken opzoeken* 'to look up the books'. The template in (i)b can be seen as a

In sum, SCV templates are phrasal lexical items of the form $[X-V^0]_V$, that are linked to a specific meaning. The different SCV templates are interrelated as well as related to other lexical items in a multiple-inheritance hierarchy. Generalisations 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.

8.2.3 Synchronic SCV formation

SCV templates express generalisations about existing SCVs, but also specify how we can form new SCVs. The SCV *oppiepen* 'to beep up', for instance, seems to have been formed on the basis of the template $[op-V^0]_V$ 'to cause Y to become accessible by V-ing' (cf. (47)-(49) in 4.4). Similarly, the SCV *nachecken* 'to check (off)' seems to have been formed on the basis of the template $[na-V^0]_V$ 'to cause Y to become checked (afterwards) by V-ing' (cf. 5.5.7 and 5.5.15.2). The formation of new SCVs such as *oppiepen* supports the claim that language users analyse *op* in SCVs such as *opzoeken* 'to look up' and *opvragen* 'to ask for' as contributing the meaning 'accessible' to the meaning of the SCV. In other words, they analyse these SCVs as consisting of two parts that both contribute their meaning to the SCV meaning. It thus appears that a comparison of the formal and semantic properties of existing SCVs with a specific particle ((25)a and (26)a) leads to the derivation of an SCV template with a fixed particle slot ((25)b and (26)b, paradigmatic analysis) that is used to form new SCVs with the particle in question ((25)c and (26)c, syntagmatic analysis). What we see, then, in synchronic SCV formation, is an interplay of paradigmatic and syntagmatic analyses.¹³

- (25) a. 1. *de boeken opzoeken* (up-search)
'to look up the books, to cause the books to become accessible
(available) by searching'
2. *de informatie opvragen* (up-ask)
'to ask for the information, to cause the information to become accessible
(available) by asking'
3. *de kinderen opbellen* (up-call)
'to call up the children, to cause the children to become accessible
(contacted) by calling'
- b. $[op-V^0]_V$
'to cause Y to become accessible by V-ing'
- c. *de chirurg oppiepen* (up-beep)
'to beep up the surgeon, to cause the surgeon to become accessible (contacted)
by beeping'

semantic extension of the template in (i)a (cf. (8) in 3.2). I have to leave further aspects of homonymy and polysemy among SCV templates (and among particles, see note 50 in 5.5.16) as a topic for further research.

¹³ 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.

- (26) a. 1. *de regels nalezen* (after-read)
'to check the rules, to cause the rules to become checked by reading'
2. *de verzekeringspolis nakijken* (after-look)
'to check the insurance policy, to cause the insurance policy to become checked by looking'
3. *de informatie nazoeken* (after-search)
'to check the information, to cause the information to become checked by searching'
- b. $[na-V^0]_V$
'to cause Y to become checked by V-ing'
- c. *de gegevens nachecken* (after-check)
'to check (off) the data, to cause the data to become checked by checking'

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 (25) may, for instance, be interpreted as 'available' in constructions with inanimate direct object referents (e.g. *de boeken opzoeken* 'to look up the books'), whereas it may be interpreted as 'contacted' in constructions with animate direct object referents (e.g. *de kinderen opbellen* 'the call up the children').

The examples in (25)-(26) furthermore illustrate that we can distinguish two types of synchronic SCV formation.

The first type is exemplified by SCVs such as *oppiepen* 'to beep up', in which the particle expresses a meaning that is not yet present in the meaning of the verb with which it combines. The motivation for this type of SCV formation appears to be the expression of an (in some sense) new concept. Other examples are, with the relevant existing SCVs and the template that they instantiate, given in (27).

- (27) a. existing SCVs: *opsluiten* 'to lock up', *opbergen* 'to put away'
template: $[op-V^0]_V$ 'to cause Y to become put together and away by V-ing'
new SCVs: *de kippen ophokken* 'to put the chickens together in a hen-house', *de gevangenen opkooien* 'to put the prisoners together into one cell' (for more on SCVs with a nominal base, see below)
- b. existing SCVs: *de schoenen inlopen* 'to wear in the shoes'
de auto inrijden 'to run in the car'
template: $[in-V^0]_V$ 'to cause Y to become in the desired shape/state by V-ing'
new SCV: *de rolschaatsen inskaten* 'to wear in the rollerblades'

The second type of synchronic SCV formation is exemplified by SCVs such as *nachecken* 'to check off'. Here, the particle can be characterised as pleonastic: it expresses a meaning that already seems to be present in the meaning of the base verb (cf. 5.5.15.2). This type of SCV formation appears to be driven by pragmatic factors such as expressiveness. Some other examples of 'new' SCVs with pleonastic particles are, with the relevant existing SCVs that instantiate the template that these new SCVs are based on, given in (28).

- (28) a. existing SCVs: *afstrepen* 'to cross/strike off', *afvinken* 'to check/tick off'
 (for more on SCVs with a nominal base, see below)
 template: $[af-V^0]_V$ 'to cause Y to become checked by V-ing'
 new SCV: *afchecken* 'to check off'
- b. existing SCVs: *uitzoeken* 'to sort/figure out', *uitpluizen* 'to comb out'
 template: $[uit-V^0]_V$ 'to cause Y to become sorted out by V-ing'
 new SCV: *uitsorteren* 'to sort out'

Although prescriptive grammarians warn against the use of SCVs with pleonastic particles, this type of SCV formation is very productive, and the same phenomenon has been reported for other languages with an SCV system. Some SCVs with pleonastic particles can be characterised as contaminations. The SCV *inkorten* 'to cut down' in (29), for instance, seems to be a contamination of *inhouden* 'to deduct/dock' and *korten* 'to cut/dock'.

- (29) existing SCV/V: *inhouden* 'to deduct, dock', *korten* 'to cut/dock'
 new SCV: *inkorten* (*op de uitkering*) 'to cut down (on social security)'
 (newspaper NRC, 28 September 2003)

Other well-known Dutch examples, against the use of which people argue forcefully, are *optelefoneren* 'to phone up' (cf. *opbellen* 'to call up' and *telefoneren* 'to (tele)phone'; note that the English counterpart of the Dutch SCV *optelefoneren*, *to phone up*, is completely acceptable) and *uitprinten* 'to print out' (cf. *uitdraaien* 'to print (out)' and *printen* 'to print'). In such formations, too, the paradigmatic dimension of SCV formation is apparent.

The examples in (27) and (28) illustrate that both types of SCV formation are 'particle-driven': templates such as *op-V* 'to cause Y to become accessible by V-ing' and *na-V* 'to cause Y to become checked by V-ing' 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. In both types of SCV formation, a converted adjective or noun may be inserted into the verbal slot in the SCV template, resulting in the formation of SCVs with a nominal or adjectival base. Some examples of such SCVs are given in (30).

- | | | | |
|---------|--------------------|-----------|-------------------------|
| (30) a. | SCVs with A-base | gloss | meaning |
| | <i>op-frissen</i> | up-fresh | 'to freshen up' |
| | <i>in-dikken</i> | in-thick | 'to thicken' |
| | <i>uit-diepen</i> | out-deep | 'to deepen' |
| b. | SCVs with N-base | gloss | meaning |
| | <i>op-hopen</i> | up-pile | 'to pile up' |
| | <i>af-beelden</i> | off-image | 'to represent' |
| | <i>in-polderen</i> | in-polder | 'to drain, to impolder' |

Booij (2002a: 215-216) points out that SCVs with adjectival and nominal bases have the structure in (31)a. This structure is different from that of deadjectival and denominal prefixed verbs, like *vergroten* 'lit. ver-big, to enlarge, to increase' and *bedijken* 'lit. be-dike, to dike', given in (31)b (cf. 3.2).

- (31) a. $[op[[fris]_A]_V^0]_V$, $[op[[hoop]_N]_V^0]_V$
 b. $[ver[groot]_A]_V^0$, $[be[dijk]_A]_V^0$

The structure in (31)a indicates that in deadjectival and denominal SCVs the adjective/noun itself is turned into a verb. In deadjectival and denominal prefixed verbs, on the other hand, there is only a verbal node on top of the prefix and the adjective or noun. Evidence for the SCV structure in (31)a is provided by the fact that the adjective/noun of a deadjectival/denominal SCV occurs in V2 position when the SCV is used finitely in main clauses, the particle being in sentence-final position in such clauses (see (3) in 3.2).

The templates in (32) can be posited for the formation of the deadjectival SCVs in (30)a (cf. Booij 2002a: 215).

- (32) a. $[op-[A]_V^0]_V$
 b. $[in-[A]_V^0]_V$
 c. $[uit-[A]_V^0]_V$

These structures indicate that adjectives can be converted into verbs by inserting them into the right slot in the SCV templates in (32). This implies that the conversion of adjectives into verbs is dependent on their occurrence in SCVs, which is indeed the case: outside the SCV construction, A to V conversion is not productive. Since only a few particles can be used to form SCVs with adjectival bases, I do not posit a more general template ($[X-[A]_V^0]_V$) that dominates the templates in (32).

Unlike conversion of adjectives into verbs, conversion of nouns into verbs is productive in Dutch. This means that we can postulate the conflation (or unification) of two templates for the formation of SCVs with nominal bases; a word formation template, on the basis of which nouns are converted into verbs ((33)a), and an SCV template, on the basis of which SCVs are formed by inserting a verb into the verbal slot ((33)b) (Booij 2005b).¹⁴

¹⁴ This kind of conflation of lexical patterns is not unique to SCVs. See Booij (2005b) for an example of conflation of two morphological templates (instead of a morphological and a phrasal lexical template, as in (33)).

- (33) a. template 1 (N-V conversion):
 $[[X]_N]_V^0$ 'to V somehow related to N'
 examples:
computeren 'lit. computer-INF, to work at/use the computer'
voetballen 'lit. football-INF, to play soccer'
- b. template 2 (SCV template with the particle *op*):
 $[op-[X]_V^0]_V$ 'to cause Y to become on a pile by V-ing'
 examples:
opbinden 'to tie up'
opladen 'to pile/heap up'
- c. conflation template
 (SCV template with the particle *op* where V is a converted N):
 $[op-[[X]_N]_V^0]_V$ 'to cause Y to become on a pile (by pile-ing)'
 example:
ophopen 'lit. up-pile, to pile up'

The template in (33)c may, somewhat simplified, be represented as $[op-[N]_V^0]_V$.

As is the case for SCVs with deadjectival verbs, only a few particles can be used to form SCVs with nominal bases. This is why I posit the conflated templates in (34), but not a dominating template such as $[X-[N]_V^0]_V$ (cf. Booij 2002a: 215).¹⁵

- (34) a. $[op-[N]_V^0]_V$
 b. $[af-[N]_V^0]_V$
 c. $[in-[N]_V^0]_V$

The functions that particles perform in SCVs with deadjectival and denominal bases are similar to the functions they perform in SCVs with verbal bases. This is illustrated in (35)-(36) (cf. 5.5.15.1).

- (35) a. V-base
 $[op-V^0]_V$ 'to cause Y to become in a better state by V-ing'
oppoetsen 'to polish up, to brush up'
opleven 'to revive, to smarten up'
- b. A-base
 $[op-[A]_V^0]_V$ 'to cause Y to become in a better state by V-ing'
 > 'to cause Y to become (more) A by V-ing'
opfrissen 'lit. up-fresh, to freshen up':
 'to cause Y to become in a better state by fresh-ing'
 > 'to cause Y to become fresh(er) (by fresh-ing)'
opleuken 'lit. up-nice, to liven/brighten up':
 'to cause Y to become in a better state by nice-ing'
 > 'to cause Y to become nice(r) (by nice-ing)'

¹⁵ A comparison of (32) and (34) illustrates that the resulting templates for processes with (34) and without (32) conflation are the same. However, these two types of template differ from one another in terms of the inheritance links they have with other templates, templates resulting from conflation being linked with the templates of the processes feeding the conflation.

- (36) a. V-base
 [*op*-V⁰]_V 'to cause Y to become together/on a pile by V-ing'
opbinden 'to tie up'
opladen 'to stack/pile up'
- b. N-base
 [*op*-[N]_V⁰]_V 'to cause Y to become together/on a pile by V-ing'
ophopen 'lit. up-pile, to pile up':
 'to cause Y to become together/on a pile (by pile-ing)'

A comparison of other denominal SCVs with the particle *op* ((37)a) reveals that a more general template than the one in (36)b could be derived for such SCVs. This template is given in (37)b.

- (37) a. *ophopen* 'lit. up-pile, to cause Y to become together/on a pile', i.e.
 'to pile up'
ophokken 'lit. up-cage, to cause Y to become in a cage', i.e.
 'to put in a cage'
opluisteren 'lit. up-lustre, to cause Y to become with lustre', i.e.
 'to add lustre to'
- b. [*op*-[N]_V⁰]_V 'to cause Y to become N/somehow related to N by V-ing'

The foregoing discussion illustrates that an analysis of SCVs as instantiations of phrasal lexical templates provides an account of the formation of SCVs with adjectival and nominal bases.

In conclusion, the various types of productive, synchronic SCV formation discussed in this subsection illustrate that SCV formation is generally based on phrasal lexical templates with a fixed particle slot, an open slot for the verb, and a specific meaning (e.g. [*op*-V⁰]_V 'to cause Y to become accessible by V-ing'). These templates generalise over classes of existing SCVs in which the particle in question (e.g. *op*) expresses the relevant meaning (e.g. 'accessible').

8.2.4 Summary

An analysis of SCVs as instantiations of phrasal lexical templates with one or more open slots provides a straightforward account of the fact that SCVs may be formed productively but at the same time have conventionalised properties, such as the property that their particles function as, for instance, resultative predicates or as modifiers. In the vast majority of SCVs, the particle expresses a meaning that is dependent on its occurrence in the SCV construction, but such SCVs can nevertheless be formed productively. This can be accounted for by analysing such SCVs as instantiations of phrasal lexical templates that contain a fixed particle slot and an open verbal slot, thus representing an intermediate position in a lexicalisation cline. There are also SCVs that appear to be completely lexicalised; these SCVs do not show any compositionality, nor can they be formed productively. The templates of such SCVs are assumed to contain both a fixed particle slot and a fixed verbal slot.

SCV templates are interrelated as well as related to other templates, being part of multiple-inheritance hierarchies in which generalisations are stated at different

levels. The lower templates in such hierarchies (and the concrete instantiations of these templates) inherit properties from the dominating templates.

Whereas SCVs represent different positions in a lexicalisation cline, all SCVs are in the intermediate position in a grammaticalisation cline. That is, SCVs have a structure that can be situated in between that of syntactic constructions and that of morphologically complex words, SCVs being phrases that consist of a non-projecting word and a verb.

8.3 SCVs and the architecture of the grammar

8.3.1 *SCVs in a parallel architecture*

I have illustrated in the chapters 4 and 5 that all SCVs have the same phrase structure, but that SCVs may have different semantic structures (and different argument structures) as a consequence of the fact that particles may perform various functions in the LCS of the SCV construction. The SCV data thus argue for a separation of the semantic structure of SCVs from their syntactic structure. It was noticed in section 2.2.1 that such a separation is posited in models of the language faculty with parallel representational levels that are linked through principles of correspondence, due to which these models allow for non-isomorphism between these levels. Examples of such models are the tripartite parallel architecture of Jackendoff (2002a) and the model of Lexical-Functional Grammar (LFG) (cf. Bresnan 2001, Toivonen 2003, see also the papers by Alsina, Butt, and T. Mohanan in Alsina et al. 1997).

I have also illustrated that SCVs may have more or less predictable meanings, which can be accounted for by positing different lexicalisation properties for different SCVs. The majority of SCVs have particles with conventionalised meanings, but are nevertheless instantiations of productive patterns. These properties can be accounted for by assuming that these SCVs represent partly lexicalised phrasal templates that contain a fixed particle slot and an open verbal slot. There also appear to be SCVs that represent lexical templates without any fixed slots and SCVs that represent lexical templates with two fixed slots (cf. 8.2). The various synchronic properties of SCVs, then, are accounted for in parallel architectures like that of Jackendoff (2002a) and LFG in combination with the notion of lexicalisation.

It was noticed in section 2.2.1 that LFG posits two separate levels of syntactic structure: the level of c(onstituent)-structure (phrase structure), which represents the X-bar-structural relations, and the level of f(unctional)-structure, which represents grammatical functions such as subject, object, and predicate. We have seen that all SCVs have the same c-structure, consisting of a non-projecting word and a verbal head. Since all SCVs, regardless of their semantic and lexicalisation properties, form the verbal predicate of a clause, taking a single subject (and possibly a single direct object and/or a single indirect object), all SCVs also have the same f-structure. According to this f-structure, the direct object NP in any SCV construction is the direct object of the SCV (V') (and not that of the verb alone, cf. 5.4). To illustrate this, the f-structures and c-structures of the SCVs in (38)a, which contain a

resultative, a modifying, and an orienting particle, are given in (38)c-d. (38)b illustrates that these SCV constructions have different LCSs, their particles performing different functions and having different participant-licensing properties.

- (38) a. examples
 resultative particle: *de schoenen inlopen* 'to wear in the shoes'
 modifying particle: *de groenten voorkoken* 'to cook the vegetables beforehand'
 orienting particle: *het publiek toespreken* 'to talk to the audience'
- b. LCSs (cf. Table 5.2 in appendix 1)
 resultative particle: [[CAUSE (x), BECOME [*in* (*de schoenen*)]], BY {*lopen* (x)}]
 modifying particle: [*koken* (x), (*de groenten*) {BEFORE;}]
 orienting particle: [*spreken* (x) {TO (*het publiek*)}]
- c. f-structures: (partially): [PRED <(SUBJ) (OBJ)>]
 resultative particle: [*inlopen* <(x) (*de schoenen*)>]
 modifying particle: [*voorkoken* <(x) (*de groenten*)>]
 orienting particle: [*toespreken* <(x) (*het publiek*)>]
- d. c-structures: [NP-[X-V⁰]_V]_{VP}
 resultative particle: [(*de schoenen*)_{NP} (*in-lopen*)_V]_{VP}
 modifying particle: [(*de groenten*)_{NP} (*voor-koken*)_V]_{VP}
 orienting particle: [(*het publiek*)_{NP} (*toe-spreken*)_V]_{VP}

All SCVs having both the same f-structure and the same c-structure, one could ask whether it is useful to distinguish between these two syntactic structures in analysing SCVs (cf. 2.2.1, referring to the discussion of f-structure in Jackendoff 2002a: 149-151). This indeed seems to be the case, since the postulation of a level of f-structure clarifies the differences and similarities between SCV constructions and related constructions, which instantiate different mappings between f-structure and the other levels of representation.

To begin with, it is in the mapping between f-structure and c-structure that SCVs differ from XP-V combinations and prefixed verbs. Resultative phrases, particles, and the prefixes *be-*, *ver-*, and *ont-* may all express results (cf. 6.4.2), so that constructions with resultative phrases, SCVs, and prefixed verbs (cf. (39)a) may have the same semantic structure (the resultative LCS, cf. 5.2), as illustrated in (39)b. (39)c illustrates that these three construction types also have the same f-structure: all three of these constructions form simple clauses at f-structure, containing a single subject and a single direct object. The three constructions differ, however, at c-structure. This is illustrated in (39)d.

- (39) a. examples
 resultative phrase: *de fiets oranje verven* 'to paint the bike orange'
 resultative particle: *de schoenen inlopen* 'to wear in the shoes'
 resultative prefix: *het bewijs verbranden* 'to burn down/up the evidence'

- b. LCSs: [[CAUSE (x), BECOME [W (y)], BY {V (x)}]¹⁶
 resultative phrase: [[CAUSE (x), BECOME [*oranje (de fiets)*]], BY {*verven (x)*}]
 resultative particle: [[CAUSE (x), BECOME [*in (de schoenen)*]], BY {*lopen (x)*}]
 resultative prefix: [[CAUSE (x), BECOME [*ver (het bewijs)*]], BY {*branden (x)*}]
- c. f-structures: (partially): [PRED <(SUBJ) (OBJ)>]
 resultative phrase: [*oranje verven* <(x) (*de fiets*)>]
 resultative particle: [*inlopen* <(x) (*de schoenen*)>]
 resultative prefix: [*verbranden* <(x) (*het bewijs*)>]
- d. c-structures
 resultative phrase: [NP-XP-V⁰]_{VP} => [(*de fiets*)_{NP} (*oranje*)_{AP} *verven*]_{VP}
 resultative particle: [NP-[X-V⁰]_V]_{VP} => [(*de schoenen*)_{NP} (*in-lopen*)_V]_{VP}
 resultative prefix: [NP-[prefix-V⁰]_V]_{VP} => [(*het bewijs*)_{NP} (*ver-branden*)_V]_{VP}

Without positing a separate level of f-structure, the difference between the three types of construction would emerge as a difference in the mapping between semantics and syntax: all three constructions have the resultative LCS, but their phrase structures are different. Positing a level of f-structure, then, allows us to locate more precisely the non-isomorphism involved in these constructions.

A second type of non-isomorphism is exhibited by SCVs with particles that perform different functions. This concerns non-isomorphism between f-structure and the semantic structure (as well as the argument structure).¹⁷ We have seen that all SCV constructions have the same f-structure, the direct object NP being the direct object of the SCV, but that the referent of this NP may have different semantic roles. This referent may be licensed by the particle, being the particle's Figure in the case of resultative particles (cf. 5.2), but the particle's Ground in the case of orienting particles and path particles (cf. 5.3.3 and 5.3.4). Alternatively, it may be licensed by the verb, which is the case for SCV constructions with modifying particles (cf. 5.3.2).

A similar kind of non-isomorphism appears, more generally, from a comparison of constructions with complex semantic structures, containing two predicative elements, and constructions with simplex semantic structures, containing only one predicative element. Although these two types of construction differ in terms of (the complexity of) their semantic structures, they may have the same f-structure, representing a clause with a single subject.¹⁸

In short, there is evidence for non-isomorphism between f-structure and the other levels of representation, so that a comparison of f-structure with these other levels clarifies the differences among SCV constructions and the differences between SCV constructions and other constructions. This means that a parallel

¹⁶ The result expressed by the prefix *ver-* is, generally, the partial or complete destruction, damaging, or wasting of the affected participant (*het bewijs* in (39)) (cf. 6.4.2).

¹⁷ I assume that the argument structure is the level that represents the thematic roles. This level is located at the semantics-syntax interface and is comparable to Jackendoff's semantic argument structure and to a (rgument)-structure in LFG (cf. 2.2.1).

¹⁸ Examples of constructions with a simplex semantic structure are sentences with morphologically simplex verbs without a secondary predicate. Other examples are SCV constructions with modifying particles and continuative particles (see 1.1 and 10.1).

architecture positing these (or functionally similar, see 2.2.1) representational levels accounts for the synchronic properties of SCVs in an insightful way.

Chapter 7, which discussed the diachrony of SCVs and ICVs, showed that different phrases that may be adjacent to the verb may, together with this verb, grammaticalise into different SCV types. Within the LFG-framework, we can locate the changes involved in this development at the distinct representational levels in the following way (see Vincent 2001 for the merits of LFG in modelling grammaticalisation and morphosyntactic change in general).

The semantic structure of the source construction is assumed to remain the same during the grammaticalisation development. Other semantic changes, however, do occur. It appears that the change starts at the interpretational level, where variation may arise through the fact that language users may make various associations and connections between the concepts they communicate about. They may, for instance, interpret the referent of a preverbal element and that of a verb as a semantic unit. These interpretational changes may then be projected to the corresponding linguistic string, so that the preverbal element and the verb are also interpreted as a syntactic unit (rebracketing). This change occurs at f-structure and may, in turn, lead to changes at c-structure: the preverbal element, which is reanalysed with the verb as a syntactic unit, can no longer project a phrase and becomes a non-projecting word. The parts of the newly formed syntactic unit may, furthermore, develop extended meanings, which may, through lexicalisation, become conventionalised. The data discussed in section 7.3.2 (see especially 7.3.2.3) illustrate that these semantic changes may, in turn, lead to changes in the argument structure (which represents the thematic roles and is part of the semantics-syntax interface).

It thus appears that the diachronic changes occur primarily at the interpretational level and at f-structure, and that these changes then affect c-structure and the semantics-syntax interface. The result of these developments is that the lexicon contains phrasal templates that contain a fixed slot for a non-projecting word and an open slot for a verb and are linked to a specific meaning.

The grammaticalisation of SCVs into ICVs also starts at the interpretational level (cf. 7.4). This change, however, does not involve any changes at f-structure, but involves changes at c-structure: the syntactic unit is reanalysed as a morphological unit and the non-projecting word is reanalysed as a prefix.

Summing up, the synchronic and diachronic properties of SCVs are accounted for in parallel correspondence models that separate syntax from semantics. Such models provide an insightful account of the fact that SCVs have a uniform syntactic structure, but differ in terms of their semantic structure (cf. (38)). A distinction between two levels of syntactic structure (grammatical-function structure and constituent/phrase structure) provides insight into the differences between SCV constructions and semantically similar and diachronically related constructions, such as particular XP-V constructions and prefixed-verb constructions. This is because these differences affect c-structure, and c-structure only (cf. (39)). Parallel correspondence models seem to be compatible with the assumption of partly lexicalised phrases; an analysis of SCVs as partly lexicalised phrases accounts for their productivity as well as for their conventionalised properties.

8.3.2 *Constructional idioms and Construction Grammar*

The discussion in the foregoing section illustrates that an analysis according to which certain constructions are characterised as constructional idioms does not imply the adoption of the framework of Construction Grammar (CG) (cf. the remarks on this issue in Jackendoff 2002a: 179-180, 194-195 and in Goldberg and Jackendoff 2004). The basic idea of CG, developed by Adele Goldberg (1995, etc.) and others, is the following: the grammar does not consist of separate components, such as a syntactic component (containing rules to build phrases) and a semantic component (containing semantic representations to which pieces of a given syntactic structure are linked). Instead, the grammar consists of form-meaning pairings: syntactic patterns are assumed to be linked as a whole to a specific piece of meaning, which includes both semantic and pragmatic information. These form-meaning pairings or "constructions" are instantiations of more general form-meaning pairings, but may have acquired a life of their own, exhibiting their idiosyncratic semantic, syntactic, and pragmatic properties. Nevertheless, these pairings may still inherit properties from the more general form-meaning pairings, so that not all properties have to be specified for all constructions. Examples of constructions that have been posited in CG are the resultative construction (*Pat sliced the box open*), the caused-motion construction (*Pat sliced the carrots into the salad*), and the ditransitive construction (*Pat sliced Chris a piece of pie*, all three of these examples are from Goldberg 2003a: 221).

The examples in the previous paragraph illustrate that a particular verb may appear in various constructions. Instead of accounting for this by means of lexical rules, which operate on the LCSs of the verb in question (cf., for instance, Rappoport Hovav and Levin 1998, 2003), the account in CG is that there are various constructions in which verbs with certain properties may appear. Whereas in lexical rule approaches certain aspects of meaning are attributed to interpretational factors, all of these aspects are claimed to be part of the construction in CG (see also the discussion of the two approaches in Jackendoff 1997b: 555-558).

A central issue in the literature comparing CG with other frameworks (e.g. Goldberg and Jackendoff 2004, Jackendoff 1996a, 2002a: 180) is the delimitation of constructions: in which cases can we posit a construction and in which cases is it better not to do so? The general condition on positing a construction is the presence of idiosyncrasies in a certain syntactic pattern; formal or semantic properties that do not straightforwardly follow from general mechanisms applying to the syntax or the semantics of the pattern in question (and that cause it to be a subregular pattern). The question that needs to be answered, however, is whether these idiosyncrasies indeed need to be stated as properties of a construction, or whether they can be derived from general factors guiding interpretation (such as inference). In the latter case, a lexical rule approach might capture the generalisations involved in that pattern more straightforwardly than a CG approach.

Irrespective of the answer to the questions asked in the previous paragraph, phenomena that have been analysed as constructional idioms, such as the *way*-construction (cf. 3.2) and SCVs, can be said to form a clear case for constructions. This is because these phenomena are clear instantiations of productive patterns that exhibit idiosyncrasies, some of the parts of these constructions having a meaning

that is dependent on their occurrence in the specific construction. We have seen that this semantic property can be accounted for by assuming that these parts are lexically fixed.

In CG, constructional idioms are seen as specific instantiations of more general constructions that lack such fixed slots. Constructional idioms are thus not exceptional or special in this framework, but represent one point on a continuum ranging from constructions that are lexically open via constructions that are partly lexically fixed to constructions that are completely lexically fixed ((lexical) idioms). It has to be noted, however, that the postulation of such a continuum for one type of construction does not imply the postulation of constructions for syntactic phenomena in general (i.e. it does not imply the adoption of the framework of CG). Jackendoff (2002a: 172-177), for instance, who adopts a framework that posits a semantic, a syntactic, and a phonological component (see 2.2.1), discusses such a continuum for the resultative construction (see also Goldberg and Jackendoff 2004). According to Jackendoff, the lexicon contains a resultative construction, given in (40)a, which consists of a syntactic frame associated with a particular meaning, but does not have a specified phonological form. A concrete instantiation of this construction is given in (40)b (cf. Jackendoff 2002a: 175, examples (24) and (25)).

- (40) a. [V NP AP]_{VP}
'to cause NP to become AP by V-ing ((with) it)'
b. *Wilma watered the tulips flat.*

Jackendoff furthermore posits the related constructions in (41)a-(41)b, in which one or more slots are phonologically (and, correspondingly, also semantically) fixed, and which can be seen as instantiations of the resultative construction in (40)a. Concrete instantiations of these constructions are given in the second lines in (41)a-b (cf. Jackendoff 2002a: 174-175, examples (20), (21), (22), and (23)).

- (41) a. [V NP AP]_{VP}: V pro_e's way PP
'to go PP while/by V-ing'
Bill belched his way out of the restaurant.
b. [V NP PRT]_{VP}: V NP[time period] away
'to spend NP V-ing'
We're twisting the night away.

There are also instantiations of the template in (40)a that contain yet more fixed slots, leaving open only the NP position. This is illustrated in (42) (cf. Jackendoff 2002a: 173, example (17)).

- (42) a. [V NP PP]_{VP}: take NP to task, put NP_i in pro_i's place, ...
b. *John took Mary to task.*

Jackendoff thus analyses these constructions as being interrelated in a way that is familiar in CG. Nevertheless, he explicitly denies that *all* syntactic configurations are inherently meaningful, that is, are constructions in the CG sense and form families of constructions with more and less fixed slots, claiming that the relation between form and meaning is often more flexible than in the constructions in (40)-

(42). Such more flexible relations are at stake in, for instance, transitive and ditransitive verb constructions, with which a whole range of meanings is associated and which are, therefore, not assumed to represent constructions in the CG sense (Jackendoff 1996a, 2002a: 180). This illustrates that it is possible to posit constructions for some structural pattern (as I have done in 8.2.2 for the resultative construction, following Jackendoff 2002a: 172-177) without adopting constructions for syntactic patterns in general.

It was noted above that phenomena that have been analysed as constructional idioms seem to be especially suited for positing constructions. Another field for which this is the case is derivational morphology. Like phenomena that have been analysed as constructional idioms, derivational patterns are generally subregular, exhibiting idiosyncrasies of various kinds. One way of accounting for this is to posit morphological rules that operate on inputs (and thereby pose various restrictions on those inputs), and to attribute possible output differences to factors such as semantic specialisation. A more straightforward account, however, could be to posit output patterns, that is, morphological templates with one or more open slots ('morphological constructions'). This has been proposed by Booij (2005b) for various morphological phenomena and by Michaelis and Ruppenhofer (2000) for the German *be*-applicative (see also Riehemann 1998, who proposes a similar analysis of German *-bar* derivations, positing schemata in the framework of Head-Driven Phrase Structure Grammar (HPSG)).

