# The aspectual function of particles in phrasal verbs

Walkova, Milada

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Milada Walková


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# The aspectual function of particles in phrasal verbs

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love, support in my linguistics endeavors, for being my guide in science and for believing in me more than I do.

# List of abbreviations

| | |
|---|---|
| AV0 | adverb (corpus tag) |
| AVP | adverb particle (corpus tag) |
| AVP-PRP | probably adverb particle but maybe preposition (corpus tag) |
| BNC | British National Corpus |
| DA | degree achievement |
| DO | direct object |
| ENE | Early New English |
| gen | indicates use across varieties of English |
| MidE | Middle English |
| ModE | Modern English |
| NP | noun phrase |
| O | object |
| OE | Old English |
| PP | prepositional phrase |
| PREF | prefix |
| PRP | preposition (corpus tag) |
| PRP-AVP | probably preposition but maybe adverb particle (corpus tag) |
| PV | phrasal verb |
| REFL | reflexive marker |
| S | subject |
| SUFF | suffix |
| UK | indicates use in the British variety of English |
| US | indicates use in the American variety of English |
| V | verb |
| VP | verb phrase |
| XML | Extensible Markup Language |

# 1 Aspect[1]

Since this dissertation deals with the aspectuality of particles in phrasal verbs (PVs), it is necessary to discuss, besides PVs, also aspect. This chapter introduces the relevant concepts and related terminology and contributes to the current debate on aspect.

There are two kinds of aspectual distinction in language: grammatical and situation aspect (e.g. Smith 1997). They represent two different yet interrelated facets of aspect. Comrie (1976: 3) defines aspects as "different ways of viewing the internal temporal constituency of a situation". Aspect gives the speaker a choice to talk about the same situation in different ways (Smith 1997: 6). To illustrate, picture a scene where Patty is drinking coffee when her husband Max arrives. After that, Patty cooks dinner. The scene involving coffee-drinking can be described variously – as a coffee drinking event followed by a cooking event (1) or the coffee drinking event being in progress while the event of Max arriving home occurs (2). The distinction between viewing the coffee drinking event as a whole (*drank* in 1)(1) or in progress (*was drinking* in 2) is given by grammatical aspect as perfective-imperfective distinction.

(1) Patty drank coffee and cooked dinner.

(2) Patty was drinking coffee when Max arrived.

Situation aspect allows the speaker to talk about the coffee drinking event as non-bounded in (3), which may be paraphrased as *Patty did some coffee drinking*, or bounded in (4), which delimits the event by quantifying the amount of coffee that Pat drank. This distinction between predicates (3) and (4) is known as atelic-telic, respectively.

(3) Patty drank coffee.

(4) Patty drank a cup of coffee.

[1] Part of this chapter has been published as Walková, Milada. 2012. Dowty's aspectual tests: standing the test of time but failing the test of aspect. *Poznaň Studies in Contemporary Linguistics* 48(3): 495–518.

In this chapter I review both grammatical (Section 1.1) and situation aspect (1.2) in English. I show how the situation aspect of a predicate is determined by the interplay of verb semantics, syntactic elements, and pragmatic implicature (Section 1.3). The last section summarizes.

## 1.1 Grammatical aspect

Grammatical aspect comprises perfectivity and imperfectivity. While perfectivity views an event in its entirety and does not distinguish its individual phases, imperfectivity is concerned with the internal temporal structure of an event. Imperfectivity involves habitual and continuous meanings (Comrie 1976: 3).

Perfective situations are sometimes characterized as completed and resultative, yet Comrie maintains that doing so is inexact, as it "puts unnecessary emphasis on the final stage of the situation rather than on its totality" (Ibid: 21). A characterization of grammatical aspect that refers to the termination of an event, yet does not assign too much importance to it is given by Csirmaz (2004a: 3, following Olsen 1997) who defines the imperfective as an intersection of event time and reference time (These terms go back to Reichenbach 1947 and refer to the time of the event described by the speaker, and an anchoring point or interval of reference, respectively. See e.g. Borik 2002 for an extensive discussion.) that does not, unlike the perfective, contain the termination of the given event. Together with Comrie's definition, perfective can be understood as presenting an event as a whole, including its ending, and imperfective as presenting just part of an event. This understanding is graphically represented in Figure 1.

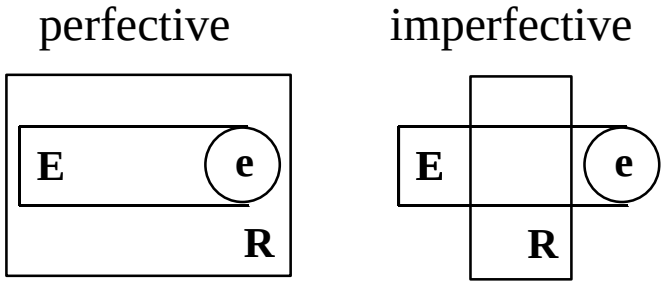



**Figure 1. A graphic representation of perfective and imperfective aspect.**

E – event, e – final endpoint of the event, R – reference.

Grammatical aspect in English is not inherent in the verb root itself, which is neutral in respect to aspect; its aspect markedness is determined by the use in a perfective or progressive form, e.g. *to smoke* (neutral) – *John smoked* (perfective) – *John was smoking* (progressive) (Dušková et al. 1988: 242). Therefore, I consider English grammatical aspect a purely grammatical category realized by verbal inflection. In contrast, in Slovak and other Slavic languages, grammatical aspect is a lexico-grammatical category inherent in the verb, e.g. *písať* (imperfective) – *na-písať* (perfective), both corresponding to English *write* (neutral). Every Slovak verb is thus perfective, imperfective, or occasionally bi-aspectual (cf. ibid.: 242, Ružička et al. 1966: 410).

A category sometimes treated with aspect is the perfect.[2] Dušková (1999: 103–112),[3] however, argues that the perfect in English is not an aspectual but a temporal category. In her view, a simple perfect form is aspectually neutral and can be used either perfectively or imperfectively, e.g. *I have lived/have been living in London since 2010* (perfective/progressive, both perfect). The difference between perfect and non-perfect forms, e.g. *Where have I put my glasses? – Where did I put my glasses?*, then, is built on a difference in temporal orientation, such as relevance for the present time in the above examples. I follow Dušková in considering the perfect a temporal category and do not deal with it further here.

## 1.2 Situation aspect

Besides grammatical aspect, the other facet of aspectual distinctions in language is situation aspect, also called lexical aspect, aktionsart, mode of action, etc.[4] This type of aspect involves differences in aspectual make-up between such pairs as *to draw* and *to draw a circle*, *to sing a song* and *to sing songs*, or *to see* and *to spot*. Yet it is important to note that situation aspect does not refer to the properties of happenings in the extralinguistic reality but to their linguistic descriptions: one and the same real-world

[2] This dissertation makes use of Comrie's (1976) terminology in order to distinguish between *perfective aspect*, i.e. aspect that views the situation in entirety, and *the perfect* construction (auxiliary *have* + *-ed participle* ) which implies that a past situation has some present relevance.
[3] Published also as Dušková, Libuše. 1983. Has the English Verb System the Category of Aspect? *Philologica Pragensia* 26: 14–23.
[4] I follow Smith (1997) and use the term *situation aspect.*

scene can be described by predicates of different situation aspect value, as examples (3 – 4) demonstrated, depending on the choice of the speaker (e.g. Krifka 1998, Smith 1997).

According to Bardovi-Harlig & Reynolds (1995: 107), "[l]exical aspect … refers to the inherent temporal makeup of verbs and predicates." It is not clear, however, what precisely this definition is supposed to mean: What exactly does *inherent temporal makeup* refer to? The absence of a well-shaped definition is characteristic to other sources as well. The delineation of situation aspect thus rests on the description of situation types (Section 1.2.1) and/or aspectual features dynamicity, telicity, and durativity (Section 1.2.2).

### 1.2.1 Situation types

It is the work of Vendler (1967: 97–121)[5] that has been highly influential in the study of situation aspect.[6] Vendler recognizes four classes of verbs[7] – states, activities, accomplishments, and achievements. These classes are commonly known as Vendler(ian) classes or situation types.

The first class, states, e.g. *know*, *believe*, or *love*, take some stretch of time for every period of which the state holds true. They do not require input of energy.

An activity, e.g. *run* or *push a cart*, is being realized in every phase of the time the activity takes. After an activity is interrupted, it still holds true that the activity has taken place, e.g. *I was running when I fell* entails *I ran*.

Accomplishments, like *draw a circle* or *run a mile*, have an endpoint which must be met; otherwise it is not true that this kind of process took place. For instance, when accomplishments are used with the progressive, the endpoint is not included in the denotation and the resulting predicate does not entail that the event took place, e.g. *I was running a mile when I fell* does not entail *I ran a mile*. Although the agent is engaged in performing the event during the time span of the accomplishment, the

[5] Published also as Vendler, Zeno. 1957. Verbs and Times. *The Philosophical Review* LXVI: 143–160.
[6] Other taxonomies exist as well (e.g. in Mourelatos 1978, Quirk et al. 1985: 201, Verkuyl 1989, 2004, among others). Vendler's classification, however, remains the most widespread.
[7] Although Vendler refers to categories of verbs, linguists have pointed out that his categories tend to exceed the limits of the verb and apply to the VP as a whole, cf. 1.3. Vendler admits borderline cases as well as the role of context for determining the category of a verb – thus a verb may be an activity in one context and a state in some other context.

accomplishment itself is not being realized during this time span; it is realized only once the endpoint is reached. Since they have an endpoint, accomplishments are not homogenous (Mourelatos 1978: 416).

Finally achievements, e.g. *reach the summit, win the race*, are situation types which take a moment only; therefore an achievement is not being realized throughout the time span which leads to the achievement itself. While accomplishments are processes which extend over a period of time and culminate in a terminus, achievements are only the terminus, preceded by a different process (Comrie 1976: 47f.2). Moreover, achievements may mark not just the end, but also the beginning of a situation (Mourelatos 1978: 416).

### 1.2.2 Aspectual features

Vendler's classes are generally analyzed in linguistic literature as based on aspectual features dynamicity, telicity, and punctuality (e.g. in Bardovi-Harlig & Reynolds 1995: 108, Brinton 1985: 159, Csirmaz 2004b, Jeschull 2003: 119–120, Olsen 1994, Rappaport Hovav 2008: 42, Smith 1997, Toivonen 2006: 184).

Dynamicity sets apart non-dynamic states from dynamic events (activities, accomplishments, achievements). Comrie (1976: 49) characterizes dynamicity as involving a change and requiring energy input, e.g. *know* (stative) – *run* (dynamic).

Durativity distinguishes durative situation types (states, activities, and accomplishments) from punctual[8] (achievements). According to Comrie (ibid.: 41), a durative situation takes some time, unlike a punctual one, e.g. *see* (durative) – *spot* (punctual). The distinction is not straightforward, though. Tenny (1994: 16) points out that "[d]uration is relative […] Cracking a pane of glass may take only an instant, but cracking the bough of a tree might take a few minutes. A bomb explodes instantaneously but the explosion of a supernova may take millions of years." It follows that the interpretation of a situation as durative or punctual is dependent on the denotee of the affected verb argument and our real-world knowledge.

[8] Sometimes termed also *punctiliar* (e.g. in Olsen 1994, Toivonen 2006) or *instantaneous* (e.g. in Csirmaz 2004a, b).

Telicity is quite an intricate issue: according to Rothstein (2008: 3, emphasis added), "[t]here is an intuitive agreement that *telic predicates are completed* or inherently bounded, but what exactly that means is very much under debate." I cannot even agree with the supposed consent that telic predicates are completed, as I will now show.

A classic approach treats telicity as involving a certain inherent endpoint, goal, or bound which is necessary for the event to be realized and beyond which the event cannot continue (e.g. in Bardovi-Harlig & Reynolds 1995: 108, Comrie 1976: 45, Dušková et al. 1988: 211, Jeschull 2003: 120, or Toivonen 2006: 184). Comrie illustrates telicity with examples *John is singing* (atelic) and *John is making a chair* (telic): "*make a chair* has built into it a terminal point, namely that point at which the chair is complete, when it automatically terminates; (...) *sing* has no such terminal point, and can be protracted indefinitely or broken off at any point" (Comrie 1976: 44). In contrast to telic situation types, atelic situation types do not have an inherent endpoint but only an arbitrary one. When a predicate is combined with the perfective, which views the situation as entire including its ending (see Section 1.1), the arbitrary (in the case of atelic situation types) or inherent (in the case of telic situation types) endpoint is entailed to have been reached (Jeschull 2003: 121). For instance, *John made a chair* indicates that the inherent endpoint of making a chair has been reached, or, in other words, that the chair has been completed. *John sang* indicates that an arbitrary endpoint of John's singing has been reached, that is, that John has stopped singing.

Yet, as Comrie (1976: 47) points out, it is possible to indicate that the inherent endpoint of a telic event has not yet been or never was reached, as when the event is aborted before it is finished, e.g. *John was making a chair when he died*. Therefore, whether this inherent endpoint is actually reached or not is an issue which should be kept separate from telicity itself, as argued by e.g. Cappelle (2004b), Cappelle & Declerck (2005) and Depraetere (1995) who suggest that the issue of reaching the endpoint should be subsumed under the term *boundedness*.

### 1.2.3 Aspectual features determine situation types

Having defined aspectual features (dynamicity, durativity, and telicity), we can know return to situation types. With regard to these aspectual features, situation types can be characterized as follows (e.g. in Bardovi-Harlig & Reynolds 1995, Csirmaz 2004b, Olsen 1994, Smith 1997, Toivonen 2006): States are stative, durative and atelic; activities are dynamic, durative, and atelic; accomplishments are dynamic, durative, and telic; achievements are dynamic, telic, and punctual (see Table 1).

| situation types | durativity | dynamicity | telicity |
|---|---|---|---|
| states | + | | |
| activities | + | + | |
| accomplishments | + | + | + |
| achievements | | + | + |

**Table 1. Aspectual features of Vendler's aspectual classes from Olsen (1994).**[9]

Accomplishments, unlike other situation types, are complex because they are a combination of both a process and an endpoint. Activities and achievements, in contrast, are simplex, as they involve either a process or an endpoint only, respectively. I present the internal constitution of dynamic situation types in Figure 2. States are not included in the figure because they lack an internal structure (Smith 1997: 32).

| | |
|---|---|
| ACTIVITY | {process} |
| ACCOMPLISHMENT | {process + inherent endpoint} |
| ACHIEVEMENT | {inherent endpoint} |

**Figure 2. Internal constitution of events.**

The internal constitution of events helps explain why accounts of aspect sometimes differ in their treatment of situation types. Some accounts (e.g. Brinton 1985: 164, Cappelle & Chauvin 2010, Comrie 1976: 47) regard telicity and achievements as incompatible, and consequently treat achievements as atelic. The motif behind this

[9] Table 1 does not contain *minus* features because, as Olsen (1994) argues, the aspectual features are privative rather than equipollent (see Section 1.2.4).

reasoning is that such accounts consider as telic only those situation types which involve both a process culminating in an inherent endpoint and the endpoint itself (i.e. accomplishments); cf. Comrie's (1976: 45) definition of "a telic situation [as] one that involves a process that leads up to a well-defined terminal point, beyond which the process cannot continue." For instance, *to draw a circle* involves a reference to the process of drawing (in the verb) as well as to its endpoint, i.e. the point when the circle is finished. In contrast, achievements refer to the endpoint but not the process preceding it, and thus they are considered atelic in accounts of this kind. In this connection, it is important to understand that although achievements are preceded by a process, the achievements themselves do not refer to this process. For instance, *to reach the summit* is necessarily preceded by a process of climbing, yet this is out of the reference of *to reach the summit*. Nevertheless, if telicity is defined as involving an inherent endpoint, then achievements are inevitably telic too, regardless of the fact that they represent only the endpoint. Therefore this dissertation treats achievements as telic.

Another comment has to be made on a situation type sometimes recognized as separate (e.g. in Giddings 2001, Olsen 1994, Smith 1997, Toivonen 2006) besides the four Vendlerian classes – that of semelfactives (from Latin *semel* 'once'), e.g. *kick*, *jump*, *knock*. Smith (1997) characterizes them as dynamic, punctual, and *atelic* yet at the same time as "intrinsically bounded" (Smith 1997: 29). This seems like a gross contradiction, since, according to Smith (Ibid: 19) "telic events have a natural final endpoint, or intrinsic bound." Obviously, if one concedes an inherent endpoint to semelfactives, their treatment as atelic is erroneous. Thus Smith's treatment of semelfactives as a separate situation type is based largely on the fact that semelfactives, unlike achievements, are not preceded by a process and that they do not bring about a change of state (Ibid: 29–30). Semelfactives also differ from achievements in that only the former are acceptable with *for X time* phrases, receiving an iterative reading:

(5) John jumped for a few minutes. (*jump* – semelfactive)

(6) ??John noticed the painting for a few minutes. (*notice* – achievement)
(Example taken from Dowty 1979: 58)

While semelfactives readily accept an iterative reading, such a reading is less available in achievements because they bring about a change of state. For instance, when *John has noticed the painting*, he has come from a state of not being to being aware of the painting and there is no way he can return to the former state in normal circumstances. (See also 1.3.4.) In spite of this difference, I do not treat semelfactives as a separate situation type but as a kind of achievements (or, when iterated, as activities) instead, due to the fact that they have the same aspectual features, i.e. both semelfactives and achievements are dynamic, punctual, and telic.

### 1.2.4 Theoretical premises

Before moving on, I will now clarify the theoretical stance of this dissertation. Situation aspect has been researched within a number of theoretical frameworks. These can be understood as either syntax-oriented or semantics-oriented. In syntactic approaches and approaches at the syntax-semantics interface (e.g. Borer 2005, van Hout 2000, MacDonald 2009, Ramchand 2001, Slabakova 2001, Tenny 1994), the situation aspect of a predicate is determined by syntactic features or structure. In semantic approaches, situation aspect, although having syntactic reflexes, is grounded in meaning. In particular, lexical-semantic approaches (e.g. Dowty 1979, Jackendoff 1996, Olsen 1994, Rappaport Hovav 2008, Smith 1997) explore which elements of meaning denoted in the lexicon determine situation aspect. Formal-semantic approaches (e.g. Filip 2000, Krifka 1992, Rothstein 2004, Verkuyl 1972) define situation aspect based on mereological notions. In addition, some analyses (Hay, Kennedy & Levin 1999, Jeschull 2007, Smollett 2005) also point out the role played by pragmatics in the interpretation of situation aspect. The present dissertation is set in the framework of lexical semantics. I follow the view according to which situation aspect is compositional (e.g. Verkuyl 1972, 1989, 2005). In particular, I adopt the monotonic compositional theory of situation aspect (Olsen 1994, Rappaport Hovav & Levin 1998) and Olsen's (ibid.) analysis of aspectual features as privative rather than equipollent. I also acknowledge the importance of pragmatic implicature. I will now discuss these premises one by one.

In the beginning of Section 1.2 I quoted the definition of situation aspect by Bardovi-Harlig & Reynolds (1995). I chose their definition because it applies both at the level of the verb and that of the predicate. Aspectual literature has witnessed some

disagreement as to whether situation aspect applies at the level of the verb or verb phrase (see Rothstein 2008: 2–3 for a brief discussion), or even the whole sentence (e.g. Verkuyl 1972, 1989, 2005). Conflicting views arise especially when theorists attempt to treat aspect in typologically different languages as the same; however, languages may markedly vary in their encoding of aspect. We have seen in 1.1 the difference in the realization of grammatical aspect in Slavic and English – while in Slavic the verb stem may be labelled as perfective or imperfective, in English only a verb form in its use may be considered perfective and/or progressive. Similarly, languages vary in the encoding of telicity (see e.g. Filip 2004, van Hout 2008, and references therein). Slavic languages exploit the 'verb-marking strategy' for encoding telicity, i.e. telicity in Slavic languages is dependent on the verb only and not on other sentence elements. In particular, situation aspect in Slavic is tied to verbal prefixation (Ružička et al. 1966: 410), e.g. Slovak *písať* 'write' (atelic) – *na-písať* 'write down' (telic), *pri-písať* 'add in writing' (telic), *pre-písať* 're-write' (telic). In contrast, English verbs alone have a certain situation aspect value, yet this is subject to change in interaction with other sentence elements, e.g. *run* (atelic) – *run a mile* (telic) – *run along the river* (atelic) – *run to the bridge* (telic). Situation aspect in English is therefore compositional (e.g. Verkuyl 1972, 1989, 2005), determined by the verb and the verb's arguments (e.g. Brinton 1985: 158, Comrie 1976: 45, Rappaport Hovav 2008: 13–14, Smith 1997: 17). Generally speaking, both grammatical and situation aspect are expressed at the level of the verb in Slavic and at the level of the predicate in English.

The differences of aspect in English and Slavic have further theoretical consequences. Grammatical aspect is a grammatical category in English and a lexico-grammatical category in Slavic (see 1.1). Situation aspect is more difficult to define: some accounts consider it to be a lexical category (e.g. Comrie 1976: 6–7ff., Dušková 1999: 103–104, Ružička et al. 1966: 410). While this may be true for Slavic languages (see Filip 1999 for a discussion of the status of Slavic verbal prefixes as inflectional or derivational morphemes), situation aspect in English is not a mere lexical category given its compositional nature. Therefore, to avoid an impression that it is a lexical

category, I use the term *situation aspect* instead of *lexical aspect*.[10] This term also directly corresponds to the term situation types (see 1.2.1).

An approach that has the advantage of allowing us to consider the aspect of a predicate as a composition of several constituents yet at the same time to recognize the contribution made by the verb itself is the so-called monotonic compositional theory of aspect developed by Olsen (1994) and Rappaport Hovav & Levin (1998). According to Rappaport Hovav & Levin, a syntactic element can expand an atelic predicate into a telic one, but not the other way round, e.g. *run* (atelic) – *run to the beach* (telic). Rappaport Hovav & Levin formalize the structure of situation types as follows. States are [x <*STATE*>], activities are [x ACT <*MANNER*>], achievements are [BECOME [x <*STATE*>]] and accomplishments [x CAUSE [BECOME [y <*STATE*>]]] or [[x ACT <*MANNER*>] CAUSE [BECOME [y <*STATE*>]]]. The italicized 'constants' in angle brackets can vary, for instance PLACE (e.g. in *to bag*) in accomplishments or INSTRUMENT (e.g. in *to hammer*) in activities. Telic predicates thus include a resulting state ([BECOME [x <*STATE*>]]) and have a complex structure that includes an atelic situation type. When a resulting state is added to an activity, a syntactic element must signal it, e.g. *sweep* (atelic, denotes a process) – *sweep the floor clean* (telic, *sweep* denotes a process and *clean* a resulting state), *sweep the leaves into a pile* (telic, *sweep* denotes a process and the prepositional phrase a resulting state). The most complex structure is found in accomplishments, which therefore cannot be expanded any further.

Olsen (1994) argues that aspectual features dynamicity, telicity, and durativity should not be treated as equipollent (as done in e.g. Brinton 1988: 56–57, Smith 1997: 20) but as privative instead. In an equipollent binary opposition, a member is either marked or unmarked for a feature, e.g. [+telic] and [-telic]. This markedness or unmarkedness is not cancellable. In consequence, as Olsen points out, analyses which treat telicity as equipollent fail to account for the fact that a [-telic] predicate can be turned into a [+telic] one upon the addition of certain syntactic elements but not contrariwise. A privative opposition is asymmetric: while one of the members is uncancellably marked, the other, unmarked member can become marked by certain

[10] Although English linguistics uses terms *situation aspect* and *lexical aspect* or *aktionsart* to refer to the same phenomena, in Chapter 5 I suggest that these terms should refer to distinct kinds of aspect.

linguistic or pragmatic context, e.g. *Lee ran* (unmarked for telicity) – *Lee ran a mile/to the store* (marked for telicity). In Olsen's analysis, verbs may be marked or unmarked for dynamicity, durativity, and telicity. What follows from her analysis is that only a shift from atelicity to telicity (illustrated above), from stativity to dynamicity, e.g. *love* (stative) – *I'm loving it* (dynamic), and from punctuality to durativity, e.g. *die* (punctual) – *John was dying when the doctor arrived* (durative), but not vice versa, is possible.

Olsen's idea of linguistic and pragmatic context determining situation aspect is further elaborated in the 1999 paper by Hay, Kennedy & Levin who show that telicity can be marked by linguistic material (syntactic elements in the predicate) or implied pragmatically. A crucial difference is that telicity derived by implicature, but not by linguistic material, can be cancelled, e.g. *I straightened the rope, but not completely* (pragmatically implied telicity in the first clause is cancelled by the second clause) – **They straightened the rope completely, but the rope is not completely straight* (telicity determined by *completely* in the first clause cannot be cancelled by the second clause). A pragmatic implicature can come from a real world convention, e.g. *The tailor lengthened my pants* (Hay, Kennedy & Levin's example) – as there is a certain pragmatic boundary to lengthening pants, or be based on a shared knowledge between the speaker and the hearer, e.g. *John swam in an hour* (example from Dowty 1979: 61) – which presupposes that both the speaker and hearer know that John swims a particular distance.

### 1.2.5 Dowty's (1979) tests for classifying situation types

Vendler (1967) suggests several tests in order to categorize verbs – or verb phrases – into individual classes; these were developed by Dowty (1979) into a set of diagnostic tests, here presented and illustrated in Table 2.[11] Although these tests have been widely used as standard tests for situation types, there are some limitations. This section discusses some problems associated with testing situation aspect.

Dowty's diagnostic tests are of three kinds. I will refer to the first one as *lexical co-occurrence tests*, since the tests of this kind are based on the acceptability of occurrence of the respective verb or VP with certain lexemes (tests number 2, 3, 8, 10,

[11] The tests are not in Dowty's (1979) original ordering; instead, they are ordered in such a way that related tests follow each other, e.g. occurrence in the progressive and the entailment of the progressive.

12, and 13 in Table 2). Similarly, the second kind of tests are based on the acceptability of occurrence of the respective verb or VP in certain grammatical structures (tests number 4, 5, and 6 in Table 2). These I will call *grammatical co-occurrence tests*. The last kind are *logical entailment tests*, based on whether a certain form or structure including the respective verb or VP entails a certain reading or ambiguity (tests number 1, 7, 9, 11, and 14 in Table 2).

| No | test | states | activities | accomplishments | achievements |
|---|---|---|---|---|---|
| 1 | habituality in a non-progressive | NO<br>*John knows the answer.* | YES<br>*John runs.* | YES<br>*John recites a poem.* | ?<br>[no example supplied by Dowty] |
| 2 | occurs with *deliberately, studiously, carefully,* etc. | NO<br>**John deliberately knew the answer.* | YES<br>*John ran carefully.* | YES<br>*John carefully built a house.* | ??<br>*??John deliberately found a penny.* |
| 3 | occurs as complement of *force/persuade* | NO<br>**John forced Harry to know the answer.* | YES<br>*John persuaded Harry to run.* | YES<br>*John forced Harry to build a house.* | NO<br>**John persuaded Bill to notice a stranger.* |
| 4 | occurs in pseudo-cleft constructions with *do* | NO<br>**What John did was know the answer.* | YES<br>*What John did was run.* | YES<br>*What John did was build a house.* | ?<br>[no example supplied by Dowty] |
| 5 | occurs in the imperative | NO<br>**Know the answer!* | YES<br>*Run!* | YES<br>*Build a house!* | ?<br>[no example supplied by Dowty] |
| 6 | occurs in the progressive | NO<br>**John is knowing the answer.* | YES<br>*John is running.* | YES<br>*John is building a house.* | ?<br>*?John is noticing a painting.* but *John is dying.* |
| 7 | *x is V-ing* entails *x has V-ed* | – | YES<br>*John is running.*<br>→ John has run | NO<br>*John is building a house.* ↛John has built a house | – |
| 8 | occurs with *for an hour/ spend an hour V-ing* | YES<br>*John loved Mary for two years.* | YES<br>*John walked for an hour.* | YES<br>*John spent an hour painting a picture.* *?John painted a picture for an hour.* | NO<br>*??John noticed the painting for a few minutes.*[12] |
| 9 | *V for an hour* entails *at all* | YES<br>*John loved Mary* | YES<br>*John walked for* | NO<br>*?John painted a* | – |

[12] The examples in Table 2 are based on Dowty (1979). However, as Jack Hoeksema (pers. comm.) observes, *notice* can have, besides a telic punctual reading 'to take notice of', also an atelic durative reading 'observe'. Thus e.g. *After a few minutes, you stop noticing an odor* and *I met a girl in one of my classes, I've noticed her for a while* are acceptable. In contrast, *find a penny* behaves as an achievement only, which is not true of other uses of *find*, e.g. *Our son found the toy interesting for a while, but grew tired of it quickly.*

| | | | | | |
|---|---|---|---|---|---|
| | *times in the hour* | *for two years.* → John loved her at any time of the two years | *an hour.* → John walked at any time of the hour | *picture for an hour.* ↛John painted a picture at any time of the hour | |
| 10 | occurs with *in an hour/ take an hour to V* | NO<br>**John loved Mary in two years.* | NO<br>#*John walked in an hour.* | YES<br>*John painted a picture in an hour.* | YES<br>*John noticed the painting in a few minutes.* |
| 11 | *x V-ed in an hour* entails *x was V-ing during that hour* | – | – | YES<br>*John painted a picture in an hour.* → John was painting the picture during the hour | NO<br>*John noticed the painting in a few minutes.* ↛John was noticing the painting during the few minutes |
| 12 | occurs with *stop* | YES<br>*John stopped loving Mary.* | YES<br>*John stopped walking.* | YES<br>*John stopped painting the picture.* | NO<br>#*John stopped noticing the painting.* |
| 13 | occurs with *finish* | NO<br>**John finished loving Mary.* | NO<br>**John finished walking.* | YES<br>*John finished painting a picture.* | NO<br>**John finished noticing the painting.* |
| 14 | ambiguity with *almost* | NO<br>*John almost loved Mary.* → John did not love her | NO<br>*John almost walked.* → John did not walk | YES<br>*John almost painted a picture.* → (1) John did not paint at all, (2) John painted but did not quite finish | NO<br>*John almost noticed the painting.* → John did not notice the painting |

**Table 2. Dowty's (1979) tests for situation types.**

Supplied with Dowty's examples where available. Dowty's discussion of the behaviour of achievements in response to tests 1 – 6 is rather limited, admitting that their behaviour varies. Legend: # unintended meaning; – not applicable because it does not occur in the given form.

Dowty's tests, originally designed to classify situation types, are today widely used as tests of aspectual features, mainly telicity. Nonetheless, a single test can fail to determine a situation type for the following reasons. First, not all of the tests are applicable to all situation types. This concerns some of the entailment tests (tests 7, 9, 11). Moreover, as Dowty (1979: 56) himself notes, the behaviour of achievements in response to tests (1 – 6) is unreliable, a point to be discussed below. Second, some predicates are ambiguous between two situation types, e.g. *He read a book* in (7a) can be interpreted as either telic or atelic (Dowty ibid.: 61, his example).

(7) (a) He read a book. (atelic/telic)
(b) He read a book for an hour. (atelic)
(c) He read a book in an hour. (telic)

Relying on a single test only, as in (7b) or (7c), does not show that the predicate can have the other reading, too.

Another problem with testing situation aspect concerns the acceptability judgments of native speakers (e.g. Smollett 2005, Tenny 1994: 41 et passim). While inserting certain verbs into testing structures results in a unanimous judgment of acceptability, others may show different judgments by various native speakers. Possibly, such variation reflects the role played by pragmatics in interpreting situation aspect. Several studies (Hay, Kennedy & Levin 1999, Jeschull 2007, Smollett 2005) stress that there is a difference between predicates which entail and those which conversationally implicate telicity (see 1.2.4). Only in the former ones does a telic reading obligatorily arise. The latter ones admit aspectual ambiguity, e.g. (7). In the aspectual literature, this factor is largely ignored, which has led to some criticism (Smollett 2005).

An even more serious problem associated with Dowty's tests is that they do not necessarily test aspectual features (dynamicity, telicity, durativity). We have seen in Table 1 that aspectual features sort situation types into stative (states) and dynamic (activities, accomplishments, achievements), atelic (states and activities) and telic (accomplishments and achievements), and durative (states, activities, accomplishments) and punctual (achievements). Building on Olsen's (1994) theory that marked aspectual features cannot be cancelled, if Dowty's tests effectively test aspectual features, then situation types should give different results on the basis of stative/dynamic, atelic/telic and durative/punctual distinctions. For instance, if a test is effective to test dynamicity, it will show certain results for states and different results for activities, accomplishments and achievements. Similarly, if a test tests telicity, states and activities will show different results than accomplishments and achievements; a test examining durativity will show different results for achievements than for other types of situation types. Although blurred by the fact that not each test is applicable to each category of situation types, this hypothesis works for most of Dowty's tests. Thus, dynamicity can be tested by non-stative tests number 1 – 6 (mainly except for achievements), telicity by logical

entailments *for X time → at all time in X* (but inapplicable to achievements) and *x is V-ing → x has V-ed* (applicable only to activities and accomplishments) and by *in X time*/*take X time to* test (tests number 7, 8, and 10), and durativity by logical entailment *x V-ed in an hour → x was V-ing during that hour* (applicable only to accomplishments and achievements), by *for X time* and *complement of stop* test (tests number 8, 11, and 12). As we can see, many of the tests fail to apply to certain situation types.

The tests that do not appear to be based on aspectual feature distinctions are tests number 13 and 14: Both the *complement of finish* test and *ambiguity with almost* test identify accomplishments only. The reason is that these tests do not test aspectual features individually but only determine a combination of both telicity and durativity (present only in accomplishments). In the case of the *complement of finish* test, only an event that has both duration and a terminus can be finished:

(8) (a) John finished painting a picture. (durative and telic verb)
(b) *John finished walking.[13] (durative and atelic verb)
(c) *John finished noticing the painting. (punctual and atelic verb)

Similarly with the *ambiguity with almost* test; ambiguity only occurs when *almost* can refer to either a process with an endpoint or the endpoint only, an option which is available only in complex events, i.e. accomplishments (see Fig. 2). Thus (9a) *John almost painted a picture* has both reading (9b), where *almost* refers to the whole event, i.e. the combination of a process and an endpoint, and (9c), where *almost* refers to the endpoint only.

(9) (a) John almost painted a picture.
(b) 'John was close to painting a picture but he did not paint a picture.'
(c) 'John started painting a picture but he did not finish it.'

Ambiguity with *almost* is thus ruled out with homogeneous situation types, namely when only a process (activities), only a terminus (achievements), or an absence of a

[13] *John finished walking* can become acceptable when it is understood that John walked a particular distance, see Section 1.2.4.

change of state (states) is involved: in (10 – 12) the (a) sentences have only one interpretation.

(10) (a) John almost ran. (activity)
(b) 'John was close to running but he did not run.'
(c) #'John started running but he did not finish.'

(11) (a) John almost won the race. (achievement)
(b) 'John was close to winning the race but he did not win the race.'
(c) #'John started winning the race but he did not finish.'

(12) (a) John almost loved Mary. (state)
(b) 'John was close to loving Mary but he did not love Mary.'
(c) #'John started loving Mary but he did not finish.'

It follows that the *complement of finish* (test 13) and *ambiguity with almost* (test 14) tests do not test aspectual features individually but only in conjunction.

Other tests not based on aspectual features themselves are tests 2 – 6: they test agentivity rather than stativity/dynamicity, according to Filip (1999: 19). Filip's claim is confirmed by the fact that the occurrence with *deliberately, on purpose*, and so on, as well as the felicitousness of *What X did (to Y) was…* (tests 2 and 4, respectively) are used as tests for indentifying an actor or agent (Saeed 2003: 151). Tests 3 and 5 also require that the subject of the main clause (in the imperative) or small clause (with verbs *persuade* and *force*) be agentive and volitional in order to be felicitous. The role played by volition and agentivity is less perspicuous with the use of the progressive (test 6) yet this test is also, at least partly, based on volition and agentivity: according to Rothstein (2004: 52), achievements do not combine with the progressive when they are involuntary non-agentive events that occur unexpectedly without prior stages.

Since states, unlike activities and accomplishments, are not voluntary (Brinton 1985: 159), they display a different behaviour in response to tests 2 – 6. This, however, does not mean that tests 2 – 6 test stativity. Further evidence that these tests are based on volition rather than aspect is shown by variation in response to these tests in achievements. It appears that some achievements are non-volitional, while others are

volitional, the context playing a major role in interpreting the event; see the different uses of *find* and *notice* in (13) and (14), respectively.

(13) (a) I've found a 100$ banknote on a sidewalk! (non-volitional)
(b) You found a 100$ banknote on a sidewalk? Please, find one for me, too. (elicits volitional interpretation in the latter sentence)

(14) (a) Steven noticed a typo in his dissertation. (non-volitional)
(b) Please notice that the deadline for abstract submission is August 15. (elicits volitional interpretation)

To conclude, some of Dowty's tests do not test aspectual features directly but rather other features associated with particular situation types.

The greatest complication of Dowty's tests, however, is that they may show false results under the influence of the phenomenon called aspectual shift and coercion. This is the subject matter of the following separate section, as it requires a more in-depth discussion.

## 1.3 Aspectual shift and coercion

### 1.3.1 Preliminaries

It has been noted above that the situation aspect value of a predicate may change when additional syntactic elements are introduced into the predicate. When the situation aspect value of a predicate changes due to introducing syntactic material or pragmatic implication into the predicate, the phenomenon known as *aspect(ual) shift* (e.g. Rothstein 2006, de Swart 1998, Zucchi 1998) arises. A shift occurs when a single reading is enforced to a predicate that is aspectually ambiguous (i.e. allowing for two different aspectual interpretations), e.g. *Bill read a book* (telic/atelic) – *Bill read a book in two hours* (telic only), or when a predicate that has a certain aspectual value receives a different aspectual value, e.g. *Alison sang* (atelic) – *Alison sang a song* (telic). A shift can arise due to a pragmatic implicature, e.g. *Kim lengthened the rope* (atelic) – *The tailor lengthened my pants* (telic; a certain conventional length implied) or syntactic material, e.g. *The child drew* (atelic) – *The child drew a cat* (telic) (Hay, Kennedy &

Levin 1999). In the latter case, a verb can be combined either with a syntactic element that can freely occur with the verb – which is then a 'legitimate' operation, e.g. *Luke swam* (atelic) – *Luke swam 100 meters* (telic), or with a syntactic element that is semantically incompatible with the verb, and which in consequence does not normally occur with the verb (as defined by Dowty's tests) – which is known as *aspectual coercion*, e.g. *Luke swam in five minutes* (telic; particular distance implied). De Swart (1998: 349) defines coercion as "an implicit, contextually governed process of reinterpretation" which occurs when a conflict arises between the aspectual values of two elements in the context. In other words, coercion is a way out of ungrammaticality, if possible. It is the very reason why Dowty's tests can give false results. In what follows, I consider coercion a type of aspectual shift rather than an independent phenomenon.

A special kind of aspectual shift appears between the pair *a single event* and *a series of events*, i.e. between two predicates one of which denotes a single occurrence of an event and the other denotes a series of events. The effect of this shift is that regardless of the situation type of the predicate denoting a single event, the predicate denoting a series of events is by default durative and atelic, as illustrated in (15) – (18). The aspectual features of the predicate denoting a series of events are independent of the aspectual features of the predicate denoting a single event because a series, first of all, necessarily has duration, and second, lacks an inherent endpoint which would make the predicate telic.

(15) (a) Luke swam. (activity – atelic, durative)
(b) Luke swam professionally for fifteen years. (state – atelic, durative)

(16) (a) John built a house. (accomplishment – telic, durative)
(b) John built houses for many years. (state – atelic, durative)

(17) (a) Sharon won the prize. (achievement – telic, punctual)
(b) Sharon won the prize for three years in succession. (state – atelic, durative)

(18) (a) The little girl jumped over the brook and fell down. (achievement – telic, punctual)
(b) The little girl jumped over the brook for an hour before she fell down. (activity – atelic, durative)

It is arguable whether the kind of situation types in the (b) sentences of (15) – (17) are states (as suggested by e.g. De Swart 1998: 359) or rather activities (as suggested by e.g. Dowty 1979: 63), especially in juxtaposition to (18b). I opt for categorizing them as states, since these situations hold true during the time allotted but are not realized in each phase of the time (cf. characterization of situation types in 1.2.1). Thus for instance, if *Luke swam professionally for fifteen years*, then for the whole fifteen years it was true that Luke swam as a professional but it does not mean that he was swimming in each phase of the fifteen years. In contrast, (18b) implies that the little girl was jumping in each phase of the hour. The difference between whether an event is realized in every phase of the designated period or not is reflected in the difference between habitual aspect and iterative/repetitive[14] aspect (both durative). Comrie (1985: 27–28) defines habitual as "describ[ing] a situation which is characteristic of an extended period of time", which applies to (15b) – (17b). (18b) can only be characterized as repetitive/iterative, i.e. "consisting of repeated occurrences of the same situation", as Declerck (1991: 277) puts it. When supplied with a suitable context, however, an event of jumping can also be denoted by a habitual, and thus stative predicate (19).

(19) The little girl jumped over the brook every morning for two years. (state – atelic, durative)

In (19), the little girl was not jumping in every phase of the designated period, unlike in (18b). The difference makes (19) a state and (18b) an activity. More technically speaking, whether the predicate denoting a series of events is stative or dynamic depends on whether it has habitual or iterative/repetitive aspect.

States themselves do not undergo the 'series of events' type of shift. Thus in (20), (a) and (b) may refer to one and the same situation and there is no change in situation aspect:

(20) (a) Benjamin believed in Santa Claus. (state – atelic, durative)
(b) Benjamin believed in Santa Claus for ten years. (state – atelic, durative)

[14] In this dissertation the terms *iterative* and *repetitive* are used as interchangeable.

Simply put, states cannot be turned into series. Instead, they are stretched further over time, so to speak.

The manifold workings of aspectual shift are reviewed below. While it is common in the literature to approach aspectual shift from the point of view of syntactic elements that influence situation aspect (e.g. verb arguments, adverbials, grammatical aspect), I will approach aspectual shift from the point of view of aspectual features and discuss aspectual shift between stativity and dynamicity (Section 1.3.2), between atelicity and telicity (Section 1.3.3) and between durativity and punctuality (Section 1.3.4).

### 1.3.2 Aspectual shift between stativity and dynamicity

As predicted by Olsen's (1994) theory (see 1.2.4), the shift from stativity to dynamicity involves marking dynamicity on stative verbs. This is made possible via the structures that do not normally occur with states (cf. Table 2), for instance using a stative verb, such as *be, love, know,* in the progressive, imperative, or with the verb *force* (21 – 23, respectively), cf. also de Swart (1998: 359).

(21) You are being silly. 'You are acting in a silly way.'

(22) Please, love me!

(23) She has forced me to know myself: my values, my strengths, and my weaknesses.
'She has forced me to get to know myself...'
(Example taken from Kitchin, Doyle R. 2011. *Finding God's Bearings. Navigating the Navy with Faith and Passion.* Tate Publishing.)

Stative verbs are thus coerced into an activity (21) or with (22 and 23), which have an inchoative meaning of entering into a state of loving or knowing oneself, into an achievement. At the same time, volition is assigned to the subject: while states are involuntary, many dynamic events are volitional. In (21 – 23), the denotee of the subject of the main clause in (21 – 22) and of the small clause in (23) is taken to be responsible for his/her behaviour, feelings, etc. When volition cannot be assigned to the subject, the coercion from stativity to dynamicity does not seem to be felicitous (24 – 25).

(24) ??You are being tall.

(25) ?Please, grow fast![15]

The coercion of states into events has implications for testing situation aspect: contrary to Dowty's predictions, stative verbs can occur in the progressive, imperative, or with the verb *force* when assigned a volitional interpretation.

A shift from stativity to dynamicity can also occur in a stative–causative alternation, i.e. when a single verb can have both a stative meaning and a causative meaning, as in (26).

(26) (a) The picture hung on the wall. (state)

(b) Joe hung the picture on the wall. (accomplishment)

(Example based on van Hout's (1996: 116) Dutch example)

A shift in the other direction, from dynamicity to stativity, is not predicted by Olsen (1994). Yet it occurs when an event receives a repetitive or a habitual reading (de Swart 1998: 359), that is, with a shift between a single event and a series of events, as in examples (15 – 17) above.

### 1.3.3 Aspectual shift between atelicity and telicity

The shift from atelicity to telicity involves either a shift from a state to a change of state (23 and 26) or the addition of an endpoint, or a boundary, to an activity. The latter is usually achieved in syntax by a noun phrase (NP) or prepositional phrase (PP), or by an adjective in resultative constructions. As shown by e.g. Jackendoff (1996), Krifka (1992, 1998), Tenny (1994), and Verkuyl (1989, 2005), only phrases which are bounded, such as a quantized[16] NP or a goal PP, delimit an event and make a predicate telic; in contrast,

[15] This example is more felicitous in the meaning of mental maturation, which involves some volition on the part of the subject.

[16] I use the term *quantized* in the sense of Krifka (1992), as referring to expressions which cannot refer to both an entity and a proper part of such an entity, e.g. a proper part of *an apple* cannot be referred to as *an apple*. In contrast, non-quantized (*cumulative* in Krifka's terms) expressions can refer to both an entity and a proper part of such an entity, e.g. a proper part of *wine* can be referred to as *wine*.

non-bounded phrases (bare plural NP, non-quantized NP, PP describing a non-bounded path) do not affect the atelicity of the predicate:

(27) (a) John walked. (no boundary; atelic)
(b) John walked along the beach. (no boundary; atelic)
(c) John walked to the park. (boundary added by a goal PP; telic)
(d) John walked a mile. (boundary added by a measure NP; telic)
(e) John walked off. (boundary added by a directional particle; telic)

(28) (a) Water leaked through John's ceiling. (mass NP subject, atelic)
(b) A gallon of water leaked through John's ceiling. (quantized, i.e. bounded NP subject, telic)
(Example taken from Dowty 1979: 63)

(29) (a) Rebecca ate cake. (mass NP DO, atelic)
(b) Rebecca ate apples. (bare plural, i.e. non-bounded NP DO, atelic)
(c) Rebecca ate a piece of cake. (quantized, i.e. bounded NP DO, telic)

(30) (a) Lotte wiped the counter. (atelic/telic)
(b) Lotte wiped the counter clean. (resultative construction, telic only)

For the discussion of the role played by particles in phrasal verbs in marking telicity see Chapter 6.[17]

Quantized NP DOs, as in (29c), require a further comment. According to the standard account (e.g. Jackendoff 1996, Krifka 1992, 1998, Tenny 1994), a quantized DO makes a predicate telic and therefore *eat an apple* or *build a house* are necessarily telic. According to Smollett (2005), however, judgments of native speakers show that such predicates allow telic as well as atelic readings, given an appropriate context and pragmatic knowledge, e.g. *The ant ate the apple for a week before it rotted into the ground* or *Steven built a Lego tower for three hours*. Smollet claims that the telic reading is given by world knowledge rather than semantic composition.

[17] Particles have been standardly recognized as telicity markers (since Brinton 1985). In chapter 6 I argue against the standard account, showing that aspectual particles can at best enforce telicity but not mark it by themselves. Only certain directional particles definitely turn a predicate into telic, as in (27e).