In sum, certain assumptions of CG seem to be useful in accounting for the regularities as well as the idiosyncrasies involved in subregular patterns, such as word formation patterns and phenomena that have been analysed as constructional idioms. Positing constructions for these cases, however, does by no means oblige us to posit constructions for other, less idiosyncratic (or completely regular) patterns, and thus to convert to CG. On the contrary, it seems as if the phenomenon of constructional idioms can be modelled well within, for instance, the parallel architectures of Jackendoff (2002a) and LFG.

8.4 A comparison with some alternative analyses of SCVs

8.4.1 Toivonen (2003), Zeller (2001), and Lüdeling (2001)

An LFG-analysis of Swedish particle verbs has been proposed by Toivonen (2003) (cf. 3.3.2 and 3.4.1). As I claim for Dutch particles (cf. 4.5 and 7.5), Toivonen claims that Swedish particles do not form a syntactic category of their own: particles may belong to different syntactic categories (e.g. P, A, or N). Similarly, Toivonen claims that Swedish particles do not have a uniform function, and that Swedish SCV constructions may, consequently, have different semantic structures and different argument structures. She furthermore points out that other construction types, such as XP-V constructions, may have semantic and argument-structural properties similar to those of SCVs. According to Toivonen, then, the only distinctive feature of particles is their phrase-structural realisation: Swedish particles are non-projecting words. Toivonen claims that a particle adjoins to V^0 in syntax, thereby forming a phrase with V^0 (cf. Toivonen 2003: 36-41). She argues that these

properties of particles can be accounted for in theories that separate the phrase structure (c(onstituent)-structure) from the semantic structure and the argument structure, as is done in the parallel architecture of LFG.

It follows from the foregoing paragraph that Toivonen's analysis of the c-structure of Swedish particles is similar to the analysis that I propose for the c-structure of Dutch particles. In Swedish as well as in Dutch, the syntactic distribution of particles is different from that of XPs, such as PPs and APs. We have seen that in Dutch, particles behave differently from semantically similar XPs in verb cluster constructions and the progressive *aan het*-construction (cf. 4.3.5). In Swedish, PPs and APs follow the direct object NP (V-NP-PP/AP), whereas particles precede this NP (V-prt-NP) (Toivonen 2003: 25-36).

In addition to the similarities between Toivonen's analysis of Swedish SCVs and my analysis of Dutch SCVs, there is an important difference between the two analyses. This difference concerns the representation of SCVs and their constituent parts. Toivonen claims that SCVs are formed by productively combining the lexical entry of a non-projecting P, A, or N with that of a verb. The ability of a word to be non-projecting (that is, its ability to show up in the particle position) is assumed to be marked in its lexical entry, and the semantic idiosyncrasies of SCVs are assumed to be specified in the lexical entries of the particle and the verb. The crucial question is whether this analysis, which does not posit lexical SCV templates, provides an effective account of the semantic dependencies among the particle and the verb in SCVs and of the different degrees of conventionalisation we find among (productively formed) SCVs.

The same applies to Zeller's (2001) analysis, which also claims that SCVs are formed by productively combining the lexical entries of the particle and the verb and also claims that the ability of a word to be used as a particle is marked in its lexical entry (cf. 3.3.2). In order to account for the semantic properties of SCVs and their restricted productivity, Zeller assumes that the lexical entry of a particle contains subcategorisation information for combining with verbs in the specific SCV structure, semantic information about the special particle meanings, and information about the classes of verbs with which the particle in question may combine.¹⁹

Analyses, then, according to which SCVs are productively formed in syntax by combining the lexical entry of the particle with that of the verb, such as Toivonen (2003) and Zeller (2001), claim that the specific semantic properties of SCVs and their restricted productivity are accounted for by the specification of the relevant information in the lexical entry of the particle and/or in that of the verb. Most of this information, however, concerns the semantic and structural interdependency of the particle and the verb. I believe that these properties of SCVs can be accounted for more straightforwardly by positing lexical SCV templates, which ensure the cross-referencing between the particle and the verb (cf. the remarks on the resultative construction in Goldberg and Jackendoff 2004: 561-562). These phrasal templates are assumed to contain an open verbal slot to account for the productivity of SCVs.

¹⁹ Zeller assumes that the special particle meanings are available only if the particle and the verb hold a specific configurational relationship. Such an assumption does not seem to be required in Toivonen's analysis, according to which particles are non-projecting words (cf. 3.3.2).

Lüdeling (2001) also claims that the notion of lexicalisation plays a role in accounting for the properties of SCVs, although her analysis differs from the one proposed here in many respects (see also the discussion in section 3.3.2). Most notably, Lüdeling claims that SCVs cannot be structurally distinguished from combinations of a preverbal phrase (e.g. a resultative phrase or a modifier phrase) and a verb; she claims that like these XP-V combinations, SCVs have the structure $[XP-V]_V$. In her analysis, then, SCVs do not form a distinct class of constructions (Lüdeling 2001: 163). Lüdeling uses the term "preverb-verb construction" (PVC) to refer to both SCVs and XP-V combinations.

I have illustrated in this study, however, that SCVs behave differently from XP-V combinations. This is for instance the case in topicalisation, copula, and verb cluster constructions (see esp. chapter 4 and section 8.2.1). The distributional differences between SCVs and XP-V combinations are accounted for by positing a specific SCV structure according to which particles are non-projecting words that form a phrase with the verb: $[X-V^0]_V$.

Although Lüdeling claims that SCVs do not have a specific structure and do, thus, not form a distinct class of constructions, she notices that speakers have the intuition that SCVs do form such a class (cf. 3.3.2). According to Lüdeling, this intuition is related to listedness: listed PVCs are usually perceived as SCVs, but this is not the case for productively formed PVCs (Lüdeling 2001: 159, 163). Lüdeling's definition of listedness, which was given in section 3.3.2, is repeated in (43).

- (43) Listedness: a simple or complex linguistic expression is listed if all terminal nodes are associated with phonological material (Lüdeling 2001: 82).

Lüdeling claims that the situation is more complicated with PVCs showing, what she calls, "type-(b)-productivity" (p. 163); PVCs that appear to be partly lexicalised, having conventionalised properties but also instantiating productive patterns. Lüdeling mentions the class of SCVs with the particle *an* 'to start V, to V partly' (including *anlesen* 'lit. at-read, to start reading, to read partly' and *anschneiden* 'lit. at-cut, to start cutting, to cut partly') as an example of a class of PVCs showing "type-(b)-productivity". We have seen that most SCVs exhibit this type of productivity, falling into semantic classes of SCVs in which a particular particle expresses the same, conventionalised meaning in combination with different verbs, and which can be extended productively (cf. chapter 5).

Lüdeling's analysis predicts that PVCs showing "type-(b)-productivity" would receive intermediate judgments when speakers are asked whether such PVCs belong to a class of SCVs, in between the judgments for fully productive PVCs and those for fully lexicalised PVCs. But as Lüdeling notices, PVCs showing "type-(b)-productivity" are typically perceived as SCVs (p. 159, 163). The specific behaviour of this class of PVCs is not extensively dealt with in Lüdeling's book (as noticed in section 3.3.2, this book focuses on a data set of only seven PVCs). Since this class constitutes the vast majority of SCVs (cf. chapter 5), this is a serious shortcoming of her analysis.

This shortcoming amounts to a more general problem of Lüdeling's analysis. It was noted above that Lüdeling claims that SCVs are structurally indistinguishable from XP-V combinations. The effect of this is that all distributional differences

between particles and preverbal XPs (i.e. resultative phrases, modifier phrases, and depictive phrases) are, in her analysis, attributed to the listedness of the SCV in question (cf. (43)). We have seen, however, that SCVs differ in terms of their lexicalisation properties: most SCVs are instantiations of phrasal templates with one lexically fixed slot, being partly lexicalised, but there are also SCVs that are instantiations of templates with no fixed slots at all, and SCVs that are completely lexicalised. We have also seen that these lexically different SCVs exhibit the same distributional properties, which differ from those of XP-V combinations (cf. 8.2.1).

I have illustrated in chapter 4 that the distributional differences between SCVs and XP-V combinations can be accounted for by assuming a specific SCV structure, according to which particles are non-projecting words. By separating the structural properties of SCVs (which are the same for all SCVs and are different from those of XP-V combinations) from their lexicalisation properties (which differ among SCVs), we thus arrive at an effective account of the various properties that are specific to SCVs. Conversely, Lüdeling, who denies the existence of a specific SCV structure and claims that SCVs are structurally identical to XP-V combinations, ascribes all distributional differences between SCVs and XP-V combinations to a difference in listedness. Listedness, however, does not appear to account for the data satisfactorily.

To illustrate the problems associated with Lüdeling's analysis, let us take a closer look at Lüdeling's account of one of the distributional issues: a modifier phrase and a resultative phrase may cooccur within a single VP, but a modifier particle and a resultative particle may not do so. This grammaticality difference is illustrated in (44)a-b, containing the modifier phrase *snel* 'quickly', the resultative phrase *oranje* 'orange', the modifying particle *na* 'afterwards', and the resultative particle *af* 'off'.

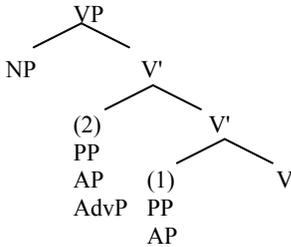
- (44) a. modifier phrase + resultative phrase:
de fiets snel oranje verven
 the bike quickly orange paint
 'to paint the bike quickly orange'
- b. modifying particle + resultative particle:
 **de broodjes na af bakken*
 the rolls after off bake
 'to finish off the rolls in the oven afterwards'
 (i.e. 'to cause the rolls to become finished off by baking them afterwards')

I have shown in section 6.4 that the ungrammaticality of constructions such as (44)b is accounted for by assuming a specific particle syntax (which also accounts for other distributional differences between particles and semantically similar XPs, cf. chapter 4). According to this particle syntax, particles are non-projecting words that combine with V^0 , thereby forming a V' . The ungrammaticality of constructions such as (44)b results from the fact that the right-most particle combines with V^0 to form a V' , after which the other particle cannot combine with V^0 anymore. As opposed to particles, modifier phrases and resultative phrases do not combine with V^0 in this way, but are syntactically independent XPs. The structural difference between particles (Xs) and phrases (XPs) assumed in the current study thus accounts for the

fact that modifier phrases and resultative phrases may cooccur, but modifying particles and resultative particles may not do so.

Lüdeling, however, does not assume such a structural difference, but claims that particles are XPs. Preverbal XPs are, in her analysis, generated in either of the two structural positions (1) and (2) in (45).

(45) VP structure assumed by Lüdeling (2001: 144).



The PP and AP under (1) in (45) represent resultative phrases (which are assumed to be sisters of the verb), whereas the PP, AP, and AdvP under (2) in (45) represent, respectively, PP adjuncts, depictive phrases, and modifier phrases (all of which are assumed to be adjuncts to the verb). Inserting the respective types of XP into the respective positions in this structure is predicted to lead to possible combinations of, for instance, a modifier phrase and a resultative phrase. In the case of (44)a, then, the modifier phrase *snel* is assumed to be generated in position (2) and the resultative phrase *oranje* is assumed to be generated in position (1).

Lüdeling claims that particles are structurally indistinguishable from (either resultative or modifier) phrases and, thus, that particles are also generated in either of the two positions (1) and (2) in (45). That is, the modifying particle *na* is assumed to be generated in position (2) and the resultative particle *af* is assumed to be generated in position (1). Lüdeling's analysis, then, predicts that a modifying particle and a resultative particle may cooccur, just like a modifying phrase and a resultative phrase. As illustrated in (44)b, however, constructions in which these two types of particle cooccur are ungrammatical. This ungrammaticality does not appear to be accounted for in Lüdeling's analysis.

By contrast, Lüdeling appears to claim that the cooccurrence of particles within a single VP is possible. She gives the "admittedly awkward" (Lüdeling 2001: 158) sentence in (46) to illustrate that combining two, what she calls, "core particles", does not necessarily lead to an unacceptable sentence.

- (46) dass Dornröschen dem Prinzen den Fernseher *an* *ab*kauft
 that Sleeping Beauty the prince_{DAT} the TV-set on/running off-buys
 'that Sleeping Beauty buys the TV-set from the prince running'
 (i.e. the TV set is running while being bought from the prince by Sleeping Beauty)

According to Lüdeling, both particles in (46) independently form an SCV with the verb *kaufen* 'to buy'. This, however, is not true for *an* 'on, running', since there is no SCV *ankaufen* 'lit. on-buy, to buy running'. Lüdeling presumably aims at the

existence of the SCV *ankaufen* 'lit. at-buy, to buy, to purchase', which contains a different particle, namely the particle *an* 'at' with the meaning 'towards the Agent' (cf. *annimmen* 'lit. at-take, to take (in), to accept'). Instead of being a particle, *an* in (46) is a depictive phrase; it is syntactically (and semantically) independent of the verb *kaufen*. That is, *an* 'on, running' in (46) has the same structure and function as, for example, *alt* 'old' in *er hat ihm den Fernseher alt abgekauft* 'he bought the TV set from him when it was old' (which no one would call a particle; there is no SCV *altkaufen* 'to buy old'). *An* 'on, running', then, is not part of an SCV, hence it is not a particle (cf. 4.3.3 and 5.6). This means that the construction in (46) contains only one particle, and that it does not constitute counterevidence to the claim that iterations of particles are excluded.

Lüdeling notices that *an* functions as a depictive predicate and *ab* as a resultative predicate in (46), and I agree with this *semantic* classification of *an* and *ab*. We have seen, however, that the fact that an element is semantically similar to a depictive or resultative predicate does not tell us anything about structural similarities (or differences) among this element and such a predicate. Phrases, particles, and prefixes, for instance, may function as resultative predicates, but these elements are structurally different from one another (cf. 8.3.1).

Lüdeling goes on saying that the example in (46) shows that "when there are several secondary predicates and adverbs, only the one that is closest to the verb can be seen as a particle" (p. 158), thus apparently admitting that *ab* is the only particle in (46) and *an* is not a particle. But in view of the fact that Lüdeling claims that there is no class of particles (and no class of particle verbs), it is not entirely clear to me what she means by this statement. Presumably, she means that only the preverbal element that is closest to the verb is *perceived* as a particle, which is, in her analysis, claimed to be related to the preverb-verb construction in question being listed.²⁰

Lüdeling, then, claims that an iteration of particles is structurally possible and that restrictions on such iterations are related to listedness. We have seen, however, that constructions with an iteration of particles are ungrammatical, and that this holds for particles of SCVs with different degrees of listedness. Constructions with an iteration of preverbal XPs, on the other hand, are not ungrammatical. I have argued that this difference in grammaticality is accounted for by assuming a structural difference between particles and preverbal XPs. It was illustrated in chapter 4 that the assumption of a specific particle structure (entailing a specific SCV structure) also accounts for other distributional differences between particles and preverbal XPs, such as differences showing up in topicalisation, copula, and verb cluster constructions.

In sum, Lüdeling (2001) claims that SCVs are structurally indistinguishable from XP-V combinations and that all distributional and semantic differences between SCVs and XP-V combinations are due to SCVs being listed. It turns out, however, that an analysis assuming (a) a specific SCV structure, which represents a

²⁰ *Abkaufen*, however, does not seem to be listed according to Lüdeling's definition of listedness, given in (43): SCVs with the particle *ab* 'off/away' show "type-(b)-productivity" (cf., e.g., *die Teller abtragen* 'to carry away the plates', *die Tapete abreißen* 'to tear off the wallpaper'), which implies that they are not completely listed, but are instantiations of *partly* lexicalised phrases.

phrase consisting of a non-projecting word and a verb, and (b) different degrees of listedness for different SCVs provides a better account of the data.

8.4.2 *Extended VP analyses*

McIntyre's (2004) paper on German and English SCVs discusses several of the particle types that I have discussed in chapter 5, such as continuative particles and path particles. Despite the similarities between his observations and mine, our analyses are very different with respect to the framework in which we interpret these observations (cf. the remarks in 3.4.2). McIntyre proposes an extended VP analysis, positing syntactic representations that contain semantically specified heads and thus directly reflect semantic structures. The effect of this is that SCV constructions with semantically different particles require different phrase structures in his framework.²¹ We have seen, however, that such semantically different particles have the same syntactic structure (the same f-structure, forming with the verb the predicate of a single clause, and the same c-structure, being non-projecting words that combine with a verbal head to form a phrase, cf. (38) in 8.3.1). The SCV data, then, ask for a framework that separates the semantic structure from the syntactic structure, as is done in Jackendoff's tripartite parallel architecture and in LFG.

A similar remark can be made for Svenonius (2003a), who discusses SCVs in the various Germanic languages (cf. 9.3.1). As I have done in this study (cf. 5.2 and 5.3), Svenonius distinguishes between particles that license a Figure participant and particles that license a Ground participant. Assuming an isomorphic semantics-syntax mapping, Svenonius represents the *semantic* difference between NPs that can be characterised as the Figure of a particle and NPs that can be characterised as the Ground of a particle in the *syntax*. That is to say, Svenonius claims that these two types of NP are generated in different positions in the phrase structure.²² In order to account for the syntactic similarities between these two semantically different types of NP (see below), he claims that both types of NP move to the position through which all direct objects are assumed to pass (the specifier of the VP).

Unlike Svenonius, I claim that the semantic difference between elements functioning as Figures and elements functioning as Grounds are represented in the semantic structure (and not in the syntactic structure), since such semantically different elements may have exactly the same syntactic properties. For example, both NPs that can be characterised as the Figure of a particle (e.g. *de schoenen* 'the shoes' in *de schoenen inlopen* 'to wear in the shoes') and NPs that can be characterised as the Ground of a particle (e.g. *het publiek* 'the audience' in *het*

²¹ This is also the case for other analyses assuming an isomorphic semantics-syntax mapping, such as the analysis of Ramchand and Svenonius (2002) and Small Clause analyses (see 3.3.2).

²² Whereas the former type of NP is assumed to be generated as the specifier of *pP* (cf. structure (26)a in Svenonius 2003a: 437), the latter type of NP is assumed to be generated as the complement of *P* (cf. structure (26)b, *ibid.*). (Actually, the structure in (26)a in Svenonius (2003a: 437) does not contain a particle, but a preposition. It follows from Svenonius' analysis, however, that he assumes that a direct object NP in an SCV construction that can be characterised as the particle's Figure is also generated in the specifier of *pP*.)

publiek toespreken 'to talk to the audience') may be syntactically realised as the direct object NP of an SCV. This means that SCV constructions with these semantically different direct object NPs have the same syntactic representation (the same f-structure and also the same c-structure, cf. 5.2, 5.3.3, 5.4, and 8.3.1). This is illustrated in (47)a-b, giving the divergent semantic representations and the uniform syntactic representations for SCV constructions with such semantically different direct object NPs (cf. (38) in 8.3.1).

(47) a. *de schoenen inlopen* 'to wear in the shoes'

semantics: [[CAUSE (x), BECOME [*in (de schoenen)*]], BY {*lopen* (x)}]
 → (THE SHOES)_{FIGURE} (BECOME IN)_{CHANGE OF STATE}

syntax: f-structure: [*inlopen* <(x) (*de schoenen*)>]
 c-structure: [(*de schoenen*)_{NP} (*in-lopen*)_{VP}]

b. *het publiek toespreken* 'to talk to the audience'

semantics: [*spreken* (x) {TO (*het publiek*)}]
 → TO_{RELATOR} (THE AUDIENCE)_{GROUND}

syntax: f-structure: [*toespreken* <(x) (*het publiek*)>]
 c-structure: [(*het publiek*)_{NP} (*toe-spreken*)_{VP}]

I thus assume that the semantic differences between these NPs are represented in the semantic structure, and that their syntactic similarities are represented in the syntactic structure. Svenonius, on the other hand, assumes that both the semantic differences and the syntactic similarities are represented in the syntax, as a consequence of which a distinction between a base-generated syntactic structure and a derived syntactic structure is required in his analysis. This means that the assumption of a, compared to my approach, less complex (namely isomorphic) semantics-syntax mapping in Svenonius' analysis is at the expense of a more complex syntactic representation (which involves, among other things, movement of the direct object NP, see also 2.2.1). I have argued in section 8.3.1 that SCV data such as (47), which exhibit semantic differences but syntactic similarity, are accounted for insightfully in a framework that separates the semantic structure from the syntactic structure.

8.4.3 Stiebels (1996)

Stiebels (1996) gives a semantic analysis of German preverbs (particles and prefixes), distinguishing between preverbs functioning as lexical arguments and preverbs functioning as lexical adjuncts (see also 3.4.2). Whereas preverbs functioning as lexical arguments satisfy an (obligatorily filled) argument slot in the verb's argument structure, preverbs functioning as lexical adjuncts do not do so. An example of each type of preverb is given in (48).

- (48) a. Lexical argument (Stiebels 1996: 89):
Plakate ankleben
 'to stick on posters' (lit. on-stick)
 (cf. *Plakate an X kleben* 'to stick posters on X')
- b. Lexical adjunct (ibid., 132):
seine überflüssigen Pfunde abschwimmen
 'to swim off one's redundant pounds' (lit. off-swim)

Stiebels claims that the classification of particles as lexical arguments vs. lexical adjuncts, in combination with the assumption that combining a verb with a lexical adjunct results in argument extension, accounts for the divergent argument-structural properties of SCVs. Her analysis, however, poses several problems.²³

To begin with, the particle *door* of, for instance, *het boek doorlezen* 'to read through the book' would be classified as a lexical adjunct in Stiebels' analysis, since this particle does not satisfy an obligatorily filled slot in the argument structure of *lezen* 'to read'. The particles in *het boek doorbladeren* 'to leaf through the book' and *het boek doorkijken* 'to look through the book', on the other hand, would be classified as lexical arguments, since *bladeren* 'to leaf' and *kijken* 'to look' take PP complements. This classification, however, does not seem to do justice to the similarities between these SCVs, all three of them containing the path particle *door* and thus representing the template in (49).

- (49) NP [*door*-V⁰]_V 'to go through NP by V-ing'

Crucially, whereas the argument-structural properties of the base verbs (the inputs) may differ across SCVs fitting a particular template, the argument structures of the resulting SCVs (the outputs) are identical. Since Stiebels assumes that lexical operations take place on the argument structures of the input verbs, these properties seem to require extra stipulations in her analysis (cf. the criticisms on similar analyses in Booij 1992 and Michaelis and Ruppenhofer 2000). Conversely, these properties are straightforwardly accounted for if we posit SCV templates such as the ones in (49), which are associated with a particular LCS that maps to a particular argument structure (cf. the analysis of Booij 2002a, b for Dutch SCVs and that of Michaelis and Ruppenhofer 2000 for German prefixed verbs).

A similar problem for Stiebels' analysis lies in the classification of the particle *ab* in *abschwimmen* in the SCV construction in (48)b above vis-à-vis that of the particle *ab* in (50).

- (50) *dass wir abgefahren sind*
 that we off-driven are
 'that we have left'

Stiebels classifies the particle in (50) as a lexical argument, claiming that *fahren* 'to drive' contains an argument slot (*ab X fahren* 'to drive off X/away from X'). The particle in (48)b above, on the other hand, is classified as a lexical adjunct, since,

²³ The first problem discussed here was also mentioned in section 3.4.2.

according to Stiebels, *schwimmen* 'to swim' does not contain an obligatorily filled argument slot.

This classification, too, disregards the semantic similarity among the particles in question: both of these particles function as resultative predicates, meaning 'off/away from X'. That is, the result of the event expressed in (50) is that WE ARE OFF/AWAY, and the result of the event expressed in (48)b above is that THE REDUNDANT POUNDS ARE OFF/AWAY. Like other resultative particles, then, both of these particles license a Figure participant, which is affected by the result the particle expresses and maps to the Theme argument at the level of argument structure. The effect of this is that both constructions contain a Theme, one of them being transitive and the other one being unaccusative, but neither of them being unergative. Similarly, both constructions express telic events. So if we characterise these particles as resultative particles (as I do in my classification, which is based on the functions particles perform in the LCS of the SCV construction), we account for the common argument-structural and lexical-aspectual properties of the SCV constructions they form (cf. 5.2). In Stiebels' classification, on the other hand, some resultative particles are classified as lexical arguments (e.g. *ab* in *abfahren*) and other resultative particles are classified as lexical adjuncts (e.g. *ab* in *die Pfunde abschwimmen*). The consequence of this appears to be that important generalisations are missed in her classification.²⁴

The fact that important (output) generalisations seem to be missed when applied to SCV constructions is a general property of approaches that assume that operations take place on the argument structure of the input such as that of Stiebels (1996). Most particles may combine with both transitive and intransitive base verbs, but form SCVs with a unique argument structure. This is, for instance, the case with path particles, which always form transitive SCVs (cf. 5.3.4), with continuative particles, which always form unergative SCVs (cf. 5.3.5), and with resultative particles, which always form either transitive or unaccusative SCVs (cf. 5.2). In other words, we see uniform argument structures in the outputs, but not in the inputs. In lexical rule approaches such as that of Stiebels (1996), according to which lexical rules operate on the argument structure, argument-structurally different inputs that form argument-structurally similar outputs require different operations.

²⁴ Most preverbs with resultative functions are classified among the lexical adjuncts, as they cooccur with activity verbs that do not contain an obligatorily filled argument slot. A resultative preverb such as *weg* in *weglaufen* 'to walk away', however, is classified as a lexical argument (Stiebels 1996: 102). Stiebels' motivation for this classification is that a verb of motion like *laufen* 'to walk' requires an argument specifying the goal or the source of the motion (which also explains why *zulaufen* 'to walk up to' in *der Hund ist ihm zugelaufen* 'the dog has walked up to him' is classified as containing an argument preverb, *ibid.*, 111). But *an* in *anlaufen* 'to walk up to' (e.g. *Der Athlet läuft das letzte Hindernis an* 'the athlete runs up to the last obstacle', *ibid.*, 163-164), which, according to Stiebels, specifies the orientation towards an object, is classified as a lexical adjunct. Apparently, then, such an orientation cannot be interpreted as the goal of the action, so that *an* does not satisfy an obligatorily filled argument slot, but specifies an optional property. This illustrates that Stiebels' adjunct/argument classification requires a careful investigation of each verb as to which NPs count as obligatorily present arguments and which NPs do not count as such.

If, on the other hand, we posit output templates such as (49), the different argument-structural effects follow without any further machinery.^{25, 26}

In addition to missing important generalisations, Stiebels' analysis does not seem to be specific enough to account for the divergent semantic and argument-structural properties of SCVs. Both the resultative particle in *Plakate ankleben* 'to stick on posters' and the path particle in *den Wald durchwandern* 'to walk through the forest', for instance, are classified as lexical arguments. We have seen, however, that resultative particles license a Figure participant and path particles license a Ground participant. The result of *Plakate ankleben* 'to stick on posters' is, correspondingly, that THE POSTERS ARE ON (THE WALL), but the result of *den Wald durchwandern* 'to walk through the forest' is not that THE FOREST IS THROUGH. Instead, the result of the latter SCV construction is that the subject referent is THROUGH THE FOREST (see 5.2 and 5.3.4). The referents of the direct object NPs in these two SCV constructions thus fulfil different semantic roles. Stiebels discusses these semantic differences and represents them in the semantic structures (SFs, semantic forms) of the SCVs in question. But these differences do not seem to be accounted for in her classification of preverbs as lexical arguments vs. lexical adjuncts. By contrast, they follow straightforwardly from the semantic analysis that I have proposed in chapter 5.

Similarly, both the resultative particle *ab* in (48)b above and the orienting particle *an* 'at' in *jemanden anlachen* 'to laugh at someone' are, in Stiebels' analysis, classified as lexical adjuncts. I have illustrated in chapter 5, however, that these particles have different semantic and lexical-aspectual properties: the result of the event in (48)b is that THE REDUNDANT POUNDS ARE OFF/AWAY, but the result of the event in *jemanden anlachen* 'to laugh at someone' is not that SOMEONE IS AT, and the event in (48)b is telic, but the event *jemanden anlachen* 'to laugh at someone' is atelic (cf. 5.2 and 5.3.3). Again, Stiebels discusses these differences, but nevertheless sticks to her basic classification of preverbs into lexical arguments and lexical adjuncts, which does not seem to account for these differences. I have illustrated that a classification based on the function a preverb performs in the LCS of the SCV construction provides a straightforward account of these differences.

In addition to missing important generalisations over preverbs and not accounting for important differences among preverbs, Stiebels' classification is not always clear. To give an example, Stiebels classifies the particle *an* 'on X' in (48)a

²⁵ We have seen that multiple inheritance links are postulated between such output templates and more general templates, from which these output templates inherit many of their properties. This is why not all of the information needs to be stored individually for each template (cf. 8.2).

²⁶ An alternative is to posit lexical rules that do not operate on the argument structure of the base, but on its LCS (cf. Booij 1992, Lieber and Baayen 1993, Rappoport Hovav and Levin 1998, 2003). In such approaches, the LCS of the base verb is taken over from the input, and not its argument structure. The argument structure of the output is assumed to follow from its LCS, which is created by the lexical rule operating on the LCS of the base. This implies that there is no need for positing different rules for argument-structurally different inputs in such approaches. I have argued in 8.3.2 and 8.4.1, however, that the conventionalised properties of SCVs appear to be accounted for more straightforwardly by positing lexical SCV templates than by positing operations on the LCS of the input.

above, which is repeated in (51)a below, as a lexical argument (Stiebels 1996, chapter 6), but claims that this particle is used as a lexical adjunct in (51)b (Stiebels 1996: 87, note 10). This particle, however, seems to perform exactly the same function in these two constructions.

- (51) a. *Plakate ankleben* 'to stick on posters' (lit. on-stick)
 b. *den Stoffrest annähen* 'to sew on the piece of cloth' (lit. on-sew)

As for the structure of SCVs, Stiebels (1996) proposes a word analysis (cf. 3.3.1). She claims that evidence for a word analysis of SCVs is provided by the fact that particles may perform the same functions as prefixes. We have seen, however, that this fact can also be accounted for if we analyse SCVs as phrases. In that case, then, we allow semantically similar elements (e.g. resultative particles and resultative prefixes like *be-* and *ver-*) to have different phrase structures (see (39) in 8.3.1 above). The fact that phrases (XPs) may also express results shows that such semantics-syntax non-isomorphism must be allowed for anyway.

Like Toivonen (2003) and Zeller (2001), Stiebels claims that SCVs are formed by combining the lexical entry of the particle with that of the verb (but unlike Toivonen and Zeller, Stiebels claims that this takes place in morphology and not in syntax). It was noted in section 8.4.1 that such an analysis requires much information to be present in the lexical entry of the particle and/or in that of the verb in order for it to account for the semantic and other dependencies between the particle and the verb in SCVs. An analysis according to which SCVs are, on the other hand, formed on the basis of phrasal lexical templates with more or less fixed slots appears to account for the various idiosyncratic properties of SCVs more straightforwardly. Such an analysis also allows us to state generalisations among SCVs and to account for the productivity of the SCV system.

8.5 Summary

The structural and semantic properties of Modern Dutch SCVs that have been discussed in the previous chapters are accounted for in a framework that posits separate, parallel levels of representation that are linked through principles of correspondence. Crucially, such a framework provides us with an elegant account of the two central properties of SCVs, given in (52).

- (52) a. *Many-to-one mapping semantic structure – syntactic structure*
 SCVs have different semantic properties (as well as different lexical-aspectual and argument-structural properties), but all SCVs have the same syntactic structure (i.e. the same constituent structure: SCVs consist of a non-projecting word and a verbal head).
- b. *Many-to-one mapping syntactic structure – semantic structure*
 Constructions with syntactic structures (constituent structures) different from that of SCVs, such as XP-V constructions and prefixed-verb constructions, may have the same semantic properties as SCV constructions (as well as the same lexical-aspectual and argument-structural properties).

(52) illustrates that the only distinctive property of SCVs is their phrase-structural realisation, and that an analysis of SCVs requires a separation of the phrase structure from the semantic structure, thereby allowing for syntax-semantics non-isomorphism. Such a separation is posited in the parallel corresponding architectures of the grammar of Jackendoff (2002a) and LFG. These frameworks, then, account for the characteristics of SCVs in an insightful way (other frameworks, however, might also be capable of doing so).

SCVs can be formed productively, but also have conventionalised properties; properties that do not follow straightforwardly from the properties of the particle and the verb in isolation (in combination with the mechanisms for combining these two elements). These two characteristics can be accounted for by analysing SCVs as instantiations of phrasal lexical templates, that is, of structural patterns that are linked to a specific meaning. It was illustrated in chapter 4 that the distributional differences between SCVs and, on the one hand, XP-V combinations and, on the other hand, prefixed verbs argue for a structural analysis according to which the particle is a non-projecting word that combines with a verbal head to form a phrase. This means that the lexical templates on the basis of which concrete instantiations of SCVs are formed have the structure in (53).

(53) $[X-V^0]_V$

These templates are linked to meanings such as 'to cause Y to become PRT by V-ing'.

In the vast majority of SCVs, the particle expresses a construction-specific meaning; a meaning that it only expresses in SCVs (but new SCVs in which the particle expresses this meaning are, nevertheless, formed productively). These SCVs are instantiations of partly lexicalised phrases, consisting of a fixed particle slot and an open slot for the verb (e.g. $[op-V^0]_V$ 'to cause Y to become accessible by V-ing'). There are also SCVs that are completely lexicalised, which represent templates that contain both a fixed particle slot and a fixed verbal slot, and SCVs with particles that do not express construction-specific meanings, which are formed on the basis of templates without any fixed slots. In other words, all SCVs are instantiations of phrasal lexical templates, which are linked to a specific meaning, but these templates differ with respect to the number of slots that are lexically fixed. The postulation of such SCV templates provides a natural account of the semantic and syntactic dependencies between the particle and the verb in an SCV and of the different degrees of conventionalisation we find among SCVs.

The synchronic analysis of SCVs proposed in this chapter falls naturally into place in a diachronic approach according to which the majority of SCVs represent an intermediate stage in two developments: a grammaticalisation development, whereby phrases develop into words, and a lexicalisation development, whereby the positions in a construction become lexically fixed. The properties of SCVs that have puzzled linguists for so long, then, can be seen as the synchronic result of two developments affecting syntactic combinations of a verb and an element that is left-adjacent to this verb.

Part III

Implications and conclusions

Chapter 9

SCVs in other Germanic languages

9.1 Introduction

Part II of this book showed that Dutch particles are non-projecting words that combine with a verbal head to form a phrase. An important issue is the generalisation of this SCV structure to SCVs in other languages. This issue will be discussed in section 9.2, which focuses on the representational properties of SCVs in other Germanic languages.¹

Part II of this book also showed that Dutch particles may perform various functions. These functions were related to the divergent historical sources of these particles: Dutch particles are grammaticalisations of resultative phrases, modifier phrases, and postpositions. All of these elements may be left-adjacent to the verb in an OV language like Dutch. The result of this is that the constructions in which these elements appear constitute plausible historical source constructions for Dutch SCV constructions. Section 9.3 will illustrate that not all of the particle types that have been distinguished for Dutch are available in all of the other Germanic languages. More specifically, many of the non-resultative particle types appear to be absent in English. On the basis of the diachronic analysis of Dutch SCVs proposed in chapter 7 it will be hypothesised that such differences between languages can be related to the word order differences between the languages in question. Section 9.3 will also present some initial support for this hypothesis. Section 9.4 will summarise the findings of this chapter.

The discussion in this chapter serves to illustrate the most striking similarities and differences between Dutch SCVs and SCVs in other Germanic languages, and to provide an initial account of these facts. Needless to say, no complete analysis of SCVs in the different Germanic languages can be given within the scope of a single chapter.²

¹ For the sake of convenience I use the term "SCV" ("Separable Complex Verb") to refer to particle verbs in OV languages such as Dutch and German as well as to particle verbs in VO languages such as English and the Scandinavian languages. The term "phrasal verb", however, is actually more appropriate for particle verbs in VO languages.

² I am grateful to Jenny Audring, Katalin É. Kiss, Bettelou Los, Peter Svenonius, and Ida Toivonen for helping me with, respectively, the German, the Hungarian, the English, the Norwegian, and the Swedish data in this chapter.

9.2 The representation of SCVs in other Germanic languages

9.2.1 German SCVs

The discussion in section 3.2 illustrates that there are many parallels between the literature on Dutch SCVs and that on German SCVs. As is the case for Dutch SCVs, for instance, word analyses (McIntyre 2001b, Stiebels 1996, Stiebels and Wunderlich 1994) as well as phrasal analyses (Lüdeling 2001, McIntyre 2004, Müller 2002a, Zeller 2001) have been proposed for German SCVs. Similarly, support for these analyses is provided by data illustrating, among other aspects, the impossibility or the (alleged) possibility of particle topicalisation, the fact that SCVs may serve as the input for word formation, and the semantic properties of SCVs (in particular, the presence of predictable and less predictable SCV meanings).

Section 3.2 showed that the word analysis of German SCVs proposed by Stiebels and Wunderlich (1994) faces various problems. Section 8.4.1 discussed some problems of Lüdeling's (2001) phrasal analysis, according to which German particles are syntactically and semantically indistinguishable from resultative, depictive, and modifier phrases (XPs). Like Dutch particles, German particles do not easily topicalise (Zeller 2003), and like Dutch SCVs, German SCVs exhibit various characteristics that are unaccounted for if we analyse German particles as resultative (or other) phrases (such as the restricted productivity of the vast majority of SCV classes, see 3.3.2, chapter 4, and 8.2.1).

The morphosyntactic properties of German SCVs can, like those of Dutch SCVs, be accounted for by analysing these SCVs as phrases that consist of a non-projecting preverbal element and a verbal head (this analysis has also been proposed for German SCVs by Toivonen 2003: 162-166). The semantic properties and productivity properties of German SCVs also resemble those of Dutch SCVs. I therefore suggest that, like Dutch SCVs, German SCVs are formed on the basis of phrasal lexical templates that generally contain a fixed particle slot and an open verbal slot (cf. 8.2).

One difference between Dutch SCV data and German SCV data, however, must be mentioned here. We have seen that Dutch verb cluster data and data instantiating the progressive *aan het*-construction show a distributional difference between particles and resultative phrases: unlike phrases (XPs, (1)a-(2)a), particles (Xs, (1)b-(2)b) appear along with the verb after auxiliaries and modals in the verb cluster and after *aan het* in the progressive *aan het*-construction (see 4.3.5).

- (1) a. dat Jan zijn fiets (*oranje*) wilde (**oranje*) verven
 that John his bike (orange) wanted (orange) paint
 'that John wanted to paint his bike orange'
 b. dat Jan de boeken (*op*) wilde (*op*) zoeken
 that John the books (up) wanted (up) search
 'that John wanted to look up the books'
- (2) a. dat Jan zijn fiets (*oranje*) aan het (**oranje*) verven is
 that John his bike (orange) at the (orange) paint is
 'that John is painting his bike orange'

- b. dat Jan de boeken (**op*) aan het (*op*) zoeken is
 that John the books (up) at the (up) search is
 'that John is looking up the books'

In (standard) German, however, the verb cluster construction does not give similar evidence. This is because the only possible word order for German verb cluster constructions, both for those with resultative phrases and for those with particles, is as in (3).

- (3) a. dass Jan sein Rad *orange* streichen wollte
 that John his bike orange paint wanted
 'that John wanted to paint his bike orange'
 b. dass Jan die Gläser *abwaschen* wollte
 that John the glasses off-wash wanted
 'that John wanted to wash up the glasses'

German verb cluster data, then, do not provide evidence for a structural difference between resultative phrases and particles. But as noted above, other types of German data (e.g. particle topicalisation data and data with particles in the copula construction) give evidence for such an analysis.³

The German counterpart of the Dutch *aan het*-progressive, the *am*-progressive, is only marginally used in standard German. If it is used, however, particles indeed appear after *am* (*er war Gläser am abwaschen* 'he was washing up glasses'), but resultative phrases may not do so (**er war Bretter am orange streichen* 'he was painting planks orange'). Like the Dutch progressive data, then, these German data support an analysis according to which particles and resultative phrases are structurally different.⁴

These data could be accounted for by analysing German SCVs as phrases that consist of a non-projecting word and a verbal head, as I have proposed for Dutch SCVs. Toivonen (2003: 166) argues that the fact that this structure has not been proposed for German SCVs by many others may be related to two factors: (1) the German data give less explicit evidence for such a structure than the Dutch data (and

³ It was noted in the discussion of Müller (2002a, chapter 6) in section 3.3.2 that there appear to be cases in which the judgments on German data instantiating particle topicalisation differ from those on Dutch data instantiating particle topicalisation (see section 3.3.2, note 20). I have to leave an investigation into these differences as a topic for further research.

⁴ *Am*-progressives are also used in the German Riparian dialect (spoken in the Rhine country). Here, too, particles appear after *am*, but phrases may not do so (Stiebels 1996: 44).

(i) Er ist {sein Zimmer} {**auf*} *am* {*sein Zimmer} {*auf*} räumen.
 he is his room up at-the his room up clear
 'He is clearing up his room.'

The same contrast appears in *zum*-infinitive constructions in the Bavarian dialect (spoken in Southern Germany), as illustrated in (ii) (Stiebels, *ibid.*).

(ii) Sie hod-s {*eam*} {**naaf*} *zum* {**eam*} {*naaf*} droogn vagesn.
 she has-it him-DAT up to-the him-DAT up bear forget
 'She forgot to carry it up for him.'

These German dialect data thus show the same contrast we have seen in Dutch progressive and verb cluster constructions.

the Swedish data, see 9.2.3) (cf. (3)), and (2) many researchers who have previously analysed German SCVs adopt frameworks in which the semantics of SCVs is tied to their phrase structure. The effect of this is that the semantic similarity between particles and resultative phrases is assumed to imply a structural similarity in such analyses. This is not the case for analyses in frameworks that posit parallel architectures, such as the one adopted by Toivonen (2003) and the one adopted in this book (see 8.3.2 and 8.4.1). As such, both Toivonen's analysis and the one proposed here avoid the confusion between the semantic and structural properties of German SCVs.

9.2.2 English SCVs

English particles may show up in two positions: either before or after the direct object. This word order alternation is illustrated in (4).

- (4) a. John looked *up* the book. / John looked the book *up*.
 b. John threw *out* the garbage. / John threw the garbage *out*.

The two variants appear to be semantically equivalent; both SCVs with predictable meanings and SCVs with unpredictable meanings exhibit the word order alternation (cf. (4)a-b and Dehé 2002: 5-11).⁵ However, there appears to be a structural difference between the two word orders: particles may have a modifier in the V-NP-prt order only. This is illustrated in (5).

- (5) a. John looked (**right*) *up* the book. / John looked the book (*right*) *up*.
 b. John threw (**right*) *out* the garbage. / John threw the garbage (*right*) *out*.

The presence of *right* has often been assumed to indicate the projecting status of the particle it precedes (e.g. den Dikken 1995: 38-41, Neeleman 1994: 278, Neeleman and Weerman 1993, Ramchand and Svenonius 2002). On the basis of this assumption, it could be hypothesised that the particles in the second phrases in (5)a-b, as opposed to those in the first phrases in (5)a-b, project a phrase. We could, in other words, postulate the two structures in (6).

- (6) a. V-X-NP (to *look up* the information, to *throw out* the garbage)
 b. V-NP XP (to *look* the information *up*, to *throw* the garbage *out*)

Right, however, is generally interpreted as a temporal modifier ('right away'), with scope over the event denoted by the SCV (cf. the discussion of *helemaal* 'completely' in 4.3.1). This modifier differs from modifiers such as *completely* and *straight* in that it may generally appear in SCV constructions with spatial particles as

⁵ SCVs like *to look up* in (4)a have conventionalised meanings but are not idiomatic: both the particle and the verb contribute their meaning to the SCV meaning, the particle *up* may express the same meaning ('physical/cognitive/perceptual accessibility') in other SCVs (e.g. *to call up*), and new SCVs in which *up* expresses this meaning may be formed productively (e.g. *to beep up the surgeon*). This shows that these SCVs are compositional (see 4.1, 4.2, and 4.4).

well as in SCV constructions with non-spatial particles (cf. *to look the book right/*completely/*straight up, to read the poem right/*completely/*straight out*). I will illustrate below that many particles that allow *right*-modification cannot appear in typical XP positions. If particles that are preceded by *right* (or post-object particles in general) are analysed as XPs, these facts remain unaccounted for. This is why I will propose a syntactic structure different from (6)b for SCV constructions with *right*.

Dehé (2002, see esp. section 4.2 and the references given there) shows that the two word orders in English SCVs are pragmatically different: SCV constructions with sentence/VP focus and with focused direct objects have the word order in (6)a, but SCV constructions with defocused NPs, providing background information, have the word order in (6)b (Dehé 2002: 122-133). These observations are in conformity with the *Focus Last* generalisation (Dehé 2002: 109).

Support for the influence of focus in the word order alternation in English SCV constructions comes from SCV constructions with pronouns: pronouns generally contain old information (thus being defocused) and may only appear in the pre-particle position. This is illustrated in (7)a. Focused pronouns, however, appear in the post-particle position ((7)b).

- (7) a. *John *called up* him. / John *called* him *up*.
 b. No, John has *called up* HIM, not HER.

The contrast in the possibility of inserting *right* in the pre-particle position, illustrated in (5) above, can also be related to focus: *right* puts the SCV into focus; it can be characterised as a focus marker. SCVs that are modified by *right*, then, must be associated with focus. I will show below that this can be realised by extraposing the particle (and the focus marker), which leads to the word order in (6)b. SCV data with pronouns and with the modifier *right*, then, show a perfect correlation between the position of the particle and the focus properties of the SCV construction.

English particles can be distinguished from resultative phrases such as the AP *orange* and the PP *to the hospital* in (8)a by their syntactic distribution: whereas all particles may appear in the pre-object position, undisputed resultative phrases may not do so. This is illustrated in (8)b.

- (8) a. John painted his bike *orange*. / John took Mary *to the hospital*.
 b. *John painted *orange* his bike. / *John took *to the hospital* Mary.

These examples show that, like Dutch particles, English particles are structurally different from resultative phrases, which points to a specific SCV structure. I suggest that English particles are non-projecting words that are generated to the immediate right of the verb (and show up sentence-finally in case the SCV is focused, see below). According to this SCV structure, the V-prt-NP order is the neutral word order of English SCV constructions, and the particle is a non-projecting word that combines with a verbal head to form an SCV. This is illustrated in (9) (cf. 4.5).

- (9) $[[V^0-X]_{VP-NP}]_{VP}$

(9) implies that English SCV constructions are structurally similar to Dutch SCV constructions (the only structural difference being that English particles and direct object NPs are postverbal instead of preverbal, which is related to the OV/VO distinction). Support for the claim that the V-prt-NP order is the basic word order of English SCV constructions is provided by the fact that English SCVs allow this order with any non-pronominal NP, regardless of its length or complexity, and by the fact that it is the most frequent order (Los 2004). Dehé (2002) illustrates that this claim is furthermore supported by the behaviour of SCVs in SCV topicalisation constructions, gapping constructions, and *wh*-constructions (see the sections 2.3.2, 3.2, 3.4, and 3.5 in Dehé 2002), as well as by data from a speech production experiment.

As opposed to what is claimed in (9), however, Dehé (2002) does not claim that the particle and the verb form a phrase, but claims that these two elements form a complex word. Nevertheless, she is aware of the fact that English SCVs do not behave as words in that (1) they may be syntactically separated by the direct object NP, and (2) they are left-headed, thus not obeying the Right-hand Head Rule (Dehé 2002: 239) (the second fact is also problematic for analyses according to which English SCVs form words only in the V-prt-NP order, such as Toivonen 2003: 166-176). These two non-word-like properties of SCVs, then, appear to be unaccounted for in Dehé's analysis. An analysis of SCVs as phrases (cf. (9)), however, provides an account of these two properties: being phrases instead of words, SCVs are (1) syntactically separable, and (2) not expected to obey the Right-hand Head Rule (for more on the V-NP-prt order, see below).

Like Dutch particles, many English particles have meanings that are dependent on their use in the SCV construction, but such particles nevertheless productively form SCVs (see note 5). These properties can be accounted for by analysing these English SCVs as instantiations of phrasal lexical templates that contain a fixed particle slot and an open slot for the verb and are linked to a specific meaning (cf. 8.2). This is illustrated in (10).

- (10) template: [V-up]_V 'to cause to become accessible by V-ing'
 instantiations: *look up (the word), call up (Mary), beep up (the surgeon)*

English also appears to have quite a few SCVs that are based on templates with two open slots. That is to say, there seem to be more English SCVs than Dutch SCVs in which particles express their basic, spatial meaning instead of a conventionalised, construction-specific meaning (cf. 8.2, see 9.3 for more on the semantic properties of English SCVs).

If a particle or SCV is associated with focus, the particle appears sentence-finally. I claim that this is the result of the information structure (IS) rule in (11) in combination with a stylistic rule of particle extraposition (see below).⁶

⁶ (11) is a simplification of (64) in Jackendoff (2002a: 414); I have left out the optional element First Focus, which only occurs in sentences with paired foci and is not relevant to the discussion here.

(11) (Topic) (Common Ground) Focus

The rule in (11), which is a formalisation of the above-mentioned *Focus Last* generalisation (cf. Jackendoff 2002a: 247-251, 410), specifies that every clause contains a *focus*, and that clauses may, in addition, contain a *topic* (old/given information) and a *common ground* (information that is neither the topic, nor the focus of the clause). IS is assumed to represent a subtier of the semantic tier (i.e. of conceptual structure), besides the descriptive tier (representing semantic structures such as those given in chapter 5 of this study) and the referential tier (cf. Jackendoff 2002a: 394 and 408-417). At the interface with the descriptive tier, the rule in (11) leads to the coindexation of focus with a particular constituent in the semantic structure. At the interface with syntax, it leads to the coindexation of focus with a particular syntactic constituent. At the interface with phonology, finally, it leads to the coindexation of focus with high stress.

The syntactic structure (SS) of English SCV constructions is given in (9) above. If the direct object NP provides background information, focus is on the SCV. Focus on a phrase is generally realised by coindexing either the whole phrase or only a part of it with a particular focus position, depending on the syntax of the language and the construction in question (cf., for instance, Zeller 2003: 187-188). Focus on English SCVs, which are phrases, is realised by coindexing the particle, which is the part of the SCV that bears stress, with the sentence-final focus position. I suggest that this is formulated in a stylistic rule of particle extraposition. Stylistic rules are syntactic rules that are *not* part of the syntactic core of the grammar, which constitutes of phrase structure rules and defines the syntactic well-formedness of utterances, specifying the hierarchical relations between parts of phrases. Stylistic rules form an independent component of syntactic rules, specifying the stylistically conditioned word order variation in a language, that is, the word order variation that is dependent on information-structural aspects such as focus (cf. Koster 1978: 2, 54-64, Rochemont 1978). English thus appears to have a stylistic rule of particle extraposition, which is given in (12).

(12) [V-X]-NP > V-NP-X
Condition: [V-X] bears focus.

The stylistic rule in (12) states that focus on an SCV is realised by extraposing the particle. The fact that it is the particle (and not the verb) that is realised in the sentence-final focus position can be related to the stress properties of SCVs, the particle being stressed within the SCV. It was noted above that the core syntax of the language in question also constrains the options of focus realisation. That is, coindexing the particle (and not the verb) with the sentence-final focus position results in a linear order of elements that conforms to the word order of other constructions (S-V-O-X, see below). The realisation of the whole SCV in the sentence-final focus position also appears to be excluded by the syntactic properties of English, according to which sentences with the word order S-O-V-X are not well-formed.

The stylistic rule in (12) is (partly) based on the IS rule in (11); it can be seen as the syntactic correlate of a specific instantiation of this IS rule. This stylistic rule,

then, represents the fact that particle extraposition is enforced by the information structure.⁷

Starting from the syntactic structure (SS) in (13)a, focus on the SCV leads to the application of the stylistic rule of particle extraposition in (13)b, which results in the word order in (13)c.⁸

- (13) a. SS: $[[V^0-X]_V NP]_{VP}$
 b. stylistic rule: $[V-X]-NP > V-NP-X$
 Condition: $[V-X]$ bears focus.
 c. word order: verb – direct object NP – PARTICLE

The particle is realised sentence-finally in (13)c (the capitals in (13)c indicate that the particle is in the focus position, i.e. that it is associated with focus stress). Instantiations of (13)c are given in (14)a.

- (14) a. John *looked* the information *UP*.
 John *threw* the garbage *OUT*.
 John *turned* Mary *DOWN*.

The construction may, alternatively, have sentence focus or VP focus, which results in the constructions in (14)b. The direct object NP may also have focus. This results in the constructions in (14)c (cf. Dehé 2002: 122-133).

- (14) b. John *looked up* the information.
 John *threw out* the garbage.
 John *turned down* Mary.
 c. John *looked up* THE INFORMATION.
 John *threw out* THE GARBAGE.
 John *turned down* MARY.

As noted above, *right* is a temporal modifier, and like other temporal modifiers, it has scope over an event. This is generally the event denoted by the SCV. I assume that *right* is generated as an adverb in the VP, as indicated in (15)a. What is special about the temporal modifier *right* is that it puts the event it modifies into focus; *right* functions as a focus marker (FM). By modifying the SCV, *right* thus puts the SCV into focus. According to the IS rule in (15)b, focused elements are realised sentence-finally. The application of this rule, then, would lead to extraposition of the SCV together with the FM *right*. According to the stylistic rule of particle extraposition in (12), however, focus on an SCV is realised by extraposing only the particle (the element that can be associated with focus stress), and not the whole SCV. The

⁷ There are many other phenomena where a particular syntactic realisation is enforced by information-structural properties (word order alternations in double object constructions, the formation of pseudo-cleft constructions (see Jackendoff 2002a: 408-410), etc.). These, too, could be accounted for by postulating stylistic rules.

⁸ See the remainder of this section for arguments in favour of the assumption of a single syntactic structure for the two word orders in English SCV constructions (esp. the discussion of (25)).

application of this rule thus leads to extraposition of the particle, together with the FM *right*. This is indicated in (15)d.

- (15) a. SS: $[[V^0-X]_V NP \textit{right}]_{VP}$
 b. IS rule (Topic) (Common Ground) Focus
 c. stylistic rule: $[V-X]-NP > V-NP-X$
 Condition: $[V-X]$ bears focus.
 d. word order: verb – direct object NP – FM PARTICLE

If the particle is realised sentence-finally (cf. (14)a), the word order of English SCV constructions resembles that of constructions with resultative phrases (such as the AP *orange* and the PP *to the hospital* in (16)a below, which, as we have seen, can be distinguished from particles in that they may not appear in the pre-object position). Constructions with resultative phrases are assumed to have the syntactic structure in (16)b (or, alternatively, a Small Clause structure: $[V [NP AP]_{SC}]_{VP}$).

- (16) a. John painted his bike *orange*.
 John took Mary *to the hospital*.
 b. SS: $NP [V NP XP]_{VP}$

I thus claim that the constructions in (14)a and those in (16)a, which have similar word orders, have different syntactic structures: whereas the constructions in (14)a are based on the SCV template (cf. (13)), those in (16)a have the syntactic structure in (16)b.

In addition to having similar word orders, the constructions in (14)a and those in (16)a are semantically similar (but not identical, see below): English particles may express results, and resultative phrases also express results (cf. 5.2 on Dutch resultative particles, see 9.3.1 for more on the semantics of English particles). The effect of this is that the two constructions have often been confused. That is to say, SCV constructions have often been analysed as being structurally identical to constructions with resultative phrases. We have seen, however, that the two constructions have different syntactic structures, SCV constructions having the structure in (9) and constructions with resultative phrases having the structure in (16)b. Evidence for this structural difference is provided by the distributional difference between particles and resultative phrases shown in (4) vs. (8) above: particles may appear in the pre-object position (which I assume is their base position), but resultative phrases may not do so (another distributional difference between particles and resultative phrases will be discussed below).⁹

In addition to this structural difference, there are semantic differences between SCV constructions and constructions with resultative phrases: particles generally have less concrete meanings than resultative phrases. Furthermore, SCVs generally fall into classes in which the same particle expresses the same conventionalised meaning and which may be extended productively (cf. note 5). This property is

⁹ There are a few adjectival resultative predicates that may appear in the particle position, such as *clean* in *to wipe clean the table* and *open* in *to push open the door*. These can be analysed as adjectival particles, being non-projecting words that form a V' with the verbal head (cf. 4.5 and 7.5.3).

accounted for by analysing SCVs as instantiations of phrasal lexical templates that (generally) contain a fixed particle slot and an open slot for the verb (cf. 8.2).

English SCV constructions, which have the syntactic structure in (17)a, are thus generated independently of constructions with resultative phrases, which have the syntactic structure in (17)b.

- (17) a. $[[V^0-X]_{V'} NP]_{VP}$
 b. $[V NP XP]_{VP}$

The SCV structure $[V^0-X]_{V'}$ in (17)a represents a phrasal lexical template that may contain lexically fixed slots. This template generalises over existing SCVs and is used to form new SCVs (cf. section 8.2). Focus on the SCV leads to the application of the stylistic rule of particle extraposition, which results in the particle showing up in sentence-final position, that is, in the word order verb-NP-prt. This word order resembles that of constructions with resultative phrases like *orange*.¹⁰

The syntactic structure of English SCV constructions ((17)a) and that of English constructions with resultative phrases ((17)b) are synchronically generated independently, but I assume that these two constructions are diachronically related to one another. That is to say, the SCV construction is assumed to be a grammaticalisation of the resultative construction, having developed its own semantic and morphosyntactic properties. My hypothesis is that the grammaticalisation of the SCV construction has proceeded as follows, starting from resultative constructions with the syntactic structure (SS) in (18)a (obviously, this hypothesis needs to be checked against historical data).

- (18) Diachronic basis:
 a. SS: V-NP-XP
 b. example: *John paints his bike orange.*

The presence of a 'heavy' or otherwise focused direct object NP in constructions like (18)b could lead to this NP showing up in sentence-final position, as in (20) below. I suggest that such NP extraposition resulted from the application of the stylistic rule in (19), which specifies the extraposition of focused NPs (among which heavy NPs).¹¹ It was noted above that stylistic rules need to be distinguished from phrase

¹⁰ Unlike English, Dutch does not have a stylistic rule of particle extraposition. This is related to the fact that the default focus position is the position left-adjacent to the sentence-final base position of the verb in Dutch. Since particles are realised in this position, no rule of particle extraposition is required for the formation of constructions in which the SCV has focus (and in which the particle is associated with the focus position and with focus stress) in Dutch.

¹¹ An example of an Old English construction with the word order V-AP/PP-NP is given in (i) (constructions with this word order are relatively infrequent in Old English, van Kemenade p.c.). As expected under my analysis, this example contains a focused (quantified) direct object (see note 12 below for more on the supposed XP status of *ut*).

(i) And aflymde ut *ii cingas*.
 and expelled out two kings
 'And expelled two kings.' (*Anglo-Saxon Chronicle C*, p. 944, 1-1146)

structure rules belonging to the 'core' of syntactic rules: stylistic rules formulate the syntactic possibilities in a language that are linked to stylistic phenomena.

- (19) V-NP-AP/PP > V-AP/PP-NP
Condition: NP bears focus.

Los (2004) points out that long, complex NPs may still be extraposed in resultative constructions. This is illustrated in (20)b, containing the resultative PP *into her briefcase*.

- (20) a. She stuffed [all the documents containing indiscriminating evidence]_{NP} [*into her briefcase*]_{PP}.
b. She stuffed [*into her briefcase*]_P [all the documents containing indiscriminating evidence]_{NP}.

The stylistic rule in (19) illustrates that extraposition of the direct object NP results in the verb and the resultative phrase being adjacent. These two adjacent elements could be interpreted as a semantic unit and, correspondingly, be reanalysed as a syntactic unit. This is illustrated in (21)a (this reanalysis appeared to be possible only for resultative predicates that consisted of a single word and met certain prosodic requirements, cf. 7.3.4). The effect of the reanalysis was that the resultative predicate could no longer project its own phrase and became a particle (X), as shown in the SS in (21)b (see section 7.3 for similar diachronic developments in Dutch).

- (21) a. Reanalysis: V-AP/PP-NP > [V-AP/PP]-NP
b. SS: [V-X]_V-NP

In addition to the adjacency of the verb and the resultative predicate, the fact that the resultative predicates that underwent this structural reanalysis (*out*, *up*, etc.) had very general meanings possibly played a role in this reanalysis. That is, these resultative predicates allowed for extended (e.g. metaphorical) interpretations and, thus, for unitary interpretations with the verb (the reanalysis of the verb and the resultative predicate as a semantic and syntactic unit presumably also led to the further loss of independent, lexical meaning in the resultative predicate, cf. 7.3.3).

In sum, I claim that the initially derived word order in (19) above, which resulted from the direct object NP being in focus and, consequently, being extraposed, was reanalysed as a (base-generated) syntactic structure (the SS in (21)b). This led to the grammaticalisation of the SCV construction, which developed its own morphosyntactic and semantic properties.¹² The result of these changes is

Further research should point out whether constructions with this word order indeed generally contain focused direct objects, as is the case for (i).

¹² The diachronic development sketched here was, of course, complicated by the OV>VO changes that occurred in the history of English. Historical data illustrate that alleged Old English particles are actually still resultative XPs, which have non-conventionalised, spatial meanings and do not exhibit a specific 'particle syntax' (alleged Old English SCV constructions generally having the word order NP-prt-V, or, in clauses with V2, V-NP-prt).

that the two syntactic structures (the SCV structure in (17)a and the structure of resultative constructions in (17)b) are synchronically generated independently, having their own morphosyntactic and semantic properties. The unique morphosyntactic and semantic properties of SCV constructions are accounted for by assuming that SCVs have the structure in (17)a and are instantiations of phrasal lexical templates.¹³

According to this analysis, SCV constructions with (defocused) pronouns also have the syntactic structure in (17)a above: $[[V^0-X]_{VP} \text{ pronoun}]_{VP}$. Since, however, pronouns give old information, focus is on the SCV in such constructions, so that the application of the stylistic rule in (12) above leads to extraposition of the particle in such constructions. This results in the word order V-pronoun-prt (e.g. *call her up* vs. **call up her*). If a pronoun is focused, however, it is associated with the sentence-final focus position, and the stylistic rule of particle extraposition does not apply (e.g. *call up HIM, not HER*, cf. (14)c).

It was noticed in chapter 4 that English particles appear to participate in topicalisation and copula constructions more easily than the corresponding Dutch particles. As illustrated in (22)-(23), however, it is not the case that all English particles participate in these two constructions (and in some cases, the relation with Dutch is the other way around, cf. the differences between *up* 'used up' and its Dutch counterpart *op*, discussed in 4.3.3).

- (22) a. ... and *out* he *threw* the garbage/*down* he pulled the handle/*up* he *threw* the ball.
 b. ... and **up* he *looked* the word/**down* he *wrote* the message/**up* she *used* her money.
- (23) a. *throw* the garbage *out* result: The garbage is *out*.
pull the handle *down* result: The handle is *down*.
throw the ball *up* result: The ball is (went) *up*.
 b. *look* the word *up* result: **The word is up*.
write the message *down* result: **The message is down*.
use the money *up* result: **The money is up*.