In a similar spirit, Hay, Kennedy & Levin (1999) incorporate pragmatics into their account, arguing that a telic reading can be triggered by a conversational implicature. They (ibid.: 137) explain that "the effect of the implicature is to impose a *completely*-like interpretation on the predicate, giving rise to the inference of a bounded measure of change." In other words, *Rebecca ate an apple* implies that Rebecca ate a whole apple unless specified otherwise.

I assume that this implicature is also at work with predicates which freely allow both an atelic and a telic reading, as the following:

(31) Barbara read a book (for/in an hour). (atelic/telic)

(32) Danielle learned French (for/in two years). (atelic/telic)

The conversational implicature leads to a telic reading of *Barbara read a book* and *Danielle learned French*. However, our world knowledge tells us that a book usually takes several reading 'sessions' to finish and therefore it is common to use *Barbara read a book* in an atelic sense:

(33) Barbara read a book (for an hour) and then she watched TV.

(34) Danielle learned French (for an hour) and then she watched TV.

In contrast, *Rebecca ate an apple* less readily invokes an atelic reading because an apple is normally eaten whole at a single eating 'session', as our real-world knowledge tells us.

A shift from atelicity to telicity can also be coerced. In (35) (taken from Dowty 1979: 61), which implies that John swam a particular distance, *in an hour* and *finished* function as aspectual operators that bring about a reinterpretation of the atelic verb *swim* as telic.

(35) (a) John swam in an hour. (telic)

(b) John finished swimming early today. (telic)

Actually, many activity verbs are attested in use with *finish* (36).[18]

(36) (a) Once you finish walking for the day you return home to your accommodation to sleep.
(Example taken from http://www.aussiewalk.com.au/faqs.htm#1, accessed August 1, 2012)
(b) I finished sleeping at 7.00.
(c) The patient finished breathing.
(d) ??It just finished raining.

Still, I assume these are instances when activities are reinterpreted as events with an inherent endpoint: a continuation of the event is not assumed here (at least not in the given moment). For instance, a patient who finished breathing is presumably dead, unlike one who stopped breathing and caught his breath again. Such a reinterpretation is harder to apply to (36d), yet this sentence is not acceptable to all native speakers.

The examples in this section illustrate why the whole predicate needs to be considered when evaluating situation aspect: the aspectual properties of the verb itself and of the whole predicate might simply not be the same.

A converse shift, from telicity to atelicity, is also possible, in the case of a shift from a single event to a series of events, as in examples (16 – 18) (see also Depraetere 1995: 12).

### 1.3.4 Aspectual shift between punctuality and durativity

The aspectual shift between punctuality and durativity is a phenomenon that receives considerably less attention in the literature than the atelicity/telicity shift. This kind of shift is marginal in the language since the perception of an event as punctual or durative is largely given by extra-linguistic factors. Nonetheless, some predicates may receive either a punctual or durative reading:

(37) The patient coughed. (punctual or durative)
(Example based on Comrie 1976: 42)

[18] I owe this observation to Jack Hoeksema.

Ambiguity between a durative and punctual reading is another instance of a shift between a single event and a series of events. For example in (37), a single cough (semelfactive) is interpreted as punctual, a series of coughs (iterative) as durative. (38a) below is also ambiguous: if the tailor killed seven flies at a single blow, as we know from a fairy tale by the Brothers Grimm, the event is perceived as punctual. If, however, the tailor killed the flies successively, at two or more blows, the event is durative. Predicates that are ambiguous for durativity can become unambiguous when an adverbial makes available only one of the readings, such as *at once* for a punctual reading (38b) and *gradually* for a durative reading (38c).

(38) (a) The tailor killed seven flies. (punctual or durative)
(b) The tailor killed seven flies at once. (punctual)
(c) The tailor gradually killed seven flies. (durative)

I have commented in 1.2.3 that semelfactives, unlike most other achievements, can be iterated. Therefore 'a series of events' reading is more readily available in semelfactives, e.g. (37). Achievements are felicitous as a series only when they are understood as new instances of the same kind of event; *Sharon won the prize for three years in succession* in (17b) is necessarily interpreted in the way that Sharon won the same kind of prize but not the same token of prize. In consequence, the DO usually appears in plural rather than singular (39).[19]

(39) (a) Howard sent large checks to his daughter for years.
(b) ?Howard sent a large check to his daughter for years.

The data behind this observation led Dowty (1979: 63) to think that it is the indefinite plurality of the DO that is responsible for the durativity of the predicate in achievements, yet this is not necessarily the case. Consider Dowty's example *John discovered fleas on his dog for six weeks* (40a). What makes it durative is not the indefinite plural of the DO

[19] The example is from Todorova et al. (2000), who argue that a punctual verb with a singular DO (*send a large check*) is aspectually incompatible with a durative adverbial (*for years*), which triggers coercion and causes a reading delay on the part of the hearer: the subjects in Todorova et al.'s study were faster in processing (39a) than (39b).

but rather the adverbial *for six weeks* that enforces durativity. Once removed, the predicate is ambiguous between a durative and punctual reading (40b). The punctual reading only can be enforced with an adverbial, as in (40c). Durativity arises only from the 'series of events' interpretation.

(40) (a) John discovered fleas on his dog for six weeks. (durative)
(b) John discovered fleas on his dog. (punctual or durative)
(c) John discovered fleas on his dog at 10 a.m. (punctual)

Duration can also be coerced to a punctual verb when it is combined with an adequate aspectual operator, such as the verb *stop*, a durative temporal adverbial, or the progressive (41 – 42), which triggers an iterative or habitual (and thus durative) reading of the punctual verb:[20]

(41) Hank stopped coming to the youth group.

(42) (a) The little girl stopped jumping.
(b) The little girl jumped for an hour.
(c) The little girl was jumping when I saw her.

The problem lies in the fact that these operators are used in Dowty's tests for the classification of situation types. Since *jump* and *visit* are compatible with *stop* and/or *for X time* adverbial, the test gives a false impression that the input verbs *jump* and *visit* are durative, which is never the case with semelfactive verbs.

If the mismatch between the aspectual value of the verb and that of an aspectual operator cannot be resolved by coercion of the verb into an iterative or habitual reading (single event → series of events type of shift), the duration of the coerced event must be 'filled' by some other means – by the state or activity that precedes the punctual event (cf. de Swart 1998: 359), resulting in an inchoative reading (43), or by the state that

[20] I follow Smith (1997) in considering semelfactives as punctual, see Section 1.2.3.

follows the punctual event, resulting in a result state reading (44), see Figure 3 for a graphic representation.[21]

(43) (a) The bomb exploded in an hour. 'The bomb exploded after the lapse of two hours.'
(b) The mountain climber reached the top in five hours. 'The mountain climber reached the top after five hours (of climbing).'
(c) The train is arriving. 'The train will arrive in no time.'

(44) Hank came to the youth group for two hours. 'Hank came to the youth group and stayed for two hours.'

It is important to notice that the verbs in (43 – 44) remain punctual although the aspectual operators give an impression that they are durative, combining the punctual event with a durative situation that precedes or follows the event. It follows that a shift from punctuality to durativity is very much like a shift from telicity to atelicity and dynamicity to stativity – it occurs only when an achievement is re-interpreted as a series or as a conjunction with some other durative situation.

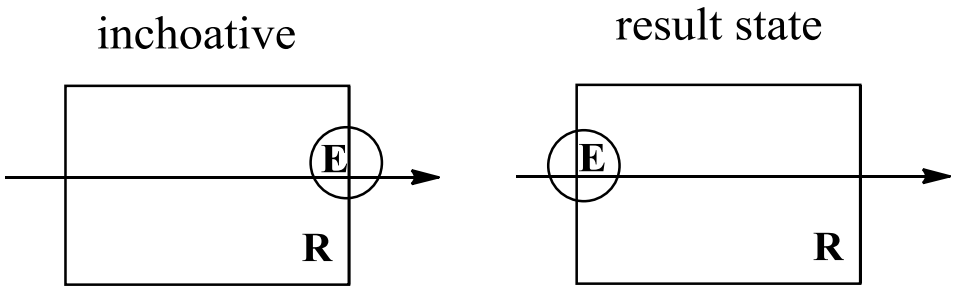



**Figure 3. An inchoative and a result state reading arising from the mismatch between the aspectual values of a punctual verb and a durative aspectual operator.**

Legend: E – event denoted by a punctual verb, R – reference time of the aspectual operator.

[21] Sometimes a predicate allows both a repetitive reading and a result state reading, e.g. *The sheriff of Nottingham jailed Robin Hood for four years* – 'The sheriff jailed Robin Hood repeatedly over a period of four years' and 'The sheriff jailed Robin Hood once for a period of four years', respectively (Dowty 1979: 58).

A shift from a durative to a punctual situation type is possible in the case of shifting a state into an achievement with an inchoative meaning, as illustrated in *She has forced me to know myself* (23). This is contrary to Olsen's (1994) analysis (see 1.2.4). For her, punctuality is a mere implicature that occurs when a verb is unmarked for durativity and that can be cancelled by a durative adverbial. We have seen above, however, that while durative adverbials coerce punctual verbs into iterative, inchoative, or result state readings, the verb itself remains punctual. Therefore, I propose that punctuality is the marked and durativity the unmarked member of the opposition. Such an analysis saves Olsen's theory of aspectual features being privative and explains (23) in the following way. States (*love, know, believe*), unmarked for punctuality and therefore durative, can be shifted into change of state achievements, marked for punctuality. Punctuality cannot be cancelled; a shift to durativity can only occur when a single event is reinterpreted as a series of events, e.g. (18). Punctuality is like telicity and dynamicity in that they can be shifted only on the basis of 'a series of events' type of shift and thus corroborates the claim that punctuality, not durativity, is marked.

A question that remains to be answered is why activities and accomplishments do not shift into achievements, since these would be further cases of a shift from durativity to punctuality. An answer lies in the internal structure of events. Achievements represent an endpoint, which may denote a change of state (see Fig. 2 and the discussion of the difference between semelfactives and other achievements). Therefore, for a situation type to be shifted into an achievement it has to be somehow associated with an endpoint or a change of state. States are associated with a change of state, because they come into existence after a change of state has taken place, i.e. achievements can mark temporal boundaries of states, therefore the stative – inchoative shift.[22] In Rappaport Hovav & Levin's (1998) terms, if achievements have a structure [BECOME [x <*STATE*>]], then states [x <*STATE*>] can be shifted into them by adding BECOME. In contrast, activities are not associated with an endpoint or a change of state, unless it is coerced on them, e.g. (35). In such a case, however, the coerced situation type is an accomplishment, not an achievement. Technically speaking, activities [x ACT

[22] At this point it is fitting to mention another phenomenon that is sometimes (e.g. van Lambalgen & Hamm 2005: 175–176) treated as a kind of aspectual shift/coercion, namely the shift associated with negation, e.g. *Our team has lost* (achievement) – *Our team hasn't lost for a long time* (state). In this case, negation of an event by default results in a state, characteristic of absence of change.

<*MANNER*>] cannot be directly shifted into achievements [BECOME [x <*STATE*>]] but only into the more complex structure of accomplishments [[x ACT <*MANNER*>] CAUSE [BECOME [y <*STATE*>]]]. This is because a shift from durativity to punctuality requires that a situation type become stripped of its durative (process) part and that the endpoint only be left, cf. Fig. 2. For activities this is impossible since they do not have an inherent endpoint, and while coercion adds one, it does not remove the durative process part. In contrast, accomplishments in theory allow this, since they contain both a process and an endpoint. Notice, however, that the endpoint in them is lexically provided by a non-verbal element (a quantized NP, a goal PP, or an adjective, see 1.3.3) while the process is denoted by the verb, e.g. *write* (durative, atelic) – *write a letter* (durative, telic). Therefore, an accomplishment cannot be stripped of its durative part without being stripped of the verb, too – but then, the predicate would collapse.

### 1.3.5 Implications

Let me now summarize the above discussion of aspectual shift. A state can be shifted to a dynamic event when volition is assigned to the agent; a simultaneous shift from atelicity to telicity and from durativity to punctuality may occur, too. States can be shifted into activities, achievements, or accomplishments in this way. Another instance of an atelic situation type being shifted into a telic one arises when an activity becomes delimited by an added boundary, resulting in an accomplishment. A durative situation type can become punctual only when a state is shifted into an achievement, which at the same time involves a shift from atelicity to telicity and stativity to dynamicity. Shifts of activities or accomplishments into achievements are not attested. Shifts in opposite directions, namely from dynamicity to stativity, from telicity to atelicity, and from punctuality to durativity are available only as shifts from a single event to a series of events. I conclude that stativity, atelicity and durativity are unmarked, while dynamicity, telicity and punctuality are marked members of privative oppositions. (See Figure 4 for an overview.)

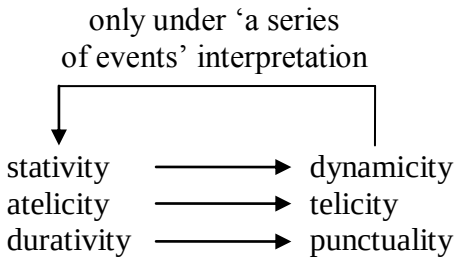



**Figure 4. Aspect shift.**

Having reviewed the factors that play a role in applying Dowty's tests for situation types, we can now turn to the implications. On a theoretical level, one can only agree with Van Lambalgen's statement that "lexical aspect (Aktionsart) is not something given with a verb, but at most a default".[23] In other words, situation aspect in English is *not* lexical. The situation aspect value of the predicate is not determined by the verb alone; and vice versa, the situation aspect value of one and the same verb can eventually give rise to various situation aspect values of the predicate. Situation aspect is thus compositional, determined by lexical semantics, syntax, and pragmatics (cf. e.g. Dowty 1979, Hay, Kennedy & Levin 1999, Jackendoff 1996, Jeschull 2007, Olsen 1994, Rappaport Hovav 2008, Smith 1997, Smollett 2005, Verkuyl 1989, 2005).

On the level of practical implications for research, Dowty's tests need to be implemented with care and awareness of all the intricacies involved. While there is some awareness in the literature that Dowty's tests may lead to 'unintended' meanings, apart from Cappelle's (2004b) manuscript discussing a couple of Dowty's tests, however, there is no work, to the best of my knowledge, that treats the tests as a whole and discusses general principles that underlie the working of the tests. First, since some predicates, such as (31), (32), (37) and (38a), may be aspectually ambiguous, a verb should be tested for two opposing aspectual features at the same time, since the presence of one does not necessarily rule out the other. Namely, when a verb allows a telic reading, it can still allow also atelic reading, and vice versa; similarly for punctuality and durativity. More importantly, though, it is important to bear in mind that when a verb is inserted into structures in order to test its situation aspect, its aspectual properties are possibly being altered, such as by coercion into an iterative or habitual

[23] Presentation available at http://staff.science.uva.nl/~michiell/docs/SlidesPToE11.pdf [accessed 15.03.2012], slide number 3.

reading. It follows that Dowty's lexical co-occurrence and grammatical co-occurrence tests are not reliable for testing situation aspect. The limitations of the individual tests are summarized in Table 3.

| No | test | problem | examples |
|---|---|---|---|
| 1 | habituality in a non-progressive | – | – |
| 2 | occurs with *deliberately, studiously, carefully,* etc. | based on volition – varied behaviour in ACH | ??*John deliberately found a penny.* but *The boss deliberately finds faults with John's work.* |
| 3 | occurs as complement of *force/ persuade* | based on volition – varied behaviour in ACH; may coerce an inchoative meaning to STA | **John persuaded Bill to notice a painting.* but *John persuaded Bill to find him a home. She has forced me to know myself.* |
| 4 | occurs in pseudo-cleft constructions with *do* | based on volition – differing behaviour in ACH | ?*What John did was find a penny.* but *What John did was find a list of guests on the internet.* |
| 5 | occurs in the imperative | based on volition – differing behaviour in ACH; may coerce an inchoative meaning to STA | ?*Please find a penny.* but *Please notice that the deadline is on Monday.*<br>*Please, love me!* |
| 6 | occurs in the progressive | based on volition; may coerce dynamicity to STA, or durativity to ACH via an iterative or inchoative meaning | *You are being silly.*<br>*The little girl was jumping when I saw her.*<br>*The train is arriving.* |
| 7 | *x is V-ing entails x has V-ed* | does not predict the behaviour of STA and ACH which actually allow the progressive (see test 6) | – |
| 8 | occurs with *for an hour/ spend an hour V-ing* | may coerce durativity via an iterative, habitual, or result state reading | *The little girl jumped for an hour.*<br>*Sharon won the prize for three years in succession.*<br>*Hank came to the youth group for two hours.* |
| 9 | *V for an hour* entails *at all times in the hour* | does not predict the behaviour of ACH which actually allow *for an hour* (see test 8) | – |
| 10 | occurs with *in an hour/ take an hour to V* | may coerce telicity to ACT or an inchoative meaning | *John swam in an hour.*<br>*The bomb exploded in an hour.* |
| 11 | *x V-ed in an hour* entails *x was V-ing during that hour* | does not predict the behaviour of ACT which actually allow *in an hour* (see test 10) | – |

| | | | |
|---|---|---|---|
| 12 | occurs with *stop* | may coerce durativity via an iterative or habitual reading | *The little girl stopped jumping.*<br>*Hank stopped coming to the youth group.* |
| 13 | occurs with *finish* | may coerce telicity to ACT | *John finished swimming.* |
| 14 | ambiguity with *almost* | – | – |

**Table 3. Limitations of Dowty's situation aspect tests.**

Legend: STA states, ACT activities, ACC accomplishments, ACH achievements.

There are several solutions to alleviate the problem of aspectual shift interfering with testing verbs. First, one could, at least in theory, ignore 'irrelevant' or 'unintended' meanings that arise from inserting the tested verbs into the given structures, such as a repetitive or habitual, inchoative or result state meaning. This is possible when linguists rely on their own acceptability judgments (a solution available only to native speakers of the given language) but not when they ask others, typically laymen, for their judgments. Another solution is to choose tests which only have a single unintended meaning and to prevent that reading. For example, to choose a test that can have an unintended iterative/habitual meaning (e.g. *stop jumping*), and to prevent it by asking the participants in the judgment task to ignore that single reading by *the sentences are to be judged as when referring to events that take place once only*, as was done in this dissertation (see Chapter 5).

Another possible solution lies in relying on logical entailment tests only. This approach, however, is rather demanding for participants and cannot be applied when testing a large number of verbs. (This is of immediate concern for the present dissertation: Chapter 5 aims to test many verbs.) Moreover, logical entailment tests are not applicable to all situation types, according to Dowty (1979). The reason is that some situation types do not occur in the structures incorporated in the logical entailment tests. This in effect means that when a researcher wants to determine the situation aspect value of a verb by a logical entailment test, he or she needs to know beforehand whether or not the given verb may occur in the structure incorporated in the test; that is, to have tested the verb previously by a grammatical or a lexical co-occurrence test. Let me

illustrate this seemingly complicated point. Suppose we want to test verbs *find (a penny)* and *die* by test 7, which involves the progressive (45).

(45) (a) *John is finding a penny* entails *John has found a penny*.
(b) *John is dying* entails *John has died*.

If our native speaker respondents have only a yes/no choice, we effectively rule out the possibility that the given verb is unacceptable in the progressive, which is the case of *find*. Therefore it is better to supply, besides a yes and no choice, also '*John is finding a penny* does not make sense' choice. There still remains a problem, though. Most native speakers will choose the 'does not make sense' choice for (45a) and 'no' for the entailment in (45b). According to test 7, therefore, *find* is either a state or an achievement and needs to be tested further, while *die* is an accomplishment (cf. Table 2). However, both these verbs are achievements (also in Dowty's account). Such a false result can be prevented by not testing achievement verbs by test 7 at all, since the test does not apply to them, according to Dowty (see Table 2). This reasoning is circular, though: if we knew that a particular verb is an achievement verb in the first place, there would be no need to test it for situation aspect. Generally speaking, hardly any of the lexical and grammatical co-occurrence tests is watertight, and since (some of) these are incorporated in logical entailment tests, the latter are not unproblematic, either.

## 1.4 Summary

This chapter has reviewed two facets of aspect – grammatical as well as situation aspect. More attention has been paid to situation than to grammatical aspect because it appears imperative in uncovering properties of aspectual particles in PVs (see the next chapter). I follow the monotonic compositional theory of aspect and treat aspectual features as privative (Olsen 1994, Rappaport Hovav & Levin 1998), yet contrary to Olsen (1994), I have suggested that punctuality rather than durativity is the marked feature, just like telicity and dynamicity.

I have reviewed the limitations of Dowty's situation aspect tests, two of which will be implemented in Chapter 5. I have also discussed various kinds of aspect shift

and coercion. Due to this phenomenon, in a computation of the situation aspect value of a phrasal verb, it is important to take into account aspectual properties of other sentence elements and pragmatics.

# 2 Phrasal verbs

English phrasal verbs, also known as particle verbs, such as *look up* 'search' and *let down* 'disappoint', have been an area of intense linguistic interest, ranging from theoretical research into their semantic (e.g. Brinton 1985, Cappelle & Chauvin 2010, Giddings 2001, Jackendoff 2002) and syntactic properties (e.g. Dehé 2002, Gries 2002, Ramchand & Svenonius 2002, Svenonius 1996), as well as their diachrony (e.g. Claridge 2000, Denison 1985, Elenbaas 2007), to various applied fields including first (e.g. Jeschull 2003, 2007) and second language acquisition (e.g. Condon 2008, Dagut & Laufer 1985, Darwin & Gray 1999, Gardner & Davies 2007, Hulstijn & Marchena 1989, Laufer & Eliasson 1993, Liao & Fukuya 2004. Verbs once neglected or unduly treated by lexicography (Bolinger 1971: xiii-xiv) today enjoy specialized dictionaries (e.g. by Cambridge Phrasal Verbs Dictionary 2006, Cowey & Mackin 2000, Macmillan 2007, Spears 1993, Vodička 2007) and numerous self-study publications for learners of English (e.g. Blackman 1998, Hart 1999, Harrison 2000, Shovel 1992).

This chapter reviews the characteristics of phrasal verbs as discussed in the literature, showing how various properties of phrasal verbs interact. The chapter only deals with the properties of phrasal verbs that are relevant for the rest of the dissertation, leaving other issues (e.g. syntactic analyses, word formation, language acquisition) aside. The organization of Chapter 2 is as follows. After delimiting and defining phrasal verbs (Section 2.1), their diachronic development is sketched briefly (2.2). Section 2.3 discusses the synchrony of phrasal verbs, namely their stylistic, phonetic, syntactic, and semantic properties. Section 2.4 critically reviews approaches to aspectual phrasal verbs and sketches the issues that a theory of aspectual particles should address. The last section summarizes.

## 2.1 Delimitation and definition of phrasal verbs

The literature uses, besides the term *phrasal verbs*, several other names to refer to the same type of combinations, including *particle verbs, verb-particle combinations* and *verb-particle constructions*. In the Slovak linguistic tradition the term *phrasal verbs* is used and deep-rooted (the term is used by e.g. Dušková et al. 1988, Štekauer 1996),

despite the fact that its use in the Western literature is usually restricted to non-compositional combinations and/or to the use in language learning. In this dissertation, I follow the Slovak tradition and use the term *phrasal verbs* (hereafter abbreviated as PVs).

PVs are multi-word expressions. Biber et al. (1999: 58–59) define "[a] multi-word lexical unit [as] a sequence of word forms which functions as a single grammatical unit [and which] has become lexicalized", often with a non-compositional meaning. The requirements of (i) lexical unity and (ii) semantic non-compositionality are reflected in classic definitions of PVs (e.g. Bolinger 1971: xii, Fraser 1976: v). Nevertheless, such definitions ignore the fact that PVs do not form a homogenous group, semantically or syntactically (see below). A definition that includes both compositional and non-compositional meanings of PVs is the one given by Biber et al. (1999: 403) who define PVs as "multi-word units consisting of a verb followed by an adverbial particle [...] These adverbial particles all have core spatial or locative meanings […]; however, they are commonly used with extended meanings."

This dissertation uses the term *phrasal verbs* to refer to both compositional and non-compositional multi-word combinations of a verb and a particle. The so-called *phrasal-prepositional verbs*, e.g. *get away with* 'escape consequences', *come up with* 'suggest an idea', treated separately in some accounts (e.g. Quirk et al. 1985: 1150–1168, Biber et al. 1999: 403, Claridge 2000) are analyzed here as PVs that combine with a prepositional complement and included in the present study with the preposition disregarded.

## 2.2 On the diachrony of phrasal verbs

For a better understanding of present-day PVs, it is useful to have a look at their diachrony first. Over centuries, certain properties of PVs have changed while others remained the same, as will be seen in the rest of the chapter. This section briefly discusses the development of PVs within the periods of Old, Middle, and Early New English.

English particles have their origin in the forms which functioned as prepositions, postpositions, adverbs, prepositional adverbs, and separable and inseparable prefixes

(Claridge 2000: 83–84). The functions of the particles in Modern English (ModE) PVs correspond to those of verbal prefixes in Old English (OE). The OE prefixes had spatial (e.g. *oðfleon* 'flee away'), idiomatic (e.g. *understandan* 'understand'; cf. *standan* 'stand'), or aspectual (e.g. *forbærnan* 'burn up') functions involving intensive, perfective or completive, and totalitive or destructive meanings (Denison 1985: 46). (As will be seen in Section 2.3.4, ModE PVs can also be classified into spatial, idiomatic and aspectual.) Particles existed in OE, but they were rare (Ibid: 38). Elenbaas (2007: 173) lists phonetic, semantic and syntactic differences between prefixes and particles in OE:

1. Primary stress – prefixes were unstressed, whereas particles could carry primary stress. This still holds true for particles in ModE.

2. Transparent meaning – as has already been said, prefixes, besides a spatial meaning, could also convey more abstract, extended (aspectual or figurative) meanings. In contrast, OE particles were restricted to spatial meanings. According to Denison (1985: 43), the first occurrences of particles with an extended meaning are not found before the twelfth century.

3. Syntactic separability – while prefixes were not separable from the verb, particles were separable and could appear in both pre-verbal and post-verbal positions (e.g. Elenbaas 2007: 206). This is due to the relatively free word order of OE with the object commonly preceding the verb (Ibid: 229).

Denison (1985: 47–48) explains the gradual progress from prefixes to free post-verbal particles by three factors – the decline of the prefixal system, the changes in English word order, and the fact that particles, unlike prefixes, could carry full stress and thus better carry the emphasis related to spatial and aspectual meanings.

The reasons for the decline of the prefixal system in OE are several. Kavka & Černý (2009) maintain that phonetic reasons, i.e. the phonetic reduction *ge-* [je] > [ji] > [i], alone did not suffice. They point out that prefixes bore several different functions. Such polysemy resulted in the loss of the distinctiveness of meaning. With a new word order and PVs at hand, prefixes became obsolete.[1]

[1] In contrast to the situation in Modern German or Dutch, which retain both particles and prefixes in abundance.

As is commonly known, OE was largely a synthetic language, where grammatical relations were expressed by means of inflection, and therefore, word order was relatively free (e.g. Vachek 1990: 70–71). As word order was becoming more fixed, with the S-V-O pattern, spatial adverbs shifted to the post-verbal position.[2] A post-verbal particle was more in accordance with an analytical trend than a prefix (Denison 1985: 48).

It may seem that the above account is trapped in a vicious circle, trying to explain the rise of PVs by the decline of the prefixal system and vice versa, the decline of the prefixal system by the rise of PVs. However, these developments are to be seen, together with the changes in word order, as three facets of one and the same process, simultaneous rather than successive (Claridge 2000: 86, Denison 1985: 47, Kavka & Černý 2009). This is confirmed by the fact that prefixes were commonly combined with particles, e.g. *hi a-iauen up* HE PREFIX-GAVE UP 'he gave up' (Denison 1985:44). As Elenbaas (2007) explains, such combinations occurred because prefixes were losing their semantic content and their intended, often abstract meaning needed to be reinforced by a particle. Later on, these combinations dropped prefixes and retained particles only, e.g. *his tonge i-kut of* 'his tongue cut off' (the prefix *i-* being a reduced form of *ge-*), *Than shal a-risen vp a dragoun* 'then shall arise up a dragon'; cf. with ModE *cut off, rise up* (no prefix), but also *arise* (no particle). Eventually, prefixes largely lost their productivity and became restricted to lexicalized cases in Middle English (MidE). The surviving prefixes in ModE are sometimes not even felt as separate morphemes, e.g. *begin*, *become.*

MidE PVs can be divided into the following three semantic categories (Elenbaas ibid.):

1. Literal – in which the particle has a spatial meaning;

2. Aspectual – where the particle adds some kind of aspectual meaning to the verb; and

[2] The shift in the word order has resulted in variation of the order of particle, verb root and affix in ModE verbal derivations, e.g. PARTICLE + VERB + AFFIX *outgoing, uplifting, onlooker* – VERB + PARTICLE + AFFIX *come-outer* – VERB + AFFIX + PARTICLE *dropper-in, finder-out – breaker-inner, cleaner-upper* VERB + AFFIX + PARTICLE + AFFIX (see e.g. Bauer 1983: 285–291).

3. Figurative – where the meaning of the PV cannot be deduced from its component parts. This same semantic classification applies to OE prefixes and ModE PVs.

As to the foreign influences which may have taken part in the rise of PVs in English, Brittonic and Old Norse, or eastern Celtic and Scandinavian languages more generally, probably played a major role, as they introduced analytical tendencies (Denison 1985, Kavka & Černý 2009). Norman, on the other hand, is believed to have slowed down the rise of PVs because it provided a vocabulary competitive to PVs (Baugh and Cable 2002: 345, Denison 1985: 53). Latin, according to Denison (1985: 53), indirectly influenced the rise of PVs by "[stimulating] OE translators to use verb-adverb collocations as translation equivalents of L[atin] compounds".

In the period of Early New English (ENE), PVs became even more frequent. They often had figurative meanings and formed nouns (Claridge 2000: 96). The commonness of PVs in ENE is documented for example in the works of Shakespeare, who used them abundantly; Blake (2002) suggests that Shakespeare exploited PVs for their syntactic flexibility and a flavour of colloquial speech.

To summarize this brief excursion into the history of PVs, OE made heavy use of prefixes with various semantic roles. Particles in PVs were relatively infrequent and they commonly occurred in pre-verbal positions. The interplay of factors producing a more analytic language led to the decline of prefixal system and to the rise of PVs with particles in post-verbal positions. These particles gradually gained more extended meanings.

Today, PVs constitute an important part of English vocabulary. New PVs are formed, while older ones acquire new meanings (Kavka 2007: 150, Vodička 2007: 7). With the knowledge of the historical background of PVs, let us now turn to the properties of PVs as found in ModE.

## 2.3 Properties of phrasal verbs

PVs need to be distinguished from free combinations of verb and preposition, as well as free combinations of verb and adverb. All three types of combinations generally resemble one another, as the same form can function as a particle, preposition, or

adverb. Nevertheless, the respective combinations differ in phonetic, semantic, syntactic, and stylistic properties, as described in this section. These properties have often been used as diagnostic criteria to determine whether a given combination is a PV or not (e.g. Bolinger 1971, Fraser 1976). However, as Darwin and Gray (1999) point out, there are exceptions to all of these criteria, which rules them out as reliable tests for distinguishing PVs.[3] Therefore, I consider these properties as tendencies rather than hard-and-fast rules.

### 2.3.1 Stylistic properties

PVs have a rather informal nature, which may be ascribed to their mostly Germanic origin[4] (e.g. Bolinger 1971: xii, Fraser 1976: 11–16) and which is manifested in their high frequency in conversation and fiction and rare occurrence in academic writing (Biber et al. 1999: 408). PVs usually have corresponding Latinate counterparts reserved for a more formal register, e.g. *put out* – *extinguish*. As Celce-Murcia & Larsen-Freeman (1999: 434) show, some PVs do not have such a Latinate counterpart: for example *to check out (of a hotel room)* can be paraphrased only, and "[n]o other verb exists that has this precise meaning."

Latinate verbs usually do not combine with particles, e.g. **consume up, *combine up*, although some combinations are relatively acceptable, e.g. *?descend down*, *?transport over*. Smollett (2002) argues that the acceptability is determined by aspectual properties of the verbs: particles do not combine with Latinate verbs because the particles have the same (spatial and/or aspectual) function as the original prefix in Latin verbs, e.g. *de-ducere* 'lead away', retained in English Latinate verbs, e.g. *deduce*.

We can therefore conclude that verb particles semantically correspond to prefixes in prefixal languages (see also Section 2.2), e.g. English *eat UP* – Latin *CON-sumere* – Slovak *Z-jesť,* English *run OUT* – Latin *EX-currere* – Slovak *VY-behnúť*. Indeed, some analyses compare Germanic particles and Slavic prefixes (see e.g. the papers in 2004 *Nordlyd* issue 32(2) and references therein).

[3] In Chapter 3 I discuss the *where*-test (Darwin and Gray 1999) as an alternative diagnostics for PVs.
[4] Cf. the three stylistic layers of English vocabulary – colloquial/neutral of Germanic origin, literary of French/Norman origin, and learned Latinate vocabulary, e.g. *ask – question – interrogate, help – aid – assist.*

### 2.3.2 Phonetic properties: Stress

The criterion of stress has been used as a very reliable test for distinguishing PVs from free combinations of verb and preposition: while a preposition cannot carry stress and the stress falls on the verb instead, in PVs it is the particle that carries stress (e.g. Dušková et al. 1988: 203, their examples, Fraser 1976: 2–3):[5]

(1) (a) She ´got off her bicycle. 'She dismounted from her bicycle.' (free combination of verb and prepositional phrase)
(b) She couldn't get ´off her ring. 'She couldn't remove her ring.' (PV)

Nevertheless, the main sentence accent falling on the direct object *her ring* in (1b) backgrounds the stress received by the particle.

Yet there are instances where a preposition can receive stress as well, as in the case of polysyllabic prepositions (2) or contrastive stress (3).

(2) That's a present I could have done with´out. (Quirk et al. 1985: 1157)

(3) He looked ´UP the road, not ´DOWN. (Celce-Murcia & Larsen-Freeman 1999: 431)

The stress criterion, therefore, occasionally admits exceptions.

### 2.3.3 Syntactic properties

#### 2.3.3.1 Particle placement – substantival and pronominal object

Particle placement has been heavily used as a rather reliable criterion to differentiate PVs from free verb-preposition combinations due to their different syntactic behaviour in relation to substantival and pronominal objects (e.g. Biber et al. 1999: 404, Bolinger 1971: 10–11, Dušková et al. 1988: 203, Fraser 1976: 2, Quirk et al. 1985: 1156–1157).

[5] The primary stress of complex verbs also distinguishes particles from prefixes, e.g. Dutch *´doorlopen* 'walk on' (PV) – *door´lopen* 'pass' (prefixed verb), *´voorkomen* 'occur' (PV) – *voor´komen* 'prevent' (prefixed verb) (Booij 2002) and English *come ´over* 'visit' (PV) – *over´come* 'defeat' (prefixed verb), *cry ´out* 'cry in pain, terror, surprise, etc.' (PV) – *out´cry* 'cry louder than someone else' (prefixed verb).

A preposition always precedes an (indirect) object NP, regardless of whether its head is a noun or a pronoun (4). Particles of PVs can either precede or follow a substantival (direct) object (5a, b), and they always follow a pronominal (direct) object (5c, d). The following examples are taken from Dušková et al. (1988: 203):

(4) (a) She got off her bicycle.
(b) She got off it.
(c) *She got her bicycle off.
(d) *She got it off. (unacceptable in the intended meaning)
(free combination of verb and preposition)

(5) (a) She couldn't get her ring off.
(b) She couldn't get off her ring.
(c) She couldn't get it off.
(d) *She couldn't get off it. (unacceptable in the intended meaning)
(PV)

However, there are cases in which the particle does not behave this way, as listed in Fraser (1976: 16–21) and Bolinger (1971: 40). The first is the case of contrastive stress or focus (6), where the particle precedes the pronominal direct object (DO). Another case involves instances with a DO realized by a long and/or complex NP, where the particle cannot follow the DO even if it is substantival (7). Similarly, the particle must precede the DO in constructions involving PV + DO + preposition + indirect object (8).

(6) (a) Figure out THESE, not THOSE.
(b) Bring along him and her.

(7) *I called the man who left up.

(8) *The man gave the money out to the poor.

On top of this, particle placement acceptability is also conditioned individually in speakers (Dušková et al. 1988: 204, Fraser 1976: 17).

Putting aside these exceptions, much research attention has been paid to the optionality of particle placement, resulting in pairs such as *I turned the lights off* and *I turned off the lights*. Bolinger (1971: 54 et passim) claims there are semantic differences between such pairs and explains that in the end position occurs the element that is to receive focus. Similar observations, stressing that intonation plays a role, are found in Svenonius (1996) and Dehé (2002). Gries (2002) includes in his analysis also other factors (e.g. complexity, length, type, and concreteness of the direct object, idiomaticity of the verb phrase, etc.) and argues that the construction with the particle preceding the DO is preferred in cases where the DO requires much processing effort on the part of the speaker or hearer.

The variability of particle placement can be treated under the theory of Functional Sentence Perspective[6] (cf. Dušková et al. 1988: 204): put simply and briefly, given information precedes new information in a sentence. It follows that whether the particle precedes or follows the DO depends on which of the two represents new information (9).

(9) We'll *make up a parcel* for them ... On the morning of Christmas Eve together we *made the parcel up*. (Dehé 2002:122,[7] emphasis added)

This is also why particles usually take post- pronoun position, as pronouns normally represent given information (5c, d). Focus-receiving pronouns, in contrast, represent new information and therefore appear at the end of a sentence (6).

It is important to note that the compositionality of PVs also affects particle position. Gries (2002: 277) points out that while compositional PVs tend to occur in

[6] A theory of information structure developed by the Prague School, mainly by Jan Firbas.
[7] Dehé takes this example from den Erades, P. (1961: 58). Points of modern English syntax XL (continued). *English studies* 42: 56–60.

split constructions (verb + DO + particle), non-compositional ones generally behave the other way round (verb + particle + DO).[8]

#### 2.3.3.2 Adverb insertion

Generally speaking, adverbs cannot be inserted between the verb and the particle in PVs (10), unlike in free combinations (11) (Fraser 1976: 2–3, his examples, Quirk et al. 1985: 1167).

(10) (a) *Harry looked furtively over the client. (*look over* 'quickly examine or inspect', PV)
(b) *The debator drew his opponent only part of the way out. (*draw out* 'elicit', PV)

(11) (a) Harry looked furtively over the fence. (*look over* 'glance over', free combination of verb and preposition)
(b) The debator drew the lucky number only part of the way out. (*draw out* 'pull out', free combination of verb and adverb)

As Bolinger (1971: 12–13, his example) argues, the possibility of adverb insertion in fact depends on semantic factors: insertion is possible with compositional (12a) but not with non-compositional PVs (12b).

(12) (a) I watched the pebbles drop gradually out. (*drop out* 'fall out', PV)
(b) *I'm afraid you'll find these transfer students dropping gradually out. (*drop out* 'withdraw', PV)

[8] Research on Dutch suggests that the complexity of the particle influences word order preferences as well (Jack Hoeksema, p.c.), yet this factor is not included in Gries (2002). For reference on Dutch, see e.g. De Cubber, Walter. 1973. De splitsing van scheidbaar samengestelde werkwoorden in hedendaags proza,
*Studia Germanica Gandensia* XIV: 39–63.

In this light, Fraser's classifying *draw out* in (11b) as a free combination is not so convincing, provided that PVs can be fully compositional. Consider *sit down*, which is a fully compositional PV that allows adverb insertion:

(13) I sat nervously down to take my final education test.
(Example taken from http://amoshingler.xanga.com/476775895/item/, accessed March 5, 2013)

I conclude that the possibility of adverb insertion does not depend on PV-hood but rather on the semantic compositionality of the given combination.

Nonetheless, there is another factor at play: insertion is acceptable with certain adverbs, such as *right, all, the hell, the heck, straight* and *clean*, e.g. *turn that light the heck off, grow straight up* (Bolinger 1971: 118, Fraser 1976: 25–27), even with non-compositional PVs, e.g. *I got the heck up, Shut the hell up!* (cf. Hoeksema & Napoli 2008).

#### 2.3.3.3 Fronting

Another property of PVs that has been exploited as a test for PV-hood is the inability of particles to be fronted. Unlike a preposition (14a, 15a), a particle cannot occur in the initial position of a sentence (14b) or a relative clause (15b), preceding a relative pronoun (example (14) is taken from Fraser 1976: 2, example (15) from Quirk et al. 1985: 1167).

(14) (a) In the street, the man reeled as if drunk. (*reel* 'stagger', free combination of verb and preposition)
(b) *In the line, the man reeled as if drunk. (*reel in (a line)* 'pull in a fishing line', PV)

(15) (a) the man on whom they called (*call* ‘shout’, free combination of verb and preposition)
(b) *the man up whom they called (*call up* ‘phone’, PV)

Nevertheless, the particle can be fronted in case it retains its literal (spatial) meaning (16) (Bolinger 1971: 116, his example).

(16) (a) Down they sat. (*sit down* ‘take a seat’, PV)
(b) *Down he broke. (*break down* ‘collapse’, PV)

At the same time, the literalness of the particle matters more than that of the verb, as demonstrated by the possibility of particle fronting with PVs whose verb is used non-literally, as in *Off you pop* and *Off you fuck* ‘Off you go’. To sum up, particle fronting is another piece of evidence that the syntactic behaviour of particles depends on their semantics.

#### 2.3.3.4 Action nominalizations

Most transitive PVs can be turned into action nominalizations (Bolinger 1971: 8). The difference between the particle in a PV and the adverb in a free combination is that in action nominalizations the particle cannot follow the DO NP (Fraser 1976: 3, his examples):

(17) (a) His throwing of the ball up was stupid. (*throw up* ‘send up in the air’, free combination of verb and adverb)
(b) *His throwing of his dinner up was stupid. (*throw up* ‘vomit’, PV)

As with the previously discussed syntactic properties, Bolinger (1971: 9–10) argues that (17b) is unacceptable due to the semantic non-compositionality of the construction, in contrast to (17a). In such an approach, *throw up* in (17a) can be classified as a PV rather than a free combination.

#### 2.3.3.5 Gapping

According to Fraser (1976: 2–3, his examples), unlike prepositions and adverbs in free combinations (18a, 19a), particles in PVs do not occur in gapped sentences, which holds true with both repeating the particle (18b) and contrasting (19b) it:

(18) (a) He sped up the street, and she, up the alleyway. (*speed up the street* 'move quickly up the street', free combination of verb and prepositional phrase)
(b) *He sped up the process, and she, up the distribution. (*speed up* 'increase speed', PV)

(19) (a) Jones pulled the old tablecloth off, and Peters the new one on. (*pull off* 'draw away', *pull on* 'put on', free combinations of verb and adverb)
(b) *Jones pulled the deal off, and Peters the money in. (*pull off* 'succeed in doing', *pull in* 'earn in a transaction', PVs)

For Fraser, *pull on* and *pull off* in (19a) are free combinations of verb and adverb, as evidenced by the possibility of occurring in gapped sentences. Nonetheless, in the present analysis *pull on* and *pull off* are PVs (see section 1.3.4 for the controversy over the status of some compositional combinations and Chapter 3 for the *where*-test from Darwin and Gray 1999 to distinguish PVs). If they are all PVs, why, then, is (19a) acceptable and (19b) not?

For gapping to be felicitous, there must be a contrast between the two clauses, cf. (18a) with (20):

(20) *He sped up the street, and she, up the street, too.

The contrasted elements can be prepositional phrases (PPs), as in (18a) or particles, as in (19a). (18b) is unacceptable because *up* does not form a PP with *the distribution*, but see (21).

(21) He sped up the process, and she, the distribution.

(19b), on the other hand, is infelicitous because the verbs *pull off* and *pull in* have unrelated meanings, namely 'succeed' and 'earn', respectively. However, the difference in the meanings is not given by the particles alone but by the composition of verb and particle. Therefore, the verb root *pull* is part of the contrasted element and should appear in the second clause for (19b) to become felicitous (in which case there is no gapping anymore):

(22) Jones pulled the deal off, and Peters pulled the money in.

When the contrast arises from the particle alone, as in (23), gapping is acceptable in PVs.

(23) A thin grin would appear and he would commence waiting as the lights faded in and the music out.
(Example taken from http://www.tadpeters.com/RCWF/Events/11-19-02%20IWC. txt, accessed March 29, 2012)

Gapping is also affected by particle placement, as Dehé (2002: 263, her examples) shows (see Dehé for a syntactic account of the phenomenon):

(24) (a) Turn the oxygen off with your knee and the acetylene on with your elbow.[9] (PV)
(b) *Turn off the oxygen and on the acetylene. (PV)

While both examples contain the same compositional PV, gapping is possible only in the (a) example. This restriction is determined by information structure (topic-focus arrangement) influencing particle placement (see 1.3.3.1); when the particles are contrasted, they need to appear in post-DO position (24).

To sum up, the behaviour of particles in gapped sentences is determined by semantic factors and information structure of the sentence.

[9] Dehé takes this example from den Dikken (1995: 43).

#### 2.3.3.6 (In)Transitivity

Needless to say, there are both transitive and intransitive PVs. An interesting feature of PVs, however, is that the particle sometimes changes the transitivity of the verb root in either way (Claridge 2000: 51, Fraser 1976: 8, his examples, Quirk et al. 1985: 1151), e.g. *sleep* (intransitive) – *sleep off *(the effects of the drinking)*[10] (transitive), *take something* (transitive in its basic meanings) – *take off* 'leave' (intransitive in this meaning). In this respect, PVs behave in a way similar to resultative constructions, e.g. *John ran *(the soles of his shoes thin).*

Particles have been likened to resultative phrases also in another respect – a sentence can only contain a single particle or resultative phrase (Tenny 1994: 80, her examples):

(25) (a) Martha wiped the table dry.
(b) Martha wiped the table clean.
(c) *Martha wiped the table dry clean.
(resultative constructions)

(26) (a) The sun dried the grass up.
(b) The sun dried the grass out.
(c) *The sun dried the grass up out.
(PVs)

Acceptability of a resultative phrase combined with a particle is harder to predict, though:

(27) (a) ??Martha wiped the table off clean.
(b) I marinated the unit with a little break fluid for about 8 hours and washed it out clean.
(Example taken from http://www.sl113.org/forums/index.php?action=printpage;topic=1824.0, accessed March 29, 2012)

[10] The asterisk before brackets is to show that the bracketed element is obligatory.

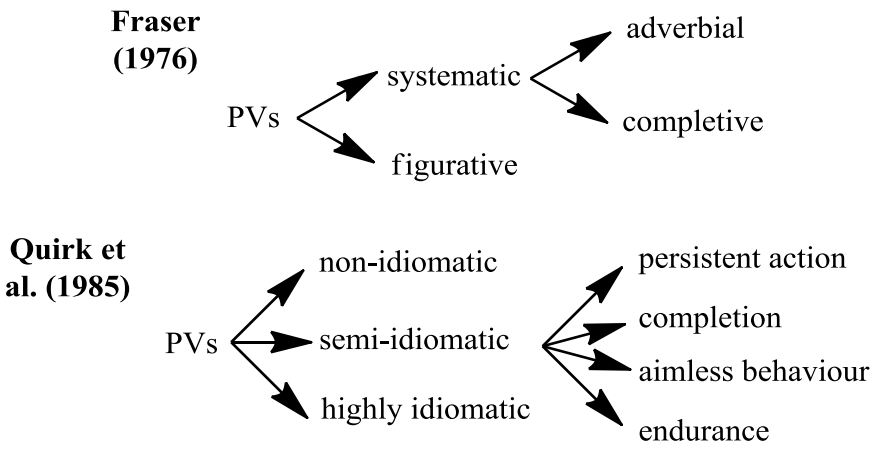
Tenny (ibid.) argues that the reason for the restriction in (25–26) is aspectual, i.e. semantic. This point will be discussed in detail in Chapter 6.