I noticed in section 4.3.4 that the Dutch counterparts of the copula constructions in (23)a contain prepositional phrases and adverbs like *naar buiten* 'out, to the outside' and *omhoog* 'upwards'. This shows that the predicative position in the copula construction is an XP position, and the same holds for the position of topicalised (fronted) elements (cf. 4.3.2). In both of these constructions, the particle is isolated

Particles with non-spatial meanings developed a little later, probably after the transition to VO had set in (see also 9.3.2 and the references given there). There is, however, still much uncertainty about the exact relationship between the development of conventionalised particle meanings, the development of a specific 'particle syntax', and the transition from OV to VO in Middle English, which is currently being investigated by Marion Elenbaas (cf. Elenbaas 2003, to appear).

¹³ Van Kemenade and Los (2003) also claim that SCV constructions are diachronically related to constructions with resultative phrases but synchronically generated independently of such constructions, and also claim that synchronic SCV formation is likely to be based on lexical SCV templates.

from the verb: in the copula construction, the verb is absent, and in the fronting construction, the particle is set apart from the rest of the VP. Both of these constructions, then, syntactically break up the SCV construction.¹⁴ This is why particles, being non-projecting words that generally express conventionalised meanings (i.e. meanings that are dependent on the cooccurrence of the particle with the verb), cannot occur in these constructions, which accounts for the unacceptability of (22)b-(23)b.

The fronting construction and the copula construction are thus available to syntactically and semantically independent XPs. Examples of such XPs are *orange* in *to paint the bike orange*, which has the syntactic structure [V-NP-XP]_{VP}. The combinations in (22)a-(23)a, however, also appear to have this syntactic structure: the use of *out*, *down*, and *up* in these constructions illustrates that these elements are semantically as well as syntactically independent of the verb. These combinations, then, are not based on the SCV structure (cf. Dehé 2002: 264-266, Toivonen 2003: 166-176).

Nevertheless, the combinations in (22)a-(23)a exhibit the word order alternation that is typical of SCVs (e.g. *pull up the ship*, *throw out the garbage*) and is unavailable to constructions with undisputed resultative phrases (e.g. **paint orange the bike*, **take to the hospital Mary*). This can be accounted for by assuming that combinations like *pull up* ('upwards') are ambiguous between having the syntactic structure of constructions with resultative phrases, repeated in (24)a below, and having the syntactic structure of SCV constructions, repeated in (24)b. These combinations, which constitute only a fairly restricted subset of the English SCVs, thus exhibit layering. That is, they may have either the structure of the source construction ((24)a), in which case their particles may be used in fronting and copula constructions, or the structure resulting from the reanalysis (the SCV structure, (24)b), in which case they may have the word order V-prt-NP (cf. the remarks on *afmaken* 'to finish' and *opeten* 'to eat up' in 4.5, 5.6, and 7.3.1).

- (24) a. [V NP XP]_{VP}
 b. [[V⁰-X]_{V'} NP]_{VP}

Conversely, the combinations in (22)b-(23)b, which do not participate in fronting and copula constructions, are unambiguous instantiations of the SCV template in (24)b, and this seems to hold for most SCVs.

Crucially, the analysis proposed here accounts for the following facts: (1) *all* English SCVs exhibit the focus-related particle alternation ((25)a) and may be modified by *right* in the V-NP-prt word order ((25)b), (2) *only a subset* of the English particles may appear in the copula construction and the topicalisation construction ((25)c), (3) the copula construction and the topicalisation construction are available to *all* resultative phrases ((25)d), and (4) as opposed to particles,

¹⁴ This is not the case in constructions with the order V-NP-prt, which result from the whole SCV being focused and the application of the stylistic rule of particle extraposition; stylistic rules are not assumed to be part of the syntactic core of the grammar.

resultative phrases may generally *not* appear to the left of the direct object NP ((25)e).^{15, 16}

- (25) a. *look {up} the information {up}, write {down} the message {down}, throw {out} the garbage {out}, throw {up} the ball {up}*
 b. *look the information right up, write the message right down, throw the garbage right out, throw the ball right up*
 c. *The information is *up*. *The message is *down*. The garbage is *out*. The ball is *up*.
 d. The bike is *orange*. Mary is *at the hospital*.
 e. **paint orange* the bike, **take to the hospital* Mary

It is important to note that the data in (25) can *not* be accounted for by identifying the V-NP-prt order, which is available to *all* English particles, with the syntactic structure of constructions with resultative phrases such as *orange* in *paint the bike orange* in (24)a (as is done in, among many others, Dehé 2002, den Dikken 1995, Elenbaas 2003, to appear, van Kemenade and Los 2003, Neeleman 1994, Neeleman and Weerman 1993, Ramchand and Svenonius 2002, and Toivonen 2003: 166-176). This is because in that case, we would expect *all* English particles to participate in XP constructions like topicalisation and the copula construction as well. In contrast, the data are accounted for if we posit an SCV structure that is different from the syntactic structure of constructions with resultative phrases, and posit layering for that subset of the English particles that participate both in unambiguous particle constructions (constructions with V-prt-NP order) and in unambiguous XP constructions (topicalisation constructions and copula constructions).¹⁷

The foregoing discussion points to a parallel between English particles and Dutch particles: whereas *all* Dutch particles are separated from the verb in the verb raising construction (optionally, see (26)b below) and in clauses with V2 (obligatorily), *only a subset* of these particles may appear in topicalisation constructions and copula constructions (e.g. the particles of *opeten* 'to eat up' and *afmaken* 'to finish', cf. 4.5 and 5.6). I have illustrated that these Dutch facts, too, are accounted for by positing a specific SCV syntax and by positing structural

¹⁵ It was noted above that the modifier *right* puts the SCV into focus. Crucially, SCVs with and without conventionalised meanings may be modified by *right*, see (25)b (cf. note 5).

¹⁶ Directional resultative PPs (*to the hospital*) must be changed into locational resultative PPs (*at the hospital*) in order to be used felicitously in the copula construction.

¹⁷ It has been argued that the use of constructions such as *shoes off* for 'take off the shoes' by children points to an analysis of English particles as resultative phrases. I claim that such constructions do not contain a particle, but contain a resultative phrase *off* (i.e. *off* in *to take off* exhibits layering). Constructions such as *shoes off*, then, can be seen as instantiations of an NP-XP structure that expresses a predicative relation. These constructions are, in other words, not manifestations of the SCV system. Note that only a few adpositions are used in such constructions; this is not the case for adpositions that function as particles in general. Children do, for instance, not say *cookie up* ('eat up the cookie') or *table off* ('wipe off the table'). This is accounted for if we analyse *up* in *to eat up* and *off* in *to wipe off* as particles (that do not exhibit layering), i.e. as non-projecting words that form a V' (and a semantic unit) with the verb. See also the remark on similar acquisition data in Dutch in 3.3.2 and the remarks on English particles and the copula construction in 4.3.3.

ambiguity (X vs. XP) for this subset of the particles, which exhibit layering. A difference between Dutch and English is that the proportion of particles that exhibit layering appears to be larger in English than in Dutch (in particular, in English there are particles with spatial meanings that exhibit layering, which is not the case for Dutch, cf. 4.3.3 and 4.3.4). However, a representative set of Modern English SCVs needs to be investigated in order to check this conjecture.

In both English and Dutch, the weight of the two word orders of SCV constructions, which are given in (26), seems to be balanced: neither of the two word orders appears to succeed in pushing the other one out over time.

- | | | | |
|---------|----------|-----------------|---|
| (26) a. | English: | 1. verb-prt-NP | (<i>look up the word</i>) |
| | | 2. verb-NP-prt | (<i>look the word up</i>) |
| b. | Dutch: | 1. aux-prt-verb | (<i>wilde op zoeken</i> 'lit. wanted up search') |
| | | 2. prt-aux-verb | (<i>op wilde zoeken</i> 'lit. up wanted search') |

The non-separated word orders in (26) (a1/b1) appear to be reinforced by the fact that particles generally have abstract, extended meanings: the presence of such meanings leads to the verb and the particle being easily interpreted as a semantic unit. This, in turn, may lead to a preference to treat these two elements also as a syntactic unit: [*look up*] *the word*, *wilde* [*op zoeken*]. The English word order in (26)a1 is furthermore reinforced by direct objects often being in focus. As for the separated word orders in (26) (a2/b2), these appear to be reinforced by their resemblance to constructions with resultative phrases (cf. *paint the bike orange*; *oranje wilde verven* 'wanted to paint orange'). The result of these two forces, which can be said to be pulling in opposite directions, seems to be that the two word orders are in equilibrium.¹⁸

Many other analyses have been proposed for English SCVs. These can be classified into two categories: analyses according to which the two word orders in SCV constructions are generated in parallel and analyses according to which the two word orders are derivationally related to one another. Both types of analysis generally claim that SCV constructions with V-NP-prt order are structurally identical to constructions with resultative phrases. That is to say, parallel analyses generally claim that V-NP-prt constructions represent V-NP-XP structures and are generated in parallel with V-prt-NP constructions. Most derivational analyses also claim that V-NP-prt constructions represent V-NP-XP structures, and claim that V-prt-NP constructions are derived from these by, generally, particle movement (e.g. Small Clause analyses and related analyses, such as Ramchand and Svenonius 2002). According to my analysis, on the other hand, structures with resultative phrases and SCV structures are generated in parallel (i.e. independently). Note, however, that I do *not* claim that structures representing the two SCV orders are generated in parallel: the V-NP-prt order is derived from the V-prt-NP order by the application of the stylistic rule of particle extraposition. The two SCV orders, then, are claimed to be derivationally related to one another.

¹⁸ A difference between the English and the Dutch constructions in (26) is that the relationship with focus is less clear for the Dutch word order alternation than it is for the English word order alternation.

We have seen that analyses that structurally identify SCV constructions with V-NP-prt order with constructions with resultative phrases require additional assumptions to account for the following two facts: (1) unlike resultative phrases, particles may appear to the left of the direct object NP (V-prt-NP), and (2) *all* particles allow the V-NP-prt order, but *only a subset* of these particles participate in XP constructions in general. Conversely, by positing a specific SCV syntax and allowing for non-isomorphism between semantic structures and syntactic structures, my proposal accounts for the fact that although particles may be semantically similar to resultative phrases, having the same participant-licensing properties and forming constructions with the same argument-structural and lexical-aspectual properties, they behave syntactically differently from such phrases (cf. the sections 5.2, 5.4, and 8.3.1).¹⁹

Derivational analyses come in two types: analyses that, like the one I propose, claim that the V-prt-NP order is the basic order (e.g. Dehé 2002 and Neeleman 1994) and analyses that claim that the V-NP-prt order is the basic order (e.g. Ramchand and Svenonius 2002).²⁰ Derivational analyses furthermore differ in their claims about how the derived order comes about. In general, this is claimed to be due to either particle movement (e.g. the analysis of Neeleman 1994, which postulates predicate movement, and Small Clause analyses, which postulate particle incorporation) or NP movement. These analyses also differ in their claims about the motivation for this movement (e.g. focus or case).

Analyses according to which the two word orders are generated in parallel generally claim that English SCVs with V-prt-NP order represent words: [V⁰-particle]_v⁰ (Toivonen 2003: 166-176). It was noted above that such analyses predict that English SCVs would obey the Right-hand Head Rule, which they do not. Analyses according to which SCV constructions with V-prt-NP order represent morphological units generally claim that SCV constructions with V-NP-prt order are structurally identical to constructions with resultative phrases (e.g. *to paint the bike orange*). We have seen that such analyses appear to be unable to account for the English SCV data satisfactorily.

My analysis of English SCVs undoubtedly leaves many questions unanswered, and, naturally, needs to be checked against modern as well as historical data. Nevertheless, I hope to have provided an illustration of how the insights gained from my analysis of Dutch SCVs could be applied to English SCVs. Although

¹⁹ Most derivational analyses are set in a Chomskyan framework and claim that the two word orders are related through 'core' syntactic movement (either particle movement or NP movement). By contrast, I propose that particle extraposition results from the application of a stylistic rule.

²⁰ Although my analysis is similar to that of Dehé (2002) in taking the V-prt-NP order to be the neutral order and relating the other order to SCV focus, Dehé's analysis differs from mine in many respects. Dehé claims, for instance, that the verb and the particle form a word (Dehé 2002: 239) and that the V-NP-prt order results from (focus-related) particle stranding, which takes place when V moves to *v* (Dehé 2002: 245). She also posits a syntactic Focus feature, thereby claiming that focus-related movement is part of the 'core' syntax (and not of the stylistic component).

alternative analyses may be possible for these SCVs, I have tried to show which range of data an analysis of English SCVs must, in my view, capture.

9.2.3 SCVs in the Scandinavian languages

Toivonen (2003) argues for a structure of Swedish SCVs that is similar to the structure that I propose for Dutch SCVs (but with a postverbal instead of a preverbal particle). Like Dutch SCVs, Swedish SCVs can be distinguished from combinations of verbs and resultative phrases on the basis of their syntactic distribution. This is illustrated in (27), which is taken from Toivonen (2003: 26).

- (27) a. Petra försöker sparka {**mot skogen*} bollen {*mot skogen*}.
 Petra tries kick towards forest-the ball-the towards forest-the
 'Petra tries to kick {towards the forest} the ball {towards the forest}.'
 b. Petra försöker sparka {*bort*} bollen {**bort*}.
 Petra tries kick away ball-the away
 'Petra tries to kick {away} the ball {away}.'

Whereas resultative PPs, such as *mot skogen* 'towards the forest' in (27)a, may only appear postverbally (V-NP-PP, *V-PP-NP), particles, such as *bort* 'away' in (27)b, may only appear preverbally (V-prt-NP, *V-NP-prt). Toivonen illustrates that this difference can be accounted for by analysing particles, as opposed to resultative phrases, as non-projecting words that form a phrase with the verb: [V⁰-X]_v.²¹ The semantic properties and productivity properties of Swedish SCVs suggest that these SCVs, too, can be analysed as instantiations of phrasal lexical templates with or without fixed slots (Toivonen, however, claims that Swedish SCVs are formed by combining the lexical entries of the verb and the particle, cf. 3.3.2, see also 3.4.1 and 8.4.1).

As I have done for Dutch particles, Toivonen shows that Swedish particles may belong to different syntactic categories: there are adpositional particles (*kasta ut* 'to throw out'), adjectival particles (*vicka loss* 'to wiggle free'), and nominal particles (*köra bil* 'to drive (a car)').²²

In contrast to what is the case for Swedish particles, Toivonen (2003: 160-162) argues that Danish elements that have been assumed to be particles are not non-projecting words, but fully projecting phrases. Evidence for this analysis comes from the fact that these elements may only appear in the same syntactic position as PPs, which is to the right of the direct object NP (V-NP-prt/PP). Elements that have been assumed to be Danish particles are thus not adjacent to the verb, so that they cannot form a syntactic unit with the verb. Toivonen claims that this implies that these elements are actually resultative PPs instead of particles (which is in conformity with the observation that they may generally be modified). Danish, then,

²¹ It was noted in section 3.3.2 that Toivonen assigns these phrases the label V⁰ instead of V'. Nevertheless, she explicitly argues against a morphological analysis of Swedish SCVs.

²² Toivonen (2003: 17, 89) also discusses particles that are verbal, such as *bygga* 'build' in *han lät bygga villan* 'he had the house built' (cf. Stiebels and Wunderlich 1994, Zeller 2001: 7). See section 10.1 for more on such verbal particles.

appears not to have particles; it appears not to have a specific SCV syntax (cf. Toivonen 2003: 162 and the references given there).

Norwegian SCVs exhibit a word order alternation similar to that of English SCVs (see Áfarli 1985, Svenonius 1994, 1996, and Taraldsen 2000). Like English particles, non-modified Norwegian particles may appear either to the left or to the right of the direct object NP, whereas modified particles may only appear to the right of this NP. This is illustrated in (28) (which is from Áfarli 1985: 75, 80).

- (28) a. Jon *sparka* {*ut*} hunden {*ut*}.
 Jon kicked out dog-the out
 'Jon kicked {out} the dog {out}.'
 b. Vi *sparka* {**rett ut*} hunden {*rett ut*}.
 we kicked straight out dog-the straight out
 'We kicked {straight out} the dog {straight out}.'

Some Norwegian adjectives that function as resultative predicates may also alternate, as illustrated in (29) (note, however, that such adjectives generally form, with the verb, a lexicalised combination).

- (29) a. Aktivistene *slapp* {*fri*} prøvekaninene {*fri*}. (Svenonius 1996: 12)
 activists-the let free test-rabbits-the free
 'The activists released the guinea pigs.'
 b. Vi *heiste* {*løs*} vraket {*løs*}. (Ibid.)
 we hoisted loose wreck-the loose
 'We hoisted the car free.'

Svenonius (1996, note 4) notices that adjectives in the pre-object position typically appear in bare forms, not showing gender and number agreement (e.g. *fri* and *løs* in (29) are bare forms, identical to the masculine singular form; the agreeing forms would be *frie* (plural) and *løst* (neuter singular)). We thus see a relationship between the particle syntax of certain adjectives and their bare, non-projecting structure (cf. 4.5 and 7.5.3).²³

Like English SCV constructions, Norwegian SCV constructions with pronouns may only have the word order V-pronoun-prt (unless the pronoun has focus, in which case the word order V-prt-pronoun is the only option).

These data suggest that, like English SCVs, Norwegian SCVs can be analysed as consisting of a non-projecting word and a verbal head, relating the post-object particle position to SCV focus (see 9.2.2). In other words, I propose the syntactic structure in (30) for Norwegian SCV constructions, which I also propose for English SCV constructions.²⁴

²³ There appears to be much inter-speaker variation on this agreement issue (Svenonius p.c., cf. also Áfarli 1985, note 8), which might indicate that changes are in progress here. I have to leave this issue as a topic for further research.

²⁴ As is the case for the analysis proposed here, English and Norwegian SCVs are claimed to have the same structure in most analyses (although the existing analyses differ in the sort of structure they posit for both types of SCV).

(30) $[[V^0-X]_{VP} NP]_{VP}$

Like English SCVs and SCVs in the other Germanic languages, Norwegian SCVs often have conventionalised meanings (cf. Åfarli 1985), but also show compositionality and productivity. These properties can be accounted for by assuming that Norwegian SCVs are instantiations of lexical SCV templates in which the particle slot may be lexically fixed.

Unlike what is the case in English, however, certain resultative PPs may also alternate in Norwegian. This is illustrated in (31) (taken from Åfarli 1985: 79).

- (31) a. Vi tok {*av oss*} jakkene {*av oss*}.
 we took off us coats-the off us
 'We took {off us} the coats {off us}.'
 b. Vi sette {*på han*} hatten {*på han*}.
 we put on him hat-the on him
 'We put {on him} the hat {on him}.'

However, not all resultative PPs may alternate, as illustrated in (32) (Åfarli 1985: 91-92).

- (32) a. Vi tok {**av det*} maten {*av det*}. (det 'it' = the table)
 we took off it food-the off it
 'We took {off it} the food {off it}.'
 b. Vi tok {*?av han*} takgrinda {*av han*}. (han 'it' = the car)
 we took off it roof-rack-the off it
 'We took {off it} the roof rack {off it}.'

Åfarli claims that various idiosyncrasies are involved in the possibilities of resultative PPs to alternate, which may vary from dialect to dialect and cannot be formalised in strict rules (cf. (32)a-b).²⁵ In any case, the alternation possibilities of Norwegian PPs appear to be quite restricted compared to those of bare Ps. Since more data need to be consulted in order to be able to assess whether SCV constructions exploiting this option indeed occur with some generality and under

²⁵ Åfarli's (1985) examples suggest that only resultative PPs containing pronouns may alternate. Svenonius (1996, note 5) claims that the alternation is most common with PPs containing reflexive pronouns (e.g. *Svo henti hann {frá sér} hnífunum {frá sér}* 'then he threw the knife down' (lit. 'from REFL')), and that it furthermore occurs with certain expressions containing bare nouns. Svenonius (p.c.), however, gives the examples in (i)a-b, both of which contain full NPs.

- (i) a. Vi tok {*av barna*} genserene {*av barna*}.
 we took off children-the sweaters-the off children-the
 'We took the sweaters off the children.'
 b. Hunden slet {*av eieren*} lua {*av eieren*}.
 dog-the tore off owner-the hat-the off owner-the
 'The dog tore the hat off the owner.'

Nevertheless, the examples given in the literature suggest that the range of PPs allowing the alternation appears to be semantically restricted: these PPs generally have NP complements with animate referents.

which conditions this may happen, I assume for the moment that Norwegian SCVs have the structure in (30).

My analysis of Norwegian SCVs resembles that of Åfarli (1985) in some respects. Åfarli claims that these SCVs are non-morphological units with lexical properties, which behave as syntactic units in that they take a single subject and a single direct object. Åfarli's analysis differs from mine, however, in that he claims that Norwegian SCVs are generated as resultative V-NP-XP constructions. According to Åfarli, the XP and the verb are reanalysed as a unit (called a "complex predicate-kernel") in such constructions, which may trigger movement of the XP to the pre-object position. This results in the word order V-XP-NP. It has to be noted, however, that reanalysis is generally assumed to take place only between elements that are linearly adjacent. This would imply that the XP movement has to take place *before* the verb and the XP are reanalysed as a complex predicate-kernel. But in that case, it is not obvious what the trigger for such XP movement could be.

If we compare Åfarli's analysis to the one proposed for English SCVs in 9.2.2, which I also propose for Norwegian SCVs, we see that both analyses claim that the verb and the resultative XP are reanalysed as syntactic units. But whereas I claim that this reanalysis took place during the development of the SCV system and has resulted in a specific SCV syntax, Åfarli claims that it takes place synchronically, that is, each time a particle appears in the pre-object position. Furthermore, Åfarli structurally identifies SCV constructions with post-object particles with constructions with resultative phrases. We have seen in 9.2.2, however, that such an analysis cannot account for the English SCV data satisfactorily, and presumably the same holds for the Norwegian SCV data. Another difference between Åfarli's analysis and mine is that Åfarli claims that the verb and the XP end up adjacently as a consequence of XP movement (the trigger for which is not obvious, see the remark above), whereas I claim that this is a consequence of focus-related NP extraposition.

Other analyses of Norwegian SCVs are Small Clause analyses and related analyses (Ramchand and Svenonius 2002, Svenonius 1994, 1996, cf. also Taraldsen 2000). These analyses appear to be confronted with the same problems that arise for similar analyses of English SCVs, which have been discussed in section 9.2.2.

A final remark on SCVs in the Scandinavian languages is that the particle necessarily precedes the verb in derivations of SCVs in these languages. This is illustrated for Swedish in (33) (taken from Toivonen 2003: 38).

- (33) a. SCV: Karin *lånande ut* böckerna. (**utlånande*)
 Karin lent out books-the
 'Karin lent the books out.'
- b. derived N: De ska träffa alla *utlånare* på kreditmarknaden. (**lånare ut*)
 they will meet all out-lenders on credit-market-the
 'They will meet all the lenders on the credit market.'

This phenomenon can be accounted for as follows: derivational suffixes like *-are* attach to verbs and must, therefore, be right-adjacent to a verb: [V-*are*]_N. In order to

ensure this adjacency between the verb and the suffix, the particle is realised preverbally, as in (33)b above.²⁶

Unlike Scandinavian particles, English particles are not realised preverbally in derivations of SCVs. These particles thus remain postverbal, which indeed seems to lead to problems in SCV suffixation. That is, SCV suffixation appears to be less common in English than in Swedish (and in Dutch, cf. Booij 2002b: 326) and to result in variable forms. This is illustrated in (34) (the judgments in (34) are tentative; they are based on the numbers of hits resulting from a *Google* search).²⁷

- (34) a. to *lend out* money:
the *lend(-)outers / ?lenders(-)out / ?lenders(-)outer / ??out(-)lenders
(cf. (33)b)
- b. to *read out* stories:
the *read(-)outers / *readers(-)out / *readers(-)outer / ??out(-)readers
(cf. Dutch *voorlezen* 'to read to someone else', *voorlezers* 'people who read to others')

9.2.4 Conclusion

Most Germanic languages have SCVs: phrases consisting of a non-projecting word and a verbal head that generally have conventionalised meanings but may be formed productively. These Germanic SCVs are structurally as well as semantically different from combinations of a verb and a resultative phrase (or a modifier phrase). The semantic properties of these SCVs can be accounted for by analysing them as instantiations of (partly fixed) phrasal lexical templates.

Particles across the Germanic languages appear to be grammaticalisations of XP-V/V-XP constructions (which may be of different types, see 9.3.2). Across the Germanic languages we also find elements that are (still) ambiguous between having the XP-V/V-XP structure and having the SCV structure, exhibiting layering. The Germanic languages seem to differ, however, with respect to the proportion of particles that exhibit layering, thereby showing different synchronic results of a similar diachronic development.

²⁶ Compare Dutch NPs that are derived from PP-V phrases by suffixation, where adjacency between the verb and the suffix is ensured by realising the PP as a postnominal complement (Booij 2002a: 200):

- (i) a. PP-V phrase: *aan pleinvrees lijden* 'to suffer from agoraphobia'
b. derived noun: *lijd-ers aan pleinvrees* 'suffer-ers from agoraphobia'

The fact that this option is generally excluded in SCV suffixation can be related to the non-projecting status of particles.

²⁷ Gerundive formation, however, is possible in English (McIntyre 2001c): *the lending out of the money, the reading out of the poem*.

9.3 The semantics and the diachrony of SCVs across the Germanic languages

9.3.1 Particle types across the Germanic languages

It was illustrated in chapter 5 that Dutch particles may function as resultative predicates, modifiers, relators, or Aktionsart markers. This section will focus on the particle types listed in Table 9.1.

TABLE 9.1. DUTCH PARTICLE TYPES AND EXAMPLES.

particle type	examples
A. resultative particles	<i>het boek op-zoeken</i> 'to look up the book' <i>de schoenen in-lopen</i> 'to wear in the shoes'
B. modifying particles	<i>de groenten voor-koken</i> 'to cook the vegetables beforehand' <i>over de film na-praten</i> 'to discuss the film afterwards'
C. relator particles	
1. orienting particles	<i>de jongen aan-kijken</i> 'to look at the boy' <i>het publiek toe-spreken</i> 'to talk to the audience'
2. path particles	<i>de sonate door-spelen</i> 'to play through the sonata' <i>de brief over-lezen</i> 'to read over/through the letter'
D. continuative particles	<i>uren door-lopen</i> 'to continue walking for hours' <i>uren door-lezen</i> 'to continue reading for hours'

It appears that not all of the particle types represented in Table 9.1 are available in all of the other Germanic languages. Orienting particles (Table 9.1-C1, cf. 5.3.3), for instance, are also present in German (35), but appear to be absent in English (36).

- (35) a. den Jungen *anlachen*
the boy at-laugh
'to laugh at the boy'
- b. dem Jungen *zunicken*
the boy to-nod
'to nod at the boy'
- (36) a. to *laugh at* the boy – *to *laugh* the boy *at*
b. to *nod to* the boy – *to *nod* the boy *to*

Productively used modifying particles also appear to be absent in English. There are, for example, no English counterparts for the Dutch SCV constructions with modifying particles in Table 9.1-B and their German counterparts in (37) (cf. 5.3.2, including note 8).

- (37) a. das Gemüse *vorkochen*
the vegetables for-cook
'to cook the vegetables beforehand'
- b. den Film *nachbesprechen*
the film after-discuss
'to discuss the film afterwards'

SCVs such as *to cook for(e)* 'to cook beforehand' and *to discuss after* 'to discuss afterwards', then, do not exist; the words *for/fore* and *after* do not function as modifying particles in English.²⁸ The English counterparts of the Dutch adpositions *voor*, *na*, *aan*, and *toe* (*for/fore*, *after*, *at*, and *to*) do, in fact, not function as particles at all (that is, these elements do not function as resultative particles either). The same holds for *with*, which is the English counterpart of the Dutch word *mee* and the German word *mit*, both of which may function as either modifying or resultative particle (cf. 5.5.6).²⁹

Similarly, there appear to be no English path particles (cf. 5.3.4). To see this, compare the Dutch SCVs with path particles in Table 9.1-C2 and the German SCVs with path particles in (38) with the English combinations in (39).

- (38) a. 1. das Buch *durchlesen*
the book through-read
'to read through the book'
2. die Sonate *durchspielen*
the sonata through-play
'to play through the sonata'
3. Alternativen *durchsprechen*
alternatives through-talk
'to talk over alternatives'
- b. den Brief *überlesen*
the letter over-read
'to read over/through the letter'
- (39) a. to *read through* the book – to *read* the book *through*
to *look through* the book – to *look* the book *through*
to *play through* the sonata – to *play* the sonata *through*
b. to *read over* the letter – *to *read* the letter *over*

Jackendoff (1997a: 541) and McIntyre (2004: 539) assume that *through* is a particle in the examples in (39)a. There is, however, a semantic difference between the two word orders in these examples (which is noticed by McIntyre 2004: 539): constructions with the word order V-*through*-NP are atelic, but constructions with the word order V-NP-*through* are telic. It was noted in section 9.2.2 that the two word orders of English SCV constructions do generally not exhibit any semantic difference (but they do exhibit pragmatic differences). There is, for instance, no semantic difference between the two word orders of the SCV constructions in (40).

- (40) a. to *throw up* the ball – to *throw* the ball *up*
b. to *look up* the information – to *look* the information *up*
c. to *write down* the number – to *write* the number *down*

²⁸ There are a few English SCVs with particles that function as modifiers, such as *to look up* (*from the book*), *to look out*, and *to speak up*. All of these SCVs appear to be intransitive. They seem to represent isolated cases rather than productive patterns (see also note 39 in 9.3.2).

²⁹ Note that the Dutch forms *mee* and *toe* are the postpositional/predicative forms of the prepositions *met* and *tot* (cf. 5.3.3). *Aan* may hold a similar relation with the preposition *naar*.

What seems to be the case, then, is that the constructions in (39) do not contain SCVs; constructions with the word order *V-through-NP* contain a prepositional PP (*through the book*, (41)a) and constructions with the word order *V-NP-through* contain a postpositional PP (*the book through*, (41)b).³⁰

- (41) a. to read [*through* [the book]_{NP}]_{PP}
 b. to read [[the book]_{NP} *through*]_{PP}

The semantic difference between the two word orders in (39) thus illustrates that *through* in these constructions is not a particle; it is not a path particle like Dutch *door* in Table 9.1-C2 and German *durch* in (38)a. The other Dutch path particle, *over*, is also exemplified in Table 9.1-C2, and its German counterpart, *über*, in (38)b above. The example in (39)b above shows that the English counterpart of this particle, *over*, does not function as a path particle either.

In short, English does not have productively used particles that function as modifiers (modifying particles) and relators (orienting particles, path particles). But English has continuative particles. Examples of English continuative particles are given in (42) (some of these are from McIntyre 2004). Like Dutch continuative particles, these English continuative particles exhibit the "atransitivity effect" (see 5.3.5).

- (42) a. to walk on, to read (*the book/*books) on
 b. to hang about, to play (*the guitar/*songs) around

The English particle *on* appears to be the semantic counterpart of the Dutch continuative particle *door*; it shows up in the same construction types and forms SCVs with the meaning 'to continue V-ing'. I will show in the next section that the fact that this English continuative particle has the form *on* instead of the form *through*, which is the cognate of *door* (the Dutch cognate of *on* being *aan*), provides an important clue to its diachrony.

Orienting particles and path particles being absent in English, there appear to be no relator particles in English, that is, no particles that license a Ground participant (cf. 5.3.3 and 5.3.4).³¹ Svenonius (2003a) claims that this difference

³⁰ Postposition constructions, such as the constructions on the right-hand side in (39), appear to be exceptional in English (as in most VO languages). In contrast to what is the case for Dutch/German, there are, for instance, no postpositional counterparts for English prepositional constructions with *up*, *in(to)*, *out (of)*, and *over*. This is illustrated in (i).

- (i) a. John drove *up* the mountain. – *John drove the mountain *up*.
 b. John walked *into* the house. – *John walked the house *in(to)*.
 John was swimming *in* the lake. – *John jumped the lake *in*.
 c. John ran *out of* the house. – *John ran the house *out (of)*.
 d. We flew *over* the ocean. – *We flew the ocean *over*.

The postposition constructions with *through* in (39) appear to be relics from an older language stage.

³¹ English also appears to lack particles belonging to the third type of relator particle: double-participant particles (e.g. *de manager het document aan-reiken* 'to hand the file to the

between Dutch and German on the one hand and English on the other hand generalises to a difference between, in his terminology, the West Germanic languages (Dutch, German, Afrikaans, and Yiddish) and the North Germanic languages (English and the Scandinavian languages). Note that this classification of the Germanic languages almost correlates with the OV/VO distinction, Dutch, German, and Afrikaans being OV languages and English and the Scandinavian languages being VO languages. Yiddish, however, is generally classified as a VO language, although it has certain OV characteristics (cf. Diesing 1997, Kroch 2001). In any case, Svenonius (2003a) claims that particles that license a Ground participant (i.e. relator particles) are present in the West Germanic languages, but are absent in the North Germanic languages.

In addition to lacking relator particles, English lacks (productively used) modifying particles (cf. Table 9.1-B). In transitive constructions with such particles, the direct object referent is licensed by the verb (see 5.3.2). So although Svenonius (2003a) is right in claiming that English particles never license a Ground participant, which accounts for the absence of English SCVs with relator particles, this cannot be the whole story; this claim does not account for the absence of English SCVs with modifying particles. The correct generalisation, then, appears not to be that English particles *never license a Ground participant*, but rather that these particles *always license a Figure participant* (if we disregard for a moment the continuative particles).³² Since particles that license a Figure participant are resultative particles, this implies that *all* transitive English SCVs have a resultative particle.³³

In contrast, transitive Dutch (and German) SCVs may have a resultative particle, a modifying particle, or a relator particle (see Table 9.1). This means that the direct object NP in Dutch/German SCV constructions may be the Figure of the particle (in SCV constructions with a resultative particle), the Ground of the particle (in SCV constructions with an orienting particle or a path particle), or may be licensed by the verb (in SCV constructions with a modifying particle) (cf. Table 5.1 in appendix 1).

In sum, there is a contrast between Dutch and German on the one hand and English on the other hand regarding the functions that particles may perform in the LCS of the SCV construction. Whereas Dutch and German particles may function as modifiers, relators, continuators, or resultative predicates, only the latter two functions appear to be available to English particles. On the basis of Svenonius (2003a) it can be hypothesised that this contrast represents a more general one; a contrast between the West Germanic languages and the North Germanic languages (as defined in Svenonius 2003a). The next subsection will relate these synchronic observations to the diachrony of the different particle types discussed in chapter 7.

manager', *de keeper de bal toe-spelen* 'to play the ball to the goalkeeper'). These particles appear to license both a Figure participant and a Ground participant (see section 5.5.15.4).

³² More specifically, English particles always license *only* a Figure participant, cf. the previous note.

³³ Transitive English SCVs may also have a stative predicative particle (in the case of stative transitive SCVs), which also licenses a Figure participant (see 5.5.15.5).

9.3.2 The diachronic hypothesis

It was illustrated in chapter 7 that Modern Dutch particles have developed out of different phrases that were adjacent to the verb in older stages of the language. The diachronic relationships we posited for the various Dutch particle types are given in Table 9.2 (cf. (51) in 7.3.4).³⁴

TABLE 9.2. THE DIACHRONY OF MODERN DUTCH PARTICLE TYPES.

particle type	source	reanalysis pattern
A. resultative	resultative phrases	...-NP-AP/PP-V ⁰ > ...-NP-[X-V ⁰] _{V'}
B. modifying	modifier phrases	...-AdvP-V ⁰ > ...-[X-V ⁰] _{V'}
C. relator	postpositions in spatial PPs	...-[NP-P] _{PP} -V ⁰ > ...-NP-[X-V ⁰] _{V'}
1. orienting		
2. path		
D. continuative	postpositions in temporal PPs	...-[NP-P] _{PP} -V ⁰ > ...-NP _{ADV} -[X-V ⁰] _{V'}

The previous section showed that the same particle types exist in German, but that English lacks productively used modifying particles, orienting particles, and path particles (having only resultative particles and continuative particles). It was noted that Svenonius (2003a) claims that these differences correspond to a difference between West Germanic, which includes the Germanic OV languages and Yiddish, and North Germanic, which includes the Germanic VO languages (with the exception of Yiddish).

Unlike the other Germanic VO languages, Yiddish has preverbal instead of postverbal particles (cf. the examples in Svenonius 2003a), thus resembling, in this respect, the Germanic OV languages. I will in this section refer to the two groups of Germanic languages distinguished in Svenonius (2003a) as *Germanic OV languages* and *Germanic VO languages like English*, with the latter of which I aim at Germanic VO languages with postverbal particles (thus excluding Yiddish). We could thus say that particles in Germanic OV languages may license either a Figure participant or a Ground participant, whereas only the first option is available to particles in Germanic VO languages like English.

It follows from the foregoing that there are two differences between particles in Germanic OV languages and particles in Germanic VO languages like English: (1) a difference in the functions that particles may perform (cf. section 9.3.1), and (2) a difference in the position of the particle relative to that of the verb: particles in Germanic OV languages are preverbal, but particles in Germanic VO languages like English are postverbal (cf., e.g., *opzoeken* vs. *to look up*).

In the light of the diachronic analysis of Dutch particles proposed in chapter 7, according to which these particles are grammaticalisations of elements that may show up left-adjacent to the verb, we could formulate the following hypothesis: the absence of certain particle types in VO languages like English is due to the fact that the historical sources of these particle types were not adjacent to the verb in the relevant historical stages of these languages. Since particles are postverbal in these

³⁴ The subscript ADV in the last reanalysis pattern in Table 9.2 indicates that the NP in this structure functions as an adverbial modifier (cf. section 7.3.2.4).

languages, this concerns right-adjacency instead of left-adjacency (cf. 7.3.1). We could thus hypothesise that the historical sources of modifying particles, orienting particles, and path particles were not right-adjacent to the verb in these Germanic VO languages at the time of the development of the SCV system. These elements could, consequently, not be reanalysed with the verb as SCVs in these languages. By contrast, these elements were left-adjacent to the verb in the older stages of the Germanic OV languages, so that they could be reanalysed with the verb in these languages (cf. 7.3).³⁵

This hypothesis needs to be checked against modern as well as historical data from the Germanic VO languages. Although this cannot be done within the scope of a single chapter, I would like to discuss some initial support for it here.

To start with, English does not have SCVs with orienting particles and path particles (cf. 9.3.1). The hypothesis is that the absence of these two SCV types in English can be related to the VO character of (the relevant historical stage of) the language. As for Dutch, both of these SCV types are diachronically related to constructions with spatial postpositional PPs (see 7.3.2.2 and 7.3.2.3). The reanalysis pattern we posited for these Dutch SCVs is given in (44).

- (44) a. transitive source constructions: NP-[NP-P]_{PP}-V > ...-NP-[X-V]_{V'}
 b. intransitive source constructions: [NP-P]_{PP}-V > NP-[X-V]_{V'}

The postposition and the verb are adjacent in both the structure for transitive PP-V constructions ((44)a) and that for intransitive PP-V constructions ((44)b). These two elements could, consequently, be reanalysed as a syntactic unit in Dutch, as indicated in (44).

Unlike OV languages, VO languages generally do not have postpositional PPs, but have prepositional PPs. Although there are clear exceptions to this generalisation (such as Hungarian, which is a VO language with postpositions, see the discussion below), English has indeed predominantly prepositional PPs (and even in Old English, postpositions were already quite rare, Los p.c.). Constructions

³⁵ It follows from this hypothesis that I assume that the English SCV system developed at a time when the language had already (certain) VO characteristics. Support for this assumption comes from the fact that English particles are postverbal: on the basis of the assumptions that (1) particles cross-linguistically developed out of elements that were reanalysed with the verb as a syntactic unit and (2) reanalysis presupposes adjacency, postverbal particles can be hypothesised to have developed out of elements that showed up *right*-adjacent to the verb, in between the verb and the direct object NP (cf. 9.2.2). This, in turn, implies that at the time of this development, English VPs were not verb-final, and thus that English was not a (predominantly) OV language anymore (cf. van Kemenade and Los 2003). Moreover, there is evidence for the claim that Old English 'particles' were actually not particles, but phrases; these elements were semantically and syntactically independent of the verb (Elenbaas 2003, Fischer et al. 2000, chapter 6, Hiltunen 1983, van Kemenade and Los 2003). They lost their semantic and syntactic independence during the Middle English period, in which the language started to develop from an OV language into a VO language (cf. Fischer et al. 2000, chapter 5). During this period, these elements developed non-spatial, metaphorical meanings and came to form a semantic and syntactic unit with the verb. In other words, they grammaticalised into particles (Elenbaas 2003, Hiltunen 1983).

with prepositional PPs in VO languages can be assumed to have the structures on the left-hand side in (45).

- (45) a. transitive source constructions: $V-NP-[P-NP]_{PP} \ll [V-X]_{V'}-NP-NP$
 b. intransitive source constructions: $V-[P-NP]_{PP} > [V-X]_{V'}-NP$

These structures show that the verb and the preposition are adjacent in the structure for intransitive PP-V constructions only; in the structure for transitive PP-V constructions, the first NP intervenes. Such transitive constructions in VO languages, then, give explicit evidence against the interpretation of the verb and the preposition as a unit. This might have prevented prepositions from being reanalysed with the verb and thus from developing into particles in VO languages like English. In this way, we can account for the observation, made in Svenonius (2003a), that Germanic VO languages like English and the Scandinavian languages do not have particles that license a Ground participant (i.e. no orienting particles and no path particles).³⁶

The foregoing discussion illustrates that the absence in VO languages like English of particle types that are historically related to postpositions in OV languages could be related to the VO character of these languages. This may also account for the fact, noticed in the previous subsection, that English does not have a continuative particle that is formally related to the adposition *through*, and in this respect differs from Dutch, which has the continuative particle *door*. This Dutch continuative particle is also assumed to be historically related to a postposition, namely to the postposition *door* that forms temporal PPs (see 7.3.2.4). The prepositional counterpart of this postposition is not right-adjacent to the verb in transitive constructions in VO languages (cf. (45)a), and this might have prevented the reanalysis of this preposition with the verb as an SCV in a VO language like English. This then might account for the fact that *through* does not function as a continuative particle (see also the remarks on continuative particles in Swedish and Hungarian below).

Nevertheless, English has continuative particles, *on* being the one that most closely resembles *door* semantically, forming SCVs with the meaning 'to continue V-ing'. Los (2004) shows that this particle appears to have developed out of the resultative particle *on*, which in its earlier uses meant "towards something in the way of approach; approaching in space, time, or condition", with unaccusatives like *go* and *come*, and "onward, forward, in space of time" (Los 2004: 98). The resultative particle *on* 'onward, on to the next point' still exists in Modern English, as the examples in (46), provided with their LCSs, illustrate (cf. (3) and (9) in 5.2).

³⁶ These languages do not have double-participant particles either, cf. note 11 in 7.3.2.2.

- (46) a. The police *moved* the bystanders *on*.
 [[CAUSE (*the police*), BECOME [ON (*the bystanders*)]], BY {*move (the police)*}]
- b. The bystanders *moved on*.
 [BECOME [ON (*the bystanders*)], BY {*move (the bystanders)*}]
- c. John *passed* the documents *on*.
 [[CAUSE (*John*), BECOME [ON (*the documents*)]], BY {*pass (John)*}]
- d. John *walked on*.
 [BECOME [ON (*John*)], BY {*walk (John)*}]

On 'on to the next point' predicates of a Theme in the examples in (46): the referents of *the bystanders*, *the documents*, and *John* end up 'onwards, at the next point'. This implies that this particle forms either transitive ((46)a, (46)c) or unaccusative ((46)b, (46)d) SCVs. Like constructions with resultative particles in general, constructions with the resultative particle *on* are telic (cf. *the police had moved on the bystanders in 10 minutes/*for ten minutes*).

The particle *on* may also be interpreted as a continuative particle in Modern English intransitive constructions. This is illustrated in (47) (cf. (41) in 5.3.5).

- (47) a. The bystanders *moved on* for hours.
 [CONTINUE *move* WITHOUT INTENDED GOAL (*the bystanders*) {for hours}]
- b. John *walked on* for hours.
 [CONTINUE *walk* WITHOUT INTENDED GOAL (*John*) {for hours}]

Continuative particles do not predicate of a Theme, thus forming unergative constructions.³⁷ Like other constructions with continuative particles, the constructions in (47) are atelic. This appears from the presence of the temporal modifier *for hours* in (47)a-b.

The discussion of (46)-(47) illustrates that Modern English intransitive constructions with the particle *on* may be ambiguous between containing a resultative particle and containing a continuative particle (the context, however, generally ensures disambiguation, containing, for instance, temporal modifiers that indicate either telicity or atelicity). On the basis of this it can be hypothesised that earlier constructions with the resultative particle *on* and unaccusative verbs like *go* and *come* contained a potential for reanalysis (cf. Los 2004: 98). That is, a reinterpretation as indicated in (48) could take place in such constructions, involving the bleaching of the resultative meaning of *on*.

- (48) *They moved on*.
 'They went onward by moving.'
 > 'They went on and on moving.'
 > 'They continued moving.'

³⁷ Compare the difference in auxiliary selection in the Dutch examples in (i)a-b, containing the resultative particle *door* 'on to the next point' ((i)a) and the continuative particle *door* 'continuously' ((i)b).

- (i) a. dat Jan alvast *doorgelopen is* (unaccusative)
 'that John already walked further (onwards)'
- b. dat Jan de hele dag *doorgelopen heeft* (unergative)
 'that John continued walking all day'

The semantic change indicated in (48) implies a change from unaccusativity to unergativity: whereas *to go onward by moving* is unaccusative, *to continue moving* is unergative (cf. note 37 and the remarks on unaccusativity in 7.3.2.3). The reinterpretation appears to have led to the development of a new pattern, which exhibits its own semantic and morphosyntactic properties. This pattern is given in (49)a. The (unergative) constructions in (49)b can be formed on the basis of this pattern.

- (49) a. pattern:
 to V on 'to continue V-ing'
- b. instantiations:
 to walk on 'to continue walking', *to read on* 'to continue reading', *to play on* 'to continue playing'

Despite the reanalysis, the older pattern (cf. (46): *to V NP on* 'to (cause NP) to become onward') also remained productive. The reinterpretation, then, has led to layering.

It thus appears that the postposition/preposition *through* could not be reanalysed as a continuative particle in English, but that the resultative particle *on* could be reanalysed as such (see also McIntyre 2004).³⁸ In this way, the difference between Dutch and English regarding the type of continuative particle that is used (*door* vs. *on*) can be related to the word order difference between these languages. Support for this hypothesis about the dichotomy in the type of continuative particle comes from other Germanic VO languages, such as Swedish. The Swedish continuative particle is *på*, exemplified in (50)a. The examples in (50)b-c (taken from Toivonen 2003: 136) illustrate that this form is also used as a resultative particle with the meaning 'on, working' ((50)b) and as a preposition with the meaning 'on X' ((50)c).

- (50) a. Arne lyssnade inte utan pratade på.
 Arne listened not but talked on
 'Arne did not listen but continued talking.'
- b. Hon sätter på kaffet och radion.
 she set on coffee-the and radio-the
 'She puts on the coffee and turns on the radio.'
- c. På överkroppen tar hon på sig en knastrande urtvättad kofta.
 on upper-body-the takes she on SELF a crackling out-washed sweater
 'On her upper body, she puts on a crackling, faded sweater.'

³⁸ It has to be noted that the process whereby resultative particles develop into continuative particles is not exclusive to VO languages like English. A similar process appears to have occurred in the case of the Dutch and German continuative particles *rond* 'around' (but see note 18 in chapter 7) and (*he*)*rum* 'around' (and the same holds for the English continuative particle *around*, cf. Los 2004 and McIntyre 2004). The Dutch particle *aan*, which is the cognate of English *on*, may also be used as a continuative particle (*maar wat aanrommelen* 'to mess around a bit'), although this use of *aan* is not very productive.

In conformity with our expectations, then, Swedish patterns with English as regards the element that functions as a continuative particle (but see the end of this section for more on the types of particle we find in Swedish; see also the remarks on continuative particles in Hungarian below).

In addition to not having orienting particles and path particles, which are assumed to be historically related to postpositions, English does not have modifying particles (see 9.3.1), and presumably the same holds for the other Germanic VO languages.³⁹ Modifying particles are historically related to modifier phrases. The reanalysis pattern we posited for such particles in OV languages is given in (51) (cf. 7.3.1).

(51) OV: NP-AdvP-V > NP-[X-V]_v

The question that needs to be answered is whether the absence of these particles in English can also be related to the VO character of (the relevant historical stage of) this language. Modifier phrases generally follow the direct object NP in VO languages; transitive constructions with modifier phrases in such languages are assumed to have the structure in (52).

(52) VO: V-NP-AdvP >< [V-X]_v-NP

The structure in (52) shows that the direct object NP intervenes between the verb and the modifier phrase in the VO counterpart of the source construction that we posited for modifying particles in OV languages. This then might have prevented modifier phrases from being reanalysed with the verb as SCVs in VO languages. The fact that a language like English does not have modifying particles could thus be related to its VO character.⁴⁰

To sum up, the contrast between the absence of certain particle types in Germanic VO languages like English and the presence of these particle types in

³⁹ Although English does not have productively used modifying particles, there are a few isolated SCVs with particles that function as modifiers, such as *to look up* and *to speak up*. I assume that these SCVs have developed individually, in either of the following two ways: (1) SCVs like *to look up* (which contains the modifying particle *up* 'upwards') could have been formed analogously to existing SCVs like *to throw up the ball* and *to lift up the table*, which contain the resultative particle *up* 'upwards'. Analogy being a non-rule governed, word-by-word process, this did not lead to the formation of productively used English modifying particles. (2) SCVs like *to speak up* could have developed out of SCVs like *to turn up (the volume)*, *to stir up (enthusiasm)*, and *to work up (an appetite)*, in which *up* is a resultative predicate with the meaning '(more) active', which is interpreted as 'louder' in certain contexts (cf. Lindner 1983: 126, 129-130). The development of intransitive SCVs like *to speak up* involves the Theme becoming implicit, which happens incidentally in specific contexts (cf. the discussion of Dutch SCVs like *inlopen* 'to warm up' in 5.5.5). This development, then, does not represent a systematic process either.

⁴⁰ A full analysis of the absence of modifying particles in English must also account for the fact that, as opposed to what I have assumed for a verb and a resultative phrase in section 9.2.2, a verb and a modifier phrase could, apparently, not end up adjacently as a result of focus-related NP extraposition. This, however, has to remain as a topic for further research.

Germanic OV languages appears to be related to the fact that the historical sources of these particles were not right-adjacent to the verb in the relevant historical stages of these VO languages. The effect of this is that these elements could not be reanalysed with the verb as SCVs in these languages. This implies that the absence of certain particle types in VO languages like English supports the diachronic analysis of Dutch particles given in chapter 7, according to which these particles are historically related to various elements that may be left-adjacent to the verb in older stages of Dutch.⁴¹

Additional support for the word order hypothesis comes from Hungarian, which is a non-Germanic language with a productive SCV system. The Hungarian SCV system resembles the Germanic SCV system in many ways. Hungarian particles (preverbs) are, for instance, syntactically separable, but the SCVs they form behave like syntactic units in various respects (cf. Ackerman and Webelhuth 1998, Kiss 2004, 2005). This suggests that these SCVs, too, consist of a non-projecting word and a verb. Hungarian is a VO language (e.g. objects follow the verb), but has many OV characteristics. It has, for example, postpositional PPs and preverbal particles. As for the types of particle, (53) shows that Hungarian has path particles (Kiss 2004, p.c.).

- (53) a. Péter *elolvasta* a levelet.
Peter through-read the letter
'Peter read through the letter.'
- b. János *átolvasta* a könyvet.
John through-read the book
'John read through the book.'
- c. János *átlapozta* a könyvet.
John through-leafed the book
'John leafed through the book.'

I have illustrated in the foregoing that path particles are also present in Germanic OV languages like Dutch and German, but are absent in a Germanic VO language like English. I have also illustrated that Dutch path particles have developed out of postpositions. The question that needs to be answered, then, is whether Hungarian postpositions similarly provide a plausible source construction for the path particles in (53).

Indeed, Hungarian has postpositions that are semantically and formally related to the particles in (53). But the PPs these postpositions form are post-verbal, constructions with such PPs having the structure in (54)a below. The verb and the postposition are not adjacent in this structure. The postposition, however, may show

⁴¹ Yiddish is a VO language that has some OV characteristics. I assume that these characteristics are related to the fact that the Yiddish SCV system is similar to that of Germanic OV languages in that (1) Yiddish particles are preverbal, and (2) these particles may function as relators (i.e. they may license a Ground participant, cf. Svenonius 2003a). My hypothesis is that postpositions could show up left-adjacent to the verb in older stages of Yiddish, so that they could be reanalysed together with the verb as a V', which led to the formation of Yiddish SCVs with preverbal relator particles (cf. the discussion of Hungarian below). I have to leave the verification of this hypothesis as a topic for further research.

up in the preverbal focus position, which leads to constructions with the word order in (54)b (Kiss p.c.). This word order can be seen as the result of the application of a stylistic rule (cf. 9.2.2). Crucially, preverbal postpositions in constructions with the word order in (54)b are undisputedly postpositions, and not particles. This appears from the fact that these postpositions carry agreement inflection; particles are not inflected, but are bare heads. The example in (54)b shows that the postposition and the verb are adjacent if the postposition shows up in the preverbal focus position. These two elements could, consequently, be interpreted as a semantic unit and be reanalysed as a syntactic unit; as an SCV (cf. (54)c). The result of the reanalysis is that the preverbal element cannot project a phrase anymore and becomes an (uninflected) bare head; a particle.

- (54) a. V-[NP-P]_{pp}
 b. P_{FOC}-V-NP
 c. [P-V]_v-NP

The semantic and formal resemblances between path particles and postpositions in Hungarian, in combination with the fact that such postpositions may show up in the preverbal focus position, could thus be assumed to account for the presence of path particles in Hungarian. We have seen that these particles are not present in all languages with an SCV system; they are absent in English.

Hungarian also has orienting particles. This is illustrated in (55) (which is taken from Kiss 2004).

- (55) a. Péter *ránézett* Évára.
 Peter at-looked Eve-at
 'Peter looked at Eve.'
 b. Péter *ráköszönt* Évára.
 Peter at-said-hello Eve-at
 'Peter said hello to Eve.'
 c. Péter *rámosolygott* Évára.
 Peter at-smiled Eve-at
 'Peter smiled at Eve.'

It was illustrated in section 7.3.2.2 that the Dutch orienting particle *toe* 'to' is historically related to the postposition *toe*. Katalin É. Kiss (p.c.) informs me that *rá* also used to be a postposition, which, like other postpositions, could show up in the preverbal focus position. In that case, this postposition could be reanalysed with the verb as a syntactic unit; as an SCV. The fact, then, that Hungarian, like Dutch and German, but unlike English, has orienting particles can also be related to the word order properties of this language.

Some examples of Hungarian SCVs with the continuative particle *át* are given in (56) (Kiss p.c.).

- (56) a. János *átolvassa* a délutánt.
 John through-reads the afternoon-ACC
 'John reads on the whole afternoon, John continues reading the whole afternoon.'

- b. János *átalussza* az éjszakát.
 John through-sleeps the night-ACC
 'John sleeps on all night, John continues sleeping all night.'

The examples in (56) show that the element that functions as a continuative particle in Hungarian is the element with the meaning 'through'. This element also functions as a path particle (cf. (53)) and as a postposition in temporal PPs, as shown in (57) (Kiss p.c., cf. 7.3.2.4).⁴²

- (57) a. Mary [két órán *át*]_{PP} aludt.
 Mary two hour through slept
 'Mary has been sleeping for three hours.'
 b. Péter [három napon *át*]_{PP} volt beteg.
 Peter three day through was sick
 'Peter has been sick for three days.'

Constructions with such temporal PPs could be assumed to represent the historical source of Hungarian SCVs with the continuative particle *át*. What we see, then, is that the Hungarian data with continuative SCVs are similar to the Dutch data with continuative SCVs (the Dutch continuative particle being *door*) and differ from the English data with continuative SCVs (the English continuative particle being *on* instead of *through*). As illustrated in (57), temporal PPs show up left-adjacent to the verb in Hungarian, so that a plausible reanalysis pattern is available for the development of the Hungarian continuative particle *át*.⁴³

In sum, Hungarian data with orienting particles, path particles, and continuative particles support the hypothesis according to which these particles are diachronically related to postpositions. These data also support the hypothesised relationship between the word order properties of a language and the particle types

⁴² Katalin É. Kiss informs me that the postposition *át* can be distinguished from the particle *át* by its stress properties (postpositions being unstressed and particles being stressed) and by its syntactic distribution (the postposition may not be separated from its NP complement; the PP as a whole can be anywhere in the sentence).

⁴³ The example in (i) below shows that there is no German continuative particle *durch* 'through' (but the German cognate of English *on*, *an*, cannot be used as a continuative particle either); the adverb *weiter* 'further' appears to be used instead to express continuity in German (cf. the remarks on the Dutch adverb *verder* 'further' in 5.3.5).

(i) noch ein bisschen (**durch*) (*weiter*) *laufen/lesen*
 still a bit through further walk/read
 'to continue walking/reading for a while'

The temporal postposition *durch*, however, shows up adjacent to the verb in German, as shown in (ii).

(ii) [die ganze Nacht *durch*]_{PP} *laufen/lesen*
 the whole night through walk/read
 'to walk/read all night long'

This temporal postposition has, apparently, not been reanalysed with the verb as an SCV in German, in contrast to what is the case for its Dutch and Hungarian counterparts. An explanation of this difference between German and Dutch/Hungarian has to remain as a topic for further research.

we find in this language. That is to say, although Hungarian is generally characterised as a VO language, its SCV system resembles that of the Germanic OV languages and differs from that of Germanic VO languages like English and the Scandinavian languages. We have seen that this can be related to some crucial OV characteristics of Hungarian: Hungarian has postpositions rather than prepositions, and these postpositions may show up (left-)adjacent to the verb in transitive constructions. Hungarian being typologically unrelated to Dutch and German, the Hungarian data furthermore illustrate that the variety of functions that particles may perform in the LCS of the SCV construction (see chapter 5) is not a peculiarity of Dutch and German or the Germanic OV languages: Hungarian particles may perform similar functions.⁴⁴

Like the Hungarian (and the Yiddish) data, the following Swedish data illustrate that it is not the OV/VO distinction per se that accounts for the differences in particle types across languages. These Swedish data also illustrate that these differences do not completely correlate with the distinction between Germanic languages with preverbal particles and Germanic languages with postverbal particles (which equals Svenonius' 2003a distinction between West Germanic languages and North Germanic languages) either. Instead, the specific word order properties of the individual languages seem to be relevant. This appears from the fact that Swedish, which has postverbal particles, seems to have orienting particles; *åt* 'at' and *till* 'to'. This is illustrated in (58) (Toivonen 2003: 154, p.c.).⁴⁵

- (58) a. Ash *sade åt/till* Thora att le. (particle, stress)
 Ash said at/to Thora to smile
 'Ash told Thora to smile.'
- b. Ash *sade åt/till* Thora det. (particle, stress)
 Ash said at/to Thora that
 'Ash told Thora that.'
- c. Ash *sparkade åt/till* Pelle bollen. (particle, stress)
 Ash kicked at/to Pelle ball-the
 'Ash kicked the ball to Pelle.'

Orienting particles license a Ground participant at LCS; the Ground of *åt/till* in (58)a-b is the referent of *Thora* and that of *åt/till* in (58)c is the referent of *Pelle*.⁴⁶ The existence of the Swedish particles *åt* and *till*, then, appears to contradict

⁴⁴ Hungarian does not seem to have productively used modifying particles (cf. Table 9.1-A, Kiss p.c.). My hypothesis is that this, too, could be accounted for by the word order properties of Hungarian, that is, by the syntactic position of modifier phrases in (older stages of) Hungarian.

⁴⁵ As for (58)a-b, the particles *åt* and *till* can be distinguished from their prepositional counterparts by their stress properties: unlike prepositions, particles are stressed. As for (58)c, containing an NP (*Pelle*) instead of a clause (*att le*) or pronoun (*det*), the preposition construction would have a different word order (*Ash sparkade bollen åt Pelle*). These data (as well as those in (59)), however, require further study, since it appears that in some cases the distinction between a particle and a preposition is not completely clear (Toivonen p.c., see also Svenonius 2003b).

⁴⁶ These Ground participants are syntactically (i.e. at f-structure, cf. 2.2.1) realised as the indirect objects of the SCV constructions, cf. (27) in 5.3.3.

Svenonius' (2003a) claim that North Germanic languages do not have particles that license a Ground participant. The existence of these particles appears to follow from the specific word order properties of Swedish. That is, the prepositions *åt* 'at' and *till* 'to' combine with verbs of saying, which often take clausal complements. Some examples of constructions with the preposition *åt* 'at' are given in (59) (in (59)a, the clausal complement is labelled as IP).

- (59) a. Ash *sade* [*åt* Thora]_{PP} [att le]_{IP}. (preposition, no stress)
 Ash said at Thora to smile
 'Ash told Thora to smile.'
 b. Ash *sade* [det]_{NP} [*åt* Thora]_{PP}. (preposition, no stress)
 Ash said that at Thora
 'Ash said that to Thora.'
 c. Ash *sparkade* [bollen]_{NP} [*åt* Pelle]_{PP}. (preposition, no stress)
 Ash kicked ball-the at Pelle
 'Ash kicked the ball to Pelle.'

The examples in (59) illustrate that complement NPs appear before PPs ((59)b-c, cf. (27) in 9.2.3), but that clausal complements, such as *att le* in (59)a, are extraposed in Swedish. The result of this is that the preposition ends up right-adjacent to the verb in constructions like (59)a. This could have led to the reanalysis of the prepositions *åt* 'at' and *till* 'to' with the verb as a syntactic unit, and thus to the formation of SCVs with orienting particles. The relevant reanalysis pattern is given in (60) (cf. 7.3.2.2).

- (60) Ash *sade* [*åt* Thora] [att le] > Ash [*sade åt*] [Thora] [att le]
 (P-OBJ) (OBJ) (I-OBJ) (OBJ)

According to the reanalysis pattern in (60), the verb *sade* and the preposition *åt* are reanalysed as a syntactic unit ([*sade åt*]) and the complement of the preposition *åt*, *Thora*, is reanalysed as the indirect object of this syntactic unit.

Unlike Swedish, English does not have SCVs with orienting particles (cf. section 9.3.1). The English counterpart of the Swedish construction in (59)a is (61).

- (61) John *told* (*at/*to) Mary to smile.

As opposed to what is the case in Swedish, an NP instead of a PP with *at/to* is used to express the participant toward which the talking is oriented (i.e. the Ground participant) in English. The effect of this is that the prepositions *at* and *to* do not show up right-adjacent to the verb in the relevant constructions in (older stages of) English. This then could be hypothesised to account for the absence of the orienting particles *at* and *to* in English.⁴⁷

⁴⁷ Swedish also appears to have path particles, as illustrated in (i) (these particles can be distinguished from the corresponding prepositions, Toivonen p.c.).