#### 2.3.3.7 The syntactic behaviour of particles depends on their semantics

The literature commonly argues that the syntactic properties described in Section 2.3.3 distinguish PVs from free combinations (e.g. Bolinger 1971, Fraser 1976). As has been argued, however, there are numerous 'exceptions' to these 'rules' (Darwin & Gray 1999). I have tried to show that these idiosyncrasies in the syntactic behaviour of PVs are not exceptions but rather regularities springing from the semantic compositionality of PVs and information structure of sentences. I conclude that the syntactic properties desribed in this chapter cannot be used to reliably distinguish PVs from various free combinations.

### 2.3.4 Semantic properties

Semantically, PVs do not constitute a homogenous group. As has been seen in 2.3.3, the semantic properties of PVs affect also their syntactic behaviour. The varied semantics of PVs has resulted in various semantic classifications of PVs in the literature. This section evaluates several relevant semantic classifications from the literature (see Figure 5 for an overview) and their defining criteria. The classifications are not ordered chronologically (date of publication) or alphabetically (authors' names) but rather in the way of increasing complexity.



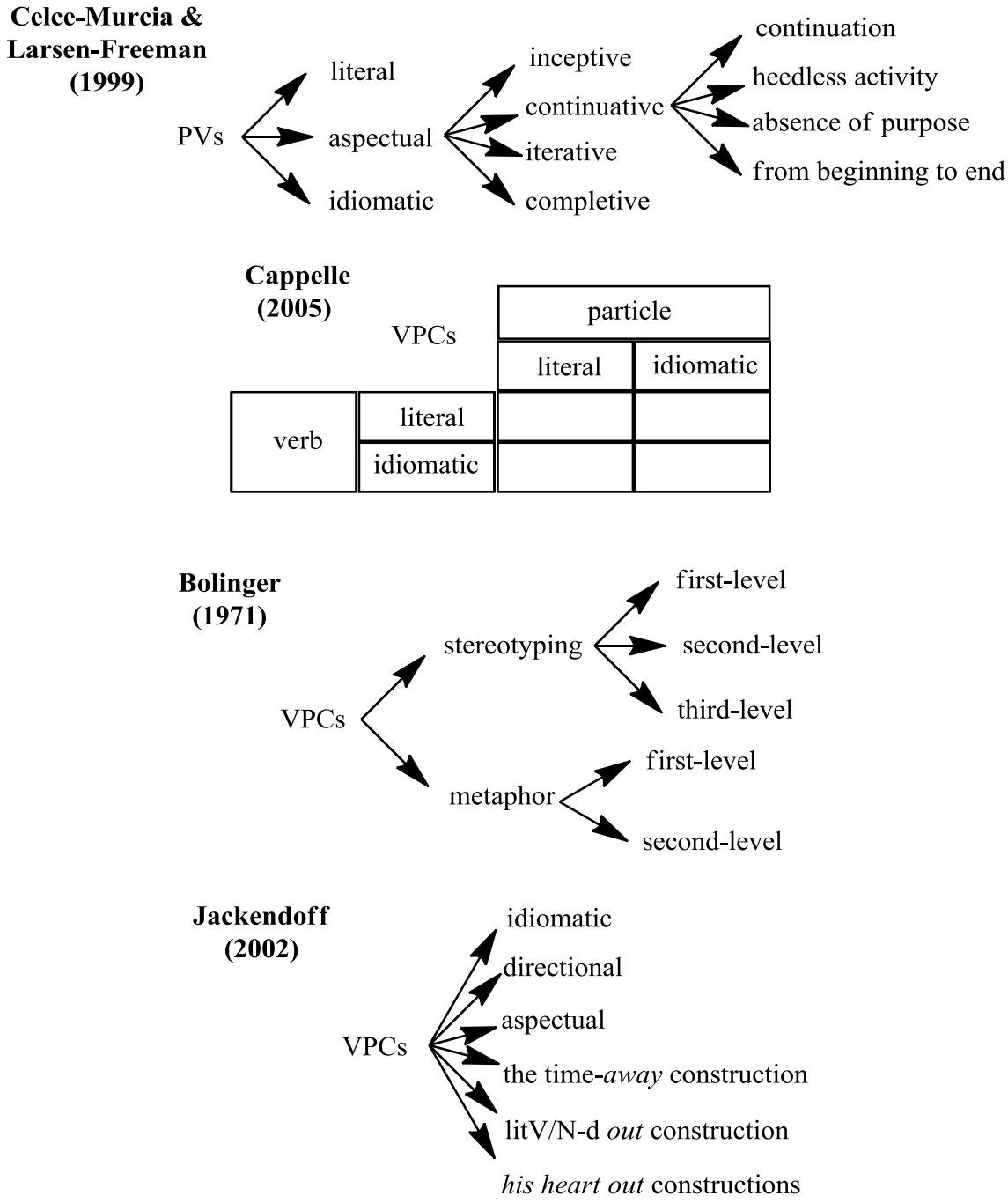



**Figure 5. Examples of semantic classifications of phrasal verbs (PVs) or verb-particle constructions (VPCs).**

#### 2.3.4.1 Fraser (1976)

Fraser (1976: 5–6) distinguishes two semantic classes of PVs – figurative (e.g. *figure out*) and systematic, in which the particle systematically modifies the meaning of the verbal root. Depending on the character of this added meaning, they are further

subdivided into those with adverbial (e.g. *hang up*) and completive (e.g. *fade out*) meaning. However, Fraser (1976: 5) admits that he cannot "precisely [formulate]" the distinction between figurative and systematic PVs and describes it vaguely as "a consistent change in meaning of the verb stem".

#### 2.3.4.2 Quirk et al. (1985)

While Fraser (1976) in fact proposes three groups under two headings, he leaves out instances in which the particle has not a completive but some other aspectual meaning, e.g. *talk away* 'talk for a long time' (continuative). Such cases are covered by the classification of PVs by Quirk et al. (1985: 1162–1163) who distinguish free non-idiomatic constructions (e.g. *bring in*, *bring out*), semi-idiomatic constructions involving various aspectual meanings (e.g. *chatter away*, *drink up*), and a third category of highly idiomatic constructions (e.g. *bring up*). The criterion that Quirk et al. use to separate the semantic classes of PVs is the substitution of one of the parts and the resulting change of meaning. Thus for them, *walk up* is a free construction because the meaning of *walk* remains the same also in *walk down*. On the other hand, *bring up* 'rear' is highly idiomatic since after substituting *up* for *down*, we arrive at a very different meaning in *bring down* 'depress'. In the middle category, termed semi-idiomatic by the authors, the substitution of a verb or particle is limited by productivity. While the meaning of the verb remains the same in the PV (e.g. *cut up* is to 'cut into pieces'), the particle may carry the meaning of persistent action (e.g. *work away*), completion (e.g. *drink up*), aimless behaviour (e.g. *play around*), or endurance (e.g. *last out*).

It is important to note that Quirk et al. do not make a distinction between free combinations on the one hand and PVs in which the particle has a directional meaning (termed 'literal PVs' hereafter) on the other. This view cannot be maintained, though, given the close semantic and syntactic relationship between verb and particle (see also Chapter 3). For instance, as *down* in *sit down* can be substituted with *up* in *sit up*, both combinations are conflated with free combinations and denied the status of PVs in Quirk et al.'s account.

Moreover, the major drawback is that Quirk et al.'s substitution criterion fails to categorize PVs into the appropriate classes. The reason is that it is unclear what should be understood by the constancy of the meaning upon substitution of a part. For example, is the meaning of the verb root in *break in* 'to get into a building or car by using force, usually in order to steal something' the same as in *break out* 'to escape from prison'? We can indeed argue that it is, since in both the verb is associated with traversing the walls of a building, usually with violence and as a criminal act. Therefore, Quirk et al.'s substitution criterion will classify both *break in* and *break out* as free non-idiomatic constructions. Yet intuitively these PVs are idiomatic, as their meanings are directly unrelated to, or at best represent only very specialized meanings of, *break* 'separate into pieces'.

#### 2.3.4.3 Celce-Murcia & Larsen-Freeman (1999)

The most widely used classification is given by Celce-Murcia & Larsen-Freeman (1999: 432–433).[11] It includes literal (e.g. *sit down, throw away*), aspectual (e.g. *use up, think over*), and idiomatic (e.g. *catch up, put off*) PVs. In distinguishing the three semantic classes, Celce-Murcia & Larsen-Freeman rely on the criterion of non-compositionality. Fully compositional PVs, in which the particle has a directional meaning, are literal; non-compositional ones are idiomatic. Aspectual PVs are defined as the class where "particles contribute consistent aspectual meaning" (ibid.: 432). Aspectual particles can have inceptive (particles *off, out, up,* e.g. *start up*), continuative (particles *on, along, away, around, through*[12], e.g. *play along*), iterative (particle *over*, e.g. *write over*), or completive (particles *up, out, off, down, over,* e.g. *cut off*) meaning.

Celce-Murcia & Larsen-Freeman's classification is slightly problematic. The first problem concerns the delimitation of the compositionality of meaning in literal PVs. Celce-Murcia & Larsen-Freeman consider literal PVs fully compositional, e.g. *throw away*. However, their account does not specify whether *throw away* is a literal PV only in the meaning 'cause to move in a direction from oneself' or also in the meaning of

[11] A similar classification, i.e. non-idiomatic (e.g. *blow up, turn over*), intensifying/perfectivizing (e.g. *drink up, fasten up*), and idiomatic (e.g. *see off, come about*) PVs, is used in Dušková et al (1988).
[12] In Chapter 4, I show that *through* does not pattern with continuative particles.

'get rid of'. The latter is not a simple sum of the meanings of the verb and the particle. Similarly, the meaning of *go out* may be restricted to 'leave a room or building' or may contain also 'for amusement' element. Such unrelated, or perhaps highly specific meanings, of PVs are left untreated in Celce-Murcia & Larsen-Freeman's account.

Secondly, Celce-Murcia & Larsen-Freeman's approach does not clarify how the aspectual meaning in aspectual PVs should be determined. Take for example *stand up*. The particle affects the situation aspect of the verb root: *stand* (state/activity) – *stand up* (achievement), see Chapter 2. As the particle contributes an aspectual meaning – Celce-Murcia & Larsen-Freeman's criterion for aspectual PVs, it follows that *stand up* should be categorized as an aspectual PV. Nevertheless, Celce-Murcia & Larsen-Freeman (1999: 432) list *stand up* among literal PVs. Their criteria are therefore somewhat inconsistent. A solution proposed here (see Chapter 3) is that particles in both literal and idiomatic PVs may affect aspect (cf. Cappelle 2005: 348–349).

#### 2.3.4.4 Cappelle (2005)

Cappelle (2005: 119–121) argues that, when classifying PVs, the literalness of both verb and particle should be considered in relation to the whole combination. He proposes a two-by-two grid which yields four categories of PVs – first, PVs in which both the verb and the particle have a literal meaning (e.g. *fall down*), second, PVs in which only the verb retains its literal meaning and the particle has an idiomatic meaning (e.g. *labour away*), third, PVs in which the verb has an idiomatic and the particle a literal meaning (e.g. *spirit away* 'carry off mysteriously') and last, PVs in which both the verb and the particle have an idiomatic meaning (e.g. *make out* 'understand'). Unfortunately, Cappelle does not elaborate on the topic further and leaves unclarified how to determine whether a verb root is literal or idiomatic (e.g. in *spirit away*). I draw on Cappelle's idea of examining the literalness of the verb root and particle in relation to the whole PV in Chapter 3, where I discuss criteria for determining a semantic class of a PV.

#### 2.3.4.5 Bolinger (1971)

A similar approach that examines parts in relation to the whole is that of Bolinger (1971: 112–115). Bolinger recognizes a first-level stereotype (e.g. *sit down*), where both the verb and the particle retain their literal meaning and the PV is compositional, versus a second-level stereotype (e.g. *break down*), where the PV is non-compositional. Idioms (e.g. *put on airs*) are third-level stereotypes. Where there is a meaning extension, Bolinger refers to metaphors. When it is the meaning of the particle that is extended, it is a first-level metaphor (e.g. *load up*). When the extension concerns the whole PV, it is a second-level metaphor (e.g. *rub out an adversary*). Although Bolinger's approach may seem rather complicated, his classes may be linked to those of the other classifications; thus first-level stereotypes are literal PVs, first-level metaphors aspectual PVs, and second-level stereotypes idiomatic PVs. When a PV is used metaphorically, it is a second-level metaphor, and when it becomes part of a larger idiomatic structure, it is a third-level stereotype. The advantage of the approaches of Cappelle (2005) and especially Bolinger (1971) is that they allow for PVs which are used metaphorically. In Chapter 3 I consider metaphorical PVs as a kind of idiomatic ones.

Bolinger bases the distinction between the classes not only on the principle of compositionality but also on metaphorical meaning extension. What is more, besides including semantic criteria he also makes observations on the differences of the behaviour of the classes that are of phonetic (reduction), psycholinguistic (slips of the tongue) and syntactic nature (fronting of the particle and adverb insertion). Although these observations are interesting in themselves, they cannot serve as guidelines for a proper classification of PVs. The reasons are several. Obviously his psycholinguistic evidence is anecdotal and thus cannot be applied in large. Phonetic reduction and constraints on adverb insertion admit many exceptions, as shown in 2.3.2 and 2.3.3.2, and cannot be used as a reliable test to distinguish individual semantic classes. And at last, although particle fronting sets apart idiomatic PVs from literal ones, it fails to delimit aspectual PVs: while some aspectual PVs admit fronting of the particle (28), others do not (29).

(28) On he chattered, hoping to be heard.

(29) *Up he drank his coffee.

Another gap in Bolinger's account is that even though he distinguishes a class of PVs which as a whole are used metaphorically, he does not specify how their behaviour differs or on what grounds one should distinguish them from other classes.

#### 2.3.4.6 Jackendoff (2002)

Yet another classification of combinations of verb and particle is that of Jackendoff (2002) who treats three more constructions with particles in addition to three classes of PVs, thus arriving at six classes altogether – directional (e.g. *put something away*), aspectual (e.g. *drink up*) and idiomatic (e.g. *freak out*) PVs, the 'time'-*away* construction (e.g. *twist the night away*), the V/N-d *out* construction (e.g. *I'm coffeed out*), and the *his heart out* family of constructions (e.g. *Richard yelled his head off*).

Jackendoff too works with both semantic and syntactic criteria. For him, literal PVs are fully compositional combinations not stored in the lexicon. Their particle functions as an argument to the verb, in a way replacing a directional path PP, e.g. *Beth took the food up/up the stairs.* Idiomatic PVs are "(at least partly) non-compositional" (ibid.: 73) and stored in the lexicon as whole combinations. Their particle cannot be fronted. (But cf. e.g. *Out he went like a light*, the PV meaning 'lose consciousness', Jack Hoeksema, pers. comm.) In aspectual PVs, the particle does not function as an argument to the verb but as an aspectual modifier that is omissible and often redundant, e.g. *Elena drank the milk (up).* Particle omission is the single syntactic criterion which can identify aspectual PVs. Jackendoff suggests that some aspectual PVs are stored in the lexicon, while others are not (unless listed as very frequent) due to their full compositionality.

However, the idea of full compositionality in literal PVs can be challenged, as we have seen in examples *throw away* and *go out* (2.3.4.3). Moreover, Jackendoff also remains silent on the issues whether particles in literal and idiomatic PVs may have an aspectual force and how PVs with metaphorical meaning extension should be treated.

#### 2.3.4.7 The semantics of particles lies along a continuum of compositionality

Although the discussed classifications are useful to give a general idea as to what kinds of meaning PVs can have, they cannot serve for a reliable classification of individual cases, as I have pointed out throughout this chapter. This issue is therefore addressed in Chapter 3.

The property that all of these classifications are based on is semantic compositionality. I side with Celce-Murcia & Larsen-Freeman (1999) and Jackendoff (2002) and recognize three basic semantic classes of PVs – literal, aspectual, and idiomatic. Following Kavka's (2003) views on idiomaticity, applicable also to PVs, and Bolinger's (1971:6) statement that "being or not being a phrasal verb is a matter of degree", I propose that the semantic classes of PVs lie along a continuum of compositionality and literalness (see Figure 6). One end of the continuum is occupied by free combinations of verb and preposition or verb and adverb, which are fully compositional, literal and not stored in the lexicon. The following class is literal PVs; they too are compositional and literal, yet unlike free combinations, they are multi-word expressions. Aspectual PVs are compositional yet the meaning of the particle is more abstract, i.e. non-literal. The other extreme of the continuum is reserved for non-compositional, idiomatic PVs, which are lexically listed. The consequence of the proposed existence of a continuum is very simple: there are no clear-cut boundaries between semantic classes of PVs, or between PVs and free combinations. It follows that delimiting individual classes requires a deeper consideration, to which I devote space in the following chapter.

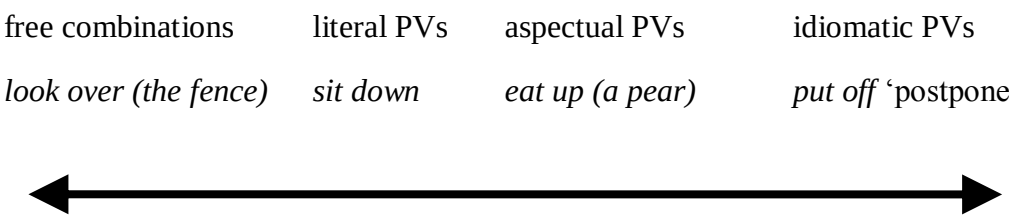



**Figure 6. The continuum between free combinations and semantic classes of phrasal verbs.**

Regarding the semantic classification of PVs, it has to be remarked that some accounts recognize a separate function of particles, namely emphatic, as in e.g. *listen up, finish off, wait up* (e.g. Kačmárová 2006, Štekauer 1996). In this dissertation, however, I treat these PVs together with (other) aspectual particles.

## 2.4 Phrasal verbs and aspect

This section reviews analyses of aspectual phrasal verbs (2.4.1). Drawing on the weaknesses of such analyses and on the conclusions on the semantics of PVs from the previous sections, section 2.4.2 raises research questions for this dissertation, to be addressed in subsequent chapters.

### 2.4.1 Previous analyses of aspectual phrasal verbs

This section presents an overview of accounts of aspectual PVs as found in the literature. Earlier accounts of PVs considered aspectual particles as completive (Fraser 1976: 6) or perfective (Bolinger 1971: 96–97, Dušková et al. 1988: 205 et 243, Smith 1997: 69). These approaches have received little support. The completive approach ignores non-completive meanings of particles – inceptive, continuative, and iterative, e.g. *start up*, *walk on*, *write over*, respectively (see 2.3.4). The perfectivizing approach runs counter to the assumption that grammatical aspect in English is a purely grammatical category (see Chapter 1) – it can only be marked by inflection (such as *–ing*) but not by derivation (such as particles). In addition, Brinton (1985) argues that particles do not mark perfectivity since PVs are compatible with phase markers (ingressive, continuative, terminative), e.g. *The shoes are starting to wear out*. The function of phase markers is to focus on a part of a situation, which contrasts with the perfective that views a situation in its totality.

To provide a more satisfactory theory of aspectual particles in PVs, Brinton (ibid.) argues that particles do not mark grammatical but situation aspect, and in particular, that particles mark telicity on the verb root, e.g. *eat* (atelic) – *eat up* (telic). In other words, particles turn activity verb roots into accomplishment PVs (ibid.: 161). Brinton considers the fact that stative verbs do not combine with particles (noted in e.g. Bolinger

1971: 89–90, Fraser 1976: 11) as independent evidence that particles are telicity markers, since states are not compatible with the notion of telicity. However, Brinton acknowledges two (potential) problems with her analysis. First, particles do not combine only with atelic activity verb roots but also with accomplishment and achievement verb roots which are telic themselves, e.g. in *win, find, meet* (telic) – *win out, find out, meet up (with somebody)* (telic). Brinton resolves the issue by claiming that the particle in such cases emphasizes the telic nature of the verb root.

The second problem with Brinton's account concerns particles *on*, *along* and *away* that do not mark telicity. Instead, according to Brinton, they mark continuative or iterative aspect, e.g. *drive on/along, work away (at the problem), babble on (about the campaign)*. Jackendoff (2002) characterizes the meaning of PVs with such particles as approximating the meaning of 'keep on V-ing'. In addition, as Jackendoff (ibid.: 77) observes, PVs with continuative aspectual particles cannot license a direct object (DO), e.g. **Dave drank scotch away/on*. On the basis of this observation, McIntyre (2001, 2004) distinguishes two types of particle uses – atransitive and non-atransitive. Therefore, I assume the existence of two kinds of particles, which I further discuss in Chapters 4 and 6.

Brinton's (1985) paper has proved very influential and the view that particles are markers of telicity forms the standard account of aspectual particles today, appearing in e.g. van Hout (1996, 1998), Jeschull (2003: 120), Keyser & Roeper (1992: 118), and Tenny (1994: 150), among others. Celce-Murcia & Larsen-Freeman (1999: 433) list among the functions of aspectual particles not only telicity marking on atelic verb roots, e.g. *wear, burn* (atelic) – *wear out, burn down* (telic), but also durativity marking on punctual verb roots, e.g. *catch, find, check, win* (punctual) – *catch up, find out, check over, win over* (durative). I would like to add two comments to Celce-Murcia & Larsen-Freeman's treatment of durativity/punctuality of PVs. First, the aspectual shift in the direction from punctuality to durativity is in agreement with Olsen's (1994) theory of durativity being the marked feature and Rappaport-Hovav & Levin's (1998) claim that accomplishments have a structure that is more complex than that of achievements. However, I argued in Chapter 1 that the shift from punctuality to durativity only occurs in the case of a shift from a single event to a series of events. Second, whether these

PVs are durative is questionable; for instance, with a durative adverbial they are either bad or have a result state reading (30).

(30) (a) I *found out* the phone number **for a minute*. (punctual)

(b) Jamie Reeves (…) *caught up* with Laswell *for a while* but ended up falling back and finishing 2nd, two minutes behind. (result state reading – the PV is punctual, cf. Section 1.3.4)
(Example taken from https://asunews.asu.edu/20120412_gallery_weekinpics #2, accessed August 3, 2012)

In addition, the particles in some of these examples do more than just mark aspect; the PVs and their corresponding verb roots have a different denotation, e.g. *catch* 'capture, seize' – *catch up* 'draw even', *win* 'achieve victory' – *win over* 'make someone agree'. In other words, these are idiomatic rather than aspectual PVs. For these reasons, whether aspectual particles influence the durativity/punctuality of the verb root is therefore an open issue. I aim to investigate the effect of particles on aspectual features of verb root in Chapter 5.

Brinton's hypothesis was tested by Giddings (2001) on a corpus of PVs with particles *down* and *out*. Giddings used Dowty's (1979) tests[13] (see Chapter 1) to ascertain the situation aspect value of PVs in her sample and the corresponding verb roots. She found, in line with the monotonic compositional theory of situation aspect (see Chapter 1), that particles may add aspectual features to but not remove them from the verb root. Giddings also found that *down* and *out* add aspectual features[14] to verb roots unless either (i) the verb root is an accomplishment (and already has the most complex structure possible, cf. 1.2.4), or (ii) the verb root is a directed motion verb (presumably, these PVs are literal rather than aspectual, cf. Chapter 3). In her discussion of the findings, Giddings notes that the change in situation aspect is typically accompanied with a change in transitivity, e.g. *I hunted* (intransitive verb root; activity) – *I hunted down the fox* (transitive PV; accomplishment). Giddings does not further

[13] Giddings (2001) does not specify which of Dowty's tests she used, or for that matter, how she identified semelfactives, which are not covered in Dowty's (1979) diagnostics.
[14] Again, Giddings (2001) fails to specify which aspectual features are added by particles.

elaborate on how this may affect the interpretation of her findings, yet this question is not trivial. Recall that Chapter 1 showed that a syntactic element, including the direct object (DO) argument, can affect the situation aspect value of the predicate. Therefore, telicity in a predicate need not come from the particle alone. Consider a typical example from the literature on telicity and particle verbs, *drink – drink up*. The received opinion is that *up* adds an inherent endpoint (i.e. telicity) to the otherwise atelic verb root *drink*. While this is basically true, the question is whether the particle is the only source of telicity in the predicate. Consider the argument structure of *drink* and *drink up* (31). Unlike atelic *drink*, which allows a mass noun DO (31a), telic *drink up* requires a quantized DO (31b), otherwise it is ungrammatical (31c) (de Hoop 1992: 93). However, *drink* with a quantized DO (31d) is also telic.

(31) (a) Mark drank coffee for/*in an hour. (atelic)

(b) Mark drank up a cup of coffee *for/in an hour. (telic)

(c) *Mark drank up coffee.

(d) Mark drank a cup of coffee *for/in an hour. (telic)

It follows that telicity in (31b) is not marked by the particle alone. Rather, it is mainly imparted by the properties of the DO.

Arguments against the telicity-marking approach to aspectual particles have been raised by Cappelle (2005: 354–355 and 351ff.), who points out that there are instances when even particles that are generally acknowledged to be telicizing (e.g. *up*) do not mark telicity, as in *The earth is warming up*. As Cappelle argues, *up* in this example does not contribute an inherent endpoint beyond which the event of warming cannot continue. The telicity-marking approach to particles does not predict when *up* contributes telicity and when it does not.

Cappelle and Chauvin (2010) adopt a different approach to the problem of aspectuality of particles, namely analyzing the particle in terms of how it describes the change expressed in the verb root. In their view, aspectual particles are comparative and/or resultative. Particles are comparative when the change expressed by the PV is gradual, e.g. *build up* ‘become greater, stronger, or larger in number’, as in *I could feel*

*the anger building up in me*, and resultative when there is an attainment of result or a change of condition, e.g. *team up* 'form a team'. Cappelle and Chauvin also point out that some PVs are ambiguous, allowing for both interpretations, as *brighten up*: its reading is comparative when it means 'make brighter' and resultative in the meaning 'make bright'. Nevertheless, Cappelle and Chauvin's analysis suffers from the same shortcomings as Brinton's (1985): It lacks specific predictions as to the telicity-marking effect of particles, and moreover, it cannot be applied to all aspectual particles, since e.g. *on* in *chatter on* cannot be analyzed as either comparative or resultative. The particles that pose a problem to both accounts are those with continuative meanings in Celce-Murcia & Larsen-Freeman's (1999: 432–433) classification of aspectual PVs (see 2.3.4.3).

### 2.4.2 Research questions

Several questions arise from the discussion of previous approaches to aspectual particles. These are to be understood in the context of theoretical discussions presented in Chapters 1 and 2.

I will first discuss how to tell apart individual semantic classes of PVs (Chapter 3). This issue is not trivial, as evidenced by Giddings' (2001) study which has shown that particles in literal PVs do not have the same aspectual properties as particles in aspectual PVs. I will show that semantic classification of PVs is not as straightforward as presented in the literature. In addition, I will also discuss how to distinguish PVs from free combinations. As shown in the present chapter, the classic syntactic tests fail in the face of semantic compositionality.

I use the approach proposed in Chapter 3 to gather a sample of aspectual PVs (Chapter 4) in order to see beyond the well-known data (and to include a wider range of aspectual particles). I use the sample to provide further support for the claim, raised in 2.4.1, that aspectual particles are of two types. Namely, I examine with what kind of verb roots the two types of particles tend to combine and what kind of PVs they form. The PVs from the sample are also used in Chapter 5.

The basic questions to be addressed in this dissertation are: Are particles telicity markers, as argued by e.g. Brinton (1985) and Giddings (2001), or not, as argued by

Cappelle (2005)? Do particles mark punctuality or durativity (or neither)? To address these questions, I test the situation aspect of PVs and corresponding verb roots in Chapter 5, similarly to Giddings' (2001) study. In contrast to her study, however, I analyze a wider range of particles, including also continuative particles (*about, along, around, on*), problematic for other accounts. The starting point of this study, grounded in the monotonic compositional theory of aspect, is that if a predicate with a PV has a different situation aspect value than its corresponding minimal pair predicate without a particle (32), then the change in the situation aspect value is attributed to the particle.

(32) (a) I ate an apple. (atelic/telic)

(b) I ate up an apple. (telic)

I determine the situation aspect value of the minimal pairs using two of Dowty's tests in a survey designed to elicit acceptability judgments from native speakers.

Since in some cases particles do not mark telicity, as discussed above, what is an appropriate alternative account of aspectual particles? In other words, if particles do not (always) mark telicity, what do they do then? Can we account for their aspectual function in some other way? I address this issue in Chapter 6 and offer an alternative analysis of aspectual particles. As follows from the above review of previous approaches to aspectual PVs, a satisfactory analysis should, first, encompasses all aspectual particles, including continuative ones (*along, about, around, away* and *on*); second, explain why many but not all particles contribute telicity, as in *The earth is warming up*; and third, account for the ambiguity of cases like *brighten up*. (The last two in fact concern one and the same type of PVs.) The analysis of particles in the present work addresses all of these issues. Chapter 6 will introduce a comprehensive theoretical framework in which I analyze my own set of data. I will argue that the aspect of particles should be analyzed in terms of scalarity rather than telicity.

In Chapter 7 I will show that the approach I propose has a cross-linguistic validity by comparing English aspectual particles and Slovak aspectual prefixes. A cross-linguistic comparison will also reveal weaknesses of the theory which need to be addressed by future research.

Chapter 8 specifically addresses aspectually ambiguous PVs in which the particle does not mark telicity, e.g. *warm up, brighten up* (atelic/telic). As the particle fails to remove the aspectual ambiguity of the verb root, I look at the function of the particle in these PVs in greater detail.

## 2.5 Summary

This chapter discussed several semantic and syntactic characteristics of PVs as relevant for the research in this dissertation. PVs resemble free combinations of verb and adverb and/or verb and preposition. I have shown that the syntactic behaviour of PVs does not always distinguish them from free combinations. In addition, the syntactic properties of PVs depend on their semantic (non-)compositionality.

Particles, whose function roughly corresponds to prefixes in prefixal languages (e.g. Old English, Slavic languages), can combine compositionally or non-compositionally with verb roots to form literal, aspectual, and idiomatic PVs. Although the literature dealing with the semantic classification of PVs lists properties of these classes, it fails in effect to provide any reliable guidelines for identifying a PV as belonging to one of the classes. I have proposed that free combinations and all the semantic classes of PVs are ordered along a continuum of semantic compositionality.

I have also reviewed previous accounts of aspectual particles, pointed to their weaknesses, and sketched the issues that a theory of aspectual particles needs to address. Developing such a theory is the goal of this dissertation.

# 3 Phrasal verbs in semantic classes: How to tell them apart

The previous chapter has shown that separating PVs from free combinations of a verb and an adverb or a prepositional phrase, as well as identifying a particular PV as belonging to a semantic class, is not as straightforward as may seem at first sight. The goal of this chapter, therefore, is to discuss the criteria for PV-hood (3.1) and for membership of a PV in a particular semantic class (3.2). The last section briefly summarizes.

## 3.1 Separating phrasal verbs from free combinations

The problem of safely recognizing whether a given combination is a PV or not is well known. The reason is that PVs as a group show certain tendencies in their behaviour yet these are not hard-and-fast rules: they admit many exceptions. This has to do with the fact that the syntactic properties of PVs are largely determined by their semantic properties, as I argued in Chapter 2. In other words, PVs do not constitute a homogenous group. Thus there is some disagreement over the status of some combinations in the literature. For instance, *come across* is listed as a PV in Celce-Murcia & Larsen-Freeman (1999: 428) and as a prepositional verb (i.e. verb-preposition combination) in Quirk et al. (1985: 1156).

Darwin & Gray (1999) offer a reverse approach to identifying PVs, namely "[r]ather than excluding a verb + particle combination from the phrasal verb category until it is proven to belong, linguists should consider all verb + particle combinations to be potential phrasal verbs until they can be proven otherwise" (ibid.: 75–76). Darwin & Gray's tests therefore target distinctive characteristics of free combinations as opposed to the characteristics of PVs. Their approach involves literal, aspectual, as well as idiomatic PVs and allows one to identify a range of combinations with various semantic properties as PVs. For this reason, Darwin & Gray's approach is better suited for the purposes of this dissertation.

Darwin & Gray (ibid.) propose seven tests, yet they maintain that any one of them is enough and another test is needed only when the results of the first one are unclear. These tests are phonological, semantic, and/or syntactic. According to the phonological

tests, free combinations admit a complete reduction of the preposition or adverb, e.g. *She RAN to the park* (free combination) – *She RAN UP a huge bill* (PV), as well as a pause (/) insertion between the verb and the preposition or adverb, e.g. *I hid / behind the door* (free combination) – *I passed */ out in the doctor's office* (PV). According to the semantic-syntactic tests, only free combinations allow the insertion of a conjunction of two *–ly* adverbs, e.g. *They crept slowly and silently down the hall* (free combination) – *I came (*suddenly and unexpectedly) across an interesting article* (PV), the insertion of an additional verb, e.g. *He pulled and jerked on the lever, but it was stuck* (free combination) – **I really messed and fouled up on my test* (PV), and particle-like element repetition and fronting, e.g. *I looked up, up, up to the very highest point* (free combination) – **I looked up, up, up your name* (PV); *Up the tree he went* (free combination) – **Up he made a story* (PV).[1] The last test is the *where*-test, which I use in this dissertation. The test is based on the fact that a particle in a PV cannot answer a *where* question (1–2, Darwin & Gray's examples).

(1) He ran up the alley.
Where?
Up the alley. (a free combination)

(2) He looked up the address.
Where did you look?
*Up the address. (a PV)

The *where*-test works on a syntactic and a semantic principle. Syntactically, a particle cannot occur in isolation from the verb, even in the case of ellipsis, unlike adverbs and prepositional phrases (PPs). It has to be noted that the *where*-test does not merely separate literal combinations (meaning both free combinations and literal PVs) from idiomatic PVs, but works as a true test of PV-hood. To set apart free combinations and literal PVs is especially tricky, since the latter border on the former due to their spatial meaning (see Figure 6 in Chapter 2). Consider the following examples, which contrast the behaviour of free combinations with PPs (3a) and adverbs (3b) on the one

[1] Notice, however, that the particles of aspectual PVs can sometimes be repeated and/or fronted, e.g. *They walked on, on, on, always towards the sea; On he chattered, hoping to be heard.*

hand, and literal PVs (4a, b) on the other. As (3–4) show, the *where*-test distinguishes PVs from free combinations of both types – verb and adverb as well as verb and PP combinations.

(3) (a) She put the new shoes on her feet.
Where did she put the new shoes?
On her feet.
(free combination of *put* and a PP)

(b) I'm sitting down here.
Where are you sitting?
Down here.
(free combination of *sit* and an adverb)

(4) (a) She put the new shoes on./She put on the new shoes.
Where did she put the new shoes?
*On./*On the new shoes.
(*put on* is a PV)

(b) I'm sitting down now. 'I'm taking a seat now.'
Where are you sitting?
*Down.
(*sit down* is a PV)

The difference between a particle (4a) and a preposition (3a) is that the latter has to be followed by a complement, which forms a PP with the preposition, e.g. *on + her feet*. In contrast, a particle does not allow such a complementation.[2] If it is followed by a noun phrase (NP), e.g. *put on the new shoes*, the NP functions as a direct object (DO) of the PV, not as a complement of the particle.[3]

[2] Some analyses (e.g. den Dikken 1995) argue for the contrary, namely that the direct object is a complement of the particle of the PV. According to Svenonius & Ramchand (2002: 103), such an account "runs counter to the fact that complements of P are uniformly interpreted as Ground elements" (see also below).

[3] The close relationship between particles and prepositions and their differences in selecting a complement has lead to analyses of particles as intransitive prepositions, e.g. Emonds (1972), Jackendoff (1973), Jaworska (1989). For a critical review of such analyses, see e.g. Cappelle (2004a).

Free combinations and literal PVs differ not only in syntax but also in semantics – in particular, Talmy's (1975, 1985) semantics of motion. Talmy distinguishes between the Figure and the Ground; the Figure is an object located or moving with respect to a reference point, which is the Ground. As Svenonius (2003: 434) argues, the complement of a preposition is a Ground, whereas the specifier of a particle is a Figure. This is exactly the case in the above examples. *Her feet* in (3a) is a Ground; it remains unexpressed in (4a), which only contains *the new shoes*, a Figure.

Svenonius' (ibid.) analysis along the lines of motion semantics can be further extended to the difference between PVs and free verb-adverb combinations. Consider the sentence in (5), taken from Levin & Rappaport Hovav (1995: 83).

(5) The mouse is running under the table.

The sentence is ambiguous between a locational and a directional reading. In the locational interpretation, the event of the mouse running takes place under the table. In the directional reading, the mouse is running from somewhere in such a direction that it should end up under the table. While *the mouse* is a Figure and *the table* is a Ground in both interpretations, the difference is that *under* represents the goal of motion in the directional reading only. In other words, *under the table* can denote the location of the event or a direction or goal of the Path along which the Figure moves. Now this same distinction is found in *sit down*. In a free verb-adverb combination (3b), *down* specifies the location of the event, as for instance in the context of occupying a particular seat in a theatre. In contrast, *down* in a PV (4b) specifies the direction/goal of the motion related with occupying a seated position.[4] The *where*-test is sensitive to whether a particle, adverb, or prepositional phrase expresses location or direction.

I conclude that the *where*-test, which is based on a syntactic and a semantic principle, can distinguish PVs from free combinations.

[4] Notice that *sit down* is used when a person changes a posture from standing to sitting, in the downwards direction, and *sit up* when the change of posture is in the upwards direction, from lying to sitting.

## 3.2 Identification of semantic classes

The literature which classifies PVs into literal, aspectual, and idiomatic ones (see Chapter 2) gives properties of the individual classes but does not, in effect, provide any reliable guidelines to identifying a PV as belonging to one of the classes. For example, Celce-Murcia & Larsen-Freeman (1999: 432) characterize aspectual PVs as the class where "particles contribute consistent aspectual meaning". However, this criterion is useless when trying to determine whether a particular PV is aspectual, as the reasoning would be circular. Rather, independent criteria are needed to characterize aspectual and other PVs. Therefore, the present section is devoted to an in-depth discussion of the criteria for assigning PVs a semantic class. It is not my intention to propose a new classification or to re-define the existing classes. Instead I discuss which criteria are relevant for classification of PVs and how they apply to individual cases. I will argue that syntactic criteria are indeterminate and propose to adhere to semantic criteria only.

I start with the discussion of the criteria given by Jackendoff (2002), who characterizes semantic classes of PVs on the basis of both syntactic (particle fronting, particle omission, argument structure) and semantic (compositionality, aspect modification) properties, see Table 4.[5] (See also 2.3.4.6.)

Some of the properties given in Table 4 are interdependent, as follows from Kavka's (2003: 33) characterization of compositionality as "constituted by both variability and literalness", variability being of two types, lexical and syntactic. However, these notions, in Kavka's view, come in degrees rather than extremes. What follows from Kavka's characterization is that non-compositional PVs (the idiomatic class) are less literal and less lexically and syntactically variable than compositional ones (the literal and the aspectual class). This is exactly what we find: recall that in Chapter 2 we saw that the acceptability of adverbial insertion (lexical variability) and particle fronting (syntactic variability), as well as the optionality of particle placement (syntactic variability) increase with the literalness of the particle and/or the compositionality of the PV. However, since there are also other factors influencing the variability of PVs, the non-variability of idiomatic PVs is a tendency rather than a rule, e.g. *mess the whole thing up, Shut the hell up!*

[5] As can be seen from the table, Jackendoff (2002) gives characteristics of the individual semantic classes rather than definite criteria; for instance, he does not discuss whether aspectual particles can be fronted or not.

| | literal PVs | aspectual PVs | idiomatic PVs |
|---|---|---|---|
| **syntactic behaviour** | allow particle fronting<br>*Up marches the sergeant.*<br>the particle functions as a verb's argument | allow particle omission<br>*close (up) the suitcase*<br>the particle functions as an aspectual modifier | do not allow particle fronting<br>**Up blew the building.*<br> |
| **semantic compositionality** | fully compositional<br>*take up* 'take upwards' | fully compositional; some are partly non-compositional<br>*drink up* 'drink completely'; *cook the food over* 're-cook the food' | fully or partly non-compositional<br>*look up* 'search' |

**Table 4. The characteristics of the semantic classification of PVs according to Jackendoff (2002).**

Particle omission is another syntactic criterion that is not watertight. Since some PVs license a DO that is unselected by the verb root (6), the particle in an aspectual PV often cannot be simply 'dropped'.

(6) (a) The patient slept off her headache.
(b) *The patient slept her headache.

Vice versa, an aspectual particle cannot be freely added to all predicates, as it can impose selectional restrictions on the verb root (7) and/or alter the verb's argument structure (6, 8).

(7) (a) The old cat killed the rats off.
(b) ?The old cat killed a rat off.

(8) (a) The old cat ate.

(b) The old cat ate a rat.

(c) The old cat ate rats.

(d) *The old cat ate up.

(e) The old cat ate up a rat.

(f) *The old cat ate up rats.

As (7) illustrates, *kill off* implies 'in masses, to extinction' meaning and is therefore odd with a singular NP (acceptable in plot narration contexts, though). (8) shows that while the verb root *eat* can be intransitive or select various kinds of DO, *eat up* obligatorily requires a DO that is quantized. (For further discussion of the effects of particles demonstrated in (6 – 8) and their consequences see Chapter 6.) These examples show that particles cannot always be omitted from aspectual PVs or added into them.

Similarly, as pointed out in 2.3.4.5, the criterion of particle fronting fails to delimit semantic classes of PVs, as aspectual PVs show a variable behaviour in this respect, e.g. *On he chattered, hoping to be heard* but **Up he drank his coffee.* I conclude that syntactic criteria for distinguishing semantic classes are mere tendencies and I rely on semantic criteria solely.

Accordingly, in my view, semantic compositionality and literalness are key criteria when classifying PVs. What I consider to be a literal meaning in a particle is a spatial, i.e. directional, meaning (cf. Celce-Murcia & Larsen-Freeman 1999: 432, Jackendoff 2002: 74, and Giddings 2001: 167), which is actually the original meaning of particles from a diachronic perspective (see 2.2).

Literal PVs contain particles with such a directional meaning, combined with motion verb roots. This observation is also supported by e.g. Celce-Murcia & Larsen-Freeman's (1999: 432) and Jackendoff's (2002: 74–75) examples of literal PVs, whose verb roots are motion verbs. Or, as Giddings (2001: 166) puts it, "the particle carries a spatial meaning, which would fit well with the motion encoded in these verbs." As verbs of motion I consider verbs that involve some concrete, physical change of

location, position, or posture (e.g. *come, run, walk, bend*), following Sablayrolles (1995), including causative verbs of motion (e.g. *put, get, send*).[6]

However, I regard some PVs as literal even though their verb roots are not motion verbs *per se*: these are instances in which the literal meaning of the verb root is associated with the motion expressed in the whole PV, e.g. *wheeze* is a verb of sound emission associated with the upward motion of the elevator in (9a) and *wash* is associated with the medium (water) that causes the motion of *things* in (9b).

(9) (a) The elevator wheezed up.
(b) And there's [*sic*] all those things got washed along in the river, they got stuck on the fence. (BNC KB8 2168)[7]

The verb root metaphorically stands for a motion verb, specifying a manner of motion denoted in the PV: 'The elevator ascended wheezing' (9a) and 'All those things were removed by a liquid' (9b).

Characterizing literal PVs as composed of a verb root expressing motion and a spatial particle agrees with the claim raised in the previous section, namely that the particle in literal PVs specifies the direction/goal of the motion of the Figure. At this point, an interesting observation shows up. Consider the examples in (10), taken from Lindner (1983: 63), who notices that their verb roots without the particle or a PP are normally used with different DOs – "one squeezes tubes, not toothpaste, and washes sinks, not dirt", as she puts it.

(10) (a) He squeezed some toothpaste out.
(b) He washed the dirt out.

[6] Although one could speculate that *lock the door* or *drink coffee* also involve some kind of motion, I do not consider these as motion verbs since they do not directly refer to a change of location, position, or posture of the denotee of a subject or direct object.

[7] Data cited herein have been extracted from the British National Corpus (BNC), distributed by Oxford University Computing Services on behalf of the BNC Consortium. All rights in the texts cited are reserved. The data drawn from the BNC are identified with a code starting with "BNC". The rest of the code is a text identifier and a sentence number.

The PVs as used in (10) are literal: the particle specifies the direction/goal of the Figure (*some toothpaste, the dirt*) in respect to an unexpressed Ground. This Ground can be expressed with a PP (11).

(11) (a) He squeezed some toothpaste out of the tube. /He squeezed some toothpaste onto his brush.
(b) He washed the dirt out of the shirt.

Without a particle or a PP, the verb loses its motion sense and sounds odd with the same DO (12–13).

(12) (a) ?He squeezed some toothpaste.
(b) ?He washed the dirt.

(13) (a) He squeezed the toothpaste tube.
(b) He washed the shirt.

Unlike in (11), *the (toothpaste) tube* and *the shirt* do not serve to denote the Ground in (13). With the associated loss of the motion meaning, it is not correct to say that the DOs in (13) are Figures, either. Instead, I will use a broader term to cover their semantic function, namely 'Theme'. Now the verbs in (13) can also become PVs, as shown in (14).

(14) (a) He squeezed up the toothpaste tube.
(b) He washed out the shirt.

While the particles in (10) specify the path of the Figure, the particles in (14) predicate something of a Theme. I postpone the discussion of what exactly the something is until Chapter 6. For now, suffice it to say that I consider the PVs in (14) to be aspectual, based on Jackendoff's (2002) characteristics: the particles in (14) do not function as verb's arguments but as optional modifiers which are omissible (13).

I will now discuss aspectual PVs and contrast them with the other classes. While the meaning of the particle in literal PVs is literal, i.e. directional – the toothpaste/dirt is *out* with respect to a Ground as a consequence of squeezing/washing in (10), in aspectual PVs this is not so – the tube is not *up* and the shirt is not *out* as a result of squeezing or washing in (14). Even with motion verb roots, particles can have a non-directional meaning and thus form PVs which are aspectual (15b) rather than literal (15a). Therefore, the same form can receive different interpretations, depending on context.

(15) (a) Five green dragons making such a roar. One *danced away* and then there were four. ('move away by dancing', literal PV)
(b) We *danced away* till morning. ('dance heedlessly', aspectual PV)

Notice that although the meaning of the particle in these examples of aspectual PVs is non-literal, that of the verb root is literal, i.e. the verb root retains the meaning it has in isolation. In other words, the verb root expresses a kind of action denoted also in the PV. For instance, *squeezing up* in (14a) is a kind of squeezing, *washing out* in (14b) is a kind of washing, and *dancing away* in (15b) is a kind of dancing. This is not the case with (16), where *walk away* and *dance away* are used as metaphorical expressions for 'stop being involved' and accordingly considered here as idiomatic PVs.