- (i) a. *läsa igenom* boken 'to read through the book'
 b. *gå igenom* allting 'to go through everything'
 c. *se över* problemet 'to look over the problem'

Other prepositions appear not to have grammaticalised into particles in English either. English has, for instance, no SCVs similar to the (non-existent) SCVs on the right-hand side in (62). One might wonder why such SCVs have not developed out of PP-V constructions like the ones on the left-hand side in (62), in which the preposition and the verb are adjacent.

(62)	PP-V	SCV	
	<i>look</i> [<i>down</i> the road] _{PP}	*[<i>look down</i>] _{V'} the road	– * <i>look</i> the road <i>down</i>
	<i>sit</i> [<i>in</i> the chair] _{PP}	*[<i>sit in</i>] _{V'} the chair	– * <i>sit</i> the chair <i>in</i>
	<i>swim</i> [<i>across</i> the river] _{PP}	*[<i>swim across</i>] _{V'} the river	– * <i>swim</i> the river <i>across</i>
	<i>drive</i> [<i>up</i> the hill] _{PP}	*[<i>drive up</i>] _{V'} the hill	– * <i>drive</i> the hill <i>up</i>

A possible account of the absence of particles that are diachronically related to prepositions in English was put forward in the beginning of this section: unlike verbs and postpositions in an OV language like Dutch, verbs and prepositions in English are adjacent in intransitive constructions only. In transitive constructions, such as (63) below, the direct object intervenes between the verb and the PP (cf. the structural patterns in (44) and (45) in 9.3.2).

(63) *drive* **the car** [*up* the hill]_{PP}

In other words, transitive PP constructions in English give explicit evidence against an SCV analysis and in favour of a PP-V analysis. This then could have prevented prepositions from being reanalysed with the verb as SCVs in English. That is, it could have prevented the development of English SCVs with relator particles.

In short, the Hungarian data show that the differences across languages regarding the availability of the different particle types does not completely correlate with the OV/VO distinction, and the Swedish data show that these differences do not completely correlate with the West Germanic/North Germanic distinction either (contrary to what is claimed in Svenonius 2003a). Instead, this property is determined by the types of phrase that may show up adjacent to the verb (left-adjacent in languages with preverbal particles, right-adjacent in languages with postverbal particles). Although the differences between languages with respect to this adjacency property generally correlate with the West Germanic/North Germanic distinction (and also largely with the OV/VO distinction), this is not always the case: language-specific word order differences may be relevant.

Swedish has, furthermore, an Aktionsart particle that appears to be similar to the Dutch inceptive particle *toe* 'to' in certain respects (cf. 5.3.5). This is the particle *till* 'to', which marks a sudden, abrupt action (cf. Toivonen 2003: 141-142). Swedish, then, appears to resemble Dutch (and German) and to differ from English with respect to the availability of some particle types. This illustrates that the property of the particle types that are available across languages does neither go hand in hand with the OV/VO distinction, nor with the West Germanic/North Germanic distinction of Svenonius (2003a) (see also below). My hypothesis is that Swedish path particles and the Swedish Aktionsart particle *till* are diachronically related to prepositions that could show up right-adjacent to the verb in both transitive and intransitive PP-V constructions in the relevant older stages of Swedish (cf. the discussion of (58)-(60) above).

9.4 Summary

This chapter discussed the synchronic and diachronic properties of particles in Germanic languages other than Dutch. Synchronically, these languages differ with respect to their 'SCV syntax' as well as with respect to the semantic types of particle that are available.

As for the SCV syntax, a specific SCV structure indeed appears to be available in most Germanic languages, although the languages in question differ with respect to the word order in SCV constructions (prt-V in Germanic OV languages vs. V-prt in Germanic VO languages (with the exception of Yiddish), and, among the Germanic VO languages, only the word order V-prt-NP (Swedish) or an alternation between this word order and the word order V-NP-prt (English and Norwegian)). There also seem to be differences among languages with respect to the synchronic result of the grammaticalisation of particles, that is, with respect to the proportion of particles that exhibit layering.

As for the semantics of particles in the Germanic languages, there appears to be a difference between Germanic OV languages and Germanic VO languages like English (i.e. Germanic VO languages with postverbal particles): non-resultative particles such as modifying particles, orienting particles, and path particles, which productively form SCVs in OV languages like Dutch and German, are absent in a VO language like English. On the basis of the diachronic analysis in chapter 7, according to which Dutch particles are historically related to different elements that may be left-adjacent to the verb in older stages of Dutch, it was hypothesised that this synchronic difference can be accounted for diachronically: not all of the elements that could show up *left*-adjacent to the verb in the relevant historical stages of Germanic OV languages could also show up *right*-adjacent to the verb in the relevant historical stages of Germanic VO languages like English. The result of this is that not all of these elements could be reanalysed with the verb as SCVs in these VO languages.

I have discussed some initial support for this hypothesis, among which Swedish data and data from a language as unrelated as Hungarian. These data support the word order hypothesis in the sense that the differences between Dutch/German and English regarding the particle types that are available indeed appear to be related to the word order differences between these languages. However, the data also illustrate that the OV/VO character of a language, in combination with the relative order of the particle and the verb in this language, does not fully account for the types of particle that are available in this language; language-specific word order properties also appear to be relevant.

In addition to supporting the word order hypothesis formulated in section 9.3.2, the data discussed in this chapter support the diachronic analysis of Dutch particles proposed in chapter 7, which claims that these particles are grammaticalisations of various elements that may be left-adjacent to the verb. This, in turn, implies that these data also support the semantic classification of Dutch particles proposed in chapter 5, according to which these particles may perform various functions that correspond to different argument-structural and lexical-aspectual properties for the SCV constructions they form.

The synchronic and diachronic hypotheses put forward in this chapter need to be checked against modern and historical data from the Germanic languages, as well as against data from other (less related and unrelated) languages. Meanwhile, I hope to have shown how we could relate the results of my analysis of Dutch SCVs to the synchronic and diachronic properties of SCVs in other languages, what differences we might expect to find in doing so, and in what directions we could look for possible explanations for these differences.

Conclusions and questions for further research

10.1 Complex predicates and grammaticalisation

It was noticed in section 1.1 that Dutch language users are often in doubt whether or not to treat combinations such as *pianospelen* 'lit. piano-play, to play the piano' and *schoonmaken* 'lit. clean-make, to clean' as orthographical units, that is, whether or not to write such combinations together. Morphological units, including compounds, are written together in Dutch (e.g. *huisdeur* 'lit. house-door, front door', *eetkamer* 'lit. eat-room, dining room'), but phrases are not (e.g. *kleine teen* 'lit. little toe', *zwarte doos* 'lit. black box, flight recorder'). This means that the answer to the question whether or not to write combinations such as *pianospelen* and *schoonmaken* together should depend on whether or not such combinations are words.

We have seen that the combinations in question, which are SCVs, do not have the morphosyntactic structure of a word, but that of a phrase. According to their morphosyntactic structure, then, *pianospelen* and *schoonmaken* should be written apart, and the same holds for other SCVs, such as (*de schoenen*) *inlopen* 'lit. in-walk, to wear in (the shoes)' and (*de boeken*) *opzoeken* 'lit. up-search, to look up (the books)'. According to the orthographical guidelines of Dutch, however, SCVs must be written as one word. This prescription appears to be related to the fact that SCVs are interpreted as units and are treated as syntactic units in, for instance, the progressive *aan het*-construction and verb clusters (cf. chapter 4). The fact that SCVs are semantic and syntactic units thus appears to outweigh the fact that SCVs are *not* morphological units for orthographical prescribers.

I have shown in this book that Dutch SCVs (as well as SCVs in other Germanic languages) are phrases consisting of a preverbal element and a verb that are syntactically separable but form a unit in certain respects. Combinations with similar properties exist in many other languages. The preverb-verb combinations discussed in a thematic section of the *Yearbook of Morphology 2003* (edited by Geert Booij and Ans van Kemenade), for instance, are strikingly similar to the Dutch SCVs. Among these are preverb-verb combinations in languages as diverse as Estonian (Ackerman 2003), the Caucasian languages Georgian and Udi (Harris 2003), and Northern Australian languages (Schultze-Berndt 2003). Similar properties hold for, for example, Persian N-V combinations, discussed in Goldberg (2003b). These papers illustrate that preverb-verb combinations across languages generally share the properties in (1).¹

¹ Tying up with the literature on non-Germanic complex predicates, I use the terms "preverb" and "preverb-verb combination" in this section. I do, however, not mean to exclude postverbal (e.g. English) particles from the discussion.

- (1) Properties of preverb-verb combinations:
- a) Preverb-verb combinations are syntactically separable.
 - b) Preverb-verb combinations consist of a non-projecting word (a noun, adjective, adverb, or adposition) and a verbal head: $[X-V^0]_V$.
 - c) The preverb in preverb-verb combinations is stressed.
 - d) Preverb-verb combinations may feed derivational morphology and compounding.
 - e) Preverb-verb combinations function as units in the syntactic structure (f-structure): a preverb-verb combination forms, with its syntactic arguments, a simple clause, taking a single subject (cf. 2.1, 5.4, and 8.3.1).
 - f) Preverb-verb combinations are generally compositional as well as conventionalised and may be formed productively.
(There are usually also non-compositional preverb-verb combinations and non-conventionalised preverb-verb combinations, and these semantically different preverb-verb combinations can be assumed to represent different points on a lexicalisation scale, cf. 8.2).

Preverb-verb combinations with similar categories of preverbs furthermore receive similar interpretations across different languages. N-V combinations, for instance, denote institutionalised activities in many languages, and A-V and P-V combinations often denote resultative events.

It is not only the synchrony of preverb-verb combinations that shows striking cross-linguistic similarities; the same holds for the diachrony of these combinations. Studies of the history of preverb-verb combinations in different languages suggest that preverbs are grammaticalisations of syntactically and semantically independent nouns, adjectives, adverbs, and adpositions that show up adjacent to the verb in the relevant historical stages of the language in question (cf., e.g., Harris 2003 and Schultze-Berndt 2003). Separable preverbs may, in addition, grammaticalise further into (inseparable) prefixes in many languages (cf. *ibid.*). This grammaticalisation development is generally accompanied (or triggered) by similar semantic changes. For example, adpositional particles that express results cross-linguistically tend to develop into markers of the completion of the event denoted by the verb. We thus see similar developmental paths for preverb-verb combinations in genetically unrelated languages.

An issue on which languages differ is the category of preverb that productively forms preverb-verb combinations. N-V combinations are, for instance, productive in Persian (cf. Goldberg 2003b) and in certain Austronesian languages (cf. Klammer 2001), but only P-V combinations and Adv-V combinations are productive across the board in Germanic languages.²

The foregoing discussion illustrates that particles may belong to one of the syntactic categories N, A, Adv, and P. Possibly, there are also particles of the category V (V-particles). Stiebels and Wunderlich (1994: 921, see also Zeller 2001:

² The two examples at the beginning of this section illustrate that there are SCVs with nominal and adjectival particles in Dutch (and in other Germanic languages). The formation of SCVs with nominal particles, however, is unproductive, and the formation of SCVs with adjectival particles is productive with only a few adjectives (cf. 1.1, 4.5, and 7.5.3).

7), for example, assume that the bold-faced words in the German examples in (2) are V-particles.³

- (2) a. *spazieren gehen*
stroll go
'to stroll'
- b. *sitzen bleiben*
sit remain
'to stay down'

Similarly, Toivonen (2003: 17, 89) assumes that the bold-faced words in the Swedish examples in (3) are V-particles.

- (3) a. *göra gällande*
make valid
'to make valid, to be the case'
- b. *lät bygga villan*
let build house-the
'to have built the house'

The Dutch counterparts of these German and Swedish examples are given in (4)a-c. The combination in (4)b has both a predictable and a conventionalised meaning, as indicated in the example.

- (4) a. *gaan wandelen/ wandelen gaan*
go walk / walk go
'to go for a walk'
- b. *blijven zitten / zitten blijven*
remain sit / sit remain
'to remain seated' or 'to stay down'
- c. *het huis laten bouwen / het huis bouwen laten*
the house let build / the house build let
'to have built the house'

The analysis given for SCVs in this study generates new research questions for the analyses of V-V combinations like those in (2)-(4). It could for instance be the case that these V-V combinations consist of a non-projecting word and a verb, having the same morphosyntactic structure as SCVs. An indication that might point into this direction is that such V-V combinations may, like SCVs, appear in the verb cluster (e.g. *dat Jan is gaan wandelen* 'that John went for a walk'); verb clusters cannot contain projections in standard Dutch (cf. 4.3.5).⁴

³ Stiebels and Wunderlich (1994) claim that these SCVs have idiomatic meanings. They propose a word analysis for these SCVs, as they do for all SCVs. Problems with this word analysis have been pointed out in section 3.3.1.

⁴ Toivonen (2003: 17, 89) argues that the absence of the infinitival marker *att* 'to' in the Swedish V-V constructions in (3) also points to the non-projecting status of the bold-faced verbs. The Dutch infinitival marker *te* 'to', however, may appear in verb clusters (e.g. *dat Jan*

There appears to be another similarity between V-V combinations and SCVs: certain V-V combinations seem to have conventionalised properties. For example, many Dutch causative constructions consisting of the causative verb *laten* 'to let' and a complement verb have idiosyncratic properties, the complement verb often expressing a meaning that it does not express outside the causative construction (see Booij 2002b: 310-313 and the references given there). Nevertheless, causative constructions with *laten* may be formed productively. In analysing SCVs, I have taken the fact that SCVs are conventionalised but also instantiate productive patterns as pointing to their constructional idioms status: SCVs are instantiations of partly lexicalised phrasal templates that contain a fixed particle slot and an open verbal slot and are linked to a specific meaning (cf. 8.2). If V-V combinations indeed exhibit similar conventionalised properties, these combinations, too, could be analysed as instantiations of partly lexicalised phrases.

A somewhat different type of Dutch V-V combination is exemplified in (5).

- (5) a. Jan *zat te zeuren*.
John sat to nag
'John was nagging.'
- b. Marie *stond te wachten*.
Mary stood to wait
'Mary was waiting.'
- c. Marie *zat een boek te lezen*.
Mary sat a book to read
'Mary was reading a book.'

The combinations in (5) contain a positional verb (*zitten* 'to sit', *staan* 'to stand') that appears to be interpreted as a marker of progressive aspect. This conventionalised function can be characterised as resulting from the bleaching of the lexical-semantic content of these verbs. But although the V-V combinations in (5) have conventionalised meanings, they are also compositional: their meanings can be distributed among their parts (cf. 4.2). Such V-V combinations can, furthermore, be formed productively. These V-V combinations, then, also appear to resemble SCVs in various respects.

Within the LFG-framework (see for instance the work of Alsina 1996, 1997 and Butt 1995, 1997, 1998) V-V combinations such as causative and permissive constructions (cf. (4)c) have received analyses similar to the analysis of Dutch SCVs proposed in this study. These constructions are generally assumed to have complex semantic structures (s(ematic)-structures and a(rgument)-structures in LFG), but simple syntactic structures (grammatical function structures or f-structures). Complex predicates vary in terms of their c(onstituent) structures. This is formulated in Butt's (1997: 108) definition of complex predicates, which is given in (6) (cf. section 1.1).⁵

het boek heeft proberen te lezen 'John has tried to read the book'). Further research is necessary in order to be able to assess the structural status of *te*.

⁵ "Argument structure" in Butt's definition refers to a semantic representation resembling Jackendoff's Conceptual Structure (CS) (see section 2.2.1 and Butt 1997: 108, 129-131, but see also Butt 1998).

(6) Definition of Complex Predicates:

- The argument structure is complex (two or more semantic heads contribute arguments).
- The grammatical functional structure is that of a simple predicate. It is *flat*: there is only one subject, one object, etc.
- The phrase structure may be either simple or complex (e.g. a complex predicate may be expressed by a single, multimorphemic word or by a phrase, CB). It does not necessarily determine the status of a complex predicate.

To give an example, Alsina (1997) illustrates that causative constructions with similar semantic structures are expressed by a causative affix combining with a lexical verb in Chicheŵa, but by a causative verb combining with a lexical verb in Catalan. These data illustrate that constructions may have the same complex semantic structure, the same simple f-structure, but different c-structures. We have seen that the same holds for Dutch constructions with resultative phrases, resultative particles, and resultative prefixes (see 8.3.1): all three of these constructions express the resultative LCS and have the f-structure of a simple clause, but their c-structures are different. That is, at c-structure, resultative phrases are syntactically independent phrases (XPs) in the VP, resultative particles are non-projecting words (Xs) that form a syntactic unit with the verb (V'), and resultative prefixes are bound morphemes that form a morphological unit with the verb (V⁰). Complex semantic structures thus appear to map to simple f-structures in both SCV constructions and V-V constructions. In these f-structures, the SCV/V-V combination functions as the verbal predicate of a simple clause (which contains a single subject).

Complex predicates across languages appear to consist of one element that belongs to a closed word class (the particle in SCVs, the positional/causative verb in V-V combinations) and one element that belongs to an open word class (the verb in SCVs, the complement verb/V-particle in V-V combinations).⁶ The element that belongs to a closed word class (the particle in SCVs and the positional/causative verb in V-V combinations) generally has a particular, construction-specific meaning that it expresses across different combinations.

The foregoing discussion illustrates that the analysis proposed for SCVs in this book generates new research questions about the structural and semantic properties of various types of V-V combination, such as causative constructions and progressive constructions with positional verbs, opening up new ways of analysing such constructions. Further research is needed in order to compare the synchronic and the diachronic properties of SCVs with those of these V-V constructions. Another issue that needs to be investigated is to what extent V-V complexes are, like most SCVs, instantiations of templates that are halfway in a lexicalisation development (cf. 4.4 and 8.2). Language-specific factors influencing the grammaticalisation of complex predicates also need to be studied in further research. I have shown that the word order properties of a language play a role in the types of

⁶ The preverb-verb combinations in the Australian language Jaminjung constitute an interesting case in this respect: these combinations consist of a preverb belonging to an open class and a verb belonging to a closed class (Schultze-Berndt 2000, 2003).

particle that are available in that language (chapter 9). The c-structure of complex predicates may also differ across languages (cf. Alsina 1997), and this, too, seems to be related to the specific morphosyntactic properties of the individual languages.

10.2 Complex predicates and the architecture of the grammar

It has been argued in this book that the semantic and structural properties of SCVs can be accounted for in a grammatical model positing parallel levels of representation that are not isomorphically related to each other, but are related through principles of correspondence. In particular, the assumption of such a parallel architecture allows us to do justice to both the semantic differences among SCV constructions and their morphosyntactic similarities. That is to say, SCV constructions have different Lexical-Conceptual Structures (LCSs), in which particles perform different functions and have different participant-licensing properties, and these different LCSs correspond to different argument structures and different lexical-aspectual structures. All SCVs, however, have the same syntactic structure: at f-structure (representing grammatical functions such as subject and direct object), all SCVs form the verbal predicate of a simple clause, and at c-structure (representing X-bar-structural relations), all SCVs are phrases that consist of a non-projecting word and a verbal head. A parallel architecture provides us with an attractive account of this many-to-one mapping between the semantic structure and the syntactic structure of SCV constructions.

Conversely, complex predicates with different c-structures, such as constructions with resultative phrases, SCV constructions with resultative particles, and prefix-verb constructions with resultative prefixes, may have the same LCS. This, too, can be accounted for in the parallel architecture: here we have a one-to-many mapping between the semantics and the syntax. These different types of resultative construction also have the same f-structure, which illustrates that it is indeed useful to distinguish between two levels of syntactic structure: f-structure and c-structure (see also 8.3.1). In the same spirit, Alsina (1997) illustrates that causative constructions in two genetically unrelated languages (Chicheŵa, a Bantu language, and Catalan, a Romance language) have similarly complex semantic structures, similarly simple f-structures, but different c-structures (see also 10.1).

Complex predicates, then, typically show non-isomorphism between their complex semantic structure, their simple syntactic structure (f-structure), and their c-structure, which may vary across different types of complex predicate (it may, for instance, be morphological or syntactic in nature). Since in a parallel architecture grammatical information is factorised into different levels of representation that are not isomorphically related to each other, such an architecture allows for (but also constrains the possibility of) 'mismatches' between these levels. It furthermore makes it possible to locate differences between complex predicates (both across languages and within a single language) at one of the levels while keeping the other levels constant (cf. Alsina 1997: 243).

By contrast, theories assuming an isomorphic (hence simpler) mapping between the semantics and the syntax, according to which (syntactically relevant) semantic differences are directly reflected by the syntax, have to posit more complex

syntactic structures. This is for instance the case for the analyses of McIntyre (2004) and Ramchand and Svenonius (2002) (cf. 3.3.2, 3.4.2, and 8.4.2). In these analyses, movement relations are postulated to account for the fact that the non-subject NP in a resultative SCV construction corresponds both to the entity undergoing the change of state expressed by the particle and to the direct object NP of the SCV. In my analysis, on the other hand, the referent of this NP is the Figure of the particle at LCS, but is the direct object of the V' (i.e. of the SCV) at f-structure. Since syntactic heads have semantic content (e.g. 'Result', 'Process', or 'Cause') in such 'isomorphic' analyses, these analyses furthermore force one to postulate different syntactic derivations for constructions with semantically different SCVs. But since such semantically different SCVs behave the same morphosyntactically, they should receive the same syntactic analysis. What we see, then, is that the simpler mapping between the syntax and the semantics in analyses assuming structure-function isomorphism is at the expense of a more complex syntactic analysis.

The non-isomorphic mapping that we find in different types of complex predicate across languages can be linked to the process of grammaticalisation. The participant-licensing relations in the LCS of a construction are typically preserved during this process; the reanalysis primarily affects f-structure, and furthermore generally leads to changes at c-structure (see 8.3.1). The lexical-semantic content of the elements involved may also change, as these elements develop extended meanings, but these changes, too, generally preserve the participant-licensing properties at LCS. Vincent (2001) illustrates that such diachronic processes can also be modelled insightfully in the parallel architecture of LFG.

A recurrent property of SCVs is their conventionalised meaning: most (but not all) particles express meanings that are dependent on their occurrence in the SCV construction. Nevertheless, SCV classes with such particles can productively be extended by combining the particle in question with other verbs. I have argued that these properties can be accounted for by analysing SCVs as instantiations of phrasal lexical templates that generally consist of a fixed particle slot and an open verbal slot and are linked to a specified meaning. SCVs are thus assumed to be constructional idioms.

I have shown that the assumption of a parallel architecture of the grammar in combination with the assumption of partly lexicalised phrasal templates provides an attractive account of the semantic and structural properties of SCVs. An investigation of the merits of these assumptions in analysing the semantic and structural properties of other types of complex predicate, such as causative constructions and other V-V combinations, has to remain as a topic for further research.

10.3 Summary and conclusions

Part I (chapters 1-3) of this book discussed my theoretical assumptions and existing analyses of Dutch and other Germanic separable complex verbs (SCVs, particle verbs) and inseparable complex verbs (ICVs, prefixed verbs). The discussion of the existing analyses focused on synchronic analyses of the structural and semantic properties of SCVs and on diachronic analyses of SCVs and ICVs.

Part II (chapters 4-8) presented my own analysis. SCVs were shown to be phrases (V') consisting of a non-projecting preverbal element (the particle) and a verb. The non-projecting status of particles is responsible for the fact that syntactically SCVs behave differently from semantically similar combinations of a phrase and a verb, such as constructions with resultative phrases. These syntactic differences appear, for instance, in verb cluster constructions (chapter 4).

In contrast to having uniform morphosyntactic properties, SCVs have divergent semantic properties: particles may perform various functions in the Lexical-Conceptual Structure (LCS) of the SCV construction, such as that of resultative predicate or that of modifier (chapter 5). Corresponding to these different particle functions, SCV constructions have different argument-structural and lexical-aspectual properties. This means that SCV constructions show a non-isomorphic semantics-syntax mapping: various semantic structures map to one and the same morphosyntactic structure. I have argued that this non-isomorphism can be modelled insightfully in an architecture of the grammar positing parallel, autonomous levels of representation that are linked through principles of correspondence (sections 5.4 and 8.3).

The synchronic semantic (in particular participant-licensing) properties of SCVs have led me to modify the original diachronic hypothesis, which claims that particles in general are diachronically related to resultative phrases. The new hypothesis claims that SCVs are diachronically related to various constructions: various elements that could show up left-adjacent to the verb in older stages of Dutch, such as resultative phrases, modifier phrases, and postpositions, have been reanalysed with the verb as syntactic units that developed into SCVs. Historical data support this hypothesis: resultative phrases, modifier phrases, and postpositions appear to have grammaticalised into particles (section 7.3).

The semantic properties of Modern Dutch ICV prefixes suggest that, in contrast to what is generally assumed, only particles that are historically related to postpositions may systematically grammaticalise further into prefixes (section 6.2). I have presented historical data supporting this hypothesis (section 7.4). The proposed semantic and structural analysis of particles, prefixes, and resultative phrases turned out to provide an insightful account of the possible and impossible cooccurrences of these elements within a single VP (section 6.4).

Most SCVs have conventionalised meanings, but also instantiate productive patterns. These two properties are accounted for by analysing SCVs as instantiations of phrasal lexical templates that contain a fixed particle slot and an open slot for the verb and are linked to a specific meaning. It is the open verbal slot in such templates that ensures the productivity of SCVs. There are also SCVs that do not show any conventionalisation and SCVs that belong to classes that cannot be extended productively. Such SCVs are claimed to be instantiations of, respectively, SCV templates without any fixed slots and SCV templates with two fixed slots (section 8.2).

The first chapter of Part III (chapter 9) compared the synchronic morphosyntactic and semantic properties of Dutch SCVs to those of SCVs in other Germanic languages. SCVs across the Germanic languages appear to be morphosyntactically similar and to be generally based on phrasal lexical templates. Differences, however, show up in the semantic properties of SCVs across the

Germanic languages: most of the non-resultative particle types that have been distinguished for Dutch can also be distinguished for German, but are not available in all of the Germanic VO languages. This difference appears to be related to the word order properties of the languages in question. That is, only elements that may show up adjacent to the verb may develop into particles, and not all of the elements that were adjacent to the verb in the relevant historical stages of Dutch were also adjacent to the verb in the relevant historical stages of, for instance, English. This difference turned out to be partly related to the OV/VO difference between these two languages.

In conclusion, the analysis of the synchrony and diachrony of Dutch SCVs has illustrated that complex predicates such as SCVs exhibit a structure-function non-isomorphism that can be modelled insightfully in an architecture of the grammar with multiple, parallel corresponding levels of representation. The non-isomorphism of complex predicates can be related to their diachrony: various syntactically and semantically complex constructions have grammaticalised into constructions with a simple syntactic structure that have preserved their complex semantic structure. In this way, the grammaticalisation of SCVs and ICVs in the history of Dutch reflects a cross-linguistically recurrent development. During this development, semantically and syntactically independent elements that may show up adjacent to a verb may, together with this verb, grammaticalise into syntactic units (phrases) and, possibly, further into morphological units (words). By having analysed the synchronic and diachronic properties of Dutch SCVs and ICVs, I hope to have shed light on this recurrent process of diachronic complex predicate formation, as well as on the synchronic properties of the products of this process: complex predicates.

Appendices

- Appendix 1: Classification of particles
- Appendix 2: Functions of ICV preverbs in Modern Dutch
- Appendix 3a: Apparent SCVs/ICVs: back formations
- Appendix 3b: SCVs consisting of a particle and a prefixed verb
- Appendix 4a: Middle Dutch SCVs and ICVs with *door* 'through' and *over* 'over'
- Appendix 4b: Middle Dutch texts

Appendix 1

Classification of particles

Table 5.1. Classification of particles.

Table 5.2. Classification of particles (modified).

Table 5.1. Classification of particles.

<i>particle function</i> resultative predicate	<i>specification particle function</i> change of state/location	<i>participant-licensing properties</i> particle licenses Figure	<i>transitivity base verb</i> transitive/unergative/unaccusative	<i>transitivity SCV</i> transitive/unaccusative	<i>telicity SCV</i> telic
		<p>examples: <i>dat Jan de schoenen inloopt</i> 'John wears in the shoes' <i>dat het water opborrelt</i> 'the water bubbles up' sem.str.: [[CAUSE (x), BECOME [PRT (y)], BY {V (x)}] [[CAUSE (Jan), BECOME [IN (de schoenen)], BY {lopen (Jan)}] [BECOME [UP (het water)], BY {borrelen (het water)}]</p>			
modifier	modifier of the event denoted by V + arguments	particle does not license any participant	transitive/unergative/unaccusative	inherited from V: transitive/unergative/unaccusative	inherited from V
		<p>examples: <i>dat Jan de groenten voorkookt</i> 'John cooks the vegetables beforehand' <i>dat we lang napraatten</i> 'we talked for a long time afterwards, we stayed and talked for a long time' sem.str.: [V (x), ((y)) {PRT}] [koken (Jan), (de groenten) {BEFORE}]</p>			

Table 5.1. Classification of particles - continued.

relator	<u>relator 1</u>	particle licenses Ground	(optionally) transitive/ unergative	transitive	inherited from V
	expresses, in combination with the Ground, a modifier of the event denoted by V + arguments	<p>examples: <i>dat Jan het publiek toespreekt</i> 'John talks to the audience'</p> <p><i>dat Jan de man napraat</i> 'John imitates the man'</p> <p><i>dat Jan Marie het lied voorzingt</i> 'that John sings the song demonstratively to Mary'¹</p> <p>sem.str.: [V (x) {PRT (y)}] or [V (x) (y) {PRT (z)}] [spreken (Jan) {TO (het publiek)}] [praten (Jan) {LIKE (de man)}] [zingen (Jan) (het liedje) {DEMONSTRATIVELY FOR/TO (Marie)}]</p>			
	<u>relator 2</u>	particle licenses Ground	(optionally) transitive/ unergative	transitive	telic
	expresses, in combination with the Ground, a change of location of the subject referent	<p>examples: <i>dat Jan de sonate doorspeelt</i> 'John plays through the sonata'</p> <p><i>dat Jan het boek doorbladert</i> 'that John leafs through the book'</p> <p>sem.str.: [GO [(PRT (y)) (x)], BY {V (x)}] [GO [(THROUGH (de sonate)) (Jan)], BY {spelen (Jan)}]</p>			

¹ The meaning 'demonstratively' must be read as 'to demonstrate, as an example' (see section 5.3.6).

Table 5.1. Classification of particles - continued.

Aktionsart marker	<u>Aktionsart marker 1:</u> continuator expresses the unbounded continuation of V	particle blocks the presence of a direct object examples: <i>dat Jan urenlang doorspeelde</i> 'John continued playing for hours' sem.str.: [CONTINUE V _{ACTIVITY} WITHOUT INTENDED GOAL (X) ({for X time})] [CONTINUE <i>werken</i> WITHOUT INTENDED GOAL (<i>Jan</i>) ({ <i>urenlang</i> })]	transitive/unergative	unergative	atelic
	<u>Aktionsart marker 2:</u> inceptor expresses the inception of V	particle blocks the presence of a direct object examples: <i>dat Jan toehapte</i> 'that John jumped at ...' sem.str.: [START V _{SEMELFACTIVE} (X) ({...})] [START <i>happen</i> (<i>Jan</i>) ({...})]	transitive/unergative	unergative	telic (punctual)

Table 5.2. Classification of particles (modified).