(16) I was bored. So I sold my practice to my partners and *walked away*. Actually, I think I *danced away*!
(Example taken from http://www.whatsidealforyou.com/about/more-about-me/, accessed April 28, 2012)

This is not to say that aspectual PVs contain only verb roots used literally. For instance, (17a) and (17b) contain verb roots which are used metaphorically – one cannot literally hold a job or pass a tradition because they are immaterial.

(17) (a) Our communion service is part of the rich tradition which has been passed down to us from Jesus Christ. (BNC KB0 845)
(b) And how can you have, hold a a [*sic*] job down (BNC KB1 1093)

However, this metaphorical extension arises from the verb root alone, not from its combination with the particle. In other words, the PVs in (17) are compositional. As the particle does not specify the goal/direction of the Figure (e.g. the tradition is not *down* as a result of its passing in 17a), I classify these PVs as aspectual. As aspectual PVs I consider compositionally derived combinations whose verb root expresses a kind of action denoted also in the PV and whose particle is not directional. The verb root may be a motion or a non-motion verb and its meaning may also be metaphorically extended. To avoid circularity (see the beginning of this section), I do not include any aspectual characteristics at this point. (Chapter 6, however, is reserved for the discussion of aspect in aspectual PVs.)

The last class that remains to be discussed is the class of idiomatic PVs. Idiomatic PVs are at least partly non-compositional: the verb root does not specify a kind of action denoted in the PV (18). Unlike in literal PVs whose verb roots are not motion verbs themselves (e.g. *wheeze up* and *wash along* in (9)), the literal meaning of the verb roots in (18), namely 'sound loudly' in (18a) and 'commit sodomy' in (18b), is in no manner associated with the motion expressed in the PVs.

(18) (a) Blast off! (BNC KB3 285)
(b) Bugger off. (BNC KB1 2292)

Verb roots in idiomatic PVs are used non-literally, e.g. *break in* 'to enter by force' is not a kind of *breaking* something, although the former may involve the latter (such as when burglars break in by breaking a window). Notice also that *break in* has other meanings such as in *break in a computer system (in order to steal information)*, *break in a conversation* 'interrupt', *break in as a reporter* 'start a career' or *break in a horse* 'train', all of which seem to share a common feature of entering and/or subduing (rather than literal breaking), a feature irrelevant for the literal meaning of the verb *break* 'separate into parts with violence'. Similarly, *throw away* 'get rid of' need not be

realized by actual throwing; and departing is a semantic feature irrelevant in idiomatic meanings of *go out* 'socialize, seek entertainment' and 'date' (see 2.3.4.3).

Some non-literal verb roots may seem literal for the resemblance between idiomatic PVs and expressions with the same meaning involving the same verb root, e.g. *make out – make love – make it* 'have sex', *Shut up! – Shut your mouth!* 'be silent'. Nonetheless, it is the particle or the NP that renders the meaning of the PV or the expression narrow and specific: *make* and *shut* acquire these particular meanings only in certain expressions.[8] This contrasts with literal PVs whose verb root is used as a motion verb – the verb root can be used productively with various directional prepositions to express the same motion meaning, e.g. *wash down, wash out, wash away* 'move with a liquid', *(the elevator) wheeze up, wheeze down* 'move with a wheezing sound'.

In some idiomatic PVs, the particle retains a directional meaning (as in (18), and also e.g. *Pop off! The burglars broke in*), in others it does not (e.g. *Shut up!*, *break in a horse*). However, a connection to the literal meanings of the verb root and the particle can still be drawn, as shown in Cognitive Linguistics approaches (e.g. Hampe 2005, Lindner 1983, Morgan 1997). Therefore, many idiomatic PVs are felt to be strongly metaphorical. Following Gibbs, Nayak & Cutting's (1989) study of decomposability of idiomatic expressions, I assume that the class of idiomatic PVs involves PVs with various degrees of non-compositionality. Consider the following examples.

(19) (a) The singer threw her opportunity away tonight.
(b) Eventually my husband came out with the truth!

Although *throw* in *throw an opportunity away* (19a) does not express a literal, physical translocation, the combination bears some relation to the literal meaning of *throw away*. Consequently, the PV is not felt entirely non-compositional. It can be understood on the basis of a simple metaphor that treats an *opportunity* like a physical object. In contrast, *come out* (19b) involves a more complex metaphor, involving appearance from a hidden to an accessible sphere (cf. Lindner 1983). Note, however, that not all idiomatic PVs are

[8] *Shut up* can also be used as an aspectual PV in *Shut your mouth up!*

based on a metaphor. For instance, the PVs in (18) are cases of analogy, similar to e.g. *fuck off, pop off*.

For an overview of the criteria I use to classify PVs into semantic classes, see Table 5. (As discussed previously, I do not apply any syntactic criteria.)

| | **literal PVs** | **aspectual PVs** | **idiomatic PVs** |
|---|---|---|---|
| **semantic compositionality** | the meaning of the verb root expresses or specifies a kind of action denoted in the PV<br>AND<br>compositional (may involve metaphorically extended verb root) | the meaning of the verb root expresses a kind of action denoted in the PV<br>AND<br>compositional (may involve metaphorically extended verb root) | the meaning of the verb root does not expresses a kind of action denoted in the PV<br>AND/OR<br>non-compositional (metaphorical extension arises from the PV not the verb root) |
| **directionality of the particle** | directional: specifies the path of the Figure | non-directional | directional or non-directional |
| **examples** | *run out (of a room)*<br>*walk away (to school)*<br>*squeeze (some toothpaste)out*<br>*wheeze up* | *come up to someone*<br>*dance away (all night)*<br>*wash (the shirt) out*<br>*eat up*<br>*read out* | *throw (an opportunity) away*<br>*walk away from troubles*<br>*pop off!*<br>*bugger off!*<br>*run out (of milk)*<br>*put off* 'postpone'<br>*break in (a horse)*<br>*shut up!*<br>*tune out* 'ignore' |

**Table 5. Semantic criteria for classifying PVs.**

In Chapter 2 I suggested that the semantic classes of PVs lie along a continuum (see Figure 6). Therefore, borderline cases are expected and encountered. On the borderline between literal and aspectual PVs are PVs whose particle can be interpreted as either directional or non-directional, e.g. *walk around* 'walk around a room' vs. 'walk aimlessly', *send out* 'send (someone) out of a room' vs. 'send out (invitations)', *try on*

'try shoes on feet' vs. 'try a dress (on body?)'. Similarly, some aspectual PVs border on idiomatic ones, e.g. *sleep a headache off* 'cause the headache to disappear by sleeping', *walk one's feet off* 'tire by walking', *cry one's heart out* 'cry a lot'. The reason is that a particle is never totally void of either a directional or an aspectual meaning. First, particles' directional meanings underlie their aspectual and idiomatic meanings. As hinted above, analyses within the framework of Cognitive Linguistics (e.g. Hampe 2005, Lindner 1983, Morgan 1997) draw a parallel between directional and more abstract meanings of particles. For instance, the directional meaning of *out* in e.g. *cry out* 'scream', *fill out* 'complete a form', *pick out* 'choose', *figure out* 'decipher' becomes extended on the basis of a metaphor that treat sources, boundaries, sets, inaccessibility, etc. as containers. Chapter 8 further discusses, albeit from a different point of view, how the spatial meaning of particles can motivate a particular aspectual meaning. Second, the particle in literal and idiomatic PVs can also contribute an aspectual meaning. For example, *walk in* 'enter', *sit down* 'take a seat' are punctual and telic, unlike their durative and atelic verb roots. However, the verb roots alone refer to different events in the extra-linguistic reality than the PVs do – the particle does not merely modify aspect but defines the event.

I conclude that there are no clear-cut boundaries between individual semantic classes and that semantic criteria are more useful than syntactic ones in determining PVs' membership in a semantic class.

## 3.3 Summary

This chapter discussed two types of criteria related to PVs. First, I discussed the distinction between PVs on one hand and free combinations of verbs and adverbs or prepositional phrases on the other. I have shown that the distinction has a syntactic and semantic base. Second, I discussed which criteria are relevant for classifying PVs into literal, aspectual and idiomatic. Contrary to Jackendoff (2002) I rejected syntactic criteria because they are mere tendencies and proposed to use solely semantic criteria. In particular, I discussed the role of compositionality, metaphorical extension of meaning, and directionality of the particle. I also argued that literal and/or aspectual meanings of particles may be retained in more abstract meanings (in aspectual and idiomatic PVs).

# 4 All aspectual particles are not equal

The goal of this chapter is twofold. First, in order to see beyond the well-known data frequently discussed in the literature, this chapter aims to present a larger sample of aspectual PVs than what is usually provided (section 4.1). To identify aspectual PVs, I draw on the discussion in the previous chapter. The second aim is to provide further support for the claim that aspectual PVs are of two kinds (section 4.2), based on Brinton's (1985) observation that some aspectual particles (e.g. *on, along, away*) behave differently from others (e.g. *up, down, out*). Section 4.3 summarizes.

## 4.1 A sample of aspectual phrasal verbs

To study properties of aspectual PVs, I first compiled a representative sample of them. Rather than restricting myself to the most typical examples of aspectual PVs, e.g. *drink up, eat up, dry out*, I set out to work with corpus data. At the same time, I wanted the sample to contain particles of both types of aspectual behaviour: continuation or iteration marking particles, e.g. in *drive on, work away (at a problem)*, and telicity marking particles, e.g. in *dry out, clean up* (Brinton 1985). For each particle to be represented equally in the final sample, I set a fixed number of PVs for each particle. The size of the sample was 100 PVs (i.e. 10 PVs for each of 10 particles, see below). To obtain such a sample, I extracted combinations of verb and particle from a computerized corpus of texts, checked whether the combinations were really PVs rather than free combinations, and selected aspectual PVs only.

### 4.1.1 The source for the sample

Several options present themselves when compiling a sample of PVs. Such a sample can be obtained, first, from a dictionary of PVs, second, from a frequency list of PVs, or third, from a corpus of texts. PVs cannot be directly searched as complex verbs in a corpus, only as combinations of a verb and a particle, due to the difficulties of computerized tracking of multi-word expressions (e.g. Sag et al. 2002). Therefore, the first two options may seem as a better solution. These, however, have other disadvantages.

First, a dictionary or a frequency list potentially contains free combinations besides PVs (see Chapters 2 and 3). Dictionaries (e.g. Vodička 2007) adopt a common practice of treating verb-particle combinations and verb-preposition combinations jointly, not unjustifiably: The academic debate over PV-hood is irrelevant to learners of English, the target readership of such dictionaries, who need to master both PVs and other multi-word verbs. Similarly, frequency lists do not necessarily distinguish between PVs and other types of combinations. For instance, Gardner & Davies (2007) present a list of the 100 most frequent PVs based on a corpus analysis but the sole criteria they rely on to determine the PV-hood of a combination are corpus tags (see below) and the distance between the verb root and the particle, namely the verb and the particle may be separated by two words at most.

Another problem concerns the polysemy and/or homonymy of PVs: One and the same form of a PV may have many different, unrelated meanings. For instance, the electronic lexical database WordNet lists eight senses for *bring up*. A frequency list treats jointly all of these meanings under the heading of *bring up* (cf. e.g. Gardner & Davies 2007) since it is based on the frequency of forms not meanings. Therefore, a frequency list tells us about the frequency of the form of *bring up* but nothing about the frequency of any one of its meanings. In consequence, PVs with several meanings, such as *bring up*, are likely to show a higher frequency than PVs with fewer meanings or a single meaning only, e.g. *check in* 'to register (at a hotel, airport, etc.)'. This does not mean, however, that a particular meaning of a form with many meanings is necessarily more frequent than a particular meaning of a form with fewer meanings.

An advantage of corpus-compiled data is that PVs can be studied in context: Namely, a corpus study is informative of the argument structure of PVs. As shown in Chapter 1, verbal arguments play a crucial role in the composition of situation aspect. Therefore, I decided to run a corpus study, which has enabled me to analyze the types of arguments with which aspectual PVs combine.

Since PVs frequently occur in conversations (Biber 1999: 408), I used a spoken conversation corpus because it represents the typical usage of PVs.[1] The spoken conversation corpus I used is a subcorpus of the British National Corpus (BNC). The BNC "is […] accepted as a general corpus even though it is a collection of texts only of

[1] In contrast, PVs used in academic writing often have narrow and field-specific meanings (Cubillo 2002).

the British variety" (Valera 2003: 299–300). The fact that the sample originates in the British variety of English needs to be taken into account, though, as there may be vocabulary differences with other varieties. For instance, when the same meaning can be expressed with the same verb root using different particles, some of the particles may be restricted to a certain variety of English, e.g. *rain off* [UK] – *rain out* [US] 'cancel or postpone (an event) because of rain', *fork out* [gen] – *fork over/up* [US] 'pay unwillingly'.[2] In addition, different varieties can express the same meaning by PVs with different verb roots, e.g. *stand in* [gen] – *fill in* [US] 'be a substitute'. On the other hand, there are some verb and particle combinations whose meaning is specific for a particular variety of English, e.g. *knock up* 'make a woman pregnant' [gen] – *knock up* 'wake someone up by knocking on their door' [UK], *do over* 'attack violently' [UK] – *do over* 're-do' [US].

### 4.1.2 The extraction of phrasal verbs from the corpus

Every word in the BNC is marked up for its word-class membership, which is known as *part-of-speech tagging*. This tagging allows one to search for a word as belonging to a particular word class. A search in the corpus is called a *query* and the results to a query are called *hits* or *solutions*. To perform searches, I used the Xaira software (http://projects.oucs.ox.ac.uk/xaira/), which is a user-interface XML (i.e. Extensible Markup Language) search engine for language corpora.

Since the automatic tagger does not recognize multi-word expressions as such, PVs can be searched in the corpus only as combinations of a verb and a particle (as done in e.g. Gardner & Davies 2007). Another option, less demanding on the computer, is to search for particles only, since each sentence normally contains a verb. Therefore, in the present study, only particles were searched for, tagged either as *adverb particle* (AVP) or as *probably adverb particle but maybe preposition* (AVP-PRP). The latter ambiguous tag appears in the cases where the automatic tagger was not able to reliably assign a word to a class. Such ambiguous cases present 10.40% of all items that may be particles as found in the corpus and the probability that the item is a particle rather than

[2] All the examples in this paragraph are taken from Cambridge Phrasal Verbs Dictionary online. Regional specification is supplied as appearing in the dictionary. PVs for which the dictionary does not specify regional restrictions are labeled [gen] to indicate their general use across the varieties of English.

a preposition is 77.27%; the estimated error rate for AVP-tagged particles is 1.58% (Leech & Smith 2000).[3] Moreover, the AVP tag in the BNC may also refer to a place adjunct, as in *there were a lot of horses around* (Leech & Smith 2000). In consequence, not all combinations found by the software were true PVs and the solutions to the query had to be manually checked for their PV-hood (as described in Chapter 3).

As my study aimed at a semantic analysis of particles, the required sample had to be of a reasonable size. The whole spoken conversation subcorpus of the BNC, however, contains 8 100 PVs in estimate. I base this estimate on the fact that conversation presents circa 45% of the spoken 10% part of the 100-million-word BNC (Leech, Garside & Bryant 1994), i.e. approximately 4.5 million words, and on the findings of Biber et al. (1999: 409) that there are roughly 1 800 occurrences of PVs per one million words in conversation. The search had to be controlled also for other reasons, namely that the sample had to contain PVs with a range of particles. Yet a search for all AVP and AVP-PRP tagged words would have resulted in an uneven distribution of individual particles in the solutions to the query. In other words, the more frequently occurring particles would have had a higher incidence and I would not have learnt about the properties of the less frequent particles.

For these reasons the search was narrowed down to a list of particles and the size of the sample was limited to ten types of aspectual PVs for each particle. Fraser (1976: 5) lists 16 particles that combine with verb roots to form PVs but his list differs from those of others (cf. e.g. Bolinger 1971: 17–22). Combining and modifying different lists, Darwin and Gray (1999, 2000) arrive at a list of 20 particles, out of which they exclude *to* on the basis of an experiential observation that it does not yield PVs.[4] I also excluded *into* since it requires that it be followed by a complementation[5] and is therefore a preposition, not a particle (see Chapter 3). On the other hand, I included *round* as a separate particle in the British variety of English (cf. Bolinger 1971: 18 f.11)

[3] It was supposed that some particles are mis-tagged as adverbs (AV0) or prepositions (PRP or *probably preposition but maybe adverb particle* PRP-AVP), yet these were not included in the search since chances that a particle would be found among them were very low: the estimated probability that a particle is mistagged as an adverb is 0.01% and as a preposition 0.1%, while the probability that a word tagged as PRP-AVP is a preposition is 92.77% (Leech & Smith 2000).

[4] Intransitive *come to* 'become conscious again' and *fall to* 'begin doing energetically' are rare exceptions. They may have originated as elliptical constructions, as Jack Hoeksema (pers. comm.) suggests, cf. *come to senses.*

[5] A search of *into* in the Cambridge Phrasal Verbs Dictionary online shows that *into* is followed by *something* or *somebody* in all its combinations.

and *apart*. A particle had to meet the following additional criteria in order to be included in the present study:

1. The particle had to be tagged as AVP or AVP-PRP in the BNC. This criterion eliminated particles *apart, aside, away,* and *forth*.
2. The particle had to combine with enough verb roots to form at least 10 types of aspectual PVs. This criterion eliminated particles *across* (no hits), *by* (16 hits including only 5 types of PVs), and *under* (29 hits, containing not a single aspectual PV).
3. The particle had to have a clear aspectual meaning. This criterion eliminated particles *in* and *back*, which can be said to have a semi-aspectual meaning perhaps (cf. Cappelle 2005: 433–436 for a discussion of *back*), e.g. *fill in a form, kiss a woman back*.
4. The particle had to be found across varieties of English.[6] This criterion eliminated *round*, which is a British-only counterpart of the particle *around*.

The study therefore included the following ten particles:

(1) about, along, around, down, off, on, out, over, up, through

The list in (1) is roughly consistent with the particles treated by Celce-Murcia & Larsen-Freeman (1999: 432–433) as aspectual. Although Celce-Murcia & Larsen-Freeman do not include *about* in their aspectual PVs, I retain it on my list since it has an aspectual meaning similar to that of *around* (*play around, play about* 'play and frolic'). Another difference is that particle *away* is not listed in (1), since it was, unfortunately, excluded by the tagging in the BNC (criterion 2 above). However, the discussion in Chapter 6 includes *away*, relying on the examples as found in the literature and/or World Wide Web.

The forms in (1) tagged as AVP or AVP-PRP in the spoken conversation subcorpus of the BNC were searched for. All the hits were downloaded, manually checked for their PV-hood and assigned a semantic class on the basis of the criteria

[6] While this would not have posed a problem for the corpus study reported on in this chapter, it could have become a source of difficulty for the study in the following chapter, in which native speakers of any variety of English were asked for acceptability judgments.

discussed in Chapter 3. Specifically, thus, all the hits to the query in the BNC subcorpus were first probed by the *where*-test and the meaning of the sentence was analyzed in terms of spatial semantics. Instances in which the particle could not be used to answer the *where* question were considered PVs and included in further analysis (2). Instances where the particle-like form could be used as the answer to the *where* question and denoted location of the event were assigned the status of free combinations and eliminated from the study (3). Furthermore, I eliminated all other instances of free combinations which involved a particle-like form (4).

(2) (a) Oh Benjy lie *down*, what matter with ya [*sic*]. (BNC KB1 1586)
(b) Erm one at the moment, but I can pull *out* the radio without any problem. (BNC KB0 2735)

(3) (a) Yes I can see her, *down* there. (BNC KB0 2518)
(b) tomorrow so I'll be *out* all day (BNC KB0 208)

(4) (a) He's upside *down*. (BNC KB1 1999)
(b) And nine point nine times *out* of ten they are wrong! (BNC KB0 797)

Out of the combinations that were found to be PVs, I further eliminated literal and idiomatic PVs. To determine the meaning of a PV, I consulted its verbal context in the corpus and definitions given in dictionaries. To determine whether a PV is compositional or not, I performed searches in dictionaries and the World Wide Web in order to find out if the verb root is used in the same meaning without a particle. In the case of polysemous PVs, the context in the corpus determined the intended meaning and the semantic class of the PV. I performed the analysis until I compiled ten types (not tokens) of aspectual PVs for each of the particles in (1). The resulting list contains 100 aspectual PVs, see Table 6. Appendix I contains these PVs in sentences as found in the BNC.

| PARTICLE | VERB ROOTS |
|---|---|
| ABOUT | *carry, fly, follow, lark, play, roam, swap, trundle, walk, wander* |
| ALONG | *bring, carry, come, drive, trot, fiddle, flow, go, take , walk* |
| AROUND | *carry, get, look, shop, push, rush, spread, swim, walk, wander* |
| ON | *chat, come, go, keep, move, pass, sally, struggle, try, walk* |
| DOWN | *close, come, hold, lay, lock, pass, settle, slow, trim, write* |
| OFF | *chop, copy, cut, finish, kill, pay, peel, sand, send, start* |
| OUT | *clean, clear, let, point, read, sell, send, set, start, try* |
| OVER | *change, check, come, cover, go, hand, join, send, swap, wipe* |
| THROUGH | *air, come, cut, get, hoover, leak, patch, pour* 'flow', *shoot* 'sprout', *take* |
| UP | *add, bring, come, end, grow, join, link, pack, save, use* |

**Table 6. The list of aspectual PVs from the sample from the BNC.**

Particles are ordered in such a way that the table be easily compared to the tables in the following section.

## 4.2 Aspectual particles are of two kinds

This section describes the obtained sample of aspectual PVs. I assume that there are two types of aspectual particles. This section provides further support for the distinction by showing that the two types of particles, as represented by the PVs in my list (see Table 6), differ with respect to transitivity and manner/result complementarity.

### 4.2.1 Preliminaries

Following Brinton (1985), Jackendoff (2002) and McIntyre (2001, 2004), I assume that aspectual particles are of two kinds. To briefly recapitulate the discussion of this point in 2.4.1: The first type is formed by particles whose meaning is continuative (in Celce-Murcia & Larsen-Freeman's 1999 terms), approximating 'keep on (V-ing)' (in Jackendoff's 2002 terms). They prohibit PVs from licensing direct objects (DOs). The other type is represented by particles with such meanings as inception, repetition, completion, and so on. They do not block DOs.

Brinton (1985) includes *along*, *away* and *on* in the first type. To these three particles I now add *about* and *around*, whose meaning indicates continuation of activity without a purpose, e.g. *mess about, play around*, and whose PVs cannot license a DO, *play (*a silly game) around/about* (example taken from McIntyre 2001: 131). In the other type I include the remaining particles from the list in (1) – *down, off, out, over, up,*

and *through*. Unlike Celce-Murcia & Larsen-Freeman (1999: 432), I do not consider aspectual *through*, e.g. in *read a book through*, as continuative, since its meaning is not 'keep on V-ing' but 'from beginning to end' (cf. Celce-Murcia & Larsen-Freeman ibid., Jackendoff 2002) and since its PVs license DOs.

*Away* seems to be of two kinds. The first one is continuative, not allowing a DO, e.g. *Bill read away* 'Bill kept on reading', *Bill read (*newspapers) away* (example from Jackendoff ibid.). The other kind appears in constructions with DOs unselected by the verb root, e.g. *Bill slept the afternoon away* 'Bill wasted the afternoon heedlessly sleeping' (example from Jackendoff ibid., see also Jackendoff 1997), *sleep the headache away* 'cause the headache to disappear by sleeping'. Although the data in this chapter do not include this particle, I discuss the peculiarity of *away* in Chapter 6.

The distinction between the two types of particles has consequences for aspect: According to Brinton (1985), particles with non-continuative meanings mark telicity, while particles with continuative meanings do not. I leave the discussion of the difference in aspect marking between two types to subsequent chapters. Here, instead, I would like to show that the two types of particles, as represented by my sample introduced in 4.1, differ with respect to two features relevant for aspect – manner and result complementarity and transitivity.

### 4.2.2 Transitivity

As PVs with the two types of particles differ in their ability to license DOs, transitivity is of immediate relevance for the present discussion. Transitivity is also related to telicity, as some types of direct object (DO) alter the aspect of a predicate, e.g. *drink* (intransitive, atelic) – *drink a cup of coffee* (transitive with a quantized DO, telic) (see Chapter 1). Therefore, I examined the transitivity of the PVs as appearing in my sample (see Appendix I), classifying them as either transitively used (PVs appearing in the sample with a DO, e.g. *sand it off, brought up investigation*) or intransitively used (PVs appearing in the sample without a DO, e.g. *they're shooting through, we started out in convoy*). I only coded PVs with surface direct objects, including a relational pronoun in a post-modifier phrase (5), as transitive. PVs with an unaccusative subject (6a) or a passive transformation (6b, c) I coded as intransitive.

(5) There is no blueprint that one could *lay down*... (KB0 966) (transitive)

(6) (a) The Polyripple *peels off* though Zoe. (KB6 566) (intransitive)

(b) Erm oh well maybe yours can be *saved up* for another time? (KB0 1491) (intransitive)

(c) If I want it *spread around*. (KB7 12922) (intransitive)

The results are given in Table 7. (For a list of verbs in the categories see Table 10.)

| PARTICLE | INTRANSITIVE PVs | TRANSITIVE PVs |
|---|---|---|
| ABOUT | 7 | 3 |
| ALONG | 7 | 3 |
| AROUND | 9 | 1 |
| ON | 8 | 2 |
| **TOTAL I.** | **31** | **9** |
| DOWN | 5 | 5 |
| OFF | 2 | 8 |
| OUT | 2 | 8 |
| OVER | 6 | 4 |
| THROUGH | 7 | 3 |
| UP | 7 | 3 |
| **TOTAL II.** | **29** | **31** |

**Table 7. The number of intransitive and transitive PVs in the sample.**

The two types of particles are separated by a thick line. The rows in bold give the total numbers for each type of particles.

In addition, I follow Tenny (1994) and distinguish two types of direct object, affected or unaffected, depending on how the event participant is involved in the action. Tenny (ibid.: 11) defines an affected event participant as undergoing a "necessary internal motion or change", e.g. the DO in *eat an apple*. Tenny (ibid.: 127 n.22) makes it clear that objects moving in space, e.g. *the train crossed the border*, undergo an external, not internal, motion, and as such are not affected event participants. In a similar vein, I do not consider effected DOs (participant comes into being by the result of the action, e.g. *build a house*) as a kind of affected DOs. The distinction between the two types of DO is aspectually relevant: According to Tenny, affected DOs appear in telic predicates only. Therefore, if the two types of particles differ in their ability to

mark telicity, as suggested by Brinton (1985), we may expect that affected DOs will be licensed only by PVs with telicity marking particles.

I classified the direct objects of transitive PVs in my sample as either affected (denoting an event participant that undergoes an internal motion or change), e.g. *clear the fireplace out, close his business down* (the participants denoted by the DOs undergo a change in a property), or unaffected, e.g. *carry horses around* (an external change of location), *the ones you've written down* (effected participant), *read that thing out.* The results are given in Table 8. (For a list of verbs in the categories see Table 10.)

| PARTICLE | UNAFFECTED DOs | AFFECTED DOs |
|---|---|---|
| ABOUT | 3 | 0 |
| ALONG | 3 | 0 |
| AROUND | 1 | 0 |
| ON | 2 | 0 |
| **TOTAL I.** | **9** | **0** |
| DOWN | 3 | 2 |
| OFF | 3 | 5 |
| OUT | 7 | 1 |
| OVER | 3 | 1 |
| THROUGH | 1 | 2 |
| UP | 2 | 1 |
| **TOTAL II.** | **19** | **12** |

**Table 8. The number of unaffected and affected DOs of transitive PVs in the sample.**

The two types of particles are separated by a thick line. The rows in bold give the total numbers for each type of particles.

I ran Fisher's chi-square two-tailed statistical test on the results. The distinction between the two types of particles is statistically significant regarding both transitivity ($p = 0.0039$) and the type of DO ($p = 0.0375$). Particles of one type (*about, along, around* and *on*) mostly form intransitive PVs. When they form transitive PVs, their DOs are always unaffected. Particles (*down, off, out, over, through* and *up*) of the other type form either intransitive PVs or transitive PVs with either unaffected or affected DOs. So, rather than showing inverse behaviour, the two types of particles differ in the range of behaviour that they show: One type is more restricted than the other in transitivity and the type of DO. Of course, the validity of my claims is limited by the rather small

size of my sample. Only a larger study can show to what extent this observation holds for PVs in general.

### 4.2.3 Manner and result verb roots

The manner/result complementarity is another aspectually relevant distinction: Telicity but not atelicity is associated with a result. Recall also from Chapter 1 that activities have a manner component in their structure [x ACT <*MANNER*>] while telic predicates involve a result [BECOME [x <*STATE*>]] component. Nevertheless, as Rappaport Hovav & Levin (2010) point out, the manner/result distinction does not neatly overlap with atelic/telic complementarity, mainly due to the compositionality of aspect. In addition, not all result verbs are telic, e.g. degree achievement verbs such as *cool* allow both an atelic and a telic reading.

Following the work of Beth Levin and Malka Rappaport Hovav (Levin & Rappaport Hovav 1991, to appear; Rappaport Hovav & Levin 1998, 2010), I distinguish verb roots that specify a manner of action (e.g. *sweep, scrub, wipe*) and verb roots that denote a result (e.g. *break, clean, clear*). This distinction originated as the path and manner of motion complementarity in motion verbs known from Talmy (1985), e.g. *enter* (path motion verb) – *swim* (manner of motion verb); however, Levin and Rappaport Hovav apply the notions more broadly, i.e. also to non-motion verbs. According to them, result verbs denote a result and do not specify the manner in which the result is achieved. For instance, one can clean a bathtub by scrubbing or wiping, etc. In contrast, manner verbs do not specify what kind of result, or whether any result at all, has been achieved; for instance, when one scrubs or wipes a bathtub, it does not necessarily become clean. The semantic distinction has also syntactic reflexes. Manner verbs are more flexible in what kind of DO they can appear with, cf. *Leslie swept; Cinderella scrubbed her fingers to the bone; The child rubbed the tiredness out of his eyes* (manner verbs) but **Kelly broke; *The clumsy child broke his knuckles to the bone; *The clumsy child broke the beauty out of the vase* (result verbs). While Levin and Rappaport Hovav argue for the complementarity of the manner-result distinction, they acknowledge that some verbs have uses of both types, e.g. *clean* ‘make clean’ (result verb) – *clean* ‘do housework’ (manner verb).

Beavers & Koontz-Garboden (2012) develop a set of diagnostic tests for manner and result verbs without presupposing a strict complementarity. Result verbs are incompatible with a denial of a result, unlike manner verbs, e.g. #*Shane just broke the vase, but it is not broken* (result) – *Tracy just swept the floor, but nothing is different about it* (manner). In contrast to manner verbs, monotransitive result verbs resist object drop, e.g. *Kim broke *(the vase) last night* (result) – *Kim scrubbed (the floor) last night* (manner), and are rather restricted in forming resultative constructions, e.g. *We dimmed the room *empty* (result) – *Cinderella scrubbed the table clean* (manner). Manner verbs typically disallow inanimates and natural forces as subjects, while result verbs allow them, e.g. #*The stiff brush wiped the floor* (manner; acceptable in personification) – *The hammer broke the vase* (result). Manner verbs, unlike result verbs, resist denial of action and reinterpretation into 'cause by negligence', e.g. #*Jim ran, but didn't move a muscle* (manner) – *Kim broke my DVD player, but didn't move a muscle — rather, when I let her borrow it a disc was spinning in it, and she just let it run until the rotor gave out!* (result). Lastly, manner verbs are always durative, e.g. *John spent five minutes running* (manner) – **John spent five minutes breaking the vase* (result).

Based on these diagnostics, Beavers & Koontz-Garboden argue that some verbs (manner of killing verbs, e.g. *guillotine, crucify, drown*; ditransitive ballistic motion verbs as *throw, toss*; and manner of cooking verbs as *fry, microwave*) pattern as both manner verbs and result verbs and thus form a third type, manner+result verbs. In addition, they also point out that the same verb may be lexicalized differently for various speakers, e.g. *electrocute* may or may not entail death. This is especially true when verbs have metaphorical interpretations, e.g. *crucify* in contexts like *The newspapers are going to crucify me when this comes out* (Jack Hoeksema, p.c.).

On the basis of the above characteristics, as well as of the description of verbs in Levin (1993), I classified the verb roots in my sample (as used in the particular context, see Appendix I) as either manner or result verbs, e.g. (5, 6).

(5) *air* – manner verb root

a) meaning: expose to air (manner), does not denote the result of action (such as being dry, cool, freshened)

b) compatible with denial of result: *I've just aired the room, but nothing is different about it, it is still stuffy.*

(6) *peel* – result verb root

a) meaning: remove peel (result), does not specify a manner of action (such as by scrubbing or blanching)

b) incompatible with denial of result: #*I've just peeled the apple, but nothing is different about it.*

The results are given in Table 9. (For a list of verbs in the categories see Table 10.) I ran Fisher's chi-square two-tailed statistical test on the results. The distinction between the two types of particles is statistically significant ($p < 0.0001$), suggesting that the two types of particles differ in what kind of verb roots they combine with. While particles *about, along, around* and *on* tend to combine with manner verb roots, particles *down, off, out, over* and *up* typically combine with result verb roots. Nevertheless, the limited size of my sample has to be taken into account before making claims of a general validity.

| PARTICLE | MANNER VERB ROOTS | RESULT VERB ROOTS |
|---|---|---|
| ABOUT | 9 | 1 |
| ALONG | 6 | 4 |
| AROUND | 8 | 2 |
| ON | 6 | 4 |
| **TOTAL I.** | **29** | **11** |
| DOWN | 2 | 8 |
| OFF | 1 | 9 |
| OUT | 2 | 8 |
| OVER | 1 | 9 |
| THROUGH | 4 | 6 |
| UP | 0 | 10 |
| **TOTAL II.** | **10** | **50** |

**Table 9. The number of manner and result verb roots of the PVs in the sample.**
The two types of particles are separated by a thick line. The rows in bold give the total numbers for each type of particles.

### 4.2.4 Discussion

Table 10 lists all the PVs from the sample by type of verb root, transitivity of PV, and type of DO: Transitively used PVs are labelled with either 'U' or 'A' to distinguish between unaffected and affected DOs, respectively.

| PARTICLE | TRANSITIVITY OF PV | MANNER/RESULT TYPE OF VERB ROOT | |
|---|---|---|---|
| | | **manner verb roots** | **result verb roots** |
| **ABOUT** | intransitively used | *fly, lark, play, roam, trundle, walk, wander* | – |
| | transitively used | *carry* U, *follow* U | *swap* U |
| **ALONG** | intransitively used | *drive, fiddle, flow, trot, walk* | *come, go* |
| | transitively used | *carry* U | *bring* U, *take* U |
| **AROUND** | intransitively used | *look, push, rush, shop, swim, walk, wander* | *get, spread* |
| | transitively used | *carry* U | – |
| **ON** | intransitively used | *chat, move, struggle, walk* | *come, go, pass, sally* |
| | transitively used | *keep* U, *try* U | – |
| **DOWN** | intransitively used | – | *come, pass, settle, slow, trim* |
| | transitively used | *hold* U, *write* U | *close* A, *lay* U, *lock* A |
| **OFF** | intransitively used | – | *chop, peel* |
| | transitively used | *copy* U | *cut* A, *finish* A, *kill* A, *pay* U, *sand* A, *send* U, *start* A |
| **OUT** | intransitively used | – | *point, start* |
| | transitively used | *read* U, *try* U | *clean* U, *clear* A, *let* U, *sell* U, *send* U, *set* U |
| **OVER** | intransitively used | *wipe* | *come, cover, go, send, swap* |
| | transitively used | – | *change* A, *check* U, *hand* U, *join* U |
| **THROUGH** | intransitively used | *hoover, leak, pour* 'flow' | *come, get, patch, shoot* 'sprout' |
| | transitively used | *air* A | *cut* A, *take* U |
| **UP** | intransitively used | – | *come, end, grow, join, link, pack , save* |
| | transitively used | – | *add* U, *bring* U, *use* A |

**Table 10. Aspectual PVs from the sample by transitivity and manner/result type of the verb root.**

Telicity is often perceived as involving a result state (Dowty 1979) or an affected event participant (Tenny 1994). The role of the DO in determining telicity is also well-known (Krifka 1992, 1998). Therefore I will now discuss how the notions of manner/result complementarity, transitivity and affectedness relate to one another and to telicity and I will try to explain why none of them directly corresponds to telicity. First, note that the affectedness of event participants does not correspond to the resultativeness of the verb. While Tenny's (1994) affectedness concerns only *internal* motion or change, result verbs concern also a change of location and change of possession. Now consider transitivity. A quantized DO (see Chapter 1) can turn an atelic predicate into a telic one, yet only a DO denoting an affected event participant can do so, e.g. *Ian ate* (atelic) – *Ian ate an apple* (affected, quantized DO, telic) – *Ian pushed a cart* (unaffected, quantized DO, atelic). On the other hand, an affected event participant can be realized not only as a surface DO of transitive verbs but also as the subject of intransitive unaccusative verbs (Tenny 1994), e.g. *I melted the butter – The butter melted.* Jackendoff (1996) points out that telic predicates may as well lack the denotation of an affected entity, e.g. *Ian pushed a cart to New York* (unaffected DO, telic). To conclude, none of the discussed notions is a necessary or sufficient condition for telicity marking.

My sample of aspectual PVs provides further support for the existence of two types of aspectual particles. I have shown that the distinction goes beyond the ability to mark telicity, as suggested by Brinton (1985), in that it also concerns the type of verb root with which the particles combine and the transitivity of the resulting PVs and the type of direct object licensed by them.

## 4.3 Summary

This chapter has described a sample of 100 aspectual PVs containing 10 different particles that was compiled from the BNC corpus of spoken conversation. The examination of the type of the verb root (manner or result verbs), the transitivity of the PVs, and the type of the DO of transitive PVs (affected or unaffected) as appearing in the sample, has revealed that aspectual particles do not combine with verb roots in an arbitrary way. Some particles (*about, along, around, on*) tend to combine with manner verbs more frequently than with result verbs. The resulting PVs are frequently

intransitive, or else the DO is not affected. Some other particles (*down, off, out, over, through, up*) typically combine with result verb roots. The PVs they form are either intransitive or transitive, with either an affected or unaffected DO. The major contribution of this chapter, therefore, is that it has provided further support for the claim that aspectual particles are of two kinds.

# 5 The effects of aspectual particles on verb roots

This chapter seeks to answer the following research question: Do aspectual particles affect situation aspect of the verb root? The goal is to compare the aspectual properties of PVs and of the corresponding verb roots by applying two of Dowty's (1979) tests (see Chapter 1) on a sample of aspectual PVs (see Chapter 4).

## 5.1 Introduction

Chapter 2 introduced Brinton's (1985) study according to which aspectual particles mark telicity on the verb root, e.g. *eat* (atelic) – *eat up* (telic). I argued that conclusions on the aspect-marking properties of particles should be drawn on the basis of a comparison of the same verb frame of a PV and a corresponding verb root, e.g. *eat an apple* (telic) – *eat up an apple* (telic), given the role of verb arguments in the composition of situation aspect. This chapter presents precisely such a comparison between minimal pairs of sentences which differ in the presence/absence of a particle. I test the aspectual features of these sentences by the *complement of stop* and *complement of finish* tests from Dowty (1979),[1] relying on acceptability judgments of a number of native speakers of English. The aspectual literature does little (with the exception of some notes in Tenny 1994 and Smollet 2005) to point out to what extent, or if at all, speakers vary in their judgments of the acceptability of aspectual tests. The research of this kind is commonly done by native speakers who seem to rely solely on their own judgments (e.g. Brinton 1985, Dowty 1979, Giddings 2001, Hay, Kennedy & Levin 1999, contra e.g. Keyser & Roeper 1992: f.4). Evidence that speakers vary in what they find acceptable, at least in aspectology, is largely anecdotal: some papers mention in passing that the authors' judgments differ from those of other authors or of reviewers (e.g. Beavers & Koontz-Garboden 2012 n.3; Jackendoff 1990: 236). This gives an impression that speakers generally agree in what they find acceptable, which is not necessarily true, as will be demonstrated by the present study.

The hypothesis for this chapter is the following: Aspectual particles alter situation aspect of the verb root. If particles alter aspect, then clear acceptability differences

[1] See Chapter 1 for the discussion of Dowty's (1979) tests.

between verb roots and PVs in aspectual tests can be expected. I therefore compare the acceptability judgments of aspectual tests of predicates with verb roots without particles to those of predicates with PVs. Acceptability judgments were elicited with surveys responded by native speakers of English.

## 5.2 Method

One hundred aspectual PVs (compiled as described in the previous chapter) were included. For each aspectual PV two sentences were created, one with and the other without a particle, e.g. *Peter closed his business down* and *Peter closed his business*.[2] Such minimal pairs make it possible to compare the aspect values of PVs and the corresponding verb roots with the same arguments. Besides the subject, further verb arguments were added as required by the PV. Some PVs required a DO and/or a PP complement, e.g. *write down a letter* or *hand a ring to John*. The DOs, and where relevant subjects, were chosen in such a way that they fulfil the selectional restrictions of the PV, e.g. *eat up an apple – *eat up apples, *kill off an ant – kill off ants*. Otherwise, an argument was selected that did not cause aspect shift by inducing a repetitive reading, e.g. *clear out the fireplace* instead of *clear out the fireplaces.* In the case of polysemous verb roots, the context induced a particular meaning. For example, to induce the meaning 'to sprout' for *shoot (through)*, the subject *the daffodil bulb* was chosen.

All the predicates were tested using two of Dowty's (1979) tests. In order to be able to design surveys not very demanding for respondents, I opted for lexical co-occurrence tests rather than logical entailments tests (see Chapter 1) and chose the *complement of stop* and *complement of finish* tests (from now on referred to as the *stop*-test and *finish*-test for brevity) since these result in relatively few unintended meanings; namely the latter may coerce telicity to activities and the former may coerce durativity via an iterative or habitual meaning (see Table 3 in Chapter 1). To prevent such unintended readings (iterative and habitual), the respondents were asked to evaluate the sentences in a way that the given event takes place only once. The full wording of the instructions for respondents can be found in Appendix II.

[2] The sample did not contain aspectual PVs which obligatorily require a DO unselected by the verb root.

For each of the 100 aspectual PVs, therefore, four sentences in total were tested – a *stop*-test sentence with a particle, e.g. (1a), and a corresponding *stop*-test sentence without a particle (1b), and two *finish*-test sentences, one with and the other without a particle (1c, d). A full list of the sentences can be found in Appendix II.

(1) (a) Mary stopped writing down a letter.
(b) Mary stopped writing a letter.
(c) Mary finished writing down a letter.
(d) Mary finished writing a letter.

Some verb roots corresponded to more than one PV, e.g. *walk – walk about – walk around – walk along*). Such verb roots were tested once only. Therefore, the number of PVs in surveys (100) was slightly higher than the number of verb roots (84). In total, 368 sentences were tested.

The sentences were distributed over a number of surveys of varying length (60 sentences or 20 sentences, depending on the willingness of respondents; given the non-round number of tested sentences, some surveys had fewer than 20 sentences). Paired clauses did not appear in the same survey.[3] Each survey contained several different particles in PVs and each contained an (at least roughly) equal representation of both PVs and verbal roots only and an equal representation of both *stop*-test and *finish*-test sentences. The sentences were ordered randomly.

The surveys were filled out by respondents whose native language was English. They were approached in various ways – in person, through social networks (both real-life and on-line), and language fora on the internet. The surveys were distributed on-line, using the Google Docs service (docs.google.com), or else in person. The surveys required no personal information from the respondents beyond the variety of English they use/their country of origin. Most participants judged 20 sentences, yet some respondents judged a greater number of sentences (filling out longer surveys or several surveys). There were 128 respondents in total.

[3] This means that the two sentences of a minimal pair were not judged by the same respondent.

Each individual sentence was judged by 10 native speakers of English as either acceptable or not acceptable by checking either *yes*-box or *no*-box (i.e. a *yes* or *no* choice, not a Likert scale). Such a design allowed me to keep the study manageable. In case a respondent skipped a particular sentence, this sentence was given to another respondent to judge so that there are no missing data points in the results.

## 5.3 Results

I am going to present the results from two points of view. Before I present the data itself (5.3.2) I will first point out the variation that was found in the acceptability judgments among the respondents (5.3.1).

### 5.3.1 Variation among respondents

The respondents varied in acceptability judgments of verb roots and PVs, as shown in Figure 7 for the *stop*-test and Figure 8 for the *finish*-test. The *x*-axis is given by the ratio of *yes* and *no* answers; the *y*-axis shows the percentage of responses for each given ratio. (The responses are given in percentages so that verb roots and PVs can be easily compared: Recall that the surveys tested 100 sentences with PVs but only 84 sentences without particles.) For instance, the 0/10 column shows the percentage of sentences with a uniform judgment of being unacceptable by all 10 respondents, and the 8/2 column shows the percentage of responses judged as acceptable by 8 respondents and unacceptable by 2 respondents.

If the judgments of the respondents were largely uniform, the data would show little variation and the graphs would have a U-shape, with most answers at the extremes of the *x*-axis. This is not the case, however, for either verbs roots or PVs with either type of test. There is, though, slightly more variation in PVs than in verb roots. The data of PVs cluster around middle values (columns 2/8 – 5/5) for both tests. In contrast, verb roots have more of their data concentrated around the extreme values (columns 0/10, 1/9, 9/1, 10/0), especially with the *finish*-test.