<i>particle function</i>	<i>specification particle function</i> <u>resultative predicate</u> : change of state/location	<i>participant-licensing properties</i> particle licenses Figure	<i>transitivity base verb</i> transitive/unergative/ unaccusative	<i>transitivity SCV</i> transitive/unaccusative	<i>telicity SCV</i> telic
		<p>examples: <i>dat Jan de schoenen inloopt</i> 'John wears in the shoes' <i>dat het water opborrelt</i> 'the water bubbles up' sem.str.: [[CAUSE (x), BECOME [PRT (y)], BY {V (x)}] [[CAUSE (Jan), BECOME [[N (de schoenen)], BY {lopen (Jan)}] [BECOME [UP (het water)], BY {borrelen (het water)}]]</p>			
	<u>stative predicate</u> : state/location (V = stative)	particle licenses Figure	unergative (stative)	unergative (stative)	atelic (stative)
		<p>examples: <i>dat het schip overhelde</i> 'the ship leaned over' <i>dat de kinderen opblijven</i> 'the children stay up' sem.str.: [BE [PRT (x)], BY {V (x)}] [BE [UP (de kinderen)], BY {blijven (de kinderen)}]]</p>			
modifier	<u>modifier of the event</u> denoted by V + arguments	particle does not license any participant	transitive/unergative/ unaccusative	inherited from V: transitive/ unergative/unaccusative	inherited from V
		<p>examples: <i>dat Jan de groenten voorkookt</i> 'John cooks the vegetables beforehand' <i>dat we lang napraatten</i> 'we talked for a long time afterwards, we stayed and talked for a long time' sem.str.: [V (x), (y)] {PRT} [token (Jan), (de groenten) {BEFORE}]</p>			

Table 5.2. Classification of particles (modified) – continued.

relator	relator_1	particle licenses Ground	(optionally) transitive/ unergative	transitive	inherited from V
	expresses, in combination with the Ground, a modifier of the event denoted by V + arguments	examples: <i>dat Jan het publiek toespreekt</i> 'John talks to the audience' <i>dat Jan Marie het lied voorzingt</i> 'John sings the song demonstratively to Mary' ² sem.str.: [V (x) {PRT (y)}] or [V (x) (y) {PRT (z)}] [spreken (Jan) {TO (het publiek)}] [praten (Jan) {LIKE (de man)}] [zingen (Jan) (het liedje) {DEMONSTRATIVELY FOR/TO (Marie)}]			
	relator_2	particle licenses Ground	(optionally) transitive/ unergative	transitive	telic
	expresses, in combination with the Ground, a change of location of the subject referent	examples: <i>dat Jan de sonate doorspeelt</i> 'John plays through the sonata' <i>dat Jan het boek doorbladert</i> 'that John leafs through the book' sem.str.: [GO [(PRT (y)) (x)], BY {V (x)}] [GO [(THROUGH (de sonate)) (Jan)], BY {spelen (Jan)}]			
	relator_3	particle licenses Figure and Ground	unergative/transitive/ ditransitive	ditransitive	telic
	expresses, in combination with the Ground, a change of location of the direct object referent (= Figure of particle)	examples: <i>dat Jan de manager het document aanreikt</i> 'John hands the file to the manager' <i>dat Jan de baby een luiert omspeldt</i> 'John puts a nappy on the baby' sem.str.: [[CAUSE (x), BECOME [(PRT (y)) (z)], BY {V (x)}] [[CAUSE (Jan), BECOME [(TO (de manager)) (het document)], BY {reiken (Jan)}]			

² See note 1.

Table 5.2. Classification of particles (modified) – continued.

Aktionsart marker	Aktionsart marker 1: continuator	particle blocks the presence of a direct object	transitive/unergative	unergative	atelic
	expresses the unbounded continuation of V	examples: <i>dat Jan urenlang doorspeelde</i> 'John continued playing for hours' sem.str.: [CONTINUE V _{ACTIVITY} WITHOUT INTENDED GOAL (X) ({for X time})] [CONTINUE <i>werken</i> WITHOUT INTENDED GOAL (<i>Jan</i>) ({ <i>urenlang</i> })]			
	Aktionsart marker 2: inceptor	particle blocks the presence of a direct object	transitive/unergative	unergative	telic (punctual)
	expresses the inception of V	examples: <i>dat Jan toehapte</i> 'John jumped at ...' sem.str.: [START V _{SEMELFACTIVE} (X) ({...})] [START <i>happen</i> (<i>Jan</i>) ({...})]			

Appendix 2

Functions of ICV preverbs in Modern Dutch

Source: *Van Dale* (1996).

NB

- 'V2?': the ICV only appears to be used in contexts that do not require a separability choice (often only past/adjectival participles, sometimes also infinitives and possibly finite forms in subordinate clauses), e.g. *doordrenken* 'to drench': *het shirt was doordrenkt met bloed* 'the shirt was drenched with blood' (often with 'met/van PP': *met bloed* 'with blood').
- I add the remark 'N base' if the ICV can by no means have a verbal base (e.g. *omarmen* 'lit. around-arm, to hug, to embrace', N base *arm* 'arm', no V base **armen*). Some ICVs for which a verbal base is available might also be derived from the corresponding noun (e.g. *omcirkelen* 'lit. around-circle, to encircle, to surround', N base *cirkel* 'circle' or V base *cirkelen* 'to circle').
- The numbers 1 and 2 after an ICV (e.g. *overspinnen* 1 'lit. over-strain, to span', *overspinnen* 2 'lit. over-strain, to overstrain, to overbend') indicate subentries in *Van Dale* (1996).

AAN (3)

Orienting (2):

aanbidden 'lit. at-pray, to worship, to adore', *aanschouwen* 'lit. at-view, to behold, to observe'.

Idiosyncratic:

aanvaard 'lit. at-?, to accept, to agree, to begin, to set out on'.

ACHTER (2)

Modifying (2):

achterhalen 'lit. after-fetch, to recover, to find out', *achtervolgen* 'lit. after-follow, to pursue, to chase after, to follow after'.

DOOR (31)

Path (31):

doorboren 'lit. through-drill, to drill through completely', *doorbréken* 'lit. through-break, to break through completely', *doordénken* 'lit. through-think, to think through completely, to consider fully', *doordésemen* 'lit. through-leaven, to leaven completely' (**desemen*, N base *desem* 'leaven, sourdough', V2?), *doordrénken* 'lit. through-drench, to soak through, to drench through' (V2?), *doordringen* 'lit. through-push, to penetrate', *doorgrónden* 'lit. through-found, to fathom, penetrate, to see through (someone's intentions)' (base V *gronden* 'to found, to sound (the bottom of a water surface)', or N-base *grond* 'bottom'), *doorklieven* 'lit. through-cleave, to cleave (completely through), to cut through (the waves)', *doorklinken* 'lit. through-sound, to ring/sound through', *doorkrúisen* 'lit. through-cross, to traverse', *doorlèven* 'lit. through-live, to live through, to spend (living)', *doorlópen* 'lit. through-walk, to walk/go/pass through', *doorschieten* 'lit. through-shoot, to shoot through completely, to riddle', *doorsnijden* 'lit. through-cut, to cut through/across completely', *doorsnúffelen* 'lit. through-nose, to rummage/nose through, to search through completely', *doorspékken* 'lit. through-lard, to intersperse with', *doorståan* 'lit. through-stand, to endure, to withstand, to be/go/come through', *doorstéken* 'lit. through-stab, to stab/pierce/run through completely', *doorstikken* 'lit. through-stitch, to stitch through', *doorstóten* 'lit. through-bump, to stab/pierce/run through', *doorstrómen* 'lit. through-flow, to flow through', *doortásten* 'lit. through-grope, to search through by groping', *doortrékken* 'lit. through-pull, to impregnate, to soak' (V2?), *doorváren* 'lit. through-sail, to go through' (archaic: *een huivering doorvoer mij* 'a shiver went through me'), *doorvóelen* 'lit. through-feel, to feel through completely' (V2?), *doorvórsen* 'lit. through-search, to scrutinize, to search through completely', *doorwáden* 'lit. through-wade, to wade through', *doorwérken* 'lit. through-work, to interlace with' (V2?), *doorzéven* 'lit. through-sift, to riddle through completely (with bullets)', *doorzien* 'lit. through-see, to see through', *doorzóeken* 'lit. through-search, to search (through completely)'.

OM (48)

Path (48):

omármen 'lit. around-arm (N base), to hug, to embrace', *ombóorden* 'lit. around-border, to edge, to border all around' (N base), *omcirkelen* 'lit. around-circle, to encircle, to surround', *omdijken* 'lit. around-dike, to surround to ring with a dike' (N base), *omflóersen* 'lit. around-shroud, to shroud' (N base, V2?), *omgéven* 'lit. around-give, to surround', *omgórden* 'lit. around-gird, to gird about', *omgrénzen* 'lit. around-border, to border (all around)', *omhángen* 'lit. around-hang, to hang, to cover around', *omhéinen* 'lit. around-fence, to fence round, to enclose' (N base *heining* 'fence'), *omhélzen* 'lit. around-?, to embrace, to hug' (**helzen*, N source *hals* 'neck'), *omhúllen* 'lit. around-wrap, to envelop/wrap all around, to enclose, to surround' (e.g. *nevels omhullen de berg* 'the mountain is enveloped in mist', cf. *zich hullen in* 'to wrap oneself in'), *omkáderen* 'lit. around-frame, to frame (around)' (N base), *omkléden* 'lit. around-clothe, to cover, to clothe all around', *omklémmen* 'lit. around-clasp, to clasp around', *omknéllen* 'lit. around-squeeze, to grip', *omkránsen* 'lit. around-wreathe, to wreathe about', *omléggen* 'lit. around-lay, to surround', *omlijnen* 'lit. around-line', to outline' (N base), *omlijsten* 'lit. around-frame, to frame', *ommúren* 'lit. around-wall, to wall in' (N base), *ompálen* 'lit. around-stake, to fence off (with stakes)' (N base), *omplánten* 'lit. around-plant, to plant all around (with)', *omránden* 'lit. around-edge, to rim, to edge', *omringen* 'lit. around-ring, to surround', *omschrijven* 'lit. around-write, to describe', *omsingelen* 'lit. around-canal, to surround' (N base), *omslingeren* 'lit. around-wind, to wind around', *omslúieren* 'lit. around-veil, to veil, to shroud', *omslúiten* 'lit. around-close, to enclose', *omsnóeren* 'lit. around-string, to gird', *omspánnen* 'lit. around-stretch, to span, to fit tightly around', *omspélen* 'lit. around-play, to dribble round (the goal keeper)', *omspóelen* 'lit. around-rinse, to wash, to bathe round', *omstikken* 'lit. around-stitch, to hem (with stitches)', *omstrálen* 'lit. around-shine, to shine about', *omstréngelen* 'lit. around-twine, to twine about', *omstúwen* 'lit. around-drive/push, to press around, to flock around', *omvángen* 'lit. around-catch, to encompass', *omvátten* 'lit. around-grasp, to enclose, to contain', *omwállen* 'lit. around-bank/bulwark, to wall in, to bulwark' (N base), *omwikkelen* 'lit. around-wind, to wrap round in', *omwinden* 'lit. around-wind, to tie up with, to wind with', *omwóelen* 'lit. around-turn, to tie up with tightly', *omzéilen* 'lit. around-sail, to sail round, to skirt', *omzómen* 'lit. around-hem, to border, to fringe', *omzwáchtelen* 'lit. around-bandage, to bandage (round)', *omzwérmén* 'lit. around-swarm, to swarm about'.

ONDER (43)

NB Many of these categories are tentative and the classifications may seem far-fetched. As noted in section 6.2.2, ICVs with *onder-* contain many idiosyncrasies and cannot be formed productively (cf. Haeseryn et al. 1997: 623, de Vries 1975: 147-149).

Apparent SCVs/ICVs (see section 6.3 and Appendix 3a) (6):

ónderbelichten 'lit. under-expose, to underexpose', *ónderbetàlen* 'lit. under-pay, to underpay', *ónderkóelen* 'lit. under-cool, to supercool', *ónderverdèlen* 'lit. under-divide, to subdivide', *ónderverhùren* 'lit. to under-let, to sublet, to sublease', *ónderwaardèren* 'lit. under-appreciate, to under-appreciate, to underrate'.

Modifying (8):

- 'inter, amid the process of' (4):
ónderbréken 'lit. under-break, to interrupt', *ónderhóuden* 'lit. under-hold', to maintain', *ónderschéppen* 'lit. under-scoop, to intercept', *óndervàngen* 'lit. under-catch, to overcome, remove';
- 'inter, among people' (2):
ónderhándelen 'lit. under-act/trade, to negotiate', *óndervrágen* 'lit. under-ask, to interrogate';
- 'inter, among other things' (2):
ónderkénnen 'lit. under-know, to recognise, to distinguish', *ónderschéiden* 'lit. under-separate, to distinguish'.

Path (5):

óndergáan 'lit. under-go, to undergo', *óndergráven* 'lit. under-dig, to dig under', *ónderkrúipen* 'lit. under-creep, to undercut', *óndermijnen* 'lit. under-mine, to undermine' (N base), *ónderspóelen* 'lit. under-wash, to undermine, to wash away'.

Relator 1 (cf. Table 5.2 in Appendix 1) (11):

- 'to V {lower than y}' (1):
ónderbíeden 'lit. under-bid, to underbid';
- 'to V {(from) under y}' (9):
ónderbóuwen 'lit. under-build, to build, to base, to underpin', *ónderlijnen* 'lit. under-line, to underline' (N base), *ónderschóren* 'lit. under-shore/prop, to shore up, to underpin', *ónderschrágen* 'lit. under-prop, to prop up, to underpin', *ónderschríjven* 'lit. under-write, to endorse, to subscribe', *ónderstéunen* 'lit. under-support, to support', *ónderstrépen* 'lit. under-line, to underline', *ónderstúttèn* 'lit. under-prop, to prop, to support', *óndertékenen* 'lit. under-mark, to sign';
- 'to V {too lithe for y}' (1):
ónderscháttèn 'lit. under-estimate, to underestimate'.

Resultative predicate (2):

- 'under X':
ónderdrúkken 'lit. under-press, to oppress, to suppress', *ónderwérpen* 'lit. under-throw, to subject'.

Conversion N>V(2):

óndertítelen 'lit. under-title, to subtitle' (conversion of N *óndertitel* 'subtitle'), *óndertrouwen* 'lit. under-marry, to give notice of one's intended marriage' (conversion of N *óndertrouw* 'issue of an intended marriage').

Idiosyncratic (9):

ondernemen 'lit. under-take, to undertake', *onderrichten* 'lit. under-direct, to instruct' (or 'inter, among people?'), *onderschikken* 'lit. under-order, to subordinate' (modifying prefix 'lower'? V2?), *onderspannen* 'lit. under-stretch, to subtend' (mathematics), *onderstèllen* 'lit. under-put, to suppose, to assume', *ondervinden* 'lit. under-find, to experience', *onderwijzen* 'lit. under-point, to teach' ('inter, among people?'), *onderzètten* 'lit. under-put, to mortgage', *onderzòeken* 'lit. under-search, to investigate' ('inter, among other things?').

OVER (81)

Apparent SCVs/ICVs (see section 6.3 and Appendix 3a) (6):

óverbelàsten 'lit. over-load, to overload', *óverbelichten* 'lit. over-expose, to overexpose', *óverbemèsten* 'lit. over-manure, to over-fertilise, to top-dress', *óvercompensèren* 'lit. over-compensate, to overcompensate', *óverwaardèren* 'lit. over-value, to overvalue', *óververhitten* 'lit. over-heat, to overheat'.

Path ('to go over y by V-ing', 'to exceed y in V-ing') (49):

overbieden 'lit. over-bid, to outbid someone', *overblúffen* 'lit. over-bluff, to confound', *overbrúggen* 'lit. over-bridge, to bridge' (N base), *overdèkken* 'lit. over-deck, to cover (with)', *overdénken* 'lit. over-think, to think over, to consider', *overdónderen* 'lit. over-thunder, to overwhelm, to confound', *overgièten* 'lit. over-pour, to pour over with, to douse with', *overhéersen* 'lit. over-rule/dominate, to rule/dominate over', *overhúiven* 'lit. over-hood, to hood over' (N base), *overkàppen* 'lit. over-?, to cover, to roof over' (back formation of N *overkapping* 'covering, roof' or N base *kap* 'hood'), *overklàssen* 'lit. over-class, to outclass' (N base *klasse* 'class' or based on English *to outclass*?), *overkòepelen* 'lit. over-dome, to cover over, to roof over, to dome' (N base *koepel* 'dome'), *overkómen* 'lit. over-come, to come over, to happen to', *overlèven* 'lit. over-live, to survive, to outlive, to live through', *overmànnen* 'lit. over-man, to overmaster, to overpower, to overcome' (N base *man* 'man'? Cf. *overmèesteren* 'to overmaster'), *overmeesteren* 'lit. over-master, to overmaster, to overpower, to overcome' (N base *meester* 'master'), *overpèinzen* 'lit. over-ponder, to ponder on/over', *overrijden* 'lit. over-ride/drive, to run over', *overrompelen* 'lit. over-?, to take by surprise' (back formation of N *overrompeling* 'surprise?'), *overrúlen* 'lit. over-?, to overrule' (based on English *to overrule*), *overschàduwen* 'lit. over-shadow, to overshadow' (N base *schaduw* 'shadow'), *overschièten* 'lit. over-shoot, to recover, to put a cover on', *overschilderen* 'lit. over-paint, to overpaint', *overschrèeuwen* I 'lit. over-scream, to drown, to shout through, to make oneself heard above', *overschrijden* 'lit. over-stride, to step over/across, to overstep, to exceed', *overschrijven* 'lit. over-write, to overwrite', *overspànnen* I 'lit. over-strain, to span', *overspèlen* 'lit. over-play, to outplay', *overspóelen* 'lit. over-wash, to wash over', *overspúiten* 'lit. over-spray, to spray with', *overstèlpen* 'lit. over-staunch/stem, to swamp with, to overcome', *overstémmen* 'lit. over-voice, to drown, to make oneself heard through', *overstijgen* 'lit. over-rise, to exceed', *overstràlen* 'lit. over-shine, to shine over, to outshine', *overstrómen* 'lit. over-stream/flow, to flood, inundate', *overtimmeren* 'lit. over-build, to roof/cover over', *overtrèden* 'lit. over-

step, to break (the law)', *overtréffen* 'lit. over-strike, to exceed, to surpass', *overtrékken* 'lit. over-draw, to cover', *overtróeven* 'lit. over-trump, to overtrump', *overvallen* 'lit. over-fall, to raid, to surprise, to overtake', *overvaren* 'lit. over-sail, to run down', *overvléugelen* 'lit. over-wing, to outstrip, to outshine, to surpass', *overvoeren* 2 'lit. over-carry, to glut, to oversupply', *overwéldigen* 'lit. over-?, to overpower, to overwhelm' (back formation of N *overweldigend* 'overwhelming?'), *overwélven* 'lit. over-vault, to vault, to cover with a vaulting', *overwinnen* 'lit. over-win, to conquer', *overwóekeren* 'lit. over-grow rank/rampant, to overgrow', *overzien* 'lit. over-see, to survey'.

Quantification ('to V more than y can stand, to V too much for y') (13):

zich overéten 'lit. over-eat, to overeat', *zich overháasten* 'lit. over-rush, to rush oneself', *overlâden* 'lit. over-load, to overload', *overprikkelen* 'lit. over-stimulate, to over-stimulate', *overschâten* 'lit. over-estimate, to overestimate', *zich overschréuwen* 2 'lit. over-scream, to overstrain one's voice', *overspânnen* 2 'lit. overstrain, to overstrain, to overbend', *overtékenen* 'lit. over-mark, to over-subscribe', *zich overtillen* 'lit. over-lift, to lift too much', *overvoeden* 'lit. over-feed, to overfeed', *overvoeren* 1 'lit. over-feed, to overfeed', *overvrâgen* 'lit. over-ask, to overcharge, to ask too much', *zich overwérken* 'lit. over-work, to overwork (oneself)'.

Non-compositional; no productivity:

Resultative predicate (3):

- 'at the other side, at the destination' (3):
overhândigen 'lit. over-?, to hand over' (**handigen* related to N *hand* 'hand'),
overréden 'lit. over-?, to persuade' (**reden* related to Middle Dutch *reden* 'to reason, to speak'), *overtúigen* 'lit. over-?, to persuade' (**tuigen* related to Middle Dutch *tugen* 'to testify')³.

Back formation (2):

overnâchten 'lit. over-night, to stay/spend the night' (back formation of N *overnachting* 'staying/spending the night, staying over?'), *overwinteren* 'lit. over-winter, to overwinter, to hibernate' (back formation of N *overwintering* 'wintering, hibernation?').

Plus (also classified as containing a path prefix, 3): *overkâppen* 'lit. over-?, to cover, roof over' (back formation of N *overkapping* 'covering, roof' or N base *kap* 'hood'), *overrompelen* 'lit. over-?, to take by surprise' (back formation of N *overrompeling* 'surprise?'), *overwéldigen* 'lit. over-?, to overpower, to overwhelm' (back formation of N *overweldigend* 'overwhelming?').

³ Middle Dutch *iemand overtugen* means 'to testify in the presence of someone', which illustrates that the direct object of *overtugen* is the Ground of *over-* in constructions with this Middle Dutch complex verb. This means that *over-* in *overtugen* was originally a relator 1 preverb: 'to testify {over someone}'.

Idiosyncratic (8):

overdrijven 'lit. over-drive, to overdo, to exaggerate', *overhóren* 'lit. over-hear, to test', *overlappen* 'lit. over-?, to overlap' (from English *to overlap*), *overléggen* 'lit. over-lay, to consider, to debate', *overlijden* 'lit. over-?, to die' (related to Middle Dutch SCV *óverliden* 'to go/pass away': originally resultative, cf. 7.4.3.2), *overtíjgen* 'lit. over-?, to cover', *overwégen* 'lit. over-weight, to consider, to think over'.

Remarks:

Overkómen: Ground realised as indirect object instead of direct object (cf. Hoekstra 1988: 113).

Double classification: *overspánnen*, *overvóeren*, *overschréuwen*.

VOOR (6)

Modifying (6):

voorkómen 'lit. for-come, to prevent', *vooronderstéllen* 'lit. for-under-put, to presuppose' (*onderstellen* 'to suppose, to assume', see also section 6.3), *voorspéllen* 'lit. for-spell, to predict', *voorvóelen* 'lit. for-feel, to sense beforehand', *voorzéppen* 'lit. for-say, to predict', *voorzien* 'lit. for-see, to foresee'.

(For the gloss of *voor* in these ICVs, see also note 8 in chapter 5.)

Appendix 3a
Apparent SCVs/ICVs: back formations

Back formations: no/variable finite forms in main clauses (source: Van Dale 1996).

back formation	meaning	meaning SCV base	separability according to Van Dale (1996)
onder-be-lichten	to under-expose	to expose	separable
onder-be-talen	to underpay	to pay	inseparable
onder-koelen	to supercool	to cool (down/off)	inseparable
onder-ver-delen	to subdivide	to divide up	inseparable
onder-ver-huren	to sublet, to sublease	to let, to hire out	inseparable
onder-waarderen	to undervalue	to appreciate, to value	past tense <i>onderwaardeerde</i> , past participle <i>h. ondergewaardeerd</i>
over-be-lasten	to overload	to load	inseparable
over-be-lichten	to overexpose	to expose	separable
over-be-mesten	to over-fertilize, to top-dress	to manure	separable
over-compenseren	to overcompensate	to compensate	past tense <i>overcompenseerde</i> , past participle <i>h. overgewaardeerd</i>
over-ver-hitten	to overheat	to heat	inseparable
over-waarderen	to overvalue	to appreciate, to value	no past tense, past participle <i>h. overgewaardeerd</i>
uit-be-handelen	to treat until the treatment is finished	to treat	separable
uit-ver-kiezen	to choose, to select, to elect	to choose, to prefer, to elect	separable
uit-ver-kopen	to sell off/out	to sell	separable
voor-onder-stellen	to presuppose	to suppose	inseparable

Appendix 3b

SCVs consisting of a particle and a prefixed verb

Source: *Van Dale* (1996).

Particles: *aan* 'at, to', *af* 'down, off', *door* 'through, on', *in* 'in(to)', *mee* 'along, with', *na* 'after, behind', *om* 'around, down', *onder* 'under, below', *op* 'up, on high', *over* 'over, across', *toe* 'at, to, closed', *uit* 'out (of)', *voor* '(be)fore, for';

Prefixes: *be-*, *ont-*, *ver-*.

NB If the base of the ICV does not exist or does not show any systematic synchronic semantic relationship with the ICV, the cell in the sixth column, referring to the function of the ICV-prefix, has *n/a* 'not applying'.

SCVs consisting of a particle and a prefixed verb.

SCV	meaning SCV	meaning ICV	meaning base	function particle	function prefix	remarks
aan-be-landen	to land, to end up	to land, to end up	to land	resultative	?	
aan-be-langen	to concern	*	*	orienting	n/a	base: N-base <i>belang</i> 'concern' cf. the Middle Dutch verbs <i>langen</i> 'to touch' and <i>belangen</i> 'to reach'
aan-be-steden	to put out to contract, to tender	to spend (on)	*	resultative	n/a	
aan-be-talen	to pay a deposit	to pay	* ⁴	resultative, 'be partly done'	n/a	(cf. <i>het vlees aanbraden</i> 'to sear the meat')
aan-be-velen	to recommend	to order, to command	*	orienting	n/a	
af-be-stellen	to cancel an order for	to order	*	resultative	n/a	V-base not systematically related synchronically (<i>stellen</i> 'to put')
af-be-talen door-be-rekenen	to pay off to pass on (e.g. the purchase tax to the customers)	to pay to calculate	*	resultative resultative, 'on to the next point'	n/a resultative	cf. note 4

⁴ The verb form *talen* exists in Modern Dutch (*talen naar* 'to care for, to strive for'), but is not in any way related to *betalen* 'to pay for', neither synchronically, nor diachronically.

SCVs consisting of a particle and a prefixed verb - continued.

SCV	meaning SCV	meaning ICV	meaning base	function particle	function prefix	remarks
door-be-talen	to pay consecutively	to pay	*	modifying	n/a	transitive SCV, no continuative particle (cf. note 32 in 6.4.4), cf. note 4
door-ver-binden	to put through (to the next person/point) (phone)	to join, to connect	to tie to	resultative, 'on to the next point'	resultative	
door-ver-kopen	to resell (to a third party)	to sell	to buy	resultative, 'on to the next point'	causative	ver- licenses a causer participant X: 'X causes Y to buy Z' (assumed to be idiosyncratic by some linguists)
door-ver-tellen	to pass on, to tell to a third person	to tell	*	resultative, 'on to the next point'	n/a	V-base not systematically related synchronically (<i>tellen</i> 'to count')
door-ver-wijzen	to refer to someone else	to refer	to point	resultative, 'on to the next point'	resultative	
mee-be-slissen	to decide with the others, to take part in deciding	to decide	*	modifying	n/a	V-base not systematically related synchronically (<i>s/lissen</i> 'to lisp')
na-be-spreken na-ver-tellen	to discuss afterwards to tell afterwards, to tell again, to repeat	to discuss to tell	to speak *	modifying modifying (+ extension)	resultative n/a	V-base not systematically related synchronically (<i>tellen</i> 'to count')

SCVs consisting of a particle and a prefixed verb - continued.

SCV	meaning SCV	meaning ICV	meaning base	function particle	function prefix	remarks
over-ver-tellen	to repeat, to tell again	to tell	*	modifying, 'again'	n/a	V-base not systematically related synchronically (<i>tellen</i> 'to count')
toe-be-delen	to assign to, to allocate to	to distribute	to share in, to divide	orienting	resultative	
toe-be-denken	to intend something for someone	to think about/of/up	to think	orienting	resultative	
toe-be-horen	to belong to	to belong, to require, should	to belong, to be right, should	orienting	?	
toe-be-reiden	to prepare to, for a certain purpose	to prepare	*	orienting	n/a	Ground may be implicit
toe-ver-trouwen	to entrust to someone, to tell confidentially to someone	to trust	<i>trouw</i> 'faith' (N) or 'faithful' (A)	orienting	?	<i>vertrouwen</i> 'to trust' is not systematically related to <i>trouwen</i> 'to marry'
uit-be-steden	to board out, to farm out	to spend on	*	resultative, 'out, to others'	n/a	
uit-be-talen	to pay out	to pay	*	resultative, 'out, to others'	n/a	cf. note 4
uit-ver-dedigen	to play it out, to counter-attack	to defend	*	resultative, 'out, away'	n/a	

SCVs consisting of a particle and a prefixed verb - continued.

SCV	meaning SCV	meaning ICV	meaning base	function particle	function prefix	remarks
uit-ver-groten	to enlarge, to print enlarged	to increase, to enlarge	<i>groot</i> 'big' (A)	resultative, 'out, on print'	resultative	back-formation of <i>uitvergroting</i> 'enlargement'? infrequently used finitely in V2 position
voor-be-houden	to reserve for	to keep, to preserve	to hold, to keep	orienting	?	
voor-be-reiden	to prepare (beforehand)	to prepare	*	modifying	n/a	
voor-be-schikken	to predestine, to predetermine	to see to, to dispose of	to arrange, to order	modifying	?	
voor-be-schouwen	to preview, to give a preview of	to consider	to see, to view, to survey	modifying	?	
voor-be-stemmen	to predestine, to predetermine	to intend, to destine	*	modifying	n/a	V-base not systematically related synchronically (<i>stemmen</i> 'to vote')
voor-be-werken	to pre-treat, to work on something beforehand	to treat	to work	modifying	resultative	
voor-ver-kopen	to sell in advance, to sell beforehand	to sell	to buy	modifying	causative	<i>ver-</i> licenses a causer participant X: 'X causes Y to buy Z' (assumed to be idiosyncratic by some linguists)
voor-ver-warmen	to preheat, to heat beforehand	to heat, to warm	to warm/ <i>warm</i> 'warm' (A)	modifying	resultative	

**Middle Dutch SCVs and ICVs with *door*
'through' and *over* 'over'**

The tables below give the Middle Dutch SCVs and ICVs with *door* 'through' and *over* 'over' (in which these preverbs are adapted to the Modern Dutch orthography), their glosses, their meanings, the Modern Dutch predicates expressing the same meanings, the glosses of these Modern Dutch predicates, the numbers of the texts the verbs are attested in (see the title list in Appendix 4b), and the corresponding line/section numbers in these texts.

NB

- *Id.* ('identical form and meaning') indicates that the same form is used to express the relevant meaning in Modern Dutch.
- Accents on the Middle Dutch complex verbs indicate their (in-)separability.

Table 7.2. Middle Dutch SCV's with *door*.

Middle Dutch	gloss	meaning	Modern Dutch	gloss	text number + section/line
dóorboren	through-drill	to drill through	id.		VIII-32, 33
dóorgaan 1	through-go	to continue	id.		VI-179a1, 179a2, 179c
dóorgaan 2	through-go	to go through	id.		49b, 55, 140, 142b
dóorkomen	through-come	to come through	id.		XII-99a
dóorleven	through-live	to live completely through	doorleven (ICV)	through-live	XIII-180
dóorrijden	through-ride	to separate by riding	uitéenrijden	apart-ride	I-159fb
dóorsien	through-filter	to filter through	dóorfilteren	through-filter	VIII-32a
dóorsnijden	through-cut	to cut through	id.		VIII-68
dóorsteken	through-stab	to pierce through	id.		VIII-150, XII-107
dóorwaken	through-wake	to wake through	id.		II-25b

Table 7.3. Middle Dutch SCV's with *over*.