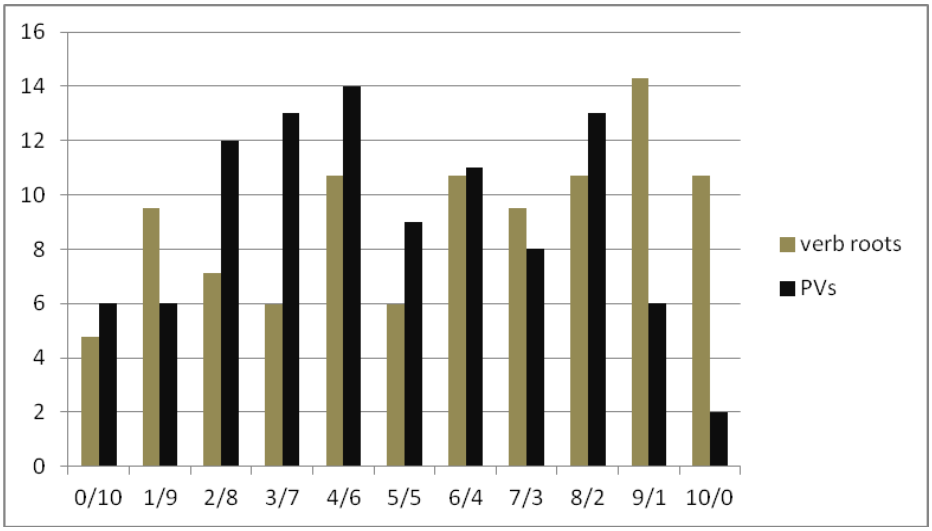



**Figure 7. The percentage of responses to *stop*-test sentences across acceptability ratios (yes/no) for the ten responses per verb root and PV.**

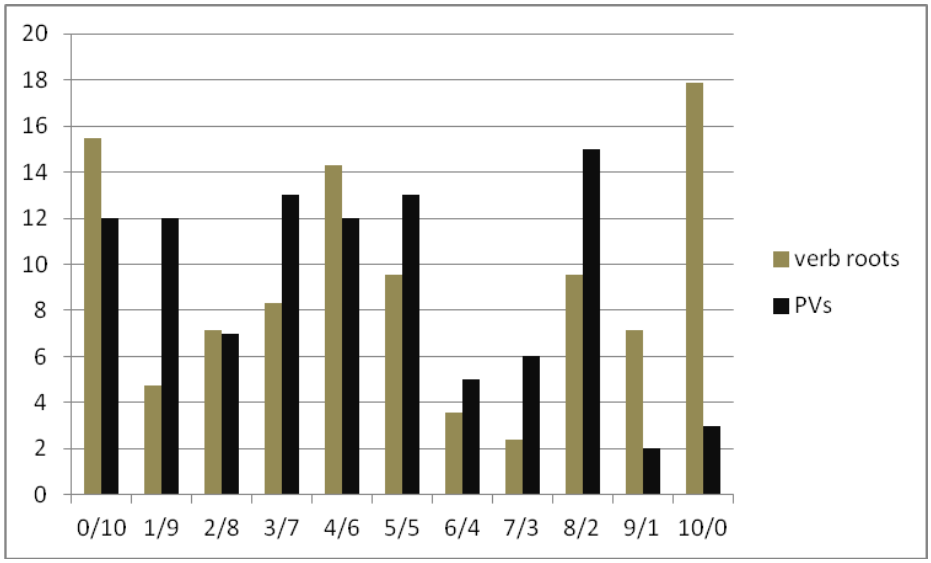



**Figure 8. The percentage of responses to *finish*-test sentences across acceptability ratios (yes/no) for the ten responses per verb root and PV.**

### 5.3.2 The effect of particles

This section aims to establish in how many of the aspectual PVs in my list (see Table 6) the particle alters the aspect of the verb root, and which factors may contribute to the occurrence of this effect. Dowty's (1979) tests for classification of situation types predict the following judgments: acceptable with both *stop* and *finish* (accomplishment),

unacceptable with either (achievement), or acceptable with *stop* but not with *finish* (activity). However, because of the variation in the judgments of my respondents and because some of the verbs or PVs were acceptable with *finish* but not with *stop* (e.g. both *close his business* and *close his business down*), a result not predicted by Dowty's tests, I did not classify the tested verb roots and PVs into Vendlerian classes.

Instead, in order to compare the verb roots' and PVs' acceptability with *stop* and *finish*, I ran a series of Fisher's chi-square two-tailed tests on the results of the judgments, one test per verb root – PV pair, separately for the *stop*-test and the *finish*-test. I then determined in how many minimal pairs there was a significant difference between the acceptability judgements of a verb root and a PV: It is in these cases that the addition of the particle affects the compatibility with *stop* and/or *finish*.

The results show that for only 17 minimal pairs of verb root and PV there was a significant difference ($p < 0.05$) in acceptability (17 out of 200, or 8.50%). These pairs are listed in Table 11. Three of them are the same verb root – PV pairs, in which the particle had an effect according to both tests. Therefore, the particle changes the judgment of compatibility with *stop* or *finish* in only 14 out of 100 PVs. For the complete results of the study, including the statistical information for each minimal pair, see Appendix III.

The PVs listed in Table 11 include a variety of particles of both types discussed in Chapter 4. Of the 14 PVs, 9 were used intransitively and 5 transitively in the surveys; 9 have manner verb roots and 5 have result verb roots. (As discussed in 4.2.3, manner verbs specify a manner of action and result verbs denote a result.)

| **test (*stop*-test or *finish*-test)** | **verb root** | **acceptability judgment (*yes*/*no*)** | **PV** | **acceptability judgment (*yes*/*no*)** | ***p* value** |
|---|---|---|---|---|---|
| *stop*-test | fiddle | 10/0 | fiddle along | 5/5 | 0.0325 |
| *finish*-test | flow | 6/4 | flow along | 0/10 | 0.0108 |
| *finish*-test | wander | 5/5 | wander around | 10/0 | 0.0325 |
| *finish*-test | write | 10/0 | write down | 5/5 | 0.0325 |
| *finish*-test | hold | 10/0 | hold down | 0/10 | < 0.0001 |
| *stop*-test | start | 9/1 | start off | 2/8 | 0.0055 |
| *stop*-test | point | 2/8 | point out | 9/1 | 0.0055 |
| *stop*-test | struggle | 10/0 | struggle on | 4/6 | 0.0108 |
| *stop*-test | walk | 8/2 | walk on | 2/8 | 0.0230 |
| *stop*-test | chat | 10/0 | chat on | 3/7 | 0.0031 |
| *finish*-test | chat | 8/2 | chat on | 1/9 | 0.0055 |
| *stop*-test | cut | 10/0 | cut through | 3/7 | 0.0031 |
| *finish*-test | cut | 0/10 | cut through | 7/3 | 0.0031 |
| *stop*-test | leak | 1/9 | leak through | 7/3 | 0.0198 |
| *stop*-test | change | 8/2 | change over | 2/8 | 0.0230 |
| *finish*-test | change | 10/0 | change over | 3/7 | 0.0031 |
| *stop*-test | grow | 9/1 | grow up | 1/9 | 0.0011 |

**Table 11. Phrasal verbs in which the association between the type of verb (verb root or PV) and the acceptability judgments is statistically significant.**

## 5.4 Discussion

The goal of this chapter is to establish whether, and to what extent, aspectual particles alter the situation aspect of the verb root. Clear acceptability differences between verb roots and PVs in aspectual tests can be expected if particles alter aspect. However, the results suggest the opposite: the effect of particles on verb roots is scarce. In addition, the observed effect may (also) spring from other factors than the aspectual force of the particle, as discussed below.

### 5.4.1 Variation among respondents

The surprisingly high variation in acceptability judgments raises the question what the source of the variation may be. I can offer only tentative answers and possible explanations. I assume the variation is given by a pragmatic principle such as Grice's (1975) Cooperative Principle. Put simply, language users, when confronted with

discourse, try to make as much sense of it as possible and assume that it is meaningful. This principle seems to remain intact even when speakers are asked to judge the acceptability of sentences and understand that some sentences might not be acceptable. I base this assumption on the occasional comments of the respondents such as those in (2). In particular, at least some people approach the acceptability judgment task in such a way that they try to construct an extralinguistic context in which the utterance may be produced (2a, b). Only when they fail to invent such a context, do they consider the sentence unacceptable (2b). Others, though, may approach the task depending on whether the sentences may be regularly encountered (2c). In addition, the aspectual tests require that the respondent deliberately ignore unintended meanings, such as a repetitive/habitual reading (see Chapter 1). For some laymen such stripping off of one of possible readings proves difficult (2d).

(2) (a) ...you might be able to say "he finished walking around", even though it sounds a little funny, if [*sic*] there is some goal associated with it. Maybe he was tired and wanted to wake up, so he walked around until he was awake.
(b) In my opinion they are all grammatically correct; some of them though are semantically extremely difficult to think up real case scenarios for.
(c) We just don't say it.
(d) 'Mary stopped jumping' is a completely acceptable sentence. I cannot imagine anyone considering that someone would stop jumping in the middle of a jump. That is rather stupid.

What further complicates the interpretation of the judgments is the obscurity of why sentences are rejected. When a sentence such as *Mary finished cleaning out the oven* is judged as acceptable, it can be concluded that *clean* is good with *out*, that *clean out* is good with *the oven* as well as with *finish*, and that the word order is good for this construction. If, however, the same sentence should be judged as unacceptable, it does not straightforwardly mean that *clean out* is bad with *finish*. Instead, there are alternative explanations. For instance, respondents may prefer a different word order (verb + particle + DO or verb + DO + particle) or a different particle or a DO. Such preferences vary among speakers (cf. e.g. the discussion of particle placement in

Chapter 2). Consider *send out*, defined in Cambridge Phrasal Verbs Dictionary online as 'send something to a lot of different people', e.g. *We sent out the wedding invitations about three weeks ago*. However, *send out* is also sometimes used with a singular DO, e.g. *a parcel* (3). (Note that *a parcel* is not something that can be sent to many people at the same time, unlike an email, for instance.)

(3) If you want to send out a parcel or package, you just need to call them and they will send a representative to collect the parcel.
(Example taken from http://www.collectmyparcel.com/blog/parcel-collection-makes-things-easier/391/, accessed July 7, 2012)

The use of *send out* with a singular DO, however, is not acceptable to all speakers: My informants expressed preference for *send* or *send off*. Similar observations are found in Lindner (1983: 57), according to whom variation among speakers is given by their diverse linguistic experience, resulting in overlapping but distinct inventories of PVs.

In a similar vein, some respondents commented that some of the verb roots and PVs in the survey are non-interpretable and/or non-acceptable as such, e.g. *?lark, ?sally, ?trundle, ?hoover through, ?patch through, *air through, *sally on, *fiddle along*. Recall that these PVs were extracted from a British corpus of spoken conversation (see Chapter 4). I assume that some of these verbs are regionally marked and unknown to speakers of other varieties, e.g. *hoover, lark*. In addition, some of the verbs may be used as a PV more frequently than without a particle, although both uses are possible, cf. the dictionary entry of *lark* 'to engage in harmless fun or mischief — often used with *about*' (Merriam-Webster dictionary online). In such a case, a speaker may accept a PV but reject the corresponding verb root without a particle. Conversely, some of the PVs, e.g. *fiddle along, air through*, may have been unacceptable to respondents for the combination of a particular verb root with a particular particle. This may be related to the semi-productivity of certain particles (cf. Jackendoff 2002 and McIntyre 2002). These forms, nonetheless, seem to show an asymmetry between comprehension and production: While they are rejected in acceptability surveys, they are attested in a conversation corpus. The observed asymmetry, noted also in Lindner (1983: 57), requires further research.

All these factors make the interpretation of the findings rather difficult. The results are not only the reflections of the aspectual class of a particular verb or PV but also of other factors, mainly frequency, aspectual coercion, particle placement, particle selection, or DO selection. Further discussion therefore has to be understood in this light.

### 5.4.2 The aspectual effect of particles

Brinton (1985) argues that aspectual particles are telicity markers, e.g. *eat* (atelic) – *eat up* (telic). If this claim holds, one can expect clear acceptability differences between verb roots and PVs in aspectual tests. In the present study, judgements were significantly different only in 14% of the studied PVs. (In addition, it has to be borne in mind that some of these changes may have been caused by non-aspectual factors, see 5.4.1.) A significant difference of acceptability is more likely to show in intransitive PVs than transitive ones and in manner verbs than result verbs. In sum, the results suggest that aspectual particles do not change the aspectual behaviour of verb roots on a large scale. Therefore, contra Brinton (1985), I conclude that aspectual particles are not primarily markers of situation aspect. My conclusion concurs with Cappelle's (2005: 355) assertion that "[s]ome verb-particle combinations may be telic while their corresponding simplex verbs are not, but this difference cannot be extended to all ore [*sic*] even most verb-particle combinations".

My results run counter to Giddings' (2001) conclusions that aspectual particles *down* and *out* turn atelic verb phrases into telic ones. In my opinion, the difference between Giddings' results and mine are caused by different methodologies. In the present study the transitivity of the verb root and the type of the DO were the same for both a PV and a corresponding verb root, e.g. *eat an apple* (telic) – *eat up an apple* (telic) in order to avoid the effects of the verb arguments on the telicity of the predicates, e.g. *eat* (atelic) – *eat up an apple* (telic) (see also below). In contrast, Giddings (ibid.: Appendix 2) apparently compared the telicity of the predicates with

simplex verbs without DOs to the telicity of the predicates with PVs with a DO, e.g. *They argued – They argued out the proposal*.[4]

Although particles are not direct markers of situation aspect, they sometimes determine situation aspect in an indirect way: by imposing selectional restrictions on the verb root, e.g. *kill a man/wildlife/birds – kill off ?a man* (acceptable in a context of plot narration)*/kill off wildlife/kill off birds*. Such selectional restrictions have an aspectual impact: recall from Chapter 1 that the type of DO determines the telicity of the predicate. Namely, non-quantized (mass noun and bare plural noun) DOs do not appear in telic predicates, while quantized (definite noun and indefinite singular count noun) DOs do (does not apply to the *push*-type of verbs, e.g. *push a cart* without a PP is atelic), e.g. *eat porridge* (atelic) – *eat apples* (atelic) – *eat the porridge* (atelic/telic) – *eat the apples* (telic) – *eat an apple* (telic), see e.g. Verkuyl (1989, 2005), Krifka (1992, 1998), Tenny (1994), and Jackendoff (1996). Now when a particle imposes selectional restrictions on the verb root, it restricts the range of aspectual interpretations of the predicate. For instance, *up* imposes selectional restrictions on *eat*, so *eat up* can only license quantized DOs, e.g. **eat up porridge – *eat up apples – eat up the porridge – eat up the apples – eat up an apple*. It follows that *eat up* does not appear in atelic predicates. This does not mean, however, that *up* marks telicity on *eat*, since *eat* with a quantized DO without the particle is also telic.

Another aspectual effect of particles goes beyond situation aspect features (dynamicity, durativity, telicity). Consider the sentences in (4) and the corresponding judgments of my respondents. This is one of the minimal pairs for which the acceptability judgments differed significantly (see Table 11).

(4) (a) John stopped walking. (judged as acceptable by 8 out of 10 respondents)
(b) John stopped walking on. (judged as unacceptable by 8 out of 10 respondents)

According to Dowty's (1979) tests, only durative events can be stopped, i.e. only durative verbs/predicates are acceptable with *stop*. This suggests that (4b) is not

[4] While Giddings (2001) does not state explicitly that the verb frames of verb roots and PVs in her study were different, her Appendix 2 lists pairs which differ in the argument structure. In addition, she notes that the aspectual change is frequently accompanied by a change in the transitivity of the verb, e.g. *I hunted – I hunted down *(the fox).*

durative, which, however, is not the case. Instead, the particle in (4b) signals that the event continues (cf. Celce-Murcia & Larsen-Freeman 1999: 432). It is therefore the incompatibility of the 'continuation' in *on* with the 'halt' in *stop* that makes (4b) unacceptable. Putting aside the fact that Dowty's tests fall short of predicting such a case, I want to stress that the aspectual contribution of aspectual particles goes beyond situation aspect. While the continuative meaning which the particle in (4b) contributes is a kind of aspectual meaning, it does not fall under the scope of either situation aspect (dynamicity/stativity, punctuality/durativity, telicity/atelicity) or grammatical aspect (perfectivity/ imperfectivity) as traditionally understood. At best, it could be said that *on* specifies duration. Therefore, contra a lot of aspectual literature which refers to telicity and other situation type aspectual features by the term *lexical aspect* (e.g. Bardovi-Harlig & Reynolds 1995, Csirmaz 2004a, van Hout 2008, Jeschull 2003, Olsen 1994, Rothstein 2004, Slabakova 2001), I propose that a distinction should be drawn between situation aspect and lexical aspect, with the former covering the complementary features dynamicity/stativity, punctuality/durativity, telicity/atelicity, and the latter covering various features which are not in complementary distribution (e.g. continuation, iteration, habituality, inchoativity, completion, etc.). Recall from Chapter 2 that it is according to these latter features that Celce-Murcia & Larsen-Freeman (1999: 432–433) classify aspectual particles (into inceptive, continuative, iterative, and completive). Another example of lexical aspect is the distributive meaning of the particle in *send out* 'send something to a lot of different people' (discussed above). I leave a systematic mapping of this kind of aspect in English to further research.

### 5.4.3 Lexical meaning of particles

Another kind of effect of aspectual particles on the verb root is non-aspectual: Aspectual particles sometimes contribute subtle lexical meanings, as illustrated in (5).[5]

[5] (5a, d) are taken from Lindstromberg (2007) and I owe (5e) to Jack Hoeksema.

(5) (a) *chop the onion* 'chop into pieces' or 'chop into two' – *chop up the onion* 'chop into pieces' but not #'chop into two'

(b) *read* 'read aloud' or 'read quietly' – *read out* 'read aloud' but not #'read quietly'

(c) *cry* 'shout' or 'weep' – *cry out* (intransitive) 'shout' but not #'weep' – *cry one's eyes/heart out* 'weep' but not #'shout'

(d) *slow down* 'slow quickly' or 'slow gradually' – *slow up* 'slow quickly and completely' but not #'slow gradually'

(e) *write down* 'set in writing' – *write up* 'write something in a complete and final form', e.g. *write down a sentence – write up a proposal*

(f) *clean up* 'tidy a place' – *clean out* 'clean the inside of a room, container, etc.', e.g. *clean up the kitchen – clean out the oven*

Notice that all the PVs in (5) are compositional and aspectual. Nonetheless, the particle restricts the lexical meaning of the verb root, which runs counter to the claim that many aspectual particles are redundant because they can be omitted (e.g. Hampe 2005, Jackendoff 2002). I conclude instead that aspectual particles sometimes contribute a subtle non-aspectual lexical meaning. If aspectual particles are not 'purely' aspectual and the interpretations of aspectual PVs and the corresponding verb roots may slightly differ, then PVs might not be fully interchangeable with the respective verb roots, at least not in all contexts.

### 5.4.4 Implications for future research

This chapter has pointed out to several methodological problems. These concern tested items and/or respondents, such as frequency of verbs and PVs, preferences for particle placement, particle selection, or DO selection, regional variation, and different attitudes towards the survey task. I propose that future studies aimed at comparing the acceptability of verb roots and PVs should control for frequency and only use verbs and PVs of high frequency which are not regionally marked. Another improvement that can be done is to elicit acceptability judgments together with the respondents' comments on the reasons why they rejected certain sentences.

## 5.5 Summary

This chapter has presented a survey study of acceptability judgments designed to determine the effect of particles on the situation aspect of predicates. Parts of the survey were inconclusive, due to various factors such as regional variation, different attitudes towards the survey task, preferences for particle placement, particle selection or DO selection, and frequency of tested items.

The results suggest that particles are not direct markers of situation aspect. Instead, particles sometimes determine situation aspect indirectly, by imposing selectional restrictions on the verb root. In addition, aspectual particles may contribute other kinds of aspectual meanings (continuation, completion, resultativeness, inchoativity, iterativity, habituality, etc.), which I propose to term lexical aspect. On top of that, aspectual particles sometimes contribute a subtle non-aspectual lexical meaning, which restricts the range of the meaning of the verb root. Aspectual PVs, therefore, might not be fully interchangeable with the corresponding verb roots in all contexts. It follows that aspectual particles are not semantically redundant.

# 6 Phrasal verbs and scalarity

This chapter builds on the arguments and findings of previous chapters and proposes a scalar analysis of aspectual particles. I argue that the primary function of the particle is to describe the change denoted in the verb root in terms of (non-)scalarity. The telicity marking effect of some particles is secondary and it is conjoined by other sentence elements, such as the direct object (DO) or prepositional phrase (PP), as well as by a pragmatic implicature. The proposed analysis offers not only an explanation as to (i) why some particles do not affect telicity and (ii) why some PVs admit both a telic and an atelic interpretation, but (iii) it also makes predictions as to when a particle marks telicity.

The chapter is organized as follows. Section 6.1 draws on and briefly summarizes the discussion in previous chapters relevant for the present chapter. Section 6.2 introduces the theoretical framework of scalarity as underlying aspectuality, within which I analyze aspectual particles (Section 6.3). Lastly, I apply the proposed scalar approach to discuss a special kind of phrasal verb constructions, which contain an intransitive verb root and an unselected DO (Section 6.4). The last section concludes and summarizes.

## 6.1 Introduction

Chapter 2 introduced two main accounts of aspectual particles: Brinton (1985), according to whom aspectual particles mark telicity, and Cappelle & Chauvin (2010), according to whom aspectual particles are comparative and/or resultative. Particles with continuative meaning, such as *on, along, about, around,* and *away* in e.g. *chat away, walk on,* challenge both of these accounts as they are not telic, comparative, nor resultative. In Chapter 4, I showed that these particles (except for *away*, for which I did not have data) are different from others, such as *down, off, out, over, through,* and *up*. In particular, the former tend to combine with manner verb roots and form intransitive PVs, or PVs with unaffected DOs. The latter, in contrast, tend to combine with result verb roots and form either intransitive or transitive PVs with affected or unaffected DOs.

I have also argued that Brinton's (1985) telicity-marking account falls short of accounting for PVs in which the particle does not mark telicity obligatorily, e.g. *brighten up, warm up* (atelic/telic). I have argued that the telicity of predicates with aspectual PVs may be determined by the verb's arguments rather than the particle, e.g. *drink (*up) coffee* (atelic) – *drink (up) a cup of coffee* (telic). (See 2.4.1 for a full discussion of these issues.) I have proposed that a satisfactory analysis of aspectual particles needs to encompass both kinds of aspectual particles, account for the aspectual ambiguity of some PVs (e.g. *brighten up*), and make predictions when particles mark telicity and when not. The analysis of particles presented here addresses all of these issues by proposing a scalar approach to the aspect of particles.

## 6.2 Scalarity and aspect

In the aspectual literature, there have been a number of accounts that in some way or other argue that it is scalar structure that underlies situation aspect, among them Beavers (2008), Filip (2008), Hay, Kennedy & Levin (1999), Jackendoff (1996), Levin & Rappaport Hovav (2010), Rappaport Hovav (2008), Rappaport Hovav & Levin (2010), Smollett (2005), and Tenny (1994). I now introduce this theoretical framework, focusing on the most recent accounts.

### 6.2.1 Scalarity in verbs

Rappaport Hovav (2008) offers a thorough analysis of situation aspect lexicalized in verbs. On the basis of the nature of the change denoted in dynamic verbs, she distinguishes two types of dynamic verbs, non-scalar (e.g. *play*, *laugh*, *exercise*) and scalar verbs (e.g. *warm*, *ripen*, *ascend*). As argued in Rappaport Hovav & Levin (2010), non-scalar verb roots are manner verbs, while scalar verbs are result verbs.

Non-scalar verbs denote a change that is not ordered along a scale. In absence of a scale, an event cannot be delimited, and therefore, non-scalar verbs are atelic. In contrast, scalar verbs denote a change along a scale, "which involves an ordered set of changes in a particular direction of the values of a single attribute" (Rappaport Hovav 2008: 17). A scale thus presents an ordering of increasing or decreasing degrees of a dimension, such as temperature, length, cost, etc. Depending on the attribute that

undergoes a change, Rappaport Hovav classifies scales in three kinds – property scales (typically associated with change of state verbs, e.g. *lengthen*, *open*), path scales (typically associated with directed motion verbs, e.g. *enter*, *go to school*) and volume/extent scales (typically associated with incremental theme verbs, e.g. *read a book*, *eat an apple*). All three kinds of scales can be expressed in atelic or telic predicates. What matters is whether the scale is bounded (in the case of telic predicates, e.g. *flatten*), or non-bounded (in the case of atelic predicates, e.g. *lengthen*).

Another distinction in scales is determined by the number of points on the scale, or in other words, the values for the attribute. A scale with only two values, namely one not associated with the attribute and one associated with the attribute, is a two-point scale (e.g. for *die* the two values are 'not dead' and 'dead'). A scale with many values of the attribute is a multi-point one (e.g. *widen*, the values corresponding to increasing width). This distinction makes a difference in the duration of events – two-point scales underlie punctual events, multi-point scales underlie durative events. While all two-point scales are bounded, and by default underlie telic predicates, multi-point scales can be bounded or non-bounded and underlie either telic or atelic predicates.

For a better understanding of Rappaport Hovav's aspectual composition of verbs, I provide its graphic representation in Figure 9. Note that while telic predicates are always associated with a bounded scale, atelic predicates denote either a change along an open scale or a non-scalar change.

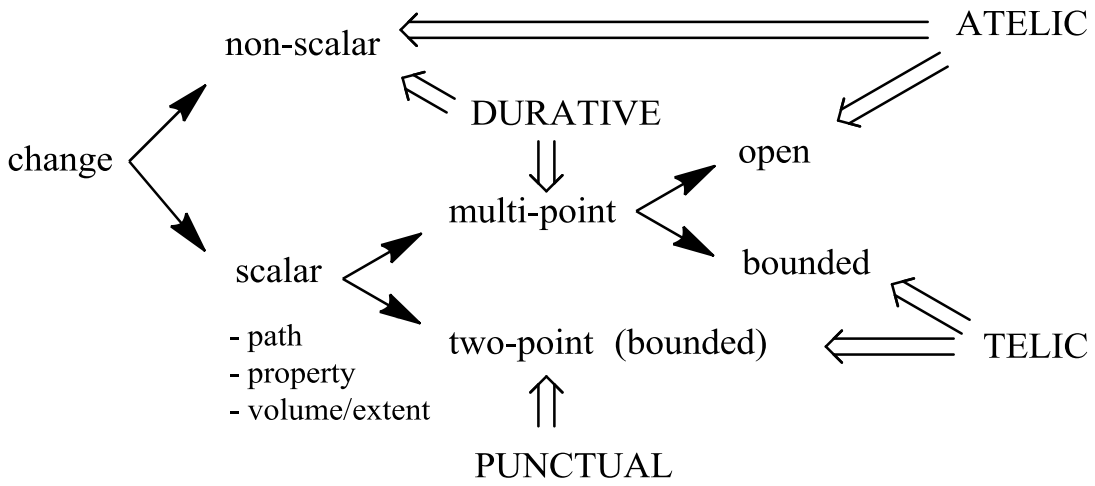



**Figure 9. The aspectual composition of verbs developed by Rappaport Hovav (2008).**

### 6.2.2 Scalarity and argument structure

What can establish a scale (i.e. its attributes serve as a scale) is an event participant (Tenny 1994) or a path (Jackendoff 1996: 313). A path scale is determined by a theme's change of position along a path. Property and volume/extent scales are established by an event participant realized as the theme argument. Not all themes, however, establish a scale in the event, e.g. *push a cart* (non-scalar unless a path is specified). Therefore, to be able to establish a scale the theme has to be of a certain kind: it must be either incrementally involved in the event (cf. Krifka 1998), e.g. *read a book, dance the night away,* or must be affected, i.e. undergoing a necessary internal motion or change (e.g. Tenny 1994: 11), e.g. *freeze the cream, open the window.* The former type of theme establishes volume/extent scales, the latter one establishes property scales. As a cover term for both types of themes, I use the term *scale-establishing theme*. It follows that a theme is involved in different ways with different types of scales. One and the same expression can be a theme in all three types of scales given an appropriate linguistic context, for example *an apple* in (1) below.

(1) (a) Dorothy carried an apple in her bag for a week. (non-scalar predicate)
(b) Dorothy carried an apple to her teacher. (path scale lexicalized in PP)
(c) An apple rolled. (non-scalar predicate)
(d) An apple rolled a yard away. (path scale lexicalized in measure phrase)
(e) An apple fell off the tree. (path scale lexicalized in verb and specified by PP)
(f) An apple ripened. (property scale lexicalized in verb)
(g) Dorothy ate an apple. (volume/extent scale lexicalized in DO)

A scale is established when a change of state, a change of location, or an incremental theme event is expressed by the interaction of the lexical semantics of the verb, the theme, and/or PP. Scales can be lexicalized in various syntactic elements, partially depending on the type of scale. Path scales are lexicalized in a goal PP (1b) or a measure phrase (1d) that combines with a non-scalar verb, or in a scalar verb (1e). In contrast, property scales are always lexicalized in the verb (1f) and volume/extent scales are always lexicalized in a verb argument (1g) (Levin & Rappaport Hovav 2010). For an overview, see Table 12.

Incremental theme verbs are non-scalar in themselves; it is the argument which lexicalizes a scale, e.g. *mow, eat* (non-scalar) – *mow the lawn, eat a sandwich* (scalar). In other words, for a predicate to denote a scale, a scale-establishing theme must be overtly expressed, as follows from Rappaport Hovav's (2008: 24) hypothesis "that scales require that the participant whose property is measured by them be overtly realized". In consequence, scalarity can affect argument structure.

| Type of scale | established by | denotes | lexicalized in | examples |
|---|---|---|---|---|
| path | change of theme's position along a path | directed motion | verb | *ascend* |
| | | | goal PP | *run to the line* |
| | | | measure phrase | *run a mile* |
| property | change in theme's property | change of state | verb | *freeze*<br>*open* |
| volume/extent | theme's volume or extent | incremental theme | quantized direct object | *eat an apple*<br>*read a book* |

**Table 12. Types of scales according to the measured attribute. Based on Rappaport Hovav (2008).**

The scale-establishing theme may be realized as a DO (1g) or as an unaccusative subject (1f), as argued by Van Hout (2000), who analyzes the relation between aspect and transitivity and arrives at the conclusion that there is a systematic relation between the two. While atelic predicates can be intransitive or have an optional DO which modifies the predicate, telic predicates require an event participant projected in the object position. This event participant may be realized as a quantized DO or as subject in an unaccusative construction.

Only quantized DOs establish a scale, in contrast to non-quantized ones, e.g. *eat bread* (non-scalar) – *eat a sandwich* (scalar) (e.g. Filip 2008: 225). However, as we know from Smollett (2005), even a predicate with a quantized DO can receive an atelic interpretation in a suitable context, e.g. *The ant ate the apple for a week before it rotted into the ground*, since an ant is not expected to finish an apple (so, the atelic interpretation of this sentence comes close to the meaning of *eat from an apple*). As Smollett argues, quantized DOs are always associated with a scale, yet an endpoint to that scale is determined by our world knowledge. In a similar spirit, Hay, Kennedy & Levin (1999) argue that telicity can be determined by linguistic material (e.g.

*completely*) or by a pragmatic implicature (e.g. conventional length of pants in *The tailor lengthened my pants*). A crucial difference is that telicity derived by implicature, but not by linguistic material, can be cancelled, e.g. *I straightened the rope, but not completely* (pragmatically implied telicity in the first clause is cancelled by the second clause) – **They straightened the rope completely, but the rope is not completely straight* (telicity determined by *completely* in the first clause cannot be cancelled by the second clause).

### 6.2.3 Scalarity and monotonic composition

Situation aspect is determined compositionally. According to the monotonic compositional theory of aspect (Olsen 1994, Rappaport Hovav & Levin 1998; see 1.2.4), a syntactic element can expand an atelic predicate into a telic one, but not the other way round, e.g. *sweep* (atelic, denotes a process) – *sweep the floor clean* (telic, *sweep* denotes a process and *clean* a resulting state), *sweep the leaves into a pile* (telic, *sweep* denotes a process and the PP a resulting state). As telicity is a subset of scalarity (see Fig. 9), I assume that the monotonicity of telicity is handed down from the underlying scalarity. Therefore, I propose that scalarity is itself built up in a monotonic and compositional way: a syntactic element added into a predicate can contribute scalarity but not remove scalarity already present in a predicate. This hypothesis will be supported throughout Section 6.3.

### 6.2.4 Interim summary: Scalarity underlies aspect

Integrating the findings in the papers discussed in this section, I assume that dynamic verbs describe changes that are or are not associated with a scale. Non-scalar verbs do not themselves lexicalize a scale, and as such are atelic. They can nevertheless appear in a telic predicate when a scale is established by a path lexicalized in a goal PP or a measure phrase (path scales) or a suitable theme realized as a DO or an unaccusative subject (volume/extent scales). Moreover, property and path scales can also be lexicalized in scalar verbs. Scalarity is a necessary but not sufficient condition for telicity. Scalar predicates are atelic when the scale is open and telic when the scale is bounded, the distinction depending partly on world knowledge.

## 6.3 Scalarity and phrasal verbs

Having spelled out the theoretical background, I now return to PVs, analyzing them in terms of scalarity as the underlying notion that determines aspect. This section addresses the issues essential for a satisfactory analysis of PVs, as suggested in Section 6.1: (i) incorporating both types of particles into the account, (ii) making predictions about the effect of particles on telicity, and (iii) explaining the ambiguity of certain PVs.

### 6.3.1 Proposal

As discussed previously in this dissertation, aspectual particles contribute an aspectual meaning but claiming that they are markers of telicity (e.g. Brinton 1985) is an overstatement (as Brinton herself admits). I will argue in 6.3.4 that telicity marking is a mere additional effect of some particles in certain predicates. I do not claim that particles are markers of scalarity, either. Instead, I propose that aspectual particles describe the dynamic change[1] denoted in the verb root as either scalar or non-scalar. Particles come in two kinds[2] – non-scalar (*about, around, along, away$_1$, on*) and scalar (*away$_2$, down, off, out, over, through, up*). Particles are not freely interchangeable across the two types, e.g. *close down/off/out* but **close around*/*about*, a fact that lends further support for the distinction between scalar and non-scalar particles. In accordance with the hypothesis that scalarity is built up in a monotonic compositional fashion, scalar particles appear only in scalar predicates, *sleep* (non-scalar) – *sleep off a headache* (scalar, scale established by *a headache*). The occurrence of non-scalar particles in scalar predicates is attested, but restricted to the path type of scales, as shown below.

While in principle one form can have both non-scalar and scalar uses, of the particles discussed here only *away* has turned out to have both a non-scalar and a scalar use. The different uses, however, correspond to different lexical meanings – for non-scalar *away* a manner of action, e.g. *sleep away, chat away*, and for scalar *away* a result

[1] Although this approach may seem restricted in that it only accounts for dynamic PVs, it is important to note that stative verbs do not form PVs (e.g. Bolinger 1971: 89–90, Fraser 1976: 11). The rare exceptions result in dynamic PVs, e.g. *hear out* 'listen attentively' or *smell out* 'fill with smell' or 'find by smelling'. In consequence, all PVs are dynamic.

[2] McIntyre (2001, 2004) also distinguishes two kinds of particles, which largely overlap with my two types. However, he bases the distinction on (a)transitivity and rejects a connection with aspect (see 7.5).

or goal, e.g. *boil away, melt away, sleep the headache away, chat the afternoon away*. The consequences of the two *away*s are further discussed in Section 6.4.

### 6.3.2 Predicates with non-scalar particles

Particles *away, along, around, about,* and *on,* problematic for previous accounts (see Section 6.1), are analyzed here as non-scalar predicate modifiers which do not refer to a scale and do not affect argument structure.[3] They typically combine with non-scalar verb roots and appear in non-scalar, and as such atelic, predicates, e.g. in *work away* 'to continue to work industriously', *play around* 'play and frolic',[4] *dream on*. Non-scalar predicates lack any sentence elements that establish a scale. Therefore, non-scalar, atelic predicates with non-scalar particles, such as (2), can be characterized as in (3).

(2) (a) I've got to shop around.
(b) Mary always carries a bag about.
(c) Just walk on.
(d) John pushed the cart on.

(3) In atelic predicates with non-scalar particles
i. the verb root is non-scalar and as such atelic,
ii. the verb root selects only arguments that do not lexicalize a scale,[5]
iii. there is no measure phrase or goal PP that lexicalizes a path scale,
iv. the particle does not lexicalize a scale, and consequently, does not mark telicity.

In relation to (3ii), it is important to note that non-scalar particles are compatible with non-quantized arguments (4a) but not with quantized ones (4b), cf. also note 5, as the latter establish a scale.[6]

[3] My findings find support in McIntyre's (2001, 2004) account, according to which these particles, unlike the other type (see 6.3.3), in their semantics do not make a reference to a theme but only modify events. According to McIntyre, these particles do not mark telicity exactly because they fail to make a reference to a theme which would follow a path designated by the particle.
[4] *The Free Dictionary*. Definitions are given only for PVs that are less common or that can have multiple meanings.
[5] (3ii) applies to both the subject argument, e.g. *Water flowed along* (non-quantized subject, does not delimit the event) – **A gallon of water flowed along* (quantized subject, delimits the event), as well as the object argument (2b, d). An atelic predicate need not contain a DO (2c).

(4) (a) My father, as far as I can remember, always played music around and that is where my love for music birthed.
(Example taken from
http://www.cduniverse.com/productinfo.asp?pid=7193048
&style=music&fulldesc=T, accessed March 10, 2013)
(b) *The band played a song around.

Furthermore, telicity is not implied pragmatically in atelic predicates with non-scalar particles, as illustrated in (5): although *swim* is normally interpreted as atelic (5a), it can become telic under a pragmatic implicature, such as when the hearer knows I always swim a particular distance (Dowty 1979: 61), as in (5b). This implicature substitutes an unexpressed measure phrase lexicalizing a scale, e.g. *2000 meters*. A non-scalar particle is incompatible with such an implicature: (5c) shows that non-scalar particles in fact enforce an atelic reading, making a telic reading derived by implicature impossible.

(5) (a) I swam for 30 minutes. (atelic)
(b) I swam in 30 minutes today! (telic)
(c) *I swam around in 30 minutes today!

While non-scalar particles typically appear in atelic predicates, they can also appear in scalar telic predicates when the verb root itself is telic (6) or when a goal PP is present (7):

(6) (a) And then you came along.
(b) The keys on my keyboard swapped around. When I press ‘q’, an ‘a’ is typed.

[6] Contrary to (4a), McIntyre (2001) argues that non-scalar particles are incompatible even with non-quantized DOs, e.g. *he sang* (**opera*) *on/along*, unless the DO is “interpreted as the conceptual theme traversing a literal or metaphoric path suggested by the particle“ (ibid.: 132), e.g. *we asked some people around* ‘we asked some people to come to our place’ but *we asked* (**some people*) *around* ‘we asked various people’.

(7) (a) The current carried everything along to the island.
(b) We drove on to the camp.
(c) I swam along to the next beach.

Although the particles in (6–7) appear in scalar predicates, the particles themselves remain non-scalar: they provide information on the manner in which the action was carried out, which is a property of non-scalar verbs (see Section 6.2.1). For instance, the particle in (7b) has a clear continuative meaning, which can be paraphrased by *further*.[7] The non-scalarity of the particle does not affect the telicity determined by the verb or the PP – the telicity of the predicate remains intact. This means, at the same time, that the scalarity of the predicate remains intact despite the presence of a non-scalar particle, which is in accordance with the assumption that scalarity is built up monotonically.

### 6.3.3 Predicates with scalar particles

Particles *away*$_2$*, down, up, off, over, through* and *out* are scalar. They do not lexicalize a scale themselves but refer to a scale lexicalized in another element in the predicate (see Table 12). Scalar particles refer to three kinds of scales: (i) a path scale, e.g. (8a) and also *come up to someone*, *send a parcel out*), (ii) a property scale, e.g. the property of being open or closed (8b), brightness in *brighten up*, dullness in *dull down*, and (iii) a volume/extent scale, e.g. (8c), *read a book through*, *mow down the lawn*).

(8) (a) Juliet walked down to the store.
(b) Lucy closed down her business.
(c) Martin ate up a cupcake.

[7] Non-scalar particles appear in telic predicates only with physical (6a), (7a–c) or metaphorical (6b) path scales, and never with non-path verbs. More generally, predicates denoting path scales are the only scalar predicates that non-scalar particles appear in, as demonstrated by the unacceptability of non-scalar particles with property and volume/extent scales in (i). At present, I have no explanation for this restriction.

(i) (a) *Lucy closed along her business.
(b) *Lucy ate about an apple.
(c) *Lucy warmed around the soup.
(d) *A tomato ripened about.

Scalar particles can alter argument structure and mark telicity, but they do not do so in all cases. As these effects depend partly on the type of scale the particle refers to, the following subsections discuss scalar particles with the three different types of scales in turn.

#### 6.3.3.1 Scalar particles and path scales

Path scales are established by a path. Therefore the telicity of the predicate depends on the boundedness of the path, which is determined by the verb root, a PP, or a measure phrase. In the following example, (a) illustrates a bounded path, (b) an open path, and (c) a path that can receive either interpretation (Examples (9a) and (9b) are taken from Jackendoff 1996).

(9) (a) Bill pushed the cart into the house in/*for two minutes. (telic)
(b) Bill pushed the cart toward the house for/*in two minutes. (atelic)
(c) The climber descended for/in a few hours. (atelic/telic)

As (10) shows, the addition of a scalar particle does not override the original interpretation of the path in any of these cases. In other words, the telicity value does not change. Neither does the particle affect the argument structure of the verb root.

(10) (a) Bill pushed the cart off into the house in/*for two minutes. (telic)
(b) Bill pushed the cart off toward the house for/*in two minutes. (atelic)
(c) The climber descended down for/in a few hours. (atelic/telic)

In sum, in the case of path scales scalar particles do not mark telicity and do not alter the argument structure of the verb root.

#### 6.3.3.2 Scalar particles and property scales

Property scales are lexicalized in change of state verbs, e.g. *break*, *tear*, *die*. These are telic and remain telic when combined with a scalar particle (11).[8]

(11) (a) The wounded dinosaur died *for/in a short time. (telic)
(b) Dinosaurs died off *for/in a short time. (telic)

There are also change of state verbs which allow both an atelic and a telic interpretation, such as *cool, warm, brighten, dry, lengthen, slow* (for their scalar analysis, see Hay, Kennedy & Levin 1999). These are traditionally termed *degree achievement verbs* (since Dowty 1979). As (12–14) show, particles added to these verb roots do not remove their aspectual ambiguity: PVs like *cool down* (12), *warm up* (13), and *dry out* (14) occur in both atelic and telic predicates.[9]

(12) (a) When the sauce [...] has cooled down for just a few minutes, use a ladle to pour it on top of the drained spaghetti. (atelic)
(Example taken from http://answers.yourdictionary.com/answers/food-cooking/make-spaghetti-sauce.html, accessed March 10, 2011)
(b) The rooms were clean, and the air conditioning absolutely fantastic... cooled [*sic*] the room down in 5 minutes, and that is important in August when temperatures reached 35 degrees Celsius or more. (telic)
(Example taken from http://www.tripadvisor.com/ShowUserReviews-g187791-d674321-r45264501-Orange_Hotel-Rome_Lazio.html, accessed March 10, 2011)

[8] The meaning of these change of state verbs in combination with *in time* adverbials slightly differs from telic predicates such as *drink up a cup of coffee* with *in time* adverbials: only the latter imply that V-ing took place during the whole of the time period specified by the adverbial. The reason is that the former are punctual and the latter durative (achievements and accomplishments, respectively), see Dowty (1979: 59).

[9] Following Hay, Kennedy & Levin (1999) I propose that the telic reading of these and also other aspectually ambiguous predicates arises due to a pragmatic implicature. For instance, the culmination point in (12–13) is understood as an agreeable temperature in (12b) and a temperature at which a hair straightener can be used in (13b) rather than "a well-defined terminal point, beyond which the process cannot continue" (Comrie 1976: 45) – the room in (12b) can be cooled further and the straightener in (13b) can be warmed further after reaching the set temperature.

(13) (a) He always warmed up for about 15 minutes before his morning run. (atelic)
(Example taken from The Free Dictionary)

(b) Revlon Ceramic Hair Straighteners are designed to heat up very fast. If you are planning to use the straightener, then you can have it warmed up in ten seconds. (telic)
(Example taken from http://www.trueceramichairstraightener.com/revlon-ceramic-hair-straightener.html, accessed March 10, 2011)

(14) (a) It can be beneficial to let the tree dry out for a day or so as this increases the trees root growth. (atelic)
(Example taken from Cappelle 2005: 355)

(b) If the unit hasn't dried out in a week's time, any residual water is capable of causing shorts and some kind of permanent damage. (telic)
(Example taken from http://answers.google.com/answers/threadview?id= 44119 0, accessed March 10, 2011)

The event participant whose property is subject to change is realized either as a DO or unaccusative subject regardless of the particle:

(15) (a) The cook cooled the soup.
(b) The cook cooled the soup down.

(16) (a) The soup cooled.
(b) The soup cooled down.

I conclude that scalar particles do not affect the argument structure or the telicity value of property scale verb roots.

#### 6.3.3.3 Scalar particles and volume/extent scales

Volume/extent scales are lexicalized in a DO combined with a non-scalar verb (see Section 3.2). As this section shows, scalar particles can affect argument structure and

telicity value in the case of volume/extent scales, unlike with other types of scales.[10] Consider *read*, which is an optionally transitive verb (17a). Without a DO, the verb receives a non-scalar reading and the predicate is consequently atelic (17b). When the DO denotes an event participant that establishes a scale, for example the scale of the volume/extent of a book, the predicate is scalar and can be telic if this scale is interpreted as bounded (17c, see also note 12). Note that the atelic reading of *read a book* (17c) comes close to 'read from a book'.

(17) (a) You should read more/this book. (intransitive/transitive)
(b) Bill read for/*in two hours. (atelic)
(c) Bill read a book for/in two hours. (atelic/telic)

The addition of a scalar particle requires that the predicate be scalar. As scales require that the scale-establishing theme be realized (see 6.2.2), the resulting PV is obligatorily transitive (18a).[11] In addition, while *read a book* can be either telic or atelic, a particle added to this predicate enforces a telic reading (18b).

(18) (a) You should read *(this book) through. (transitive)
(b) Bill read a book through *for/in two hours. (telic)

It needs to be stressed again that although the particle signals that a volume/extent scale is bounded, it does not itself lexicalize a scale – instead, the scale is lexicalized in the DO. With some other predicates, their atelic or telic nature depends on the quantization of the DO – atelic ones contain non-quantized DOs (19a), telic ones quantized DOs

[10] The ability of scalar particle to alter argument structure extends also to DOs unselected by the verb root. Such cases are discussed in Section 6.4.
[11] An exception is intransitive *Come on, eat up!* While Van Hout (2000) suggests that its Dutch counterpart is elliptical, the English imperative *eat up* does not necessarily involve a bounded scale: when told to a child, it does not imply that she has to eat the whole meal but rather that she should get on with her eating, cf. also Rothstein's (2006) snippet on how the imperative weakens telicity in *eat your soup*. To account for this use of *eat up*, other similar cases, as well as Slovak prefix data (see Chapter 7) I tentatively propose the existence of another kind of scale not recognized in Rappaport Hovav (2008), namely one provided by a property of the action itself, such as intensity (emphasis) or temporal contour (ingressive, terminative aspects). English examples, though, seem to be rare and frequently occurring in the imperative, e.g. *Hey, wait up!* (wait up 'pause so that another person can catch up'), *Listen up, everybody!* (listen up 'listen closely'), *Come on pussy, man up!* (man up 'become more manly'), *Pinocchio thought this over for a minute* (think over 'think carefully').

(19b). In such cases, a particle is compatible with a quantized DO only (19c, d). The resulting predicate is telic (19d).

(19) (a) Mark drank coffee for/*in an hour. (atelic)
(b) Mark drank a cup of coffee *for/in an hour. (telic)
(c) *Mark drank up coffee.
(d) Mark drank up a cup of coffee *for/in an hour. (telic)

Definite and possessive noun phrases, e.g. *the coffee* and *his coffee* can be interpreted as either quantized or non-quantized (cf. Filip 2003: 60f.). For instance, (20a) can be interpreted as telic or atelic, see paraphrases. Also in such cases a particle added to the predicate enforces telicity (20b).

(20) (a) Mark drank his coffee for/in an hour. (atelic/telic)
'Mark drank coffee, which belonged to him, for/*in an hour.' (atelic)
'Mark drank a cup of coffee, which belonged to him, *for/in an hour.' (telic)
(b) Mark drank up his coffee *for/in an hour. (telic)
*'Mark drank coffee, which belonged to him, for/*in an hour.' (atelic)
'Mark drank a cup of coffee, which belonged to him, *for/in an hour.' (telic)

In doing so, the particle actually enforces a 'whole-like' reading of the DO, e.g. 'all of a specific quantity of his coffee' in (20b) and 'a whole book' in (18b).[12] So while the DO lexicalizes a scale, the scalar particle in these cases marks the endpoint of the scale, rendering it explicitly bounded.