Middle Dutch	gloss	meaning	Modern Dutch	gloss	text number + section/line
óverblijven	over-stay	to be left over	id.		IV-187
óverbrengen 1	over-bring	to take to, to carry over	id.		VI-222
óverbrengen 2	over-bring	to spend (time)	dóorbrenghen	through-bring	II-41a, VI-224a
óvergaan	over-go	to happen to, to come over	óverkómen (ICV)	over-come	VI-307a
óvergeven	over-give	to give to, to give away	id. (only meaning 'to give to')		VI-64, 65, 144, 198, 248, 249
óverkomen 1	over-come	to come to	id.		I-152rb, VI-4, 5
óverkomen 2	over-come	to happen to, to come over	óverkómen (ICV)	over-come	VI-56a
óverkomen 3	over-come	to pass by	óvergaan, voorbijgaan	over-go, past-go	VI-224b
óverleveren	over-deliver	to carry over, to transmit	óverdragen	over-carry	II-11a
óvertliden ⁵	over-go	to pass by	óvergaan, voorbijgaan	over-go, past-go	II-35b
óverreizen naar	over-travel to	to travel further to	cf. Modern Dutch ICV <i>overlijden</i> 'to pass away, to die' (* <i>lijden</i> 'to go')	through-travel to	VI-59a, 63
óverschieten	over-shoot	to shoot to the other side	dóorreizen naar		I-161ra
óverzien	over-see	to see completely over, to survey	id.	over-see	VI-203

⁵ The complex verb *óvertliden* is also attested in VI-119b and in VI-176. These two tokens contain past participle forms without the past participle marker *ge-* (*over-leden*). The *Middelnederlands Woordenboek* 'Middle Dutch Dictionary' (1998, lemma *over-liden*) states that the absence of *ge-* does not constitute ICV evidence in the case of *óvertliden*, since the past participle form of the Middle Dutch base verb *liden* is *leden*, and not *ge-leden*. The complex verb *óvertliden*, then, can be classified as an SCV on the basis of the SCV evidence in II-35b, which contains an infinitival form that is separated by a modal verb (*over laet lijden* 'lit. over let go, let pass by'). The meaning of this complex verb is expressed by *óvergaan* or by *voorbijgaan* in Modern Dutch, as indicated in Table II (see section 7.4.3.2 for some remarks on the relationship with the Modern Dutch ICV *overlijden*).

Table 7.4. Middle Dutch ICVs with *door*.

Middle Dutch	gloss	meaning	Modern Dutch	gloss	text number + section/line
doorboren	through-drill	to stab, to pierce	id.	through-squeeze	I-148vb, VIII-56
doordrinken	through-squeeze	to soak with	id. (doordrénken)	through-drill	VIII-98
doorgáten	through-hole	to pierce	doorbóren		VIII-6a, 6b, 46, 114, 167, IX-27, X-188, XII-91b, XII-96
doorgráven	through-dig	to pierce by digging	id.		II-20b
doorhóuwen	through-chop	to pierce by striking	doorsláan	through-strike	XIII-38
doorlôpen	through-run	to intersect	id., doorkrúisen	through-cross	VI-255, X-199a, 200, 201a
doomágelen	through-nail	to pierce with nails	doorspíjkeren	through-nail	XIII-18a
doorrénnen	through-run	to intersect	doorkrúisen	through-cross	I-139va1, VII-197
doorrijden	through-ride	to run over/through completely	overrijden	over-ride	I-161va, VI-35b, 36a, 77a, 238
doorrijgen, doorrien	through-pierce	to pierce	doorbóren	through-drill	XIII-18b
doorrijten	through-pierce	to pierce	doorbóren	through-drill	V-93r
doorscóord zijn	through-cracked be	to be cracked	gescheurd zijn	cracked be	VIII-27
doorsláan 1	through-strike	to intersect	doorlôpen, doorkrúisen	through-run, through-cross	X-194, 199b, 201b
doorsláan 2	through-strike	to pierce	doorbóren	through-drill	VIII-30a
doorsnijden	through-cut	to cut through completely, to pierce by cutting	id.		VIII-30b
doorstéken	through-stab	to pierce by stabbing	stekend doorbóren	stabbing through-drill	I-150vb, 151va, 155rb, 159ra, 161vb, VI-131, 192, 278, VIII-149
doortógen zijn van	through-drawn be with	to be soaked with	doortrókken zijn van	through-drawn be with	V-86r

Table 7.4. Middle Dutch ICVs with *door* – continued.

Middle Dutch	gloss	meaning	Modern Dutch	gloss	text number + section/line
doorwándelen	through-wander	to walk/go/pass through completely, to undergo	doortópen, ondergáan	through-walk, under-go	VII-33va
doorwónd zijn	through-wounded	to be wounded	gewond zijn	wounded be	VIII-142a
doorwórstelen	through-wrestle	to struggle through	id.		VI-236
doorzien	through-see	to see through	id.		III-167rb1, 167rb2
doorziën	through-scorch	completely, to survey to scorch	verzéngen	<i>ver</i> -*zengen	V-106r

Table 7.5. Middle Dutch ICVs with *over*.

Middle Dutch	gloss	meaning	Modern Dutch	gloss	text number + section/line
overdenken	over-think	to think over completely, to reflect on	id.		V-49, XIII-181
overdragen	over-carry	to agree, to arrange	overeenkomen	overone-come	V-15a, 24, VI-40, 41, 89, 111, 119a, 126
overhângen	over-hang	to hang (with), to decorate with	behângen	<i>be</i> -hang	VI-116
overlâden	over-load	to overload	id.		XIII-129
overlâechen	over-load	to overload	overlâden	over-load	VI-301
overlâsten	over-load	to attack	overvâllen	over-fall	VI-83, 138
overlôpen met	over-run with	to suffuse with	overgieten met	over-pour with	V-133
overspreken	over-speak	to discuss, to talk about fully	bespreken	<i>be</i> -speak	III-106
overvâllen	over-fall	to surprise, to attack	id.		VI-128, 186

Table 7.6. Middle Dutch complex verbs with *door* and *over* showing both SCV evidence and ICV evidence.

Middle Dutch	gloss	meaning	Modern Dutch	gloss	text number + section/line
doorscrepen	through-scrape	to scrape off	afschrapen, afschrappen	off-scrape	VIII-30b, 32b, 32c, 41a
doorzoeken	through-search	to search (through) completely	doorzoeken (ICV)		II-4b, 5b
overbrengen 3	over-bring	to run through, to use up, to squander	opmaken verkwisten	up-make ver-*kwisten	XIII-6, 43b, 145b, 204
overlezen	over-read	to read over/through	óverlezen	over-read	III-102d, 102e, IVa-182,
overzetten	over-put	to read aloud to render in another language, to draw up in another language	hardop lezen óverzetten in een andere taal, ópstellen in een andere taal	aloud read over-put in another language, up-put in another language	IVb-205a, 206a1, V-6b II-01a, III-103, 104a, IV-179a, 179b, 184, 185b, 199, IVb-208a1, 208a2

Middle Dutch texts

- I. Historie van Troyen (1479, Gouda)
- II. Historie van die seuen wijse mannen van roemen (1480, Gouda)
- III. Van duytsche boeken te lesen (1445, Eastern Flanders, Brabant)
- IV. Verclaringhe vanden duytschen boeken (excerpten) (1460, Eastern Flanders, Brabant)
- V. Historie van Reynaert die vos (1479, Gouda)
- VI. Historie van Malegijs (1556, Antwerp)
- VII. Brieven (1350, Gent)
- VIII. Cyrurgie (1351, Flanders)
- IX. Boek van Medicinen (1351, Flanders)
- X. Chiromantie (1351, Western part of the Low Countries)
- XI. Leringhe van orinen, Uroscopie (1351, Flanders)
- XII. Liber Magistri Avicenne (1351, Flanders)
- XIII. Spiegel der sonden (1435, Oudenaarde, Western-Gelderland)
- XIV. Schaecspel (1479, Gouda)
- XV. Marialegenden en –exempelen (1500, Mechelen, Eastern-Brabant)
- XVI. Bijbelvertaling 1360 (1460-1462, South-Western Limburg)
- XVII. Vanden gheestelijken tabernakel (1380, Groenendaal, South-Western-Brabant)
- XVIII. Tafel vanden kersten ghelove – Zomerstuk (1480, Holland)

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Samenvatting

(Summary in Dutch)

1. Complexe predikaten: SCVs en ICVs

In dit proefschrift staan de synchrone en diachrone eigenschappen van twee typen complexe predikaten in het Nederlands centraal: die van scheidbaar samengestelde werkwoorden of partikelwerkwoorden (*separable complex verbs*, SCVs) en die van onscheidbaar samengestelde werkwoorden (*inseparable complex verbs*, ICVs). Voorbeelden van SCVs zijn *inlopen* en *napraten*. Voorbeelden van ICVs zijn *doorzoeken* en *overspóelen*. Beide typen werkwoorden bestaan uit een preverbaal element dat correspondeert met een prepositie en/of postpositie (*in, na, door, over*) en een werkwoord (*lopen, praten, zoeken, spoelen*). Het verschil in scheidbaarheid tussen deze twee typen werkwoorden, dat correspondeert met een verschil in klemtoonpatroon (vergelijk *inlopen, nápraten, doorzóeken, overspóelen*), wordt geïllustreerd in (1)-(2).

- (1) SCV: *inlopen*
 - a. Jan *loopt* de schoenen *in*.
 - b. dat Jan de schoenen niet hoeft *in te lopen*
 - c. dat Jan de schoenen *inloopt*

- (2) ICV: *doorzoeken*
 - a. Jan *doorzóekt* het huis op wapens.
 - b. dat Jan het huis niet hoeft *te doorzóeken*
 - c. dat Jan het huis *doorzóekt*

Zoals (1)a en (2)a laten zien, worden de finiete vormen van SCVs gescheiden in hoofdzinnen, maar is dit niet het geval voor de finiete vormen van ICVs. Uit (1)b en (2)b blijkt dat infinitiefconstructies met de infinitiefmarkeerder *te* dit verschil in scheidbaarheid tussen SCVs en ICVs eveneens tonen. De voorbeelden in (1)c en (2)c laten zien dat het verschil in scheidbaarheid niet blijkt uit de finiete vormen van SCVs en ICVs in bijzinnen.

2. De synchrone analyse van SCVs en ICVs

Over de synchrone structurele status van SCVs is reeds veel geschreven. Centraal in dit debat staat de vraag of SCVs woorden (morfologische eenheden, met V⁰-status) of woordgroepen (syntactische eenheden, met V'-status) zijn. Een woordanalyse lijkt de semantische en argumentstructurele eigenschappen van SCVs goed te kunnen verantwoorden. De scheidbaarheid van SCVs vormt echter een probleem voor een dergelijke analyse: zoals geformuleerd is in het principe van Lexicale Integriteit,

kunnen woorden niet gesplitst worden in de syntaxis. Indien we Lexicale Integriteit aannemen, moeten we dus concluderen dat SCVs geen woorden zijn.

In veel woordgroepanalyses van SCVs wordt aangenomen dat partikels zoals *in* in *inlopen* syntactisch en semantisch identiek zijn aan syntactisch zelfstandige resultatieve predikaten. Een voorbeeld van een syntactisch zelfstandig resultatief predikaat is *oranje* in *de fiets oranje verven*: het resultaat van de handeling uitgedrukt door *de fiets oranje verven* is dat de fiets oranje is. Op vergelijkbare wijze zou gesteld kunnen worden dat het resultaat van *de schoenen inlopen* is dat de schoenen "in" (met de figuurlijke betekenis 'in de gewenste vorm/conditie') zijn.

Een probleem voor deze woordgroepanalyse is dat syntactisch zelfstandige resultatieve predikaten en partikels verschillen wat betreft hun syntactische distributie. Zo staan partikels na *aan het* in de progressieve *aan-het*-constructie en (optioneel) na het finiete werkwoord in werkwoordclusters, maar kunnen syntactisch zelfstandige resultatieve predikaten niet op deze posities staan. Dit is te zien in (3)a-b. Daarnaast kunnen partikels niet voorkomen in koppelwerkwoordconstructies (kww-constructies) en topicalisatieconstructies (topicconstructies), terwijl dit wel mogelijk is voor syntactisch zelfstandige resultatieve predikaten, zoals geïllustreerd wordt in (3)c-d.

- (3) a. *aan-het*-constructie:
 dat Jan de schoenen aan het *in*-lopen is
 *dat Jan de fiets aan het *oranje* verven is
 (dat Jan de fiets *oranje* aan het verven is)
- b. werkwoordcluster:
 dat Jan de schoenen *in* heeft gelopen / heeft *in*-gelopen
 dat Jan de fiets *oranje* heeft geleverd / *heeft *oranje* geleverd
- c. kww-constructie:
 *De schoenen zijn *in*.
 De fiets is *oranje*.
- d. topicconstructie:
 *Maar *in* zijn de schoenen niet.
 Maar *oranje* is de fiets niet.

Deze distributionele verschillen tussen partikels en syntactisch zelfstandige resultatieve predikaten kunnen worden verantwoord door aan te nemen dat een partikel, in tegenstelling tot een syntactisch zelfstandig resultatief predikaat, geen syntactische projectie (XP), maar een syntactisch hoofd (X) is. Dit syntactische hoofd vormt een woordgroep met het werkwoord: $[X-V^0]_{VP}$. SCVs worden dus geanalyseerd als woordgroepen, maar deze woordgroepen worden verondersteld een andere syntactische structuur te hebben dan combinaties van een syntactisch zelfstandig resultatief predikaat (resultatieve XP) en een werkwoord.

Uit het voorafgaande blijkt dat er in syntactisch opzicht een verschil is tussen de resultatieve XP *oranje* in *de fiets oranje verven* en het partikel *in* in *de schoenen inlopen*. In semantisch opzicht komen deze twee elementen echter sterk met elkaar overeen. Beide elementen formuleren namelijk het resultaat van de handeling die wordt uitgedrukt door de constructie: het resultaat van *de fiets oranje verven* is dat de fiets oranje is en het resultaat van *de schoenen inlopen* is dat de schoenen "in" (in de gewenste vorm/conditie) zijn. Hoewel de koppelwerkwoordconstructie **de*

schoenen zijn in in (3)c dus *syntactisch* onwelgevormd is, geeft deze constructie de *semantische* relatie tussen *de schoenen* en *in* in *de schoenen inlopen* correct weer: net als *oranje* in *de fiets oranje verven* heeft *in* in *de schoenen inlopen* de semantische functie van resultatief predikaat. Dit betekent dat zowel *oranje* in *de fiets oranje verven* als *in* in *de schoenen inlopen* prediceren over een participant (*de fiets* en *de schoenen*) door de eindtoestand van deze participant te noemen (*oranje* en *in* 'in de gewenste vorm/conditie').

De stelling dat partikels functioneren als resultatieve predikaten is niet nieuw; deze stelling wordt in de literatuur veelvuldig verdedigd. Uit mijn onderzoek is echter gebleken dat er ook veel partikels zijn die niet functioneren als resultatief predikaat. Zo heeft het partikel *na* in *over de film napraten* een functie die vergelijkbaar is met die van een bijwoordelijke bepaling: het functioneert als modificeerder (vergelijk *naderhand* *over de film praten*). Hetzelfde geldt voor het partikel *voor* in *de groenten voorkoken* (vergelijk *de groenten van tevoren koken*). Andere partikels zijn functioneel vergelijkbaar met preposities; ze functioneren als relator. Dit is bijvoorbeeld het geval met het partikel *toe* in *het publiek toespreken* (vergelijk *tot het publiek spreken*) en met het partikel *aan* in *de jongen aankijken* (vergelijk *naar de jongen kijken*). Ten slotte zijn er partikels die functioneren als markeerder van aspect, zoals het partikel *door* in *uren doorlopen*, dat het voortduren van de handeling die wordt uitgedrukt door het werkwoord aanduidt. Met behulp van al deze typen partikels kunnen op een productieve manier SCVs worden gevormd.

In semantisch opzicht is dus slechts een deel van de partikels vergelijkbaar met resultatieve XPs zoals *oranje* in *de fiets oranje verven*. In syntactisch opzicht echter zijn *alle* partikels verschillend van resultatieve XPs: partikels projecteren geen XP, maar zijn kale hoofden (X).

In tegenstelling tot een SCV heeft een ICV de constituentstructuur van een woord; ICVs zijn morfologische eenheden: [prefix-V⁰]_V⁰. Met betrekking tot de semantiek van ICVs is vastgesteld dat prefixen zoals *door* in *het huis doorzoeken* en *over* in *het land overspoelen* niet functioneren als resultatief predikaat, maar als relator (vergelijk *Jan doorzocht het huis* – *Jan zocht door het huis* en *de rivier overspoelde het land* – *de rivier spoelde over het land*). Hierin verschillen ICV-prefixen als *door-* en *over-*, die corresponderen met preposities en/of postposities, van de prefixen *be-*, *ont-* en *ver-* (in bijvoorbeeld *bespreken*, *ontbranden* en *verwijzen*), die wel functioneren als resultatief predikaat.

De synchrone semantische en structurele analyse van SCVs, ICVs en geprefigeerde werkwoorden met de prefixen *be-*, *ont-* en *ver-* die ik voorstel, biedt een verklaring voor de mogelijke en onmogelijke combinaties van resultatieve XPs, partikels en prefixen in een VP. Zo verantwoordt mijn analyse de ongrammaticaliteit van **de groenten gaar voorkoken* (met de betekenis 'ervoor zorgen dat de groenten gaar worden door ze van tevoren te koken'), waarin een resultatieve XP (*gaar*) wordt gecombineerd met een modifierend partikel (*voor*). Ook verantwoordt mijn analyse de grammaticaliteit van een constructie als *de vergadering nabespreken*, waarin een modifierend partikel (*na*) wordt gecombineerd met een prefix dat functioneert als resultatief predikaat (*be-*).

3. *Non-isomorfie*

Partikels hebben verschillende functies in de Lexicaal-Conceptuele Structuur (LCS) van de zin, zoals die van resultatief predikaat, van modificeerder of van relator, waarmee verschillende eigenschappen op het niveau van de LCS corresponderen. Zo prediceert een resultatief predikaat over een participant in de LCS, maar doet een modificeerder dat niet. Daarnaast voegt een resultatief predikaat interne temporele geleding toe aan de handeling die wordt uitgedrukt door de constructie, maar laat een modificeerder de interne temporele kenmerken van de constructie intact.

Deze verschillende semantische eigenschappen zorgen ervoor dat SCV-constructies met resultatieve partikels en SCV-constructies met modifierende partikels verschillende argumentstructurele en lexicaal-aspectuele eigenschappen hebben. Zo zijn SCV-constructies met resultatieve partikels altijd ofwel transitief, ofwel onaccusatief (maar nooit onergatief) en telisch, maar erven SCV-constructies met modifierende partikels hun transitiviteits- en teliciteitskenmerken van de basisconstructie (i.e. van de constructie zonder het partikel). SCV-constructies met modifierende partikels die een onergatieve en atelische basis hebben zijn dus zelf ook onergatief en atelisch. Dit geldt bijvoorbeeld voor *over de vergadering napraten*. De kenmerken onergativiteit en atelicititeit zijn echter uitgesloten voor SCV-constructies met resultatieve partikels: evenals constructies met andere resultatieve predikaten (zoals resultatieve XPs en resultatieve prefixen) zijn constructies met resultatieve partikels altijd transitief/onaccusatief en telisch. De uiteenlopende argumentstructurele en lexicaal-aspectuele eigenschappen van SCV-constructies zijn dus niet onvoorspelbaar, maar volgen uit de eigenschappen van het betreffende partikel op het niveau van de LCS in combinatie met die van de basis.

Uit de data in dit proefschrift blijkt dat SCVs verschillende semantische structuren (LCSs) hebben. Alle SCVs hebben echter dezelfde syntactische structuur (constituentstructuur), want alle partikels zijn kale hoofden (X) die een constituent vormen met het werkwoord. Dit betekent dat de relatie tussen de semantische structuur (LCS) en de syntactische structuur van SCVs niet isomorf is: verschillende semantische structuren corresponderen met een en dezelfde syntactische structuur.

Omgekeerd kunnen constructies met verschillende constituentstructuren, zoals constructies met resultatieve XPs, resultatieve partikels en resultatieve prefixen (*be-*, *ont-*, *ver-*), dezelfde semantische structuur hebben. Immers, deze elementen functioneren alle drie als resultatief predikaat. Dit betekent dat constructies met een van deze drie elementen, ongeacht welk van de drie, de resultatieve LCS hebben. Deze LCS staat in (4).

- (4) [[CAUSE (x), BECOME [W (y)]], BY {V (x)}]
'to cause Y to become W by V-ing'

De semantische structuur in (4) correspondeert dus met verschillende constituentstructuren.

Dergelijke non-isomorfie tussen de semantiek en de syntaxis kan goed verantwoord worden in theoretische modellen waarin parallelle structuurniveaus worden aangenomen die aan elkaar gerelateerd zijn door middel van correspondentieprincipes. Dit is bijvoorbeeld het geval in het model van Lexical-

Functional Grammar (LFG) en in de tripartiete parallelle architectuur van Ray Jackendoff.

De SCV-data lijken moeilijker te verantwoorden in modellen die uitgaan van een een-op-eenrelatie tussen de semantiek en de syntaxis, zoals Chomskyaanse modellen. Dit komt doordat in dergelijke modellen de verschillende semantische structuren van SCV-constructies verondersteld worden te corresponderen met verschillende syntactische structuren. Het aannemen van verschillende syntactische structuren voor semantisch verschillende SCVs is echter niet wenselijk, aangezien alle SCVs dezelfde syntactische distributie hebben (vergelijk (3)). Deze uniforme syntactische distributie vraagt om de aanname van een uniforme syntactische structuur voor SCVs: $[X-V^0]_V$.

4. SCVs als constructional idioms

In SCV-constructies zoals *de schoenen inlopen* en *over de vergadering napraten* dragen zowel het partikel als het werkwoord bij aan de betekenis van de SCV. Deze SCVs zijn dus compositioneel. Ondanks de compositionaliteit van SCVs is hun betekenis echter niet altijd geheel voorspelbaar op grond van de betekenis die het partikel en het werkwoord in isolatie hebben. Zo volgt de betekenis van *inlopen*, die kan worden omschreven als 'ervoor zorgen dat het object in de gewenste vorm/conditie komt door te lopen' ('to cause NP to become in the desired shape/state by walking'), niet direct uit de combinatie van de betekenis van *in* 'naar binnen' met die van *lopen*. Toch voegt *in* betekenis toe in deze SCV ('in de gewenste vorm/conditie'); *in* heeft dezelfde betekenis in SCVs als *de auto inrijden* en *het tennisracket inslaan*. Bovendien kan het partikel *in* 'in de gewenste vorm/conditie' gebruikt worden om nieuwe SCVs te vormen, zoals *de rolschaatsen inskatzen*. Deze betekenis van *in* is echter gebonden aan het gebruik in SCVs; het is een constructiespecifieke, geconventionaliseerde betekenis. SCVs zoals *inlopen* zijn dus tegelijkertijd compositioneel en conventioneel.

De paradoxale combinatie van de eigenschappen compositionaliteit, conventionaliteit en productiviteit van SCVs kan verantwoord worden door aan te nemen dat SCVs instantiaties zijn van gedeeltelijk gelexicaliseerde woordgroepen (*constructional idioms*). Volgens deze analyse worden SCVs gevormd op grond van lexicale templatens met een gevulde partikelpositie en een open positie voor het werkwoord. Deze templatens corresponderen met een bepaalde betekenis. Een voorbeeld van een SCV-templaat staat in (5).

- (5) $[in-V^0]_V$ 'to cause NP to become in the desired shape/state by V-ing'
('ervoor zorgen dat het object in de gewenste vorm/conditie komt door V')

De analyse van SCVs als gedeeltelijk gelexicaliseerde woordgroepen verantwoordt de verschillende eigenschappen van SCVs. Dit geldt bijvoorbeeld voor de scheidbaarheid van SCVs: SCV-templatens zijn woordgroeptemplatens. Daarnaast verantwoordt de open werkwoordpositie in een templaat als (5) de productiviteit van SCVs: door deze positie te vullen met verschillende werkwoorden kunnen nieuwe SCVs met het partikel *in* 'in de gewenste vorm/conditie' worden gevormd. Ook blijkt uit het templaat dat het partikel en het werkwoord beide betekenis toevoegen: de twee posities in het templaat corresponderen ieder met een deel van de betekenis.

Ten slotte biedt deze analyse een verklaring voor de geconventionaliseerde semantische en andere eigenschappen van SCVs, die vaak onterecht geïnterpreteerd zijn als kenmerken die zouden wijzen op de woordstatus van SCVs: deze eigenschappen worden in de voorgestelde analyse verantwoord door aan te nemen dat woordgroeptemplaten als (5) opgeslagen zijn in het lexicon. Dit betekent dat de vermeende *woord*kenmerken van SCVs hier worden geanalyseerd als *lexicale* kenmerken (i.e. als kenmerken van lexicale eenheden, die de structurele status van een woord of een woordgroep kunnen hebben). De voorgestelde synchrone analyse van SCVs expliciteert dus de relatie tussen de morfologie, de syntaxis en het lexicon.

SCVs die geconventionaliseerde eigenschappen hebben, maar tegelijkertijd compositioneel zijn en productieve patronen instantiëren, vormen de meerderheid van de Nederlandse SCVs. Daarnaast zijn er SCVs met partikels die geen geconventionaliseerde betekenis hebben, zoals *opgooien*, en SCVs die niet compositioneel zijn (en dus ook geen productieve patronen instantiëren), zoals *zich aanstellen*. Deze SCVs representeren respectievelijk SCV-templaten met twee open posities en SCV-templaten met twee gevulde posities (volledig gelexicaliseerde SCV-templaten). SCVs zijn dus in meerdere of mindere mate gelexicaliseerd.

Ondanks deze verschillen in de mate van lexicalisatie hebben alle SCVs dezelfde syntactische distributie. Zo kunnen de partikels van alle SCVs in werkwoordclusters staan (vergelijk (3)). Deze uniforme syntactische distributie volgt uit de aanname van een uniforme syntactische structuur voor SCVs: $[X-V^0]_V$.

5. De diachronie van SCVs en ICVs

De synchrone semantische analyse van SCVs en ICVs heeft geleid tot een herziening van de oorspronkelijke diachrone hypothese, volgens welke zowel SCVs als ICVs grammaticalisaties zijn van constructies met resultatieve XPs (zoals *de fiets oranje verven*). Deze hypothese stelt dat SCVs en ICVs verschillende stadia in een en dezelfde historische ontwikkeling representeren, waarbij ICVs worden verondersteld een stadium verder te zijn dan SCVs. De semantische eigenschappen van SCVs en ICVs maken het echter onwaarschijnlijk dat alle SCVs en ICVs historisch gerelateerd zijn aan constructies met resultatieve XPs: veel partikels en vrijwel alle prefixen functioneren niet als resultatief predikaat.

Volgens de herziene diachrone hypothese hebben niet alleen resultatieve XPs, maar ook andere elementen die direct links van het werkwoord konden staan in oudere stadia van het Nederlands, zoals bijwoordelijke bepalingen en postposities, zich ontwikkeld tot partikels. Verondersteld wordt dat de heranalyse van deze verschillende elementen met het werkwoord als syntactische eenheden heeft geleid tot de formatie van SCVs met partikels die functioneren als resultatief predikaat, modificeerder en relator. Data uit oudere stadia van het Nederlands ondersteunen deze hypothese. Ook SCVs met partikels die functioneren als markeerder van aspect blijken historisch te kunnen worden gerelateerd aan constructies met postposities.

Op basis van de synchrone semantische analyse van ICVs, waaruit bleek dat prefixen voornamelijk functioneren als relators, neem ik aan dat alleen SCVs met relatorpartikels verder kunnen grammaticaliseren tot ICVs. Ook deze diachrone hypothese wordt ondersteund door historische data.

6. SCVs in andere Germaanse talen

Uit een vergelijking van de syntactische en semantische kenmerken van Nederlandse SCVs met die van SCVs in andere Germaanse talen blijkt dat deze SCVs gelijksoortige syntactische eigenschappen hebben, maar in semantisch opzicht van elkaar verschillen. Zo kunnen in een Germaanse VO-taal als het Engels geen SCVs gevormd worden met partikels die functioneren als modificeerder of relator, terwijl een Germaanse OV-taal als het Duits wel dezelfde typen partikels als het Nederlands heeft. Een ander verschil tussen de Germaanse OV-talen en de Germaanse VO-talen dat in dit verband relevant is, is dat partikels in OV-talen preverbaal zijn, terwijl partikels in VO-talen (in het algemeen) postverbaal zijn.

Op grond van de aanname dat alleen elementen die direct naast het werkwoord kunnen staan zich kunnen ontwikkelen tot partikels wordt verondersteld dat het verschil tussen het Nederlands en het Duits enerzijds en het Engels anderzijds wat betreft de typen partikels die we vinden verband houdt met de woordvolgordeverschillen tussen deze talen. Deze woordvolgordehypothese komt op het volgende neer: niet alle elementen die in oudere stadia van Germaanse OV-talen als het Nederlands en het Duits direct *links* van het werkwoord konden staan, konden ook direct *rechts* van het werkwoord staan in oudere stadia van een Germaanse VO-taal als het Engels. Als gevolg hiervan konden niet al deze elementen in het Engels met het werkwoord worden geheranalyseerd tot syntactische eenheden (dat wil zeggen, tot SCVs met postverbale partikels). Ter ondersteuning van deze diachrone hypothese werden data uit het Engels, Zweeds en Hongaars gepresenteerd. Deze data laten zien dat het verschil tussen talen wat betreft de typen partikels die onderscheiden kunnen worden gedeeltelijk correspondeert met het OV-/VO-onderscheid.

7. De morfologie, de syntaxis en het lexicon

De analyse van Nederlandse SCVs in dit proefschrift impliceert een aanscherping van de grens tussen de morfologie en de syntaxis. Uit deze analyse is gebleken dat we in de grammatica een structurele categorie moeten aannemen tussen, enerzijds, morfemen die deel uitmaken van woorden en, anderzijds, syntactisch zelfstandige woorden die woordgroepen projecteren. Dit is de categorie van de niet-projecterende woorden; niet-projecterende woorden zijn syntactisch onzelfstandig en vormen een syntactische projectie met een ander woord.

De analyse expliciteert eveneens de relatie tussen de morfologie, de syntaxis en het lexicon. Zo blijkt uit deze analyse dat het lexicon niet alleen templatens voor de vorming van woorden bevat, maar ook templatens voor de vorming van woordgroepen. Het gaat hierbij om woordgroepen met geconventionaliseerde eigenschappen. Net als woordtemplatens bevatten deze woordgroeptemplatens een of meer open posities die gevuld kunnen worden met woorden van een bepaalde syntactische (sub-)categorie. Hierdoor kunnen op een productieve manier nieuwe woordgroepen worden gevormd die de betreffende geconventionaliseerde eigenschappen hebben. Door deze woordgroepen te analyseren als instantiaties van gedeeltelijk gelexicaliseerde templatens, wordt verantwoord dat ze zowel conventioneel als compositioneel zijn en bovendien productief gevormd kunnen worden. De combinatie van de eigenschappen conventionaliteit, compositionaliteit en productiviteit wordt vaak beschouwd als typerend voor de producten van

woordvormingprocédés (woorden). De data in dit proefschrift laten echter zien dat deze eigenschappen van toepassing zijn op *alle* elementen die gevormd worden op basis van lexicale templatens met een of meer open posities, of deze nu de structurele status van een woord (X^0) of die van een woordgroep (X' of XP) hebben.

Curriculum Vitae

Corrien Blom was born in Doetinchem on 29 November 1974. After graduating from Grammar School (OSG Bataafse Kamp Hengelo, 1993), she started a degree in Dutch Linguistics and Literature at the Radboud University Nijmegen in 1994, specialising in psycholinguistics and linguistics. Following her graduation (*cum laude*) in 1999, she began her graduate study at the Département d'Etudes Germaniques at the Sorbonne University in Paris, from which she obtained the Diplôme d'Etudes Approfondies (DEA) in Dutch linguistics (*cum laude*) in 2000. From September 2000 to January 2005, she held an AiO position at the Department of Linguistics at the Vrije Universiteit Amsterdam. In 2003, she spent one term at the Department of Linguistics at Stanford University.