Based on the above examples, I conclude that in the case of volume/extent scales, in contrast to other types of scales, scalar particles affect argument structure and enforce telicity. Yet do scalar particles always enforce telicity with this type of scale? An example that suggests that this is not the case can be found in Cappelle (2005: 355),

[12] This observation finds support in Filip's (1999: 226) Incremental Theme Hypothesis, stating that in Slavic languages verbal morphology, in particular aspectual, quantifies incremental theme arguments. Her hypothesis seems to extend to English particles, too.

who illustrates an atelic use of *build up* (21a). (21b, c) provide further examples of an atelic *build up* besides a telic one in (21d).

(21) (a) The anticipation had built up for quite a few weeks… (atelic)
(Example taken from Cappelle 2005: 355)

(b) Ms Way admitted a backlog of X-rays at the hospital had built up for two years before it came to the attention of the Trust. (atelic)
(Example taken from http://www.bbc.co.uk/news/uk-northern-ireland-12360989, accessed December 4, 2012)

(c) We've built up the anticipation for a week, and now that we've had our fun, it's time for a delicious climax. Metaphorically, of course. (atelic)
(Example taken from http://brownsheec.wordpress.com/sex-week/sw-2010/, accessed December 4, 2012)

(d) So, a few days ago I went out to see Toy Story 3, the anticipation built up in ten years too much to bear. (telic)
(Example taken from http://www.infobarrel.com/Toy_Story_3%3A_Not_ Your_ Average_Threequel, accessed March 10, 2011)

Does it mean that scalar particles do not mark telicity with all volume/extent scales or is there another condition that needs to be met for the telicity marking effect to occur? A closer examination of the examples in (21) reveals that *build up* is used in a very special way here. First, the theme is an abstract entity that is 'accumulated' rather than 'constructed'. Second, as a result of this meaning shift of *build*, the theme may be realized not only as a DO but also as an unaccusative subject (21a, b) – a pattern that we find in the PVs denoting property scales, in which the particle does not necessarily mark telicity.[13] The unaccusative construction and atelic interpretation is not available to *build up* in the 'construct' sense (22).

(22) (a) The first piglet built up his house *for/in a day.

(b) *A house built up at the bank of the river.

[13] This is not to say that the atelicity/telicity of English PVs and unergativity/unaccusativity go hand in hand, as suggested in Van Hout (2004) for Dutch verbs. I leave to future research the question why and to what extent unaccusativity is of significance for predicting the aspectual behaviour of PVs.

In other words, scalar particles mark telicity with volume/extent type scales only if the scale-establishing theme can be realized as a DO but not as an unaccusative subject. I conclude that referring to a volume/extent type of scale is a necessary but not sufficient condition for the scalar particle to function as a telicity marker.

### 6.3.4 Particles: telicity and scalarity

The examples in 6.3.2 and 6.3.3 have shown that particles in general do not mark telicity. Therefore, I propose that the primary function of the particle is to describe the change denoted in the verb root as scalar or non-scalar. Telicity marking is an additional effect that occurs when the particle refers to a bounded scale.

As demonstrated above, particles mark telicity only under certain conditions, namely when (i) the particle is scalar, (ii) there is a volume/extent scale lexicalized in the DO, and (iii) this DO cannot become the subject of the verb – in other words, the verb cannot detransitivize. Therefore, I propose the following:

(23) Scalar particles enforce telicity in a predicate in which a volume/extent scale is lexicalized in the DO which cannot become an unaccusative subject.

The generalization given in (23) explains the issue raised by Cappelle (2005), namely that some particles do not mark telicity, e.g. in *The Earth has warmed up* (see 2.4). In this predicate, a property scale is established by a change in the temperature of the Earth and lexicalized in the verb root. As we have seen, scalar particles do not remove the aspectual ambiguity of 'degree achievement' verbs, to which *warm* belongs. Another example of 'degree achievement' verbs is *brighten*. When combined with a particle, the resulting *brighten up* is, as noted by Cappelle & Chauvin (2010), ambiguous between the readings 'make bright' and 'make brighter' (see 2.4). On the reading 'make bright', the change is on a two-point scale, the two values being 'not bright' and 'bright'. On the reading 'make brighter', the PV expresses a change along a multi-point scale, the values referring to different degrees of brightness. This distinction has implications for telicity: while the former meaning is only associated with a

bounded scale and telicity, the latter can also be associated with an open scale and atelicity.

While Cappelle & Chauvin (ibid.: 250) acknowledge scalar meanings in some PVs, they reject the idea that aspectual PVs generally describe the change involved in the event as scalar. They do so on the basis of supposed counterexamples like *wrap up a present* or *lull somebody to sleep*, "which denote telic events with no internal quantifiable stages".[14] Such reasoning is probably grounded in the understanding of a scale as used in hard sciences, namely one that necessarily has more than just two points. However, acknowledging that a change that involves only two points is also scalar allows a uniform treatment of PVs.

### 6.3.5 Interim summary: Scalarity underlies the aspect of particles

This section has shown that particles are of two types. Non-scalar particles do not refer to a scale and do not affect the argument structure of the verb. They enforce atelicity in non-scalar predicates. Scalar particles refer to a scale and appear in scalar predicates only, as scalarity is built up in a monotonic and compositional fashion. Scalar particles can affect the argument structure of a verb root. They enforce telicity in volume/extent scales lexicalized in a DO. Particles thus systematically appear in atelic, telic, or aspectually ambiguous predicates depending on the type of the particle, the verb root and the verb arguments. An overview of different types of aspectual PVs in respect to scalarity can be found in Table 13.

[14] Originally reads as follows: "qui expriment des événements téliques sans phases internes quantifiables"; my translation.

| Type of PVs | | verb roots | particles | meaning of the particle | Can the particle | | examples |
|---|---|---|---|---|---|---|---|
| | | | | | mark telicity ? | alter the argument structure of the verb root? | |
| non-scalar | | process verbs | about, along, around away$_1$, on | manner: continuation, heedlessness | no | no | *play about, chat away, walk on, play around, swim about* |
| scalar | path | motion verbs* | | | no | no | *come along, walk on to the store* |
| | | | away$_2$, down, off, out, over, through, up | change along a scale, can signal goal or result | no | no | *descend down, send a parcel out* |
| | property | change of state verbs | | | no | no | *break up, slow down, dry out, warm up, cool down* |
| | volume /extent | incremental theme verbs | | | yes | yes | *eat an apple up, build up, write a paper over, dance the night away, sleep off a headache* |

**Table 13. An overview of aspectual PVs in the scalarity approach.**

*As discussed in 6.3.2, motion verbs have a peculiar property of being able to combine with both scalar and non-scalar particles.

## 6.4 Phrasal verbs and unselected objects

The proposed scalar analysis of particles opens new possibilities for looking at PVs with unselected objects, i.e. combinations of an intransitive verb root, a particle, and a DO, e.g. (24). As predicted by the hypothesis that scalarity is built up monotonically and

compositionally (see 6.2.3), scalar particles occur only in scalar predicates. This means that the presence of a scalar particle requires that the predicate be scalar and that the event participant establishing a scale be overtly realized. As a consequence, a scalar particle combined with a non-scalar and (optionally) intransitive verb root, e.g. *sleep* in (24a), *think, read*, forms a scalar and obligatorily transitive PV, e.g. (24b), *think out a plan, read a book through*, all of which generally mean 'to V until a particular state is reached'.[15] While the scalar particle in these examples renders a scale obligatory, it is not the particle but the DO that lexicalizes a scale – the PV without the DO is unacceptable (24c).

(24) (a) Vincent slept. (non-scalar, atelic)
(b) Vincent slept off his headache. (scale lexicalized in *his headache*, telic)
(c) *Vincent slept off. (scale removed)

The best known of the constructions with particles and unselected objects is the so-called 'time'-*away* construction (Jackendoff 1997). For Jackendoff (2002) the 'time'-*away* construction 'waste [$_{\text{Time}}$ NP] heedlessly V-ing', e.g. *dance the night away*, is distinct from PVs with *away* 'keep on V-ing', e.g. *talk away, waltz away*. Contra Jackendoff, I propose that the 'time'-*away* construction can be regarded as an aspectual PV with an unselected DO. Below, I show that the apparent differences between this construction and other PVs with *away* originate from the scalarity in the construction, lexicalized by the time-NP DO.[16]

While Jackendoff (1997) considers similarities between the 'time'-*away* construction and aspectual PVs with *away*, he asserts that they differ in telicity and the

[15] The effect concerns only aspectual meanings of particles, not directional ones, in which case the PV is not obligatorily transitive, e.g. *walk away, run off* (see the characteristics of literal and aspectual particles in Chapters 2 and 3).

[16] While it is not my intention to discuss the syntax of these PVs, the peculiarity of the DO selected by an intransitive verb root deserves a brief comment. PVs behave the same way as resultative constructions in that they can combine with an unselected DO, e.g. *John ran the soles of his shoes *(thin).* The meaning of the 'time'-*away* construction is not resultative, though. Jackendoff (1997: 550) makes this point clear using the example *Bill gambled his life away*:

> The 'time'-*away* reading [...] is one in which Bill has spent his whole life gambling; the resultative reading is one in which Bill has bet his life and lost (he ends up perhaps submitting to slavery or killing himself).

Jackendoff treats the DO in the 'time'-*away* construction as the object of the VP but not of the verb root alone.

possibility of modification. While the construction with a time-NP (25a) is telic, the corresponding PV without the NP (25b) is atelic.[17] Second, only the 'time'-*away* construction can be modified by a quantificational modifier (26). To these differences, I now add the possibility of particle omission: the particle can only be omitted in the PV without an NP (27).

(25) (a) Tom slept the morning away. 'Tom spent the morning sleeping.'
(b) Tom slept away. 'Tom slept heedlessly.'

(26) (a) Tom slept the morning entirely away.
(b) *Tom slept entirely away.

(27) (a) Tom slept the morning *(away).
(b) Tom slept (away).

However, all of these differences can be accounted for in the proposed scalar approach to particles. First, *sleep away* in the (b) examples of (25–27) is a non-scalar and as such atelic PV. In contrast, *sleep the morning away* in the (a) examples contains a volume/extent scale lexicalized in the time-NP in the DO position. This time-NP DO cannot become the unaccusative subject of the PV. Therefore, as follows from the generalization in (23), the predicate is telic. Second, a quantificational modifier such as *entirely* can be applied only to predicates with a quantized DO (28), or in other words, only to scalar predicates (26).

(28) (a) Tom ate an apple entirely. (quantized DO)
(b) *Tom ate rice entirely. (non-quantized DO)

As (26b) lacks a quantized DO, it does not allow for quantificational modification. Lastly, the scalar particle in (27a) cannot be omitted because of its effects on argument structure. The verb root *sleep* alone does not license an unselected object in **sleep the morning*. Therefore, the particle can only be omitted together with the DO, which also removes the scale, as in *Tom slept*.

[17] Standard telicity tests cannot be applied to the 'time'-*away* construction as it already contains a time adverbial (Jackendoff 1997: 540).

The same behaviour can be found in other constructions with PVs and unselected objects and their intransitive correspondents:

(29) (a) Elena drank her pain away. 'Elena drank until she stopped feeling pain.'
(b) Elena drank her pain entirely away.
(c) Elena drank her pain *(away).

(30) (a) Elena drank away. 'Elena drank heedlessly.'
(b) *Elena drank entirely away.
(c) Elena drank (away).

These examples confirm that the 'time'-*away* construction belongs to a family of constructions whose properties originate from the unselected object.

Nevertheless, there is an important difference between *away*-PV constructions with unselected objects and PVs with *away*, yet not at the level of the construction but of the particle, both semantically and syntactically. While *away* in non-scalar PVs, e.g. *drink away* (30), adds the meaning of heedlessness (cf. Celce-Murcia & Larsen-Freeman 1999: 432–433) and has no effect on argument structure, the *away* in constructions with an unselected DO, e.g. (29), affects the argument structure of the verb root, making the PV obligatorily transitive. Moreover, it marks a boundary on the scale lexicalized in the 'time'-NP. Therefore we are dealing with two *away*s, a non-scalar and a scalar one, with different semantic contributions and effects on argument structure.

What all this evidence points to is that the essential difference between aspectual PVs with *away* and the 'time'-*away* construction is that the latter contains a scale lexicalized in the time expression NP. Treating the 'time'-*away* construction as distinct from PVs is therefore not necessary. Instead, the 'time'-*away* construction can be considered an aspectual PV whose semantic properties can be explained by the scale lexicalized in the time expression that functions as the DO of the VP.

## 6.5 Summary

This chapter has analyzed English aspectual particles and PVs in terms of scalarity. This approach covers all aspectual particles, accounts for the aspectual ambiguity of some PVs and predicts when particles mark telicity and when not. I have argued that particles come in two kinds, scalar and non-scalar. Non-scalar particles (*about, along, around, away*$_1$, and *on*) appear in non-scalar predicates or scalar predicates which denote a path, but not with scalar predicates denoting a change in a property, volume or extent of the theme. Scalar particles (*away*$_2$, *down, off, out, through, up, over*), on the other hand, require the presence of a scale established by a path or by a suitable theme. Scalar particles refer to the property, path, or volume/extent scale lexicalized in a verb, DO, goal PP or measure phrase. The effect of telicity marking is restricted to scalar particles referring to a scale of volume/extent lexicalized in the DO which cannot become the unaccusative subject. The data suggest that scalarity is a feature that is built up compositionally and monotonically.

# 7 Aspect(s) of English particles and Slovak prefixes

This chapter aims to show how the theory of situation aspect based on scalarity can be applied cross-linguistically by comparing English aspectual particles to their functional counterparts in Slovak, namely prefixes.[1] While the chapter presents data well-known from other Slavic languages, it offers a new perspective for analyzing these data from. By comparing the aspectual properties of verbal satellites in two typologically different languages I advocate the cross-linguistic validity of the scalar theory of situation aspect. In addition, this analysis provides an aspectual account for the distinction between external (superlexical) and internal (lexical) prefixes in Slavic languages (e.g. Di Sciullo & Slabakova 2005, Gehrke 2004, Svenonius 2004, among others).

## 7.1 Introduction

Let me briefly summarize the theory of situation aspect based on scales introduced in Chapter 6 (found in various forms in e.g. Beavers 2008, Filip 2008, Hay, Kennedy & Levin 1999, Jackendoff 1996, Smollett 2004, Rappaport Hovav 2008, Rappaport Hovav & Levin 2010, Tenny 1994). Dynamic verbs and verb phrases are either non-scalar (e.g. *play, laugh, exercise*) or scalar (e.g. *ascend, run a mile, warm, eat an apple*), depending on whether they denote a change ordered along a scale or not. Scales can be open (e.g. *lengthen, slow, ascend*) or bounded (e.g. *flatten, enter, die*). The latter always underlie telic predicates. Moreover, scales can be two-point (in punctual verbs, e.g. *die, come*) or multi-point (in durative verbs, e.g. *warm, eat an apple*). In addition, scales can measure a path (e.g. *run a mile*) or a verb argument's property (e.g. *cool*) or a volume or extent (e.g. *eat an apple*).

Taking the scalar theory of aspect as a framework, I propose that both English aspectual particles and Slovak aspectual prefixes describe the change denoted in the verb root as scalar or non-scalar, and thus fall into two types (scalar particles/prefixes and non-scalar particles/prefixes). The advantages of this theory relevant for an analysis

[1] I do not address particles and prefixes in their directional uses (in motion events) e.g. *bring up* 'fetch upwards', *take in* 'take inside'; *v-behnúť* in-run 'run into', *od-letieť* away-fly 'fly away', or non-compositional (idiomatic) uses, e.g. *put off* 'delay', *pass away* 'die'; *u-tiecť* PREF-flow 'run away', *zá-vidieť* PREF-see 'envy'; cf. e.g. Celce-Murcia & Larsen-Freeman (1999: 432–433) and Jackendoff (2002) for English particles.

of particles and prefixes are the following. First, it exhaustively covers the data, as it allows one to deal also with particles that mark telicity as well as particles that do not mark telicity by treating them as either scalar or non-scalar (see Chapter 6). A similar difference in telicity marking has been observed for Slavic prefixes: internal/lexical prefixes but not external/superlexical prefixes mark telicity (e.g. Di Sciullo & Slabakova 2005, Svenonius 2004). My analysis of Slovak aspectual prefixes not only covers both types of prefixes, considering them as scalar and non-scalar, respectively, but also gives an aspectual account for the existence of two types of prefixes.

Second, the scalar theory of situation aspect offers an explanation of argument structure alternations. Scales require that the participant they measure be overtly expressed (Rappaport Hovav 2008: 24). It follows that a telic predicate, or scalar in general, must express a measured participant, e.g. *eat, read* (non-scalar) – *eat an apple, read a book* (scalar). As scalar particles and prefixes appear in scalar predicates only (see the discussion of the monotonicity and compositionality of scalarity in Chapter 6), their presence in a predicate makes the realization of a measured participant obligatory. This participant is either the unaccusative subject (e.g. *the lake froze up, the soup cooled down*) or the direct object (e.g. *the nurse cooled down the soup, the child read a book through*). Particles and prefixes can alter the argument structure of (optionally) intransitive verbs, turning them into obligatorily transitive PVs or prefixed verbs. As this subsumes also complex predicates with unselected objects, e.g. *dance the night away, sleep off a headache*, no separate treatment of these is necessary as far as aspect is concerned (contra Jackendoff 1997).

Third, the scalar theory allows us to explain how the aspectual properties of the predicate can change with the addition of syntactic elements, such as a DO or a measure phrase, e.g. *Jake read* (atelic) – *Jake read a book* (atelic/telic; see 1.3.3), *Jake ate* (atelic) – *Jake ate an apple* (telic), *The lake cooled* (atelic/telic) – *The lake cooled four degrees* (telic). In the scalar analysis, these syntactic elements either introduce a scale (*a book, an apple*) into the predicate, making it potentially telic, or mark a bound on the scale already present in the predicate (*four degrees*), making the predicate unambiguously telic. As particles and prefixes can change the aspectual properties of predicates (e.g. atelic/telic *read a book* – telic *read a book through*, and the Slovak counterparts atelic *čítať knihu* – telic *pre-čítať knihu*), the scalar theory of situation

aspect is a suitable framework of analysis. Namely, particles and prefixes can mark a bound on an open scale denoted in a predicate and thus function as telicity markers (e.g. *read a book* can be interpreted as involving an open scale, while *through* in *read a book through* marks a bound on the scale). Otherwise, particles and prefixes (that is to say, the scalar ones) require that the predicate be scalar, i.e. that a scale be present in the predicate, lexicalized in a suitable syntactic element, e.g. *eat Ø/porridge/an apple – eat up *Ø/*porridge/an apple*. It has to be noted, though, that particles and prefixes do not lexicalize a scale themselves.

This dissertation treats situation aspect in the lexical semantic framework in which aspectual features are built up in a monotonic compositional fashion (e.g. Olsen 1994, Rappaport Hovav & Levin 1998; see 1.2.4). Thus syntactic elements can expand a stative predicate into a dynamic one (e.g. stative *John resembles his father* – dynamic *John is resembling his father more and more*), a non-scalar into a scalar (e.g. non-scalar *read* – scalar *read a book*) and an atelic into a telic one (e.g. atelic *run* – telic *run a mile*). However, only certain elements can do so, namely if they are marked for a feature (e.g. atelic *run* – telic *run a mile* – atelic *run miles*). I follow Olsen (1994) in treating aspectual features as privative rather than equipollent. Marked features (+dynamic, +scalar, +telic) determine the overall aspect of a predicate and thus can override unmarked features (0dynamic, 0scalar, 0telic). Therefore, a 'clash' occurring between two (or more) elements with different aspectual values presents no problem, e.g. *hear* [0dynamic] + *out* [+dynamic] = *hear out* [+dynamic]. Similarly, a doubled contribution of elements is not problematic, e.g. *walk* [+dynamic] + *on* [+dynamic] = *walk on* [+dynamic]. Notice also that the doubled contribution goes beyond complex verbs, e.g. *come* [+telic] + *to the store* [+telic] = *come to the store* [+telic].

If particles and prefixes describe the change denoted in the predicate as either scalar or non-scalar, as I propose, then, taking into account the monotonicity and compositionality of aspectual features (dynamicity, scalarity, telicity), the following predictions hold:

(1) If particles and prefixes describe the change denoted in the predicate, they cannot appear in stative complex verbs, as states do not denote any change, either scalar or non-scalar. Therefore, PVs and prefixed verbs are dynamic.

(2) Scalar particles and prefixes can alter argument structure, since scales require an obligatory realization of the measured event participant. This effect is not obligatory, as it only concerns verb roots that are (optionally) intransitive. Non-scalar particles and prefixes do not alter argument structure.

(3) Since the denotation of a telic predicate must contain a bounded scale, only scalar particles and prefixes, but not non-scalar ones, can turn atelic predicates into telic ones. Nevertheless, scalar particles and prefixes do not necessarily mark telicity, as when they refer to open scales.

The rest of this chapter supports these predictions in turn with data from English and Slovak (Sections 7.2 – 7.4). The similarities and differences between the two languages are pointed out. Section 7.5 compares my account to previous ones and the last section summarizes.

## 7.2 Particles, prefixes and stativity

Given the monotonicity and compositionality of dynamicity (see previous section), a dynamic complex verb contains at least one element that is +dynamic (the other element being +dynamic or 0dynamic), while a stative complex verb contains only elements that are 0dynamic. It follows that stative complex verbs can contain stative but not dynamic verb roots, whereas stative verb roots can be part of stative or dynamic complex verbs. However, English "[s]tative verbs such as *know, want, see, hear, hope, resemble,* etc. practically never combine with a particle", as Fraser (1976: 11) observes.[2] The few exceptions result in dynamic PVs (4 – 5).

(4) (a) Did you hear that? (*hear*, stative)

(b) Please, hear me out! (*hear out* 'listen to everything one wants to say', dynamic)

[2] This dissertation only considers prototypical stative verbs, such as verbs of perception or mental attitude, as stative (cf. e.g. Novakov 2009). Therefore, I consider verb roots such as *sleep* and *sit* with an agentive subject as dynamic.

(5) (a) The garlic smells. (*smell* stative)
(b) The garlic smelled out the kitchen. (*smell out* 'fill with smell', dynamic)
(c) The dog smelled out the drugs. (*smell out* 'find by smelling', dynamic)

In Slovak, prefixes freely combine with stative verbs. The resulting prefixed verbs are dynamic, with an inchoative meaning (6–7). (Mlynarczik 2004: 129 arrives at the same conclusion for Polish prefixes.)

(6) (a) Anna milovala Jozefa. (stative)
Anne loved Joseph
'Anne loved Joseph.'

(b) Anna sa za-milovala do Jozefa. (dynamic)
Anne REFL PREF-loved into Joseph
'Anne fell in love with Joseph.'

(7) (a) Chlapec videl mačku. (stative)
boy saw cat
'The boy saw a cat.'
(b) Chlapec u-videl mačku. (dynamic)
boy PREF-saw cat
'The boy spotted a cat.'

Since complex verbs can be stative only if they contain a stative verb root, and as prefixes and particles turn stative verb roots into dynamic complex verbs, I conclude that the prediction postulated in (1) holds: PVs and prefixed verbs are dynamic. This supports the hypothesis that particles and prefixes describe the change denoted in the predicate.

## 7.3 Particles, prefixes and argument structure

Particles and prefixes differ in their ability to alter argument structure, depending on whether they are scalar or non-scalar. Non-scalar particles (e.g. in *sleep away, walk on,*

*play around*) and prefixes appear in predicates in which there is no scale established by the theme's change of position, property, or volume/extent. They do not alter argument structure (8, 9).

(8) (a) John and Mary danced.
(b) John and Mary danced away. 'John and Mary kept on dancing.'[3]

(9) (a) Dieťa (si) spievalo.
child (REFL) sang
'The child sang (for him/herself).'
(b) Dieťa (si) za-spievalo.[4]
child (REFL) PREF-sang
'The child sang (for him/herself) (for some time).'

While non-scalar particles have a continuative meaning (e.g. Celce-Murcia & Larsen-Freeman 1999: 432), prefixes have an attenuative ('a bit') and/or autobenefactive ('for oneself') meaning. The latter meaning is additionally carried in Slovak by the reflexive marker *si*, which combines with both prefixed and non-prefixed verb roots. *Si* is optional in both cases, although it may be pragmatically (dis)preferred in some contexts. I therefore do not consider (9) as a counterexample to prediction (2).

Scalar particles appear in predicates in which a scale is established by the theme's change of position along a path, e.g. *come up to someone, pri-behnúť* 'come running', the theme's change in property, such as temperature, e.g. *cool down, zo-hriať polievku* 'warm up the soup', or the theme's volume/extent incrementally involved in the event, e.g. *eat up an apple, po-staviť vežu* 'build a tower'. Scalar particles and prefixes in these predicates express a result or goal.

Scalar particles can alter argument structure, turning an optionally transitive verb root into an obligatorily transitive PV (10). PVs containing scalar particles can also

[3] As discussed in Chapter 6, aspectual *away* can be either non-scalar (in intransitive PVs) or scalar (in transitive PVs). Note that the PVs with non-scalar *away* can occur in conative frames, e.g. *Billy bashed away at the piano* (example from Jackendoff 1997: 540).
[4] The same prefix can be used with a scalar meaning in *Dieťa (si) za-spievalo pesničku* 'The child sang a song (to self)', where a scale is lexicalized in the DO. This DO should not be viewed as a counterexample to the claim that non-scalar particles do not alter argument structure but rather as a manifestation of the fact that one and the same form can have both non-scalar and scalar uses (see also previous note).

license a DO unselected by the verb root (11).[5] This effect depends on the transitivity of the verb root: scalar particles do not alter argument structure of obligatorily transitive verb roots (12).

(10) (a) Lisa drank (her milk).
(b) Lisa drank up *(her milk).

(11) (a) Ally slept *a headache.
(b) Ally slept off *(a headache).

(12) (a) I sent *(a parcel) to my sister.
(b) I sent off *(a parcel) to my sister.

Scalar prefixes have the same effect on argument structure (13), including unselected DOs (14), unless the verb root is obligatorily transitive (15) (cf. e.g. Di Sciullo & Slabakova 2005, Svenonius 2004).

(13) (a) Líza pila (mlieko).
Lisa drank (milk)
'Lisa drank (milk)'.
(b) Líza vy-pila *(mlieko).
Lisa PREF-drank *(milk)
'Lisa drank up *([a certain amount of] milk)'.

(14) (a) Víly tancovali *noc.
fairies danced *night
'The fairies danced *the night.'
(b) Víly pre-tancovali *(noc).
fairies PREF-danced *(night)
'The fairies danced *(the night) away.'

[5] In this respect, both prefixed verbs and PVs behave like resultative constructions, e.g. *run the soles of your shoes *(bare)* (see Chapter 6). According to Jackendoff's (1997) analysis of the so-called 'time'-*away* construction, the unselected DO is the DO of the verb phrase rather than of the verb itself. I suggest this holds not only for English scalar particles but also for Slovak scalar prefixes (see below).

(15) (a) Gazda na poli pestoval *(zemiaky).
farmer on field grew potatoes
'The farmer grew potatoes on the field.'

(b) Gazda na poli vy-pestoval *(zemiaky).
farmer on field PREF-grew potatoes
'The farmer grew (some) potatoes on the field.'

Slovak also has a special case of an argument structure effect that is not observed in English. In (16b), the prefixed verb licenses an obligatory reflexive marker *sa* unselected by the verb root.[6] This reflexive marker refers to the argument that measures out the event. It manifests the ability of scalar prefixes to alter argument structure and is therefore different from the optional autobenefactive marker *si* that combines with non-scalar prefixes (9).

(16) (a) Otec *sa jedol.
father *REFL ate
'Father ate.'

(b) Otec *(sa) na-jedol.
father *(REFL) PREF-ate
'Father ate (himself full).'

Such a case arises when the scale is lexicalized in the subject argument – the event is delimited by the hunger/fullness of the *father*, realized as the subject argument in (16b). Such a case is not accounted for in Rappaport Hovav (2008), which is based on English data (cf. the English translation of (16b) by a resultative phrase). This type of scale is difficult to classify in Rappaport Hovav's (2008) framework. While volume/extent may seem the closest type for (16b), given the cognitive link between

[6] As pointed out to me by Jack Hoeksema, similar cases are found in Dutch, e.g. (i).
(i) (a) De student sliep *zich.
the student slept *himself.
'The student slept.'
(b) De student ver-sliep *(zich).
the student PREF-slept *(himself).
'The student overslept.'

volume and 'fullness' as opposite to hunger, the same choice may be questioned for *Otec sa vy-spal* 'Father slept (enough)'. Both carry a meaning component of 'to satisfaction'. Further examples of scalar verbs that are difficult to classify are e.g. *do-jesť* 'finish eating', *na-kúpiť* 'to buy a lot', and *na-fajčiť* 'to make a lot of smoke by smoking'. These data suggest that Rappaport Hovav's classification of scales might need to be adjusted for application to other languages. I tentatively assume the existence of a scale that measures a property of the event itself, such as intensity or temporal contour. (See also note 11 in Chapter 6.) For now, I leave the issue to future research.

Some forms, such as *away, za-*, and *po-*, can function either as non-scalar, in intransitive complex verbs, or as scalar in their transitive uses, e.g. *dance away* 'keep on dancing' (non-scalar) – *dance away 5 kilos/my depression* 'to make 5 kilos/my depression go away by dancing' (scalar); *za-spievať (si)* 'sing (for some time)' (non-scalar) – *za-spievať (si) pesničku* 'sing a song' (scalar); *po-spať (si)* 'sleep (for some time)' (non-scalar) – *po-šliapať trávnik* 'trample a lawn' (scalar). It also has to be noted that English has a richer variety of non-scalar particles (*about, along, (a)round, away*$_1$, *on*) than Slovak (*po-*$_1$ and *za-*$_1$). In addition, Slovak lacks exclusively non-scalar particles, since *po-* and *za-* can also be used as scalar (see the examples above). In contrast, out of English non-scalar particles only *away* can also function as scalar.

To sum up, this section supports prediction (2): Scalar but not non-scalar particles and prefixes alter argument structure.

## 7.4 Particles, prefixes and telicity

This section reviews the ability of particles and prefixes to mark telicity. Non-scalar particles and prefixes do not mark telicity (17, 18).

(17) (a) The children walked in silence for/*in a long time. (atelic)
(b) The children walked on in silence for/*in a long time. (atelic)

(18) (a) Ján (si) (*za) hodinu spal. (atelic)
John (REFL) (*in) hour slept
'John slept for/*in an hour.'

(b) Ján (si) (*za) hodinu po-spal. (atelic)
John (REFL) (*in) hour PREF-slept
'John slept for/*in an hour.'

Contra Filip (1999: 201–203), I do not consider perfective prefixed verbs with delimitative *po-* (18b) telic, since they do not denote an event with an inherent culmination point but merely an event with an arbitrary endpoint, that is, a temporally bounded process. The atelicity of these verbs is manifested by the acceptability of occurrence with *for time* adverbials. With an *in time* adverbial the verb has only an ingressive reading, which points to its atelicity (cf. Chapter 1).

Scalar particles can mark telicity (19) but they do not always do so, as in (20b), which retains both an atelic and a telic interpretation despite the presence of *up*. (The telicity marking effect of scalar particles depends partly on the type of scale lexicalized in the predicate, see Chapter 6.)

(19) (a) Lisa drank her milk for/in five minutes. (atelic/telic)
(b) Lisa drank up her milk *for/in five minutes. (telic)

(20) (a) Grandma warmed the soup for/in five minutes. (atelic/telic)
(b) Grandma warmed up the soup for/in five minutes. (atelic/telic)

Scalar prefixes mark telicity (21) but unlike English particles, they always do so, that is, regardless of the type of scale (22).[7] (Milićević (2004: 291) finds the same for Serbo-Croatian.)

[7] At present I have no explanation why scalar prefixes, unlike scalar particles, always mark telicity. This seems to be part of the parametric variation among languages in the encoding of telicity (see e.g. Filip 2004, van Hout 2008 and references therein). Telicity in English is a compositional property of the verb phrase rather than the verb only, as it depends not only on the verb root, but also DO, PP, measure phrase and/or particles. In contrast, Slavic languages exploit a 'verb-marking strategy' to encode telicity, i.e. telicity in Slavic languages is dependent on the verb only and not on other sentence elements. This phenomenon is not directly related to the absence of articles in Slavic languages (note that articles play a major role in marking telicity via quantification in English, e.g. atelic *eat apples* – telic *eat an apple*), as it

(21) (a) Líza pila mlieko (*za) päť minút. (atelic)
Lisa drank milk (*in) five minutes
'Lisa drank milk for/*in five minutes.'

(b) Líza vy-pila mlieko *(za) päť minút. (telic)
Lisa PREF-drank milk *(in) five minutes
'Lisa drank up the milk *for/in five minutes.'

(22) (a) Babka hriala polievku (*za) päť minút. (atelic)
grandma warmed soup (*in) five minutes
'Grandma warmed the soup for/*in five minutes.'

(b) Babka zo-hriala polievku *(za) päť minút. (telic)
grandma PREF-warmed soup *(in) in five minutes
'Grandma warmed up the soup *for/in five minutes.'

In addition, prefixes mark not only telicity (situation aspect) but also perfectivity (grammatical aspect, see Chapter 1). Perfectivity marking concerns both types of prefixes: (21b), 22(b) and also (18b) are all perfective. The interaction between situation and grammatical aspect has an important consequence: It has to be noted that testing telicity in (21a, 22a) is problematic due to the fact that the unprefixed verbs are imperfective. What is crucial for determining telicity is whether the predicate denotes an inherent culmination endpoint of a situation; imperfective aspect, however, views only part of a situation and thus does not include its endpoint (see Chapter 1). The imperfective simply does not 'see' the endpoint and imperfective verbs always appear as atelic (cf. Smith 1997: 231–234). However, I assume (21a, 22a) to be uncontroversially atelic, with the verbs referring to the processes of milk drinking and soup warming without a culmination point and roughly corresponding to 'engage in a drinking process' and 'cause to become warmer', respectively.

The same applies to the so-called secondary imperfectives, i.e. imperfective verbs composed of a perfective prefixed stem and an imperfectivizing suffix, which in a way over-rules the original perfective value of the prefixed stem, e.g. *zo-hrie-vať* PREF-warm-SUFF 'warm' (imperfective). I propose that a scalar prefix in secondary

is not restricted to Slavic languages which lack articles but applies also to Slavic languages with articles, as suggested by Di Sciullo & Slabakova's (2005) study of Bulgarian.

imperfectives marks not only perfectivity but also telicity, so the prefixed stem is perfective and telic. However, the culmination point is not visible in the imperfective (grammatical) aspect, so a secondary imperfective verb appears as atelic. Therefore, the existence of secondary imperfectives does not run counter to the claim that scalar prefixes always mark telicity. Instead, grammatical and situation aspect should be treated separately (e.g. Borik & Reinhart 2004, Smith 1997, de Swart 1998), with the former functioning as an aspectual operator over the latter.

This section has shown that scalar but not non-scalar particles and prefixes mark telicity, providing support for prediction (3). While the telicity marking effect is obligatory for prefixes, for particles it is optional and dependent on the type of scale.

## 7.5 Comparison with previous accounts

I have shown that the predictions postulated in (1–3) hold for both English particles and Slavic prefixes: (i) Prefixed verbs and PVs are dynamic. There are two kinds of particles and prefixes with different effects on argument structure and telicity:[8] scalar but not non-scalar particles and prefixes can (ii) alter argument structure and (iii) mark telicity.

While there exists literature on Slavic prefixes that distinguishes between two types of prefixes (see below), a systematic distinction for English particles has been lacking. To the best of my knowledge, the only exception is McIntyre's (2001, 2004, 2007) distinction between intransitive and transitive (atransitive and non-atransitive in McIntyre's terms) uses of particles. His distinction roughly corresponds to mine. At the same time, though, McIntyre (2001: 136–137 *et passim*) rejects a connection between transitivity and telicity because the two do not correlate; namely, non-scalar particles block all kinds of direct objects, not only those which delimit an event, e.g. *he played (*his guitar) along/around/away/on* (but see my attested example (4a) in Chapter 6). Both in this chapter and the preceding ones I have provided evidence in favour of the correlation between the two types of particles, transitivity and aspect. I therefore do not

[8] See van Hout (1996) for similar observations in Dutch, e.g. *door-schrijven* 'write on', *mee-lezen* 'read along' (intransitive, atelic) – *af-schrijven* 'finish writing', *op-eten* 'eat up', *uit-lezen* 'finish reading' (transitive, telic). In my interpretation, particles *door* 'on' and *mee* 'along' are non-scalar and particles such as *af* 'off', *op* 'up' and *uit* 'out' are scalar. Van Hout (ibid.: 96f.) also notes that *door* is ambiguous between the two uses, just like English *away* and Slovak *za-* and *po-*.

uphold McIntyre's conclusion. I assume instead that there may be additional factors which cause non-scalar particles to block DOs, an issue that future research should address.

For Slavic prefixes, a distinction has been made between internal (or lexical) and external (or superlexical) prefixes, in e.g. Di Sciullo & Slabakova (2005), Gehrke (2004), Svenonius (2004). According to this literature, only internal prefixes can mark telicity and cause argument structure alternations. Besides aspectual meanings, they also have spatial and idiosyncratic meanings. They cannot stack on top of other prefixes. Syntactically, they originate inside a verb phrase (VP). In contrast, external prefixes mark temporal boundedness (perfectivity) but not telicity. They have aspectual and quantificational meanings. They originate outside a VP. My analysis makes a parallel distinction, the internal (i.e. lexical) prefixes being scalar and the external (i.e. superlexical) ones being non-scalar in my account. My account offers a deeper insight into the distinction by arguing that the underlying scalarity is a necessary condition for telicity marking and argument alternation effects to occur. Moreover, the present account discusses the dynamicity marking effect of prefixes on stative verbs.

There are also other accounts of Slavic prefixes based on an underlying scalar structure, e.g. Filip (2008), Kagan (2012), and Součková (2004). In Filip's (2008: 217) account, scales underlie telicity, too, and prefixes play a role in specifying the scale. Along the lines of Filip's earlier work, Součková (2004) discusses Czech *po-* and argues that the different meanings of *po-* can receive a unified analysis when understood as containing an extensive measure function of events. This prefix can either measure or delimit the event. According to Kagan (2012), who discusses Russian *pod-* and *do-*, "the major semantic function of a prefix is to impose a certain relation between two degrees on a scale". The difference between these accounts and mine is that the former treat my non-scalar prefixes as scalar ones, the scale being one of time. McIntyre (2004: 529) proposes something similar for non-scalar English particles:

"The description EXTENDED AND UNINTERRUPTED, which applies to the relevant spatial reading of *on*, also applies here, except what is extended and uninterrupted is the course of the event rather than the path of an entity. I assume that the intuitive notion of an event's course is conceptualizable as a path followed by the event through time."

An approach that treats all prefixes (and particles) as scalar fails to explain the different effects the two types of particles and prefixes have on argument structure and telicity. Kagan (2012) ascribes these differences to lexical vs. superlexical uses of a particular prefix without referring to what constitutes the aspectual basis for the distinction. Contrary to that, my analysis predicts the difference in behaviour of the two types of prefixes by considering the underlying scalarity necessary for these effects to occur.

## 7.6 Summary

This chapter has argued that the scalarity theory of situation aspect offers a comprehensive framework for analyzing the aspectual properties of English particles and Slovak prefixes in a unified way. I have shown that PVs and prefixed verbs exhibit systematic behaviour in terms of dynamicity, telicity, and argument structure effects. These phenomena can be successfully analyzed in terms of scalarity. While the data demonstrate the predictive power of a theory of situation aspect based on scales, they also reveal weaknesses that still need to be addressed by the theory when applied cross-linguistically. In particular, future research should aim at discovering whether there are also other types of scales beyond the basic three (path, property, volume/extent), and whether there is further parametric variation among languages in relation to scales.

# 8 *Up* and *down* the scale: Phrasal verbs with 'degree achievement' verb roots

This chapter further extends the theory of aspectual particles based on scalarity by drawing a link between the spatial and the aspectual meanings of particles via a metaphor. Chapter 6 has argued that English aspectual particles describe the change in dynamic verb roots as scalar or nonscalar. In the present chapter I argue more particularly that particles specify the scale lexicalized in the verb root by determining its direction. This claim is illustrated with a case study of particle verbs formed by a 'degree achievement' verb root and the particle *up* or *down*.

## 8.1 Introduction

As suggested in Chapter 5, particles do not always mark telicity. Chapter 6 has argued instead that particles in PVs describe the change denoted in the verb root as scalar or non-scalar. In the case of scalar verbs, particles refer to a scalar change. According to the 'one scale only' restriction (Rappaport Hovav 2008, Tenny 1994), a predicate denotation can only involve a single scale; if a predicate contains more than one scalar element, one of these elements introduces a scale and the other(s) serve(s) to specify that scale, as for instance, the resultative phrase in *We steamed the clothes dry/stiff/clean*. A particle does not introduce a new scale but specifies the scale already present in the predicate and lexicalized in the verb or DO. One kind of possible specification is marking a boundary on the scale, as in the case of volume/extent scales. This is not the case, however, with property scales lexicalized in 'degree achievement' (DA) verbs,[1] such as *cool, widen,* and *age*. 'Degree achievement' verbs vary in the extent to which they tend to be telic or atelic, depending also on the context (see e.g. Hay 1998, Hay, Kennedy & Levin 1999, Kennedy & Levin 2008). As I argue in Chapter 6, property verb roots (to which DA verb roots belong) which are aspectually

[1] The term goes back to Dowty (1979: 88–90) and refers to verbs which are derived mostly from gradable adjectives and which, according to Dowty, are achievements. Hay, Kennedy & Levin (1999) call into question the assumption that DA verbs are achievements and show that they behave like activities and accomplishments.

ambiguous remain ambiguous even with a particle. Therefore, this chapter does not focus on the (a)telicity of DA (phrasal) verbs but instead focuses on scales.

In what sense, then, do particles specify property scales? Scales are essentially paths (cf. e.g. Beavers 2009, Jackendoff 1996, Krifka 1998) and as such have a direction. I propose that scalar particles determine the direction of a property scale via their spatial meanings. I will now provide support for this proposal with a case study of PVs with 'degree achievement' verb roots and particles *up* and *down*. Section 8.2 discusses directions of scales and a related phenomenon of markedness. It also introduces a hypothesis and predictions. The next two sections present data from two complementary sources – corpus (8.3) and dictionaries (8.4). I then discuss both types of data and draw conclusions from them (8.5). Section 8.6 briefly draws implications for future research on particles. Finally, the last section concludes.

## 8.2 Directions of scales and markedness

Particles *up* and *down* refer to two ends of a vertical axis. As follows from the one-scale-only restriction (see 8.1), particles do not introduce a scale of their own when combined with property verb roots but instead specify the scale lexicalized in the verb root. I propose that this specification means determining the direction of a scale (a non-spatial path) and assume that the property scale in the verb root should be aligned with the vertical axis of *up*/*down*. Put differently, a property scale lexicalized in a verb root should be conceived of as vertical when the verb root is combined with a particle of a vertical axis such as *up* or *down*. I will now describe how property scales can be presented as vertical, and the implications arising therefrom, starting with the characterization of 'degree achievement' (DA) verbs.

DA verbs are verbs derived from gradable adjectives; they describe a change in a property of a verb argument, such as *cool* describing a change in the temperature of the soup in (1). The degrees of the property (such as temperature in (1)) constitute a scale that underlies the situation aspect of the verb (a property scale, see Chapter 6).

(1) The soup cooled. (atelic/telic)

While several verbs can refer to one and the same scale, not all of them necessarily refer to the same end of the scale. For instance, verbs *cool, warm,* and *heat* all refer to a temperature scale yet, since they are antonymous, *cool* refers to lowering temperature and *warm* and *heat* to rising temperature. The temperature scale can be presented as vertical based on the UP IS MORE (DOWN IS LESS) metaphor (Lakoff & Johnson 1980), cf. e.g. *the average temperature went up/rose/went down/dropped*. On a vertical temperature scale, therefore, *cool* refers to the lower end of the scale, while *warm* and *heat* refer to the upper end of the scale – a vertical thermometer has low temperatures below high ones (cf. also Hay 1998). Similarly, other property scales can be presented as vertical, too, with one type of verbs having a 'positive value' and as such referring to the upper end of a scale, and the other type of verbs having a 'negative value' and referring to the lower end of a scale. Notice that you can, for instance, 'add' *brightness, light, speed, warmth, depth, length* ('positive value' nouns) but you cannot 'add' *dim-ness, darkness, slow-ness, cool-ness, narrow-ness* or *short-ness* ('negative value' nouns): in order to do the latter, you need to reduce the former. For example, one cannot darken a room in any other way than by preventing light from entering the room; one cannot make a long piece of ribbon shorter other than by removing part of it, etc.

The words which refer to the upper end of a property scale in a way also cover the meaning of the words referring to the lower end of the scale. Consider how we talk about measurements using the 'positive value' adjectives, e.g. *How deep/?shallow is the lake? It's 1m deep/*shallow.* While *shallow* in *How shallow is the lake?* presupposes that the lake is indeed shallow, the same is not true about *How deep is the lake?* – such a question can be asked regardless of whether the speaker thinks the lake is (or is not) deep. Similarly, general measurement terms are derived from the 'positive value' adjectives, not 'negative value' ones, e.g. *depth, length, width*. In sum, 'positive value' terms can sometimes be used to refer to both positive and negative values of the scale; for instance *length* refers to both long and short objects while *shortness* refers to short ones only.

All the discussed characteristics fall under the 'unmarked – marked distinction', e.g. *warm, deep, long* ('positive value' – unmarked) – *cool, shallow, short* ('negative value' – marked). The theory of markedness originated in the Prague School of Linguistics as a way to characterize phonological oppositions yet has been extended

since then to other domains. In Batistella's (1990: 1) words, "the notion of markedness posits that the terms of polar oppositions at any level of language are not mere opposites, but rather that they show an evaluative nonequivalence that is imposed on all oppositions". Antonymous adjectives form an opposition with a marked and an unmarked member. The unmarked member is more general, more common and broader; the marked one is more specific and narrower – see above how *depth* and *How deep is...?* (unmarked) can refer to bodies which are either deep or shallow, unlike *shallowness* and *How shallow is...?* (marked). Some further criteria for markedness are, according to Batistella (ibid.), that the unmarked member is more widely distributed, prototypical and experientially more basic.

Not all pairs of oppositions exhibit the same degree of markedness: Dixon (1982: 17–18) distinguishes two types of markedness – strong marking with a clearly unmarked member and weak marking in which the unmarked member is not so clearly unmarked in relation to the marked member. For instance, *rough* is in Dixon's (ibid.: 18) view "arguably unmarked in respect to *smooth*" (weak marking), while e.g. *big, long, wide, thick* are clearly marked in relation to *small, short, narrow, thin*, respectively (strong marking). (Dixon unfortunately does not elaborate on the distinction any further.)

For the present study I gathered DA verbs mainly from the literature discussing these verbs (Hay 1998, Hay, Kennedy & Levin 1999, Kennedy & Levin 2008), as I was unable to find a comprehensive list of DA verbs. I also established additional criteria that DA verbs had to meet in order to be included in the study. Namely, it was required that (i) the verbs be, at least in principle, capable of forming PVs, thus *a priori* ruling out Latinate verbs (see 2.3.1), and that (ii) the verbs form antonymous pairs, ruling out e.g. *sweeten*. The list of antonymous DA verb roots I used is given in (2). The verbs forming oppositions are presented in the same line; the verbs derived from unmarked adjectives are presented in the left column; the verbs derived from marked adjectives are in the right column. (For simplicity I will refer to the verbs as unmarked and marked, respectively.)

(2)

| unmarked verb roots | marked verb roots |
|---|---|
| *brighten* | *dim* |
| *deepen* | *shallow* |
| *fatten, thicken* | *thin* |
| *fill* | *empty* |
| *harden* | *soften* |
| *heat, warm* | *cool* |
| *lengthen* | *shorten* |
| *lighten* | *darken* |
| *rough, roughen* | *flatten, smooth* |
| *sharpen* | *dull* |
| *speed* | *slow* |
| *strengthen* | *weaken* |
| *wet* | *dry* |
| *widen* | *narrow* |

The hypothesis of this chapter is that particles specify a property scale lexicalized in a verb root by determining its direction. A property scale, when understood as a non-spatial path, has two endpoints, one of which is a starting point and the other an endpoint, or a goal (cf. Tyler & Evans 2003: 217–218). Verbs can identify either end of a scale as a goal. Consider again verbs *heat*, *warm* and *cool*: while they all refer to the same scale, in *heat* and *warm* the goal is the upper end of a vertical scale of temperature, in *cool* the goal is the lower end of a vertical scale of temperature. I assume that particles do not combine with verb roots arbitrarily (as shown in Chapter 4) but in such a way that the particle identifies as the goal the same end of a scale as the verb root. If the particles *up* and *down* identify as a goal the same end of the scale as 'degree achievement' verb root does, then the following predictions hold:

(3) (a) DA verb roots preferentially combine with one of the two particles, and, more specifically,

(b) Marked DA verb roots preferentially combine with *down* and unmarked DA verb roots preferentially combine with *up*.

(3b) is derived from the assumption that *up*, like unmarked verbs, identifies the upper end of a scale as the goal, in contrast to marked verbs and *down*. I check the predictions drawing on corpus frequencies (Section 8.3) and dictionary data (Section 8.4).

Notice, however, that sometimes a PV identifies as a goal a different end of a scale than its verb root in isolation; in such a case, a particle seems to over-rule the verb root in identifying the goal. Consider the following examples. The combination of the same verb root with antonymous particles usually results in synonymous PVs, e.g. *drink up – drink down* 'drink (completely)', although they are used in slightly different contexts, the latter habitually used to refer to taking medicine or drinking alcoholic beverages. At other times, the same verb root, when combined with antonymous particles, results in antonymous PVs, e.g. *fade out/down/away/off* 'disappear' – *fade in/up* 'appear'. *Fade* thus combines with several particles, two of which (*in* and *up*) alter the basic meaning of the verb root *fade* 'disappear' into its antonym. This semantic effect of particles cannot be shown by corpus frequency but only by the meaning of a PV contrasted to its verb root. Therefore, besides determining the preference of the verb roots in (2) for one of the two particles with corpus data, I also explore whether particles alter the meaning of the verb root so that the PV has a meaning antonymous to the meaning of the verb root. In order to do so I consulted dictionaries and a lexical database (Section 8.4).

## 8.3 Corpus data

To determine the distribution of *up* and *down* with the verb roots in (2), corpus frequencies were collected. The query was run in the whole of the British National Corpus (BNC). The combinations were searched for as lemmas of the verb root followed by *up/down* tagged as adverb particle (AVP) within the span of four words, following Gardner & Davies (2007: 344–345), who argue that there are very few instances of PVs beyond a four-word span. To minimize the occurrence of prepositions in the hits, only the AVP (adverb particle) tag, but not AVP-PRP (adverb particle but maybe preposition), was used.[2]

[2] As the hits were not manually checked for their PV-hood it has to be understood that not all the hits were actual instances of PVs, e.g. *Subsequent reports, however, suggested that the temperature rise had been uneven across the globe, with a minority of regions, including the north Pacific and north-east*

| **verb root** | **total** | *up* raw | *up* % | *down* raw | *down* % |
|---|---|---|---|---|---|
| *slow* | 1183 | 51 | 4 | 1132 | **96** |
| *speed* | 689 | 666 | **97** | 23 | 3 |
| *fill* | 593 | 591 | **100** | 2 | 0 |
| *dry* | 392 | 389 | **99** | 3 | 1 |
| *warm* | 373 | 368 | **99** | 5 | 1 |
| *heat* | 179 | 176 | **98** | 3 | 2 |
| *cool* | 153 | 4 | 3 | 149 | **97** |
| *brighten* | 134 | 134 | **100** | 0 | 0 |
| *narrow* | 70 | 1 | 1 | 69 | **99** |
| *smooth* | 54 | 3 | 6 | 51 | **94** |
| *soften* | 54 | 52 | **96** | 2 | 4 |
| *sharpen* | 51 | 50 | **98** | 1 | 2 |
| *fatten* | 36 | 36 | **100** | 0 | 0 |
| *rough* | 25 | 25 | **100** | 0 | 0 |
| *lighten* | 24 | 24 | **100** | 0 | 0 |
| *thin* | 16 | 3 | 19 | 13 | **81** |
| *harden* | 15 | 15 | **100** | 0 | 0 |
| *thicken* | 12 | 12 | **100** | 0 | 0 |
| *wet* | 10 | 5 | 50 | 5 | 50 |
| *flatten* | 9 | 3 | 33 | 6 | 66 |
| *strengthen* | 6 | 6 | **100** | 0 | 0 |
| *darken* | 5 | 2 | 40 | 3 | 60 |
| *shorten* | 4 | 4 | **100** | 0 | 0 |
| *shallow* | 3 | 3 | **100** | 0 | 0 |
| *dim* | 2 | 1 | 50 | 1 | 50 |
| *empty* | 2 | 0 | 0 | 2 | **100** |
| *widen* | 2 | 2 | **100** | 0 | 0 |
| *deepen* | 0 | 0 | - | 0 | - |
| *dull* | 0 | 0 | - | 0 | - |
| *roughen* | 0 | 0 | - | 0 | - |
| *lengthen* | 0 | 0 | - | 0 | - |
| *weaken* | 0 | 0 | - | 0 | - |

**Table 14. Frequencies of DA verb roots with particles *up* and *down* in the BNC.**

Clear preferences for one particle (>80%) are in bold.

Table 14 presents the frequencies of the PVs in raw numbers and percentages. The verb roots are ordered in descending total occurrence. The total occurrence is

*Atlantic oceans, having* cooled *by* up *to 0.5 degrees Celsius during the decade.* (BNC HKR 3018) The estimated error rate for AVP-tagged particles in the BNC is 1.58% (Leech & Smith 2000). What is important though, is not the absolute number of real PVs in the hits, but rather the ratio, and thus a preference for one of the particles; cf. also the next footnote.

constituted by the occurrence of a particular verb root with *up* together with its occurrence with *down*, given separately in the respective columns. Instances of the verb root with other particles are ignored.[3]

As can be seen in Table 14, there are three types of verb roots, whose distribution is presented in Figure 10:

(i) 23 verb roots with a clear preference (>80%) for one of the particles (*slow, speed, fill, dry, warm, heat, cool, brighten, narrow, smooth, soften, sharpen, fatten, rough, lighten, thin, harden, thicken, strengthen, shorten, shallow, empty, widen*). The preference is highlighted in bold in Table 14;

(ii) 4 verb roots without a clear preference (50 – 66%)[4] for one of the particles (*dim, darken, flatten* and *wet*). It has to be noted that the verb roots without a clear preference all have a low total occurrence (≤10) in the corpus with either of the particles. It is possible that a bigger corpus would also reveal a clear preference for one of the particles;

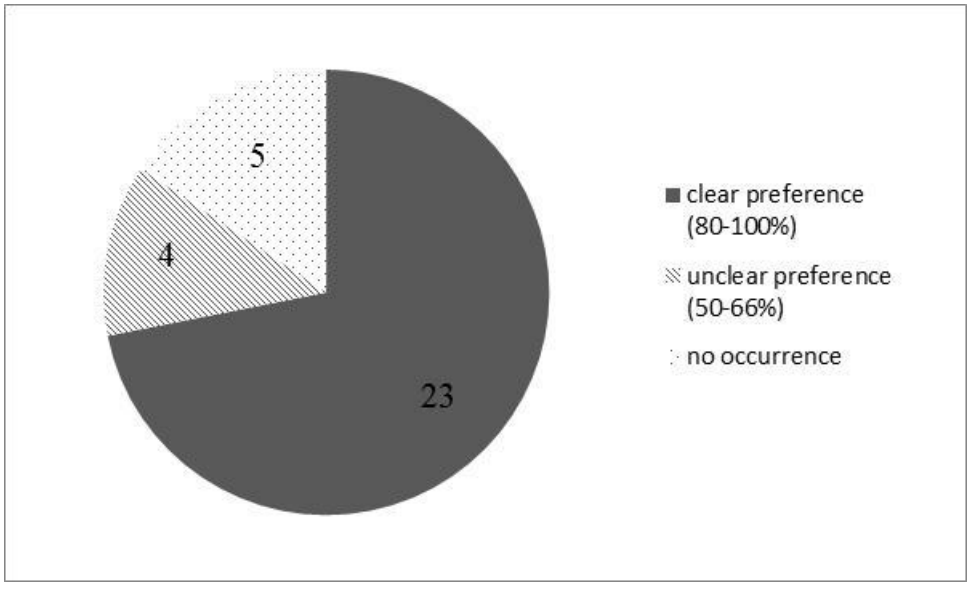



**Figure 10. The distribution of DA verb roots according to their preferential behaviour with respect to particles *up* and *down* in the BNC.**

[3] The preference I found for the verbs *heat* and *cool* is confirmed by Cappelle, Shtyrov & Pulvermüller (2010), whose data are drawn from the BNC too but probably sorted out manually. They report 90 occurrences of *cool down* to 1 occurrence of *cool up* and 78 occurrences of *heat up* to 2 occurrences of *heat down*. Their data thus suggest an even stronger correlation.

[4] There were no verb roots with a preference for one particle between 66 and 80%; therefore, the upper limit for unclear preference is set to 66%.

(iii) 5 verb roots that do not occur at all with either *up* or *down* (*deepen, dull, roughen, lengthen, weaken*).

As can be seen in Fig. 10, most verb roots preferentially combine with either *up* or *down*, as predicted in (3a).

## 8.4 Dictionary data

This section discusses PVs formed by the DA verb roots in (2) and the particle *up* or *down* as found in dictionaries (Cambridge Phrasal Verbs Dictionary online, The Free Dictionary, Vodička 2007, and Wordnik) and the lexical database WordNet. Only compositional meanings were considered; fully non-compositional meanings (e.g. *harden up* 'tighten the sheets of a vessel') were ignored. The results are presented in Table 15, with the unmarked verb roots on the left and the marked ones on the right. Verb roots referring to the same property scale are grouped together and marked off with a line in the table. The table shows with which of the two particles the verb roots are listed in dictionaries; if a PV appears in at least one of the consulted sources, its meaning is given in the table. PVs that do not appear in any of the sources are marked with an 'x'. In addition, the table also shows whether the particle alters the meaning of the verb root or not. The cases in which the particle alters the original meaning of the verb root are marked with #: *dim up* 'make bright', *warm down* 'cool down after exercise'.[5]

[5] The consulted dictionaries define some of the PVs as causative only 'make *adjective*', while others are defined as both causative and inchoative 'make/become *adjective*'. In addition, the sources define some PVs as 'make(/become) *adjective* or *adjective in the comparative*' and others as either only 'make(/become) *adjective*' or 'make(/become) *adjective in the comparative*'. This variety of alternations is not relevant for the present discussion, so, for simplicity, Table 15 provides a uniform meaning of the type 'make *adjective*' for all the PVs that can be characterized as such. This is not meant to indicate that the respective PVs cannot have 'become *adjective*' and 'make/become *adjective in the comparative*' meanings.

| **unmarked verb roots** | ***up*** | ***down*** | **marked verb roots** | ***up*** | ***down*** |
|---|---|---|---|---|---|
| *brighten* | make bright | x | *dim* | #make bright | make dim |
| *deepen* | x | x | *shallow* | x | x |
| *fatten* | make fat | x | *thin* | x | make thin |
| *thicken* | make thick | x | | | |
| *fill* | make full | x | *empty* | x | x |
| *harden* | x | x | *soften* | make soft | x |
| *heat* | make hot | x | *cool* | x | make cool |
| *warm* | make warm | #cool down after exercise[6] | | | |
| *lengthen* | x | x | *shorten* | x | x |
| *lighten* | make light | x | *darken* | x | x |
| *rough* | make rough | x | *flatten* | x | x |
| *roughen* | make rough | x | *smooth* | make smooth | x |
| *sharpen* | make sharp | x | *dull* | make dull | x |
| *speed* | make faster | x | *slow* | make slow | make slow |
| *strengthen* | x | x | *weaken* | x | x |
| *wet* | x | make wet | *dry* | make dry | x |
| *widen* | x | x | *narrow* | x | make narrow |

**Table 15. The interaction of the meanings of particles *up* and *down* with the meaning of DA verb roots.**

The verbs as presented in Table 15 are of three types, whose distribution is presented in Figure 11:

(i) 18 verb roots that are listed in dictionaries with one particle only (e.g. *brighten, fatten, fill, soften*). These constitute the largest subset. In all of these cases the particle does not alter the original meaning of the verb root (e.g. *brighten up* 'brighten', *thin down* 'thin');

(ii) 3 verb roots that are listed with both particles. These form the smallest subset, including only three verb roots (*dim, slow, warm*). The resulting pairs of PVs are either synonyms (*slow down* 'slow' – *slow up* 'slow') or antonyms (*dim down* 'dim' – *dim up* 'brighten', *warm up* 'warm' – *warm down* 'cool down');

(iii) 11 verb roots that are not listed with either particle (e.g. *darken, deepen, shallow, empty*).

[6] *Warm down* 'cool down after exercise' is defined differently than other PVs in the table (i.e. not as 'make cool') in order to indicate that *warm down* has a very narrow and specific use.

As Fig. 11 shows, most verb roots preferentially combine with one of the two particles, confirming prediction (3a).

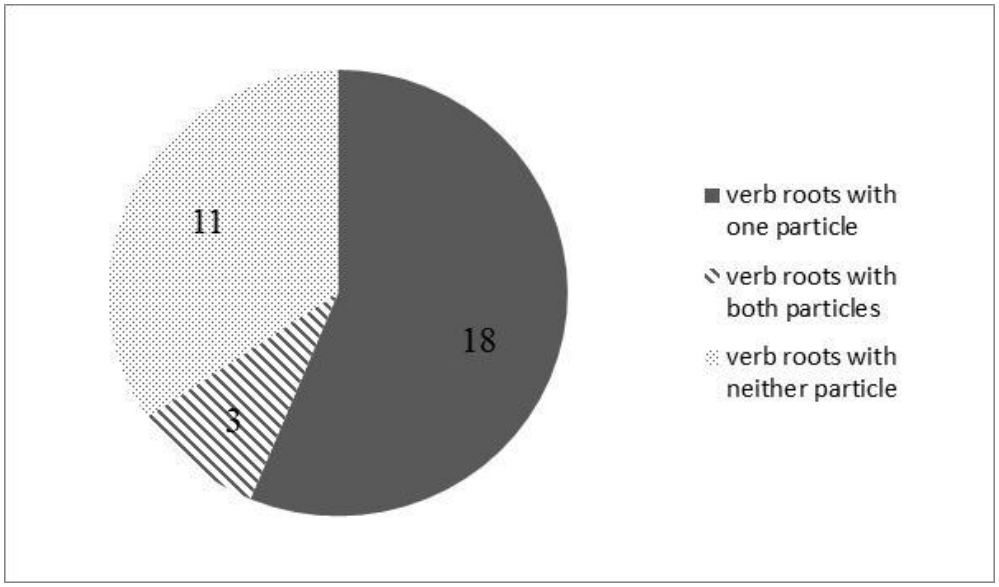



**Figure 11. The distribution of DA verb roots according to their behaviour with respect to particles *up* and *down* in dictionaries.**

## 8.5 Comparison and discussion

This section compares the data from the two sources, presented in Sections 8.3 and 8.4, and discusses to what extent they confirm the predictions in (3). As Figures 10 and 11 show, both data sources suggest a tendency for DA verb roots to preferentially combine with one particle, confirming prediction (3a).

I will now establish the preference for one of the two particles in each verb root based on the combination of the data from the two types of sources: both largely agree on the issue which particle is preferred by a particular verb root, see Table 16.

The cases in which the two sources do not fully concur are of three kinds. First, two verb roots (*slow* and *warm*) are listed with both particles in the dictionaries but the corpus data suggest a very strong preference (over 95%) for one of the particles. This is not a contradiction, though: dictionaries give information on the possibility of occurrence with a certain particle but do not establish which particle occurs with the verb root more frequently. In these cases one of the particles is strongly preferred (and

the preference of the verb root is established for this particle, see Table 17) yet the possibility of combination with the other particle is available.

| verb root | corpus preference | dictionary preference |
|---|---|---|
| *brighten* | up | up |
| *cool* | down | down |
| *darken* | up & down | - |
| *deepen* | - | - |
| *dim* | up & down | up & down |
| *dry* | up | up |
| *dull* | - | up |
| *empty* | down | - |
| *fatten* | up | up |
| *fill* | up | up |
| *flatten* | up & down | - |
| *harden* | up | - |
| *heat* | up | up |
| *lengthen* | - | - |
| *lighten* | up | up |
| *narrow* | down | down |
| *rough* | up | up |
| *roughen* | - | up |
| *shallow* | up | - |
| *sharpen* | up | up |
| *shorten* | up | - |
| *slow* | down | up & down |
| *smooth* | down | up |
| *soften* | up | up |
| *speed* | up | up |
| *strengthen* | up | - |
| *thicken* | up | up |
| *thin* | down | down |
| *warm* | up | up & down |
| *weaken* | - | - |
| *wet* | up & down | down |
| *widen* | up | - |

**Table 16. Combinations of DA verbs with particles according to the corpus and dictionaries.**

Second, some verb roots do not show a clear preference for one of the particles according to the corpus data. The dictionary data either list the given verb root with one

of the particles only (*wet*), or give both particles with the verb root (*dim*). In the former case I establish the preference according to the dictionary data (see Table 17), in the latter no conclusions on the preference are made.

Third, some PVs appear in one of the two sources of data only. Thus some PVs are listed in the dictionaries, but do not occur in the corpus, or vice versa, they appear in the corpus but are not listed in the dictionaries, e.g. *shorten, shallow, dull, roughen*. In such cases, I rely on a single source of data to establish the preference for one of the particles.

Lastly, in two cases the sources are in conflict: *harden up* (100% preference of the verb root for *up* rather than *down* in the BNC, see Table 14) and *smooth down* (94% preference of the verb root for *down* rather than *up* in the BNC) are not listed in any dictionary. However, while the other alternative is not listed for the former verb root (*harden down* is not in dictionaries, either), for the latter one *smooth up* is listed (although *up* has only 6% occurrence compared to 94% of *down*). Therefore, I treat the dictionary data for *harden* as incomplete and rely on the BNC data instead. For *smooth*, however, no conclusions can be made.

In sum, there are two types of verbs for which one cannot establish the preference for a particle. The first type are verbs which do not combine with either particle according to both sources (*deepen, lengthen, weaken*). These verbs may simply not form PVs or form PVs with other particles (e.g. *lengthen out*), and as such do not contradict prediction (3a). The other type are verb roots for which no definite conclusions can be made (*dim, smooth*), either because the sources are contradictory (for *smooth*) or because the verb root combines equally with *up* and *down* (*dim*). These two can be understood as counterexamples to the prediction that verb roots preferentially combine with one of the two particles (3a). Both types of verb roots had to be discarded in order to check the prediction that unmarked verb roots preferentially combine with *up* and marked ones with *down* (3b), as this prediction can only apply to verb roots which conform to prediction (3a).

The final conclusions on the preference of such verb roots for either *up* or *down* are shown in Table 17. Unmarked verb roots behave as predicted in (3b) – all except one preferentially combine with *up*. In contrast, while some marked verb roots combine with *down*, as predicted in (3b), some other marked verb roots combine with *up*,

contrary to the prediction in (3b). Taking this into account, I will now refine my proposal that the particle and the verb root both identify the same end of a scale as its goal by proposing that the particle is either marked or unmarked. Consider the distribution of the two particles: *down* is largely restricted to marked verbs while *up* combines with both unmarked and marked verbs. This distribution suggests that the two particles also exhibit non-equivalence in terms of markedness; I propose, therefore, that *up* is unmarked in relation to *down*. In fact, it is not surprising to find that *up*, which refers to the upper end of a vertical axis, is unmarked and its opposite is marked: Recall that words referring to the upper end of a scale are unmarked while those referring to the lower end are marked (see 8.2).

| | unmarked verb roots | marked verb roots |
|---|---|---|
| preference with *up* | *brighten*<br>*fatten*<br>*thicken*<br>*fill*<br>*harden*<br>*heat*<br>*warm*<br>*lighten*<br>*rough*<br>*roughen*<br>*sharpen*<br>*speed*<br>*strengthen*<br>*widen* | *shallow*<br>*soften*<br>*shorten*<br>*dull*<br>*dry* |
| preference with *down* | *wet* | *thin*<br>*empty*<br>*cool*<br>*darken*<br>*flatten*<br>*slow*<br>*narrow* |
| no preference established | *deepen*<br>*lengthen* | *dim*<br>*smooth*<br>*weaken* |

**Table 17. Preferences of marked and unmarked DA verb roots to combine with particle *up* or *down*.**

Different combinations of a marked and an unmarked element are possible and observed to a different degree, see Figure 12. Typical combinations include two elements which are the same in terms of markedness (71%), i.e. an unmarked verb + unmarked particle *up* or a marked verb + marked particle *down.* In contrast, combinations of a mixed type, i.e. a marked verb + unmarked particle *up* or an unmarked verb + marked particle *down,* are less common (29%) and their meaning is slightly less predictable – it is only in this type that the PV is antonymous to the corresponding verb root (4).[7] At the same time, such a meaning alternation due to a particle appears only when the verb root combines with both particles, which makes the phenomenon rare. It is not a rule, however, that if a verb root combines with both particles, then the combination of a mixed type (a marked verb root + an unmarked particle or an unmarked verb root + a marked particle) results in a meaning alternation, as demonstrated by *slow* in (5), whose PVs with *up* and *down* are both synonyms of *slow.*

| | | | | | |
|---|---|---|---|---|---|
| (4) | (a) | *warm* unmarked | *warm up* 'warm' | *warm down* 'cool down after exercise' |
| | (b) | *dim* marked | *dim up* 'brighten' | *dim down* 'dim' |
| (5) | | *slow* marked | *slow up* 'slow' | *slow down* 'slow' |

I conclude that aspectual particles rarely alter the original meaning of DA verb roots. This possibility is available only when the verb root can also combine with an antonymous particle that does not alter the meaning of the verb root.

[7] One could argue that *fade up, fade in, warm down,* and *dim up* are non-compositional, since the PV does not express the kind of action denoted in the verb root (cf. Chapter 3), and as such idiomatic rather than aspectual. However, in this chapter I attempt to show that a PV's meaning antonymous to the meaning of the PV's verb root is composed of the meanings of the verb root (determining the scale) and the particle (specifying the direction of this scale). At present I give no definite conclusions on the matter due to the scarcity of these data.

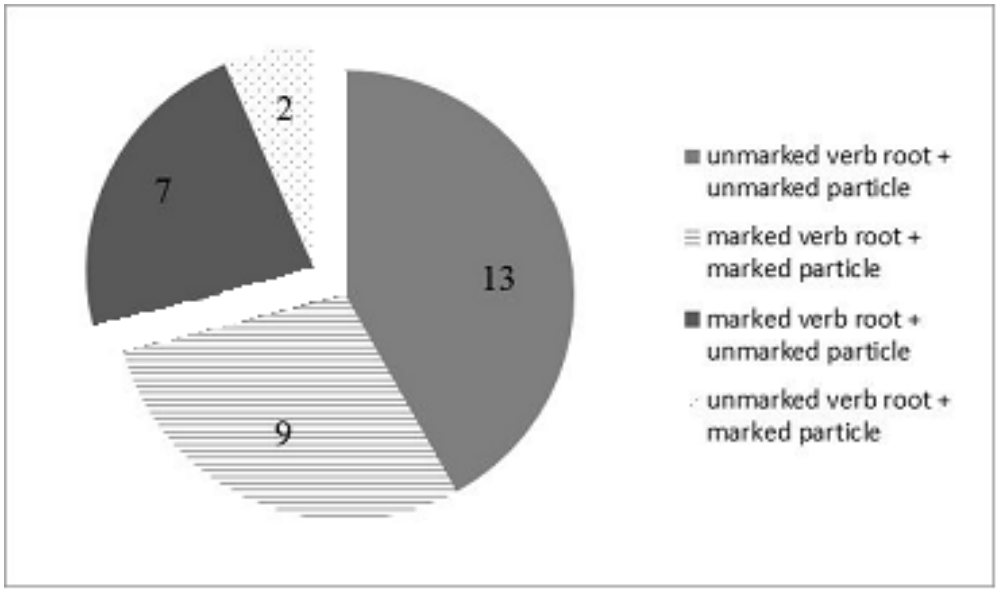



**Figure 12. The distribution of DA PVs according to the markedness of their elements.**

## 8.6 Implications

The presented case study raises at least a couple of questions for further research. First, can the distinction in markedness be extended to other particles as well? Consider again PVs *fade down/away/off/out* 'disappear' – *fade in/up* 'appear'. The verb root *fade* has a 'negative value' meaning and is thus marked, its antonyms *appear, materialize, brighten* being unmarked. *Down*, a marked particle, does not alter the original meaning of *fade*: *fade* and *fade down* are synonymous. *Away, off,* and *out* behave the same way as *down*. In contrast, *in* behaves as *up,* an unmarked particle: both particles alter the original meaning of the verb root, forming PVs antonymous to the verb root in isolation. Further research should aim at determining whether the marked/unmarked opposition can be further extended to other scalar particles as well.

All the above particles determine the direction of the scale lexicalized in *fade* by locating its goal in space, such as on a vertical axis (*up, down*), in distance (*away, off*), or as perceptually accessible (*in*) or inaccessible (*out*)[8] (cf. Tyler & Evans 2003). In

[8] According to Tyler & Evans (2003: 192) "this linguistic coding reflects the lived experience of the boundaries of the LM [landmark, i.e. Ground, see Chapter 3 – M.W.], placing limits on perceptual accessibility when the experiencer is located interior to a bounded region." This is only of possible

sum, some particles signify some kind of distance and/or inaccessibility (*away, down,*[9] *off, out*) whereas particles *up* and *in* signify visibility and/or proximity. This indicates the role of the literal meaning of particles in their abstract meanings and, specifically, in their aspectual scale-related meanings.

A second open issue is whether the markedness distinction can be applied to particles crosslinguistically. Consider the Dutch examples in (6–7).[10] While verb roots derived from unmarked adjectives combine with particles which in themselves signify cognitive proximity or visibility (6), verb roots derived from marked adjectives combine with particles signifying cognitive distance or less visibility (7) (but cf. *uitdiepen* 'to deepen' from *diep* 'deep' and *uit* 'out').

| | | | | |
|---|---|---|---|---|
| (7) | (a) | *sterk* 'strong' | *aansterken* 'to convalescence' | *aan* 'to' |
| | (b) | *dik* 'thick' | *indikken* 'to thicken' | *in* 'in' |
| | (c) | *fris* 'fresh' | *opfrissen* 'to refresh' | *op* 'up' |
| (8) | (a) | *zwak* 'weak' | *afzwakken* 'to weaken' | *af* 'off' |
| | (b) | *dun* 'thin' | *uitdunnen* 'thin out' | *uit* 'out' |

The verbs in (7–8) behave just like the English PVs with *fade*, suggesting that Dutch verb particles may also exhibit non-equivalence in terms of markedness.

## 8.7 Summary

This chapter has argued that particles specify property scales lexicalized in DA verb roots by determining their direction, i.e. by identifying the goal of a scale. Analyzing semantic oppositions within the framework of the theory of markedness, I predicted that DA verb roots preferentially combine with one of the two particles, and, specifically, that marked verb roots preferentially combine with *down* and unmarked ones with *up*. The predictions were checked with data from two sources (corpus and dictionaries). The results suggest that combinations of verb root and particle are not arbitrary but follow

readings of *in*/*out*; contrary readings are also possible, such as accessibility in *out* (*find out, figure out*), see e.g. Lindner (1983), Morgan (1997).

[9] Something that is *down* is less visible than something that is *up* at eye-level.

[10] (7) and (8a) are taken from Booij (2010: 133) and I owe (8b) to Jack Hoeksema.

regular patterns. Namely, unmarked verb roots tend to combine with *up* only, as predicted. Marked verb roots combine with either *down* or *up*, the latter kind combination being unexpected. The wider distribution of *up* compared to *down* suggests that *up* is unmarked in relation to *down*.

# 9 Summary and conclusions

Phrasal verbs, or particle verbs, are complex verbs composed of a verb and a particle. Phrasal verbs have some peculiar semantic and syntactic properties. This dissertation advances the understanding of some of these properties by a lexical-semantic analysis of aspectual particles. In doing so, the dissertation contributes to the discussion of the theory of aspect.

Aspect and its two components – grammatical and situation aspect (Smith 1997) – is the subject matter of Chapter 1. The main focus is on situation aspect within the framework of monotonic compositional theory (Olsen 1994, Rappaport Hovav & Levin 1998) according to which the situation aspect of a predicate is built up monotonicly and compositionally. A predicate can be marked or unmarked for the aspectual features dynamicity, telicity and durativity, according to Olsen (1997). Contra her conclusions about durativity, I argue that punctuality is a marked feature and durativity is unmarked. The situation aspect value of a predicate is determined by linguistic material as well pragmatic implicature (Hay, Kennedy & Levin 1999). A change in the value of situation aspect is known as aspectual shift. This phenomenon is the gravest complication of a battery of tests developed by Dowty (1979) and used for the diagnostics of situation aspect.

Chapter 2 reviews properties of PVs, compared to free combinations of verb and adverb or preposition, and argues that semantic compositionality determines the syntactic behaviour of PVs and free combinations. The chapter discusses several semantic classifications of PVs and opts for a classification into literal, aspectual, and idiomatic PVs (Celce-Murcia & Larsen-Freeman 1999). The chapter also reviews previous accounts of aspectual particles and raises the research questions to be addressed in the rest of the dissertation.

Chapter 3 further discusses differences between free combinations and PVs on the one hand, and between the three semantic classes of PVs on the other. I argue that syntax is useful for the distinction between free combinations and PVs only (Darwin & Gray's 1999 *where*-test), unlike semantics, which applies in both distinctions, between free combinations and PVs as well as between the three semantic classes of PVs. In particular, I discuss the role of motion semantics, compositionality, and metaphors.

However, I point out that in idiomatic PVs literal and aspectual meanings of particles may be retained, and literal meanings of particles may be retained in aspectual PVs.

Chapter 4 is a corpus study of aspectual particles. By examining transitivity, type of verb root, and type of direct object of combinations of ten different particles with ten verbs each, a total of 100 PVs, I come to the conclusion that aspectual particles do not combine with verbs roots in an arbitrary way. The results suggest that there are two types of particles. Particles of one type (*about, along, around, on*) tend to combine with manner verbs and form intransitive PVs, or PVs with an unaffected direct object (i.e. not undergoing an internal motion or change, Tenny 1994). Particles of the other type (*down, off, out, over, through, up*) tend to combine with result verbs and form both intransitive and transitive PVs with either an affected or unaffected direct object.

Chapter 5 uses the PVs from the corpus study to investigate the effect of particles on the situation aspect of the verb root. The PVs and corresponding verb roots have been assessed by two of Dowty's (1979) aspectual tests in an acceptability judgment survey. The results suggest that particles do not mark situation aspect directly. However, the study was complicated by respondents' different attitudes towards the task, their preferences for direct object selection, particle selection, and particle placement, as well as regional variation and the frequency of tested PVs and verb roots. Nonetheless, aspectual particles determine situation aspect in an indirect way, by imposing selectional restrictions on the verb root. For instance, *eat* can license various DOs – quantized and non-quantized; *eat up* can only license quantized DOs. As a result, the predicates with *eat up* are telic – not because *up* marks telicity but because it restricts the verb root's DOs to quantized. Aspectual particles also contribute other kinds of aspectual meanings (such as continuation, completion, resultativeness, inchoativity, iterativity, habituality, distribution, etc.) which I propose to term *lexical aspect*, as well as subtle non-aspectual lexical meanings. It follows that aspectual particles are not redundant.

Chapter 6 proposes a theory of aspectual particles in the situation aspect framework based on scales (e.g. Rappaport-Hovav 2008, and many others). I argue that there are two types of particles, non-scalar and scalar. Non-scalar particles combine with manner verb roots and form intransitive PVs or PVs with an unaffected direct object (particles *about, along, around, away$_1$, on*). In contrast, scalar particles which

combine with result verbs and whose PVs can license affected direct objects (particles *away*$_2$, *down, off, out, over, through, up*). Scalar particles, unlike non-scalar ones, require the presence of a scale in the denotation of a predicate. A scale is an ordering of values of an attribute. Scalar particles can refer to path scales, property scales, or volume/extent scales, lexicalized in various syntactic elements. A particle marks telicity only when it is scalar and refers to a volume/extent scale lexicalized in the direct object which cannot become an unaccusative subject. I also argue that scalarity, like telicity, is built up in a monotonic and compositional way. As scales require that the event participant measured by the scale be overtly realized, a scalar particle can alter the argument structure of an intransitive or optionally transitive verb root, making it obligatorily transitive. This restriction accounts for obligatorily transitive PVs with direct objects unselected by the verb root, e.g. *sleep off a headache*. A subset of these, the so-called 'time'-*away* construction, need not be treated separately from other aspectual PVs, as I argue contra Jackendoff (1997).

Chapter 7 applies the same framework to Slovak aspectual prefixes, with which English aspectual particles are compared and contrasted. Both prefixed verbs and PVs show a systematic behaviour in terms of dynamicity, telicity, and argument structure effects depending on the type of prefix or particle (scalar or non-scalar). Both types of particles and prefixes turn stative verb roots into dynamic complex verbs. Only scalar particles and prefixes can mark telicity and alter the argument structure of verb roots. However, Slovak prefixes mark telicity regardless of the type of scale, unlike English particles. Based on my Slovak data, I tentatively assume that besides the three types of scale, another type of scale may exist, namely one that measures a property of the event, e.g. *dojesť* 'finish eating', *nakúpiť* 'buy a lot'.

Chapter 8 focuses on property scales lexicalized in 'degree achievement' verb roots (e.g. *warm, cool, brighten, slow*) and how particles *up* and *down* specify these scales. I argue that aspectual particles determine the direction of a scale by identifying its endpoint. Both corpus and dictionary data show that most 'degree achievement' verb roots preferentially combine with one of the two particles. More specifically, verb roots derived from unmarked adjectives (e.g. *brighten, fatten, warm*) prefer *up*, while verb roots derived from marked adjectives (e.g. *cool, soften, thin*) combine with either *up* or *down*. The results not only point to the non-arbitrariness of combination of verb root

and particle but also to the non-equivalence within a pair of opposite particles, suggesting that *up* is unmarked in relation to *down*.

In sum, this dissertation challenges some common assumptions on PVs. Most importantly, as I argue throughout the dissertation, aspectual particles combine with verb roots non-arbitrarily. Second, contra Brinton (1985), I argue that particles are *not* markers of telicity. I show that telicity marking concerns only scalar particles referring to volume/extent scales lexicalized in a direct object which cannot become an unaccusative subject. Third, contra Jackendoff (1997), I argue that the 'time'-*away* construction should be treated together with other aspectual PVs. The distinctive properties of the 'time'-*away* construction follow from the scale required by the particle and lexicalized in the direct object. These properties are characteristic of other obligatorily transitive PVs with unselected direct objects as well. Fourth, I propose to distinguish between situation aspect (stativity/dynamicity, telicity/atelicity, and durativity/punctuality), and lexical aspect (continuation, completion, resultativeness, inchoativity, iterativity, etc.), contra the literature which uses the term *lexical aspect* to refer to what I call situation aspect distinctions (e.g. Rothstein 2004, Slabakova 2001). Fifth, contra Jackendoff (2002), I argue that aspectual particles are not redundant: they may impose selectional restrictions on the verb root or alter its argument structure and they may carry subtle aspectual and non-aspectual meanings. Lastly, I argue that aspectual particles are not all equal. I show that aspectual particles come in two types. In addition, particles, at least scalar ones, seem to be non-equivalent within one type, with a distinction between marked and unmarked particles.

Many questions still need to be answered, some of them marginally raised in this dissertation. How can we test situation aspect in a more reliable way than using Dowty's (1979) tests? Why do people produce PVs which they reject in acceptability judgments? What kinds of lexical aspectual meanings are there and how are they expressed in English? How does unaccusativity affect the telicity marking properties of English particles? Are there any other types of scales besides path, property and volume/extent scales? To what extent do non-scalar particles block non-quantized direct objects? How do languages parametrically differ in relation to scales? Are opposite particles distinguished by markedness, and if they do, does the distinction apply cross-linguistically? How do the literal meanings of particles determine their aspectual

meanings? I leave these issues to future research devoted to the study of aspect and/or phrasal verbs.

# Samenvatting (Summary in Dutch)

Scheidbare werkwoorden zijn complexe werkwoorden die zijn opgebouwd uit een werkwoord en een partikel. Scheidbare werkwoorden (vanaf nu PV's genoemd, naar de Engelse term *phrasal verbs*) hebben een aantal specifieke semantische en syntactische eigenschappen. Dit proefschrift draagt bij aan de kennis van een aantal van deze eigenschappen middels een lexicaal-semantische analyse van aspectuele partikels.

Aspect heeft twee componenten – grammaticaal aspect en situationeel aspect (Smith 1997). Dit is het thema van Hoofdstuk 1. De nadruk ligt hierbij op situationeel aspect binnen het raamwerk van de monotoon-compositionele theorie (Olsen 1994, Rappaport-Hovav & Levin 1998). Volgens deze theorie is het situationeel aspect van een predikaat monotoon en compositioneel opgebouwd. Volgens Olsen (1997) kan een predikaat gemarkeerd of ongemarkeerd zijn voor de aspectuele kenmerken dynamiciteit, teliciteit en durativiteit. In tegenstelling tot Olsens conclusies over duratitviteit, stel ik voor dat het kenmerk punctueel gemarkeerd is en duratief ongemarkeerd is. De waarde van het situationeel aspect van een predikaat wordt bepaald door zowel het linguïstische materiaal als door pragmatische implicaturen (Hay, Kennedy & Levin 1999). Een verandering in de waarde van het situationeel aspect staat bekend als een 'aspectual shift'. Dit fenomeen compliceert het diagnosticeren van het situationeel aspect met behulp van aspectuele testen, zoals de serie testen ontwikkeld door Dowty (1979).

Hoofdstuk 2 kijkt naar de eigenschappen van PV's, en vergelijkt deze met vrije combinaties van een werkwoord met een bijwoord of een voorzetsel. Er wordt beargumenteerd dat semantische compositionaliteit het syntactische gedrag van PV's en vrije combinaties bepaalt. Het hoofdstuk bespreekt verder semantische classificaties van PV's en stelt voor om ze in te delen in drie klassen: letterlijke, aspectuele en idiomatische PV's (Celce-Murcia & Larsen-Freeman 1999). Ook wordt er in dit hoofdstuk gekeken naar eerdere uiteenzettingen over aspectuele partikels en worden de onderzoeksvragen geformuleerd, die in de rest van het proefschrift behandeld worden.

Hoofdstuk 3 gaat dieper in op de verschillen tussen vrije combinaties en PV's aan de ene kant en die tussen de drie semantische klassen van PV's uit Hoofdstuk 2 aan de andere kant. Ik beargumenteer hier dat syntactische kenmerken alleen bruikbaar zijn bij het onderscheid tussen vrije combinaties en PV's (de *where*-test van Darwin & Gray's

1999). Semantische kenmerken zijn daarentegen bruikbaar bij het vergelijken van vrije combinaties en PV's, en ook bij het onderscheiden van de drie semantische klassen. In het bijzonder kijk ik hierbij naar de rol van de semantiek van bewegingswerkwoorden, compositionaliteit en metaforen. Verder laat ik zien dat bij idiomatische PV's de letterlijke en aspectuele betekenissen behouden kunnen blijven en dat de letterlijke betekenis van partikels behouden kan blijven bij aspectuele PV's.

Hoofdstuk 4 beschrijft een corpusstudie over aspectuele partikels. Ik onderzoek in dit hoofdstuk transitiviteit, type werkwoordstam en type direct object bij combinaties van tien verschillende partikels met elk tien verschillende werkwoorden, in totaal 100 PV's. Mijn conclusie is dat aspectuele partikels niet op een willekeurige manier combinaties vormen met werkwoordstammen. De resultaten suggereren daarentegen dat er twee typen partikels zijn. Partikels van het ene type (*about, along, around, on*) combineren vooral met zogenaamde 'manner' werkwoorden en vormen intransitieve PV's of PV's waarbij het direct object niet beïnvloed wordt tijdens de actie (dit wil zeggen dat ze geen verandering of interne beweging ondergaan, Tenny's 1994 term 'affectedness'). Partikels van het andere type (*down, off, out, over, through, up*) combineren vooral met resultatieve werkwoorden en vormen intransitieve en transitieve PV's met directe objecten die wel of niet beïnvloed worden door de actie van het werkwoord.

Hoofdstuk 5 onderzoekt het effect van partikels op het situationeel aspect van de werkwoordstam bij de 100 PV's uit de corpusstudie. De PV's en bijbehorende werkwoordstammen zijn beoordeeld in een onderzoek met acceptabiliteitsoordelen van moedertaalsprekers aan de hand van twee aspectuele testen van Dowty (1979). De resultaten suggereren dat de partikels situationeel aspect niet direct markeren. De resultaten van deze methode bleken echter te zijn beïnvloed door de verschillende houdingen van de proefpersonen tegenover de taak, en door hun voor- of afkeur voor bepaalde directe objecten, partikels en de positie van de partikels. Regionale variatie was ook van invloed, alsook de frequentie van de geteste PV's en werkwoordstammen. Desalniettemin bepalen aspectuele partikels het situationeel aspect op een indirecte manier, door het leggen van selectierestricties op de werkwoordstam. Het werkwoord *eat* staat bijvoorbeeld verschillende soorten directe objecten toe, namelijk telbare en niet-telbare (vgl. de Engelse termen 'quantized' en 'non-quantized'); *eat up* daarentegen

kan alleen gecombineerd worden met telbare directe objecten. Dit leidt ertoe dat predikaten met *eat up* telisch zijn – niet omdat *up* teliciteit aangeeft, maar omdat het vereist dat het direct object van de werkwoordstam telbaar is. Aspectuele partikels voegen ook andere soorten van aspectuele betekenis toe (zoals continuering, voltooiing, resultativiteit, inchoativiteit, iterativiteit, habitualiteit, distributiviteit, enz.), waar ik de term *lexicaal aspect* aan geef, en ook subtiele, niet-aspectuele lexicale betekenissen. Hieruit volgt dat aspectuele partikels wel degelijk betekenis bijdragen aan PV's.

Hoofdstuk 6 presenteert een theorie voor aspectuele partikels binnen het raamwerk van situationeel aspect dat is gebaseerd op schalen (bijvoorbeeld Rappaport-Hovav 2008, en vele anderen). Ik beargumenteer dat er twee typen partikels zijn: scalaire en niet-scalaire. Niet-scalaire partikels combineren met 'manner' werkwoordstammen en vormen intransitieve PV's, of PV's met een niet-beïnvloed direct object (met partikels zoals *away, down, off, out, over, through, up*). Scalaire partikels, in tegenstelling tot niet-scalaire partikels, vereisen de aanwezigheid van een schaal in de denotatie van een predikaat. Een schaal is een rangorde van waardes van een bepaald attribuut. Scalaire partikels verwijzen naar één van drie mogelijke schalen, zogenaamde 'path' schalen, 'property' schalen, of 'volume/extent' schalen, die zijn gelexicaliseerd in verschillende syntactische elementen. Een partikel markeert teliciteit alleen wanneer het scalair is en refereert naar een 'volume/extent' schaal die gelexicaliseerd is in het direct object (dat geen subject kan worden in een onaccusatief werkwoord). Ik bepleit ook dat scalariteit, net als teliciteit, is opgebouwd op een monotone en compositionele manier. Een schaal vereist dat de 'event participant' die gemeten wordt door de schaal, overt gerealiseerd is in de zin. Op die manier kan een scalair partikel de argumentstructuur van een intransitieve of optioneel transitieve werkwoordstam veranderen, waardoor het verplicht transitief wordt. Dit verklaart waarom sommige scheidbare werkwoorden verplicht een direct object selecteren, terwijl de werkwoordstam geen direct object neemt, zoals in *sleep off a headache*. Ik beargumenteer verder dat de zogenaamde '*time-away'* constructie daarom niet als een aparte constructie behandeld hoeft te worden, contra Jackendoff (1997).

Hoofdstuk 7 past dezelfde scalaire analyse toe op Slowaakse aspectuele prefixen, door Engelse partikels ermee te vergelijken en ertegen af te zetten. Zowel Slowaakse werkwoorden met een prefix als Engelse PV's laten systematisch gedrag zien in termen

van dynamiciteit, teliciteit en effecten op argumentstructuur, afhankelijk van het type prefix of partikel (scalair of niet-scalair). Beide typen prefixen en partikels veranderen statieve werkwoordstammen in dynamische werkwoorden. Echter alleen scalaire partikels en prefixen kunnen teliciteit markeren en de argumentstructuur van de werkwoordstam veranderen. In tegenstelling tot Engelse partikels markeren Slowaakse prefixen echter altijd teliciteit, ongeacht het type schaal. Op basis van mijn Slowaakse data neem ik voorlopig aan dat er naast de drie typen schalen nog een ander type kan bestaan, namelijk een schaal die een eigenschap van de actie meet, zoals bij *dojest'* 'ophouden met eten', *nakúpit'* 'veel kopen'.

Hoofdstuk 8 focust op 'property' schalen zoals die gelexicaliseerd zijn in 'degree achievement' werkwoordstammen (bijvoorbeeld *warm, cool, brighten, slow*), en hoe de partikels *up* en *down* deze schalen specificeren. Ik beargumenteer dat deze aspectuele partikels de richting van de schaal bepalen door het eindpunt te identificeren. Zowel corpusdata als data uit woordenboeken laten zien dat de meeste 'degree achievement' werkwoordstammen bij voorkeur combineren met één van beide partikels. Meer precies gezegd, werkwoordstammen die afgeleid zijn van ongemarkeerde bijvoeglijke naamwoorden (bijvoorbeeld *brighten, speed, warm*) hebben de voorkeur voor *up*, terwijl werkwoordstammen afgeleid van gemarkeerde bijvoeglijke naamwoorden (bijvoorbeeld *cool, soften, thin*) combineren met *up* en *down*. Deze resultaten wijzen niet alleen op het niet-willekeurige karakter van de combinatie van werkwoordstam en partikel, maar ook op de gemarkeerdheid binnen een paar van tegengestelde partikels, suggererend dat *up* ongemarkeerd is in relatie tot *down*.

Samenvattend, dit proefschrift trekt een aantal gangbare aannames met betrekking tot PV's in twijfel. Het belangrijkste punt, dat ik gedurende het hele proefschrift beargumenteer, is dat aspectuele partikels op niet-willekeurige manier combineren met werkwoordstammen. Ten tweede, contra Brinton (1985), pleit ik ervoor dat partikels *geen* markeerders zijn van teliciteit. Ik laat zien dat teliciteitsmarkering alleen betrekking heeft op scalaire partikels die refereren naar een 'volume/extent' schaal die gelexicaliseerd is in een direct object (dat geen subject kan worden in een onaccusatief werkwoord). Ten derde, contra Jackendoff (1997), stel ik voor dat de '*time-away*' constructie geanalyseerd kan worden zoals andere aspectuele PVs. De specifieke eigenschappen van deze constructie volgen dan uit de schaal die vereist is door het

partikel en die gelexicaliseerd is in het direct object. Deze eigenschappen gelden ook voor andere, verplicht transitieve PV's met ongeselecteerde directe objecten. Ten vierde pleit ik ervoor om situationeel aspect (met de aspectuele opposities stationisch/dynamisch, telisch/atelisch en duratief/punctueel) te onderscheiden van lexicaal aspect (continuering, voltooiing, resultativiteit, inchoativiteit, iterativiteit, etc.), in tegenstelling tot de bestaande literatuur waar de term *lexicaal aspect* gebruikt wordt voor wat ik bedoel met situationeel aspect (bijvoorbeeld Rothstein 2004, Slabakova 2001). Ten vijfde, contra Jackendoff (2002), laat ik zien dat aspectuele partikels wel degelijk betekenis bijdragen: ze kunnen selectierestricties leggen op de werkwoordstam of de argumentstructuur van het werkwoord veranderen en ze kunnen subtiele aspectuele en niet-aspectuele betekenissen dragen. Tot slot beargumenteer ik dat aspectuele partikels niet allemaal gelijk zijn, maar dat er twee typen zijn. Daarbij komt dat er, ten minste bij scalaire partikels, binnen een paar van partikels een tegenstelling is waarbij de ene gemarkeerd is in relatie tot de andere.

Veel vragen blijven echter nog onbeantwoord; sommige daarvan zijn zelfs nauwelijks aan de orde gekomen in dit proefschrift. Hoe kunnen we situationeel aspect testen op een betrouwbaardere manier dan met de testen van Dowty (1979)? Waarom produceren sprekers van het Engels PV's, die ze afwijzen wanneer ze acceptabiliteitsoordelen moeten geven? Welke soorten lexicaal-aspectuele betekenis zijn er en hoe worden ze uitgedrukt in het Engels? Hoe beïnvloed onaccusativiteit de eigenschappen van teliciteitsmarkering van Engelse partikels? Zijn er nog andere schalen naast de 'path', 'property' en 'volume/extent' schalen? Tot op welke hoogte blokkeren niet-scalaire partikels niet-telbare directe objecten? Wat zijn de parametrische verschillen tussen talen met betrekking tot schalen? Worden paren van tegengestelde partikels onderscheiden op gemarkeerdheid en, als dat het geval is, kan dat onderscheid cross-linguïstisch worden toegepast? Op welke manier bepaalt de letterlijke betekenis de aspectuele betekenis van een partikel? Deze vraagstukken laat ik open voor toekomstig onderzoek naar aspect en scheidbare werkwoorden.

# Resumé (Summary in Slovak)

Frázové slovesá sú viacslovné slovesá zložené zo slovesného základu a častice. Frázové slovesá majú špecifické sémantické a syntaktické vlastnosti. Táto dizertačná práca prispieva k porozumeniu niektorých týchto vlastností lexikálno-sémantickou analýzou vidových častíc frázových slovies. Zároveň práca prehlbuje teóriu vidu.

Prvá kapitola sa zaoberá vidom v angličtine a jeho dvoma komponentmi – gramatickým vidom a predikátovým vidom (v angl. používame termín *situation aspect*). Ťažiskom práce je druhý typ vidu z hľadiska monotonickej kompozičnej teórie (Olsen 1994, Rappaport Hovav & Levin 1998), podľa ktorej je predikátový vid monotonický a kompozičný. Podľa Olsenovej (1997) môže byť predikát príznakový alebo neprízнakový pre vidové príznaky dynamickosť, telickosť a duratívnosť. V protiklade s jej závermi o duratívnosti predkladá naša práca názor, že bodovosť je príznaková a duratívnosť neprízнaková. Predikátový vid je jednak determinovaný jazykovým materiálom a jednak implikovaný pragmaticky (Hay, Kennedy & Levin 1999). Zmena v hodnote predikátového vidu sa nazýva vidový posun (v angl. *aspect(ual) shift*). Tento fenomén je najzávažnejšou komplikáciou Dowtyho (1979) súboru testov používaných na určenie predikátového vidu.

Druhá kapitola je prehľadom vlastností frázových slovies v porovnaní s voľnými syntaktickými spojeniami slovesa s príslovkou alebo predložkou a demonštruje, že sémantická kompozičnosť determinuje syntaktické vlastnosti frázových slovies i voľných syntagiem. Kapitola rozoberá niekoľko sémantických klasifikácií frázových slovies a volí klasifikáciu na neidiomatické, vidové a idiomatické (Celce-Murcia & Larsen-Freeman 1999). Kapitola navyše prináša kritický pohľad na predchádzajúce štúdie o vidových časticiach a uvádza výskumné otázky práce.

Tretia kapitola ďalej rozoberá rozdiely medzi voľnými syntagmami a frázovými slovesami na jednej strane a medzi troma sémantickými kategóriami frázových slovies na strane druhej. Podľa našej mienky syntax odlišuje len voľné syntagmy od frázových slovies (test s použitím otázky *kde*, p. Darwin & Gray 1999), kým sémantika sa uplatňuje v oboch prípadoch, pri rozlišovaní voľných syntagiem od frázových slovies ako aj pri rozlišovaní troch sémantických kategórií frázových slovies. Zaoberáme sa predovšetkým rolou pohybovej sémantiky, kompozičnosti a metafory. Avšak

poukazujeme aj na to, že častice v idiomatických frázových slovesách si môžu zachovávať neidiomatické a vidové významy, a podobne častice vo vidových frázových slovesách si môžu zachovávať neidiomatické významy.

Štvrtá kapitola predstavuje korpusovú štúdiu vidových častíc. Štúdia skúma tranzitívnosť, typ slovesného základu a typ priameho predmetu stovky frázových slovies, ktoré predstavujú kombinácie desiatich typov častíc, a prichádza k záveru, že vidové častice sa so slovesnými základmi nekombinujú arbitrárne. Výsledky naznačujú, že sú dva druhy vidových častíc. Jeden druh častíc (*about, along, around, on*) sa spravidla spája so slovesami vyjadrujúcimi spôsob, akým dej prebieha, s ktorými tvorí netranzitívne frázové slovesá alebo frázové slovesá s priamym predmetom, ktorého denotát nepodlieha vnútornej zmene či vnútornému pohybu (porov. Tenny 1994). Častice druhého typu (*down, off, out, over, through, up*) sa prevažne spájajú s rezultatívnymi slovesami a tvoria tranzitívne aj netranzitívne frázové slovesá s priamym predmetom, ktorého denotát podlieha alebo nepodlieha vnútornej zmene či vnútornému pohybu.

Piata kapitola na frázových slovesách z korpusovej štúdie skúma vplyv častíc na predikátový vid slovesného základu. Frázové slovesá a príslušné slovesné základy sme podrobili dvom Dowtyho testom (1979) v dotazníkovej štúdii gramatickej prípustnosti. Respondentmi boli rodení hovoriaci anglického jazyka. Výsledky naznačujú, že častice nie sú priamymi nositeľmi príznakov predikátového vidu. Výsledky štúdie však zahmlievajú rôzne faktory, napr. geografická variácia a frekvencia testovaných frázových slovies a slovesných základov, ale aj to, že respondenti pristupovali k hodnoteniu gramatickej prípustnosti rôznorodo, či uprednostňovali určitý priamy predmet, časticu alebo slovosled. Vidové častice jednako determinujú predikátový vid nepriamo, a to tým, že limitujú výber priameho predmetu slovesného základu. Napríklad *eat* (jesť) sa môže kombinovať s rôznymi typmi priameho predmetu, kvantifikovaným i nekvantifikovaným. Naopak *eat up* (zjesť) sa môže kombinovať len s kvantifikovaným priamym predmetom. Následkom toho sú predikáty s frázovým slovesom *eat up* telické – nie však preto, že *up* je nositeľom príznaku telickosti, ale preto, že *up* obmedzuje priamy predmet slovesného základu na kvantifikovaný. Vidové častice sú nositeľmi ďalších druhov vidových významov (ako kontinuálnosť, ukončenie

deja, rezultatívnosť, inchoatívnosť, iteratívnosť, habituálnosť, distributívnosť, atď.), ako aj odtiene nevidových významov. Preto vidové častice nie sú redundantné.

Šiesta kapitola na základe výsledkov predošlých kapitol predstavuje teóriu vidových častíc zakotvenú v teórii predikátového vidu založenej na škálach (napr. Rappaport-Hovav 2008 a mnohí ďalší). Podľa nás jestvujú dva typy vidových častíc: neškálové a škálové. Neškálové častice (*about, along, around, away$_1$, on*) sa spájajú so slovesami vyjadrujúcimi spôsob, akým dej prebieha, a spolu tvoria netranzitívne frázové slovesá alebo frázové slovesá s priamym predmetom, ktorého denotát nepodlieha vnútornej zmene či vnútornému pohybu. Naopak škálové častice (*away$_2$, down, off, out, over, through, up*) sa spájajú s rezultatívnymi slovesami a tvoria frázové slovesá, ktoré môžu viazať priamy predmet, ktorého denotát podlieha alebo nepodlieha vnútornej zmene či vnútornému pohybu. Na rozdiel od neškálových častíc je prítomnosť škálových častíc v predikáte podmienená prítomnosťou škály v denotácii predikátu. Škála je radenie hodnôt určitého atribútu, napr. teploty v slovese *warm* (hriať). Škálové častice sa môžu vzťahovať na škály pohybu (napr. *enter* vstúpiť), vlastnosti (napr. *brighten* rozjasniť), alebo objemu či rozsahu (napr. *read a book* čítať knihu), ktoré môžu byť lexikálne vyjadrené v rôznych vetných členoch. Častica je nositeľom telickosti len ak je škálová, pričom odkazuje na škálu objemu či rozsahu lexikálne vyjadrenú v priamom predmete, ktorý sa nemôže stať neakuzatívnym podmetom. Podľa nášho názoru je škálovitosť, rovnako ako telickosť, monotonická a kompozičná. Keďže účastník deja meraný škálou nesmie byť nevyjadrený, škálová častica môže ovplyvniť intenčnú hodnotu (fakultatívne) netranzitívneho slovesného základu a zmeniť ho na povinne tranzitívne, napr. *eat (an apple) – eat up an apple* (jesť (jablko) – zjesť jablko). Táto podmienka vysvetľuje tiež existenciu povinne tranzitívnych frázových slovies, ktorých slovesný základ je netranzitívny, napr. *sleep off a headache* (vyspať sa z bolesti hlavy). Na rozdiel od Jackendoffa (1997) preto osobitný opis jedného typu takýchto frázových slovies, tzv. time-*away* konštrukciu (napr. *dance the night away* pretancovať noc), nepovažujeme za potrebný.

Predkladanú teóriu aplikujeme i na slovenské vidové prefixy, ktoré porovnávame s anglickými vidovými časticami v siedmej kapitole. Prefixové slovesá i frázové slovesá vykazujú systematické správanie vo vzťahu k dynamickosti, telickosti a intenčnej hodnote v závislosti od typu prefixu či častice (škálový alebo neškálový typ). Oba typy

prefixov a častíc menia statívne slovesné základy na dynamické prefixové či frázové slovesá. Len škálové častice a prefixy môžu byť nositeľmi telickosti a meniť intenčnú hodnotu slovesného základu. Avšak na rozdiel od anglických častíc sú slovenské prefixy nositeľom telickosti bez ohľadu na typ škály. Na základe slovenských dát sa domnievame, že okrem uvedených troch typov škál jestvuje ďalší typ škály, a to taký, ktorý meria nejakú vlastnosť samotného deja, napr. *dojesť, nakúpiť*.

Ôsma kapitola sa zameriava na škály vlastnosti lexikálne vyjadrené v stupňových slovesných základoch, napr. *warm* (hriať), *cool* (chladiť), *brighten* (rozjasniť), *slow* (spomaliť), a na to, ako sú tieto škály špecifikované časticami *up* a *down*. Tvrdíme, že vidové častice udávajú koncový bod týchto škál, a tým určujú ich smer. Podľa slovníkových i korpusových dát väčšina stupňových slovesných základov uprednostňuje kombináciu s jednou zo spomínaných dvoch častíc. Konkrétne sa slovesné základy odvodené od nepríznakových adjektív (napr. *brighten* (rozjasniť), *warm* (hriať)) kombinujú s *up*, kým slovesné základy odvodené od príznakových adjektív (napr. *cool* (chladiť), *soften* (mäknúť)) sa kombinujú buď s *up* alebo s *down*. Výsledky poukazujú nielen na nearbitrárnosť kombinácie slovesných základov s časticami, ale aj na neekvivalentnosť opozitných častíc, a teda na to, že *up* je nepríznakové vo vzťahu k *down*.

V krátkosti, predkladaná dizertačná práca spochybňuje niektoré bežné domnienky o frázových slovesách. Predovšetkým, ako v práci priebežne poukazujeme, vidové častice sa so slovesnými základmi kombinujú nearbitrárne. Po druhé, na rozdiel od Brintonovej (1985) tvrdíme, že častice *nie sú* nositeľmi telickosti. Demonštrujeme, že telicky príznakové sú len škálové častice odkazujúce na škálu objemu či rozsahu lexikálne vyjadrenú v priamom predmete, ktorý sa nemôže stať neakuzatívnym podmetom. Po tretie, na rozdiel od Jackendoffa (1997) pokladáme tzv. time-*away* konštrukciu za druh vidového frázového slovesa. Jej vlastnosti sú determinované škálou, ktorá je podmienená časticou a lexikálne vyjadrená priamym predmetom. Tieto vlastnosti sú charakteristické aj pre ostatné obligatórne tranzitívne frázové slovesá s netranzitívnym slovesným základom. Po štvrté, navrhujeme v anglickej terminológii rozlišovať medzi predikátovým vidom (statívnosť/dynamickosť, telickosť/atelickosť, a duratívnosť/bodovosť) a spôsobom slovesného deja, na označenie ktorého navrhujeme pre angličtinu termín *lexical aspect*. Týmto spôsobom presadzujeme terminologickú

jednotnosť a jednoznačnosť, na rozdiel od literatúry, ktorá termínom *lexical aspect* označuje vidové protiklady predikátového vidu (napr. Rothstein 2004, Slabakova 2001). Po piate, na rozdiel od Jackendoffa (2002) tvrdíme, že vidové častice nie sú redundantné, keďže môžu limitovať výber priameho predmetu slovesného základu či meniť jeho intenčnú hodnotu, ako aj byť nositeľmi jemných významových odtieňov vidového i nevidového charakteru. Napokon tvrdíme, že vidové častice nie sú všetky rovnaké. Ako demonštrujeme, sú dva druhy vidových častíc. Navyše častice, resp. škálové častice, sa javia nerovnými v rámci jedného typu a delia sa na príznakové a nepríznakové.

Mnoho otázok zostáva nezodpovedaných. Niektoré sme v práci okrajovo načrtli. Ako možno predikátový vid testovať spoľahlivejšie než použitím Dowtyho (1979) testov? Prečo používatelia jazyka produkujú frázové slovesá, ktoré pri testoch gramatickej prípustnosti odmietajú? Aké druhy spôsobu slovesného deja existujú a ako sú v angličtine vyjadrené? Sú okrem škály pohybu, vlastnosti, a objemu či rozsahu ešte ďalšie typy škál? Do akej miery neškálové častice blokujú nekvantifikovaný priamy predmet? Ako sa jazyky parametricky líšia vo vzťahu k škálam? Líšia sa opozitné častice príznakovosťou, a ak áno, uplatňuje sa tento protiklad aj v iných jazykoch? Ako neidiomatické významy častíc determinujú ich vidové významy? Tieto otázky nechávame na budúci výskum zameraný na vid či frázové slovesá.

# References


Bardovi-Harlig, Kathleen & Dudley W. Reynolds. 1995. The role of lexical aspect in the acquisition of tense and aspect. *TESOL Quarterly* 29(1): 107–131.

Batistella, Edwin L. 1990. *Markedness: The evaluative superstructure of language*. Albany, NY: State University of New York Press.

Bauer, Laurie. 1983. *English word-formation*. Cambridge: Cambridge University Press.

Baugh, Albert C. & Thomas Cable. 2002. *A history of the English language.* Upper Saddle River, NJ: Prentice Hall.

Beavers, John. 2008. Scalar complexity and the structure of events. In Johannes Dölling, Tatjana Heyde-Zybatow & Martin Schäfer (eds.), *Event structures in linguistic form and interpretation*, 245–265. Berlin: Mouton de Gruyter.

Beavers, John. 2009. Multiple incremental themes and figure/path relations. In Tova Friedman and Satoshi Ito (eds.), *Proceedings of SALT [Semantics and Linguistic Theory]* 18: 90–107. Ithaca, NY: Cornell University.

Beavers, John & Andrew Koontz-Garboden. 2012. Manner and result in the roots of verbal meaning. *Linguistic Inquiry* 43(3): 331–369.

Biber, Douglas, Stig Johansson, Geoffrey Leech, Susan Conrad & Edward Finegan. 1999. *Longman grammar of spoken and written English*. London & New York: Longman.

Blackman, Daniel. 1998. *Tests in English. Phrasal verbs.* Havlíčkův Brod: Fragment.

Blake, Norman F. 2002. Phrasal verbs and associated forms in Shakespeare. *Atlantis* 24(2): 25–39.

Bolinger, Dwight L. 1971. *The phrasal verb in English*. Cambridge, MA: Harvard University Press.

Booij, Geert. 2002. Separable complex verbs in Dutch: A case of periphrastic word formation. In Dehé et al. (eds.), *Verb-particle explorations*, 21–42.

Booij, Geert. 2010. *Construction morphology*. New York: Oxford University Press.

Borer, Hagit. 2005. *The normal course of events. Structuring sense, Volume II*. Oxford: Oxford University Press.

Borik, Olga. 2002. *Aspect and reference time.* PhD dissertation, Utrecht University. Published in 2006. Oxford & New York: Oxford University Press.

Borik, Olga & Tanya Reinhart. 2004. Telicity and perfectivity: Two independent systems. In László Hunyadi et al. (eds.), *Preliminary Papers of LOLA 8*. http://filcat.uab.cat/clt/membres/postdoctorands/Borik/borik-reinhart-lola8.pdf [Feb 6, 2013]

Brinton, Laurel J. 1985. Verb particles in English: Aspect or aktionsart? *Studia Linguistica* 39(2): 157–168.

Brinton, Laurel J. 1988. *The development of English aspectual systems.* Cambridge: Cambridge University Press.

*Cambridge phrasal verbs dictionary.* Cambridge University Press. http://dictionaries.cambridge.org/ [2007–2011]; http://dictionary.cambridge.org/ [2011–2013]

Cappelle, Bert. 2004a. The particularity of particles, or why they are not just 'intransitive prepositions'. *Belgian Journal of Linguistics* 18(1): 29–57.

Cappelle, Bert. 2004b. (A)telicity and (un)boundedness: Ten complications of the "in/for X time" test. http://www.kuleuven-kortrijk.be/nl/Onderzoek/Letteren/Onderzoek Taalkunde/FEST/DescriptiveEnglishGrammar/bert-cappelle/%28A%29telicity%20and%20%28un%29boundedness.pdf [May 5, 2009]

Cappelle, Bert. 2005a. *Particle patterns in English. A comprehensive coverage.* Leuven: Katholieke Universiteit Leuven PhD dissertation.

Cappelle, Bert & Catherine Chauvin. 2010. Interprétations aspectuelles des verbes à particule en anglais: Téliques, comparatifs, résultatifs. In Pascale Hadermann, Olga Inkova, Michel Pierrard & Dan Van Raemdonck (eds.), *Approches de la scalarité*, 249–281. Genève: Droz.

Cappelle, Bert & Renaat Declerck. 2005. Spatial and temporal boundedness in English motion events. *Journal of Pragmatics* 37(6): 889–917.

Cappelle, Bert, Yury Shtyrov & Friedemann Pulvermüller. 2010. *Heating up* or *cooling up* the brain? MEG evidence that phrasal verbs are lexical units. *Brain and Language* 115(3): 189–201.

Celce-Murcia, Marianne & Diane Larsen-Freeman. 1999. *The grammar book. An ESL/EFL teacher's course.* Boston: Heinle & Heinle.

Claridge, Claudia. 2000. *Multi-word verbs in Early Modern English: A corpus-based study*. Amsterdam & Atlanta: Rodopi.

Comrie, Bernard. 1976. *Aspect.* Cambridge: Cambridge University Press.

Condon, Nora. 2008. How cognitive linguistic motivations influence the learning of phrasal verbs. In Frank Boers & Seth Lindstromberg, *Cognitive linguistic approaches to teaching vocabulary and phraseology*, 133–158. Berlin & New York: Mouton de Gruyter.

Cowey, Anthony P. & Ronald Mackin. 2000. *Oxford dictionary of phrasal verbs.* Oxford: Oxford University Press.

Csirmaz, Aniko. 2004a. Aspect and aspect change crosslinguistically. In László Hunyadi et al. (eds.), *Preliminary Papers of LOLA 8*. http://home.utah.edu/~u0587010/web-content/Pages/Papers/lola4Letter.pdf [May 19, 2009]

Csirmaz, Aniko. 2004b. Severely constrained aspect. Paper presented at GLOW [Generative Linguistics in the Old World] workshop on tense, aspect and modality 27. April 18–21, 2004. Thessaloniki, Greece. http://home.utah.edu/~u0587010/ [March 17, 2007]

Cubillo, Mari Carmen Campoy. 2002. Phrasal and prepositional verbs in specialized texts: A creative device. *Ibérica: Revista de la Asociación Europea de Lenguas para Fines Específicos (AELFE)* 4: 95–111.

Dagut, Menachem & Batia Laufer. 1985. Avoidance of phrasal verbs – a case for contrastive analysis. *Studies in Second Language Acquisition* 7(1): 73–80.

Darwin, Clayton M. & Loretta S. Gray. 1999. Going after the phrasal verb: An alternative approach to classification. *TESOL Quarterly* 33(1): 65–83.

Darwin, Clayton M. & Loretta S. Gray. 2000. Comments on Clayton M. Darwin and Loretta S. Gray's "Going after the phrasal verb: An alternative approach to classification": The authors respond. *TESOL Quarterly* 34(1): 165–173.

Declerck, Renaat. 1991. *Tense in English: Its structure and use in discourse.* London & New York: Routledge.

Dehé, Nicole. 2002. *Particle verbs in English. Syntax, information structure and intonation.* Amsterdam & Philadelphia: John Benjamins.

Dehé, Nicole, Ray Jackendoff, Andrew McIntyre & Silke Urban (eds.). 2002. *Verb-particle explorations.* Berlin & New York: Mouton de Gruyter.

Denison, David. 1985. The origins of completive *up* in English. *Neuphilologishe Mitteilungen* 86: 37–61.

Depraetere, Ilse. 1995. On the necessity of distinguishing between (un)boundedness and (a)telicity. *Linguistics and Philosophy* 18(1): 1–19.

den Dikken, Marcel. 1995. *Particles: On the syntax of verb-particle, triadic, and causative constructions.* (Oxford Studies in Comparative Syntax.) Oxford: Oxford University Press.

Dixon, Robert. M. W. 1982. *Where have all the adjectives gone?: And other essays in semantics and syntax.* Berlin: De Gruyter.

Dowty, David R. 1979. *Word meaning and Montague grammar. The semantics of verbs and times in generative semantics and in Montague's PTQ.* Dodrecht: D. Reidel Publishing Company.

Dušková, Libuše. 1999. *Studies in the English language I.* Prague: Karolinum.

Dušková, Libuše, Zdenka Strnadová, Dagmar Knittlová, Jaroslav Peprník & Jarmila Tárnyiková. 1988. *Mluvnice současné angličtiny na pozadí češtiny.* Praha: Academia. http://emsa.ff.cuni.cz/ (March 5, 2013)

Elenbaas, Marion. 2007. *The synchronic and diachronic syntax of the English verb-particle combination.* PhD dissertation, Utrecht University.

Emonds, Joseph. 1972. Evidence that indirect object movement is a structure-preserving rule. *Foundations of Language* 8: 546–561.

Filip, Hana. 1999. *Aspect, eventuality types and nominal reference*. New York: Routledge, Taylor & Francis Group (Garland).

Filip, Hana. 2000. The quantization puzzle. In Carol Tenny & James Pustejovsky (eds.), *Events as grammatical objects, from the combined perspectives of lexical semantics, logical semantics and syntax*, 3–60. Stanford: CSLI [Center for the Study of Language and Information] Press.

Filip, Hana. 2003. Prefixes and the delimitation of events. *Journal of Slavic Linguistics*, 11(1), 55–101.

Filip, Hana. 2004. The telicity parameter revisited. In Robert B. Young (ed.), *Proceedings of SALT [Semantics and Linguistic Theory]* 14: 92–109. Ithaca, NY: Cornell University.

Filip, Hana. 2008. Events and maximalization. In Susan Rothstein (ed.), *Theoretical and crosslinguistic approaches to the semantics of aspect*, 217–256. Amsterdam & Philadelphia: John Benjamins.

Fraser, Bruce. 1976. *The verb-particle combination in English*. New York, San Francisco & London: Academic Press.

Gardner, Dee & Mark Davies. 2007. Pointing out frequent phrasal verbs: A corpus-based analysis. *TESOL Quarterly* 41(2): 339–359.

Gehrke, Berit. 2004. Adverbial functions of Slavic prefixes. Paper presented at the Workshop on event structure in linguistic form and interpretation, Leipzig. March 17–19, 2004. http://parles.upf.edu/llocs/bgehrke/home/leipzig2004.pdf [March 10, 2013]

Gibbs, Raymond W., Jr, Nandini P. Nayak & Cooper Cutting. 1989. How to kick the bucket and not decompose: Analyzability and idiom processing. *Journal of Memory and Language* 28(5): 576–593.

Giddings, Catherine. 2001. What it means to be DOWN and OUT: The semantics of particles in English. In Michalis Georgiafentis, Paul Kerswill & Spyridoula

Varlokosta (eds.), *Reading Working Papers in Linguistics* 5, 155–173. Reading: University of Reading.

*Google Docs service*. docs.google.com [2010–2012] Now Google Drive.

Gries, Stefan T. 2002. The influence of processing on grammatical variation: Particle placement in English. In Dehé et al. (eds.), *Verb-particle explorations*, 269–288.

Hampe, Beate. 2005. When down is not bad and up not good enough. A usage-based assessment of the plus-minus parameter in image-schema theory. *Cognitive Linguistics* 16(1): 81–112.

Harrison, Jeremy. 2000. *Frázová slovesa.* Dubicko: Infoa.

Hart, Carl W. 1999. *The ultimate phrasal verb book.* New York: Barron's.

Hay, Jennifer. 1998. The non-uniformity of degree achievements. Paper presented at the Linguistic Society of America annual meeting, New York. January 1998. http://www.saps.canterbury.ac.nz/jen/documents/lsa98.pdf [March 15, 2013]

Hay, Jennifer, Christopher Kennedy & Beth Levin. 1999. Scalar structure underlies telicity in "degree achievements". In Tanya Mathews & Devon Strolovitch (eds.), *Proceedings of SALT [Semantics and Linguistic Theory]* 9: 127–144. Ithaca, NY: Cornell University.

Hoeksema, Jack & Donna Jo Napoli. 2008. Just for the hell of it: A comparison of two taboo-term constructions. *Journal of Linguistics* 44: 347–378.

de Hoop, Helen. 1992. *Case configuration and noun phrase interpretation.* Groningen: University of Groningen PhD dissertation.

van Hout, Angeliek. 1996. *Event semantics of verb frame alternations. A case study of Dutch and its acquisition.* PhD Dissertation, Tilburg University. Published in 1998. New York & London: Garland Publishing.

van Hout, Angeliek. 1998. On the role of direct objects and particles in learning telicity in Dutch and English. In Annabel Greenhill, Mary Hughes, Heather Littlefield & Hugh Walsh, *Proceedings of the Annual Boston University Conference on Language Development* [BUCLD] 22(2): 397–408. Boston: Boston University.

van Hout, Angeliek. 2000. Projection based on event structure. In Peter Coopmans, Martin Everaert & Jane B. Grimshaw (eds.), *Lexical specification and insertion*, 397–422. Amsterdam & Philadelphia: John Benjamins.

van Hout, Angeliek. 2004. Unaccusativity as telicity checking. In Artemis Alexiadou, Elena Anagnostopoulou & Martin Everaert (eds.), *The unaccusativity puzzle: Studies on the lexicon-syntax interface*, 60–83. Oxford: Oxford University Press.

van Hout, Angeliek. 2008. Acquiring telicity cross-linguistically: On the acquisition of telicity entailments associated with transitivity. In Melissa Bowerman & Penelope Brown (eds.), *Crosslinguistic perspectives on argument structure: Implications for learnability*, 255–278. Mahwah, NJ: Lawrence Erlbaum.

Hulstijn, Jan H. & Elaine Marchena. 1989. Avoidance: Grammatical or semantic causes? *Studies in Second Language Acquisition* 11(3): 241–255.

Hunyadi, László, György Rakosi & Enikő Tóth (eds.). 2004. *Preliminary Papers of LOLA [Symposium of Logic and Language]* 8. Debrecen, Hungary.

Jackendoff, Ray. 1973. The base rules for prepositional phrases. In Stephan R. Anderson & Paul Kiparsky (eds.), *Festschrift for Morris Halle*, 345–356. New York: Holt, Rinehart and Winston.

Jackendoff, Ray. 1990. *Semantic structures.* Cambridge, MA & London: MIT Press.

Jackendoff, Ray. 1996. The proper treatment of measuring out, telicity, and perhaps even quantification in English. *Natural Language and Linguistic Theory* 14(2): 305–354.

Jackendoff, Ray. 1997. Twisting the night away. *Language* 73(3): 534–559.

Jackendoff, Ray. 2002. English particle constructions, the lexicon, and the autonomy of syntax. In Dehé et al. (eds.), *Verb-particle explorations*, 67–94.

Jaworska, Ewa. 1989. Intransitive prepositions in Polish. *Poznań Studies in Contemporary Lingistics* 24: 171–182.

Jeschull, Liane. 2003. What particle verbs have to do with grammatical aspect in early child English. In Dagmar Bittner & Natalia Gagarina (eds.), *Acquisition of aspect*

*(ZAS Papers in Linguistics* 29*)*, 119–131. Berlin: ZAS [Zentrum für Allgemeine Sprachwissenschaft].

Jeschull, Liane. 2007. The pragmatics of telicity and what children make of it. In Alyona Belikova, Luisa Meroni & Mari Umeda (eds.), *Proceedings of the second conference on generative approaches to language acquisition North America [GALANA 2]*, 180–187. Somerville, MA: Cascadilla.

Kačmárová, Alena. 2006. *On conveying strong judgments in conversational English*. Prešov: University of Prešov.

Kagan, Olga. 2012. Degree semantics for Russian verbal prefixes: The case of *pod-* and *do-*. *Oslo Studies in Language* 4(1): 207–243.

Kavka, Stanislav J. 2003. *A book on idiomatology*. Žilina: University of Žilina.

Kavka, Stanislav J. 2007. *Past and present of the English language*. Ostrava: University of Ostrava.

Kavka, Stanislav J. & Miroslav Černý. 2009. Whims of the Old English prefix *ge-* revisited. (To the memory of Prof. Antonín Beer). *Ostrava Journal of English Philology* 1(1): 54–66.

Kennedy, Christopher & Beth Levin. 2008. Measure of change: The adjectival core of degree achievements. In Louise McNally & Christopher Kennedy (eds.), *Adjectives and adverbs: Syntax, semantics and discourse*, 156–182. Oxford: Oxford University Press.

Keyser, Samuel Jay & Thomas Roeper. 1992. Re: The abstract clitic hypothesis. *Linguistic Inquiry* 23(1): 89–125.

Krifka, Manfred. 1992. Thematic relations as links between nominal reference and temporal constitution. In Ivan A. Sag & Anna Szabolcsi (eds.), *Lexical matters*, 29–53. Chicago: Chicago University Press.

Krifka, Manfred. 1998. The origins of telicity. In Susan Rothstein (ed.), *Events and grammar*, 197–235.

Lakoff, George & Mark Johnson. 2003. *Metaphors we live by*. London: The University of Chicago Press.

van Lambalgen, Michiel. Sine anno. Coercion. http://staff.science.uva.nl/~michielldocs/SlidesPToE11.pdf [March 15, 2012]

van Lambalgen, Michiel & Fritz Hamm. 2005. *The proper treatment of events.* Malden, MA: Blackwell.

Laufer, Batia & Stig Eliasson. 1993. What causes avoidance in L2 learning? L1-L2 difference, L1-L2 similarity, or L2 complexity? *Studies in Second Language Acquisition* 15(1): 35–48.

Leech, Geoffrey & Nicholas Smith. 2000. *Manual to accompany the British National Corpus (Version 2) with improved word-class tagging.* http://163.1.0.36/docs/bnc2postag_manual.htm [Aug 5, 2009]

Leech, Geoffrey, Roger Garside & Michael Bryant. 1994. CLAWS4: The tagging of the British National Corpus. In *Proceedings of the 15th International Conference on Computational Linguistics [COLING 94]*, 622–628. Kyoto, Japan. http://ucrel.lancs.ac.uk/papers/coling.html [Aug 5, 2009]

Levin, Beth. 1993. *English verb classes and alternations: A preliminary investigation*, Chicago: University of Chicago Press.

Levin, Beth & Malka Rappaport Hovav. 1991. Wiping the slate clean: A lexical semantic exploration. *Cognition* 41: 123–151.

Levin, Beth & Malka Rappaport Hovav. 1995. *Unaccusativity: At the syntax-lexical semantics interface.* (Linguistic Inquiry Monograph 26). Cambridge, MA: MIT Press.

Levin, Beth & Malka Rappaport Hovav. 2010. Lexicalized scales and verbs of scalar change. Presented at the 46th Annual Meeting of the Chicago Linguistic Society [CLS], Chicago. April 8–10, 2010. http://www.stanford.edu/~bclevin/cls10change.pdf [Jan 10, 2013]

Levin, Beth & Malka Rappaport Hovav. To appear. Lexicalized meaning and manner/result complementarity. In Boban Arsenijević, Berit Gehrke & Rafael Marín (eds.), *Subatomic semantics of event predicates.* Dordrecht: Springer. http://www.stanford.edu/~bclevin/barcel11rev.pdf [March 8, 2013]

Liao, Yan & Yoshinori J. Fukuya. 2004. Avoidance of phrasal verbs: The case of Chinese learners of English. *Language Learning* 54(2): 193–226.

Lindner, Susan J. 1983. *A lexico-semantic analysis of English verb particle constructions with "out" and "up"*. PhD dissertation, Indiana University.

Lindstromberg, Seth. 2007. Synonymous antonyms in Prepositionland? *Humanising Language Teaching Magazine* 9(4). (Sine pagina.)

MacDonald, Johnatan. 2009. Inner aspect and phases. In Kleanthes K. Grohmann (ed.), *Explorations of phase theory: Features and arguments*, 207–230. Berlin: Mouton de Gruyter.

*Macmillan phrasal verbs plus.* 2007. Oxford: Macmillan.

McIntyre, Andrew. 2001. Argument blockages induced by verb particles in English and German: Event modification and secondary predication. In Nicole Dehé & Anja Wanner (eds.), *Structural aspects of semantically complex verbs*, 131–164. Berlin: Peter Lang.

McIntyre, Andrew. 2002. Idiosyncrasy in particle verbs. In Dehé et al. (eds.), *Verb-particle explorations*, 97–118.

McIntyre, Andrew. 2004. Event paths, conflation, argument structure and VP shells. *Linguistics* 42(3): 523–571.

McIntyre, Andrew. 2007. Particle verbs and argument structure. *Language and Linguistics Compass* 1(4): 350–397.

*Merriam-Webster dictionary*. http://www.merriam-webster.com/ [2008–2013]

Milićević, Nataša. 2004. The lexical and superlexical verbal prefix *iz-* and its role in the stacking of prefixes. *Nordlyd* 32(2): 279–300.

Mlynarczyk, Anna. 2004. *Aspectual pairing in Polish*. PhD dissertation, Utrecht University.

Morgan, Pamela S. 1997. Figuring out figure out. Metaphor and the semantics of the English verb-particle construction. *Cognitive Linguistics* 8(4): 327–357.

Mourelatos, Alexander P. D. 1978. Events, processes, and states. *Linguistics and Philosophy* 2(3): 415–434.

Novakov, Predrag. 2009. Dynamic-stative distinction in English verbs. *Zbornik Matice srpske za filologiju i lingvistiku* 52(2): 187–195.

Olsen, Mari Broman. 1994. The semantics and pragmatics of lexical aspect features. *Studies in the Linguistic Sciences* 24: 361–375.

Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech & Jan Svartvik. 1985. *A comprehensive grammar of the English language.* London & New York: Longman.

Ramchand, Gillian. 2001. Aktionsart, l-syntax and selection. Paper presented at Perspectives on Aspect conference, Utrecht University. http://www.let.uu.nl/~ Henk.Verkuyl/personal/poa/ramchand.pdf [May 25 2012]

Ramchand, Gillian & Peter Svenonius. 2002. The lexical syntax and lexical semantics of the verb-particle construction. In Line Mikkelsen & Christopher Potts (eds.), *Proceedings of the 21st West Coast Conference on Formal Linguistics [WCCFL]* 21, 101–114. Somerville, MA: Cascadilla Press. http://ling.auf.net/lingbuzz/000007 [March 15, 2013]

Rappaport Hovav, Malka. 2008. Lexicalized meaning and the internal temporal structure of events. In Rothstein (ed.), *Theoretical and crosslinguistic approaches to the semantics of aspect*, 13–42.

Rappaport Hovav, Malka & Beth Levin. 1998. Building verb meanings. In Miriam Butt & Wilhelm Geuder (eds.), *The projection of arguments: Lexical and compositional factors,* 97–134. Stanford: CSLI [Center for the Study of Language and Information] Press.

Rappaport Hovav, Malka & Beth Levin. 2010. Reflections on manner/result complementarity. In Malka Rappaport Hovav, Edit Doron & Ivy Sichel (eds.), *Syntax, lexical semantics, and event structure*, 21–38. Oxford: Oxford University Press.

Reichenbach, Hans. 1947. *Elements of symbolic logic*. New York: The Macmillan Company.

Rothstein, Susan (ed.). 1998. *Events and grammar*. Dordrecht: Kluwer.

Rothstein, Susan. 2004. *Structuring events: A study in the semantics of lexical aspect*. Malden, MA: Blackwell Publishing.

Rothstein, Susan. 2006. Telicity at the dinner table: Do I have to eat it all? In Hans-Martin Gärtner, Sigrid Beck, Regine Eckardt, Renate Musan & Barbara Stiebels (eds.), *Between 40 and 60 puzzles for Krifka. A web festschrift for Manfred Krifka*. Berlin: ZAS [Zentrum für Allgemeine Sprachwissenschaft]. (Sine pagina.) http://www.zas.gwz-berlin.de/fileadmin/material/40-60-puzzles-for-krifka/pdf/rothstein.pdf [Feb 6, 2013] Published also in 2009 in *Snippets* 20.

Rothstein, Susan. 2008. Introduction. In Rothstein (ed.), *Theoretical and crosslinguistic approaches to the semantics of aspect*, 1–10.

Rothstein, Susan (ed.). 2008. *Theoretical and crosslinguistic approaches to the semantics of aspect*. Amsterdam & Philadelphia: John Benjamins.

Ružička, Jozef (ed.). 1966. *Morfológia slovenského jazyka.* Bratislava: Vydavateľstvo Slovenskej akadémie vied.

Sablayrolles, Pierre. 1995. The semantics of motion. In *Proceedings of the seventh conference on European chapter of the Association for Computational Linguistics*, 281–283. Dublin, Ireland. http://acl.ldc.upenn.edu/E/E95/E95-1040.pdf [March 15, 2013]

Saeed, John I. 2003. *Semantics*. Malden, MA: Wiley-Blackwell Publishing.

Sag, Ivan A., Timothy Baldwin, Francis Bond, Ann Copestake & Dan Flickinger. 2002. Multiword expressions: A pain in the neck for NLP. In Alexander F. Gelbukh (ed.), *Proceedings of the Third International Conference on Intelligent Text Processing and Computational Linguistics* [CICLing 2002], 1–15. Mexico City, Mexico.

di Sciullo, Anne M. & Roumyana Slabakova. 2005. Quantification and aspect. In Verkuyl et al. (eds.), *Perspectives on aspect*, 61–80.

Shovel, Martin. *Making sense of phrasal verbs.* Upper Saddle River, NJ: Prentice Hall.

Slabakova, Roumyana. 2001. *Telicity in the second language*. Amsterdam & Philadelphia: John Benjamins.

Smith, Carlota S. 1997. *The parameter of aspect.* Dordrecht: Kluwer.

Smollett, Rebecca. 2002. Why you can “eat up” an apple but not “consume up” an apple. In Sophie Burelle & Stanca Somesfalean (eds.), Proceedings of the 2002 annual conference of the Canadian Linguistic Association [CLA], 285–298. Quebec: University of Quebec. http://homes.chass.utoronto.ca/~cla-acl/2002/Smollett_2002.pdf [March 15, 2013]

Smollett, Rebecca. 2005. Quantized direct objects don’t delimit after all. In Verkuyl et al. (eds.), *Perspectives on aspect*, 41–59.

Součková, Kateřina. 2004. There is only one po-. *Nordlyd* 32(2): 403–419.

Spears, Richard A. 1993. *NTC’s dictionary of phrasal verbs and other idiomatic verbal phrases.* Chicago: NTC Publishing Group.

Štekauer, Pavol. 1996. On the word-formation status of naming units with particles. In *Studia Philologica* III, Acta Facultatis Pedagogicae Universitatis Šafarikanae, 78–82. Prešov: University of P. J. Šafárik.

Svenonius, Peter. 1996. The optionality of particle shift. *Working Papers in Scandinavian Syntax* 57: 47–75.

Svenonius, Peter. 2003. Limits on P: Filling in holes vs. falling in holes. *Nordlyd* 31(2): 431–445.

Svenonius, Peter. 2004. Slavic prefixes inside and outside VP. *Nordlyd* 32(2): 194–242.

de Swart, Henriette. 1998. Aspect shift and coercion. *Natural Language & Linguistic Theory* 16(2): 347–385.

Talmy, Leonard. 1975. Figure and ground in complex sentences. In *Proceedings of the First Annual Meeting of the Berkeley Linguistics Society,* 419–430. Berkeley: Berkeley Linguistics Society.

Talmy, Leonard. 1985. Lexicalization patterns: Semantic structure in lexical forms. In Timothy Shopen (ed.), *Language typology and syntactic description 3: Grammatical categories and the lexicon*, 57–149. Cambridge: Cambridge University Press.

Tenny, Carol. 1994. *Aspectual roles and the syntax-semantics interface.* Dordrecht: Kluwer.

*The British National Corpus, version 3 (BNC XML Edition).* 2007. Distributed by Oxford University Computing Services on behalf of the BNC Consortium. http://www.natcorp.ox.ac.uk/

*The free dictionary*. Farlex. http://www.thefreedictionary.com/ [2009–2013]

Todorova, Marina, Kathy Straub, William Badecker & Robert Frank. 2000. Aspectual coercion and the online computation of sentential aspect. In Lila R. Gleitman & Aravind K. Joshi (eds.), *Proceedings of the 22nd Annual Conference of the Cognitive Science Society*, 523–528. Philadelphia: University of Pennsylvania.

Toivonen, Ida. 2006. On continuative *on*. *Studia Linguistica* 60(2): 181–219.

Tyler, Andrea & Vyvyan Evans. 2003. *The semantics of English prepositions: Spatial scenes, embodied meaning, and cognition*. Cambridge: Cambridge University Press.

Vachek, Josef. 1990. *English past and present. An introductory course*. Prague: Státní pedagogické nakladatelství.

Valera, Salvador. 2003. Computerised corpora and corpus linguistics. In Pavol Štekauer & Stanislav Kavka (eds.), *Rudiments of English Linguistics II*, 297-321. Prešov: University of Prešov.

Vendler, Zeno. 1967. *Linguistics in Philosophy*. Ithaca, NY: Cornell University Press.

Verkuyl, Henk J. 1972. *On the compositional nature of the aspects*. Dordrecht: D. Reidel.

Verkuyl, Henk J. 1989. Aspectual classes and aspectual composition. *Linguistics and Philosophy* 12(1): 39–94.

Verkuyl, Henk J. 2005. Aspectual composition: Surveying the ingredients. In Verkuyl et al. (eds.), *Perspectives on aspect*, 19–39.

Verkuyl, Henk, Henriette de Swart & Angeliek van Hout (eds.). 2005. *Perspectives on aspect*. Dordrecht: Springer.

Vodička, Lukáš. 2007. *Anglicko-slovenský slovník frázových slovies*. From Czech translated by Tatiana Laliková & Tatiana Langová. Bratislava: Fragment.

*WordNet. A lexical database for English.* 2010. Princeton University. http://wordnet.princeton.edu [2012]

*Wordnik.* Dictionary. http://www.wordnik.com/ [2012]

*Xiara*. Software. University of Oxford. http://projects.oucs.ox.ac.uk/xaira/

Zucchi, Sandro. 1998. Aspect shift. In Rothstein (ed.), *Events and grammar*, 349–370.

# Appendices

# Appendix I

**ABOUT**

| | | |
|---|---|---|
| 1 | KB0 844 | I'll say at the outset, that Holy Communion is not something that we *play about* with. |
| 2 | KB1 368 | Yeah he must've been *following* her *about*. |
| 3 | KB1 924 | Er, asking if there's anything we co , look at him *walking about* with that |
| 4 | KB1 2039 | I'm watching him *flying about*. |
| 5 | KB1 2509 | I don't *carry* them *about* with me though. |
| 6 | KB7 1123 | That's cos she's lonely and she just *wanders about*. |
| 7 | KB7 1980 | We work, we we work shift work so I I mean you know we get up at half past four in the morning and and if you've got people *trundling about* above your heads all hours of the night it's er |
| 8 | KB7 7129 | when you get and what have you in then the officers, I mean I know they're in their twenties when they get *larking about* and what have you I don't like it. |
| 9 | KB7 12747 | they've had all and oh lunch he'll manage dinner can't *swap* them *about* Are you alright then? |
| 10 | KB7 13261 | Yeah, they like to *roam about* and explore and and, and er, I'm not sure I wanna cope with litter trays for ever, would you? |

**ALONG**

| | | |
|---|---|---|
| 1 | KB0 58 | erm, he wants to *come along* and see you |
| 2 | KB0 1812 | It means that when you *go along* to the social services, register and it's above board children's work that you are doing. |
| 3 | KB6 1884 | And I'm *driving along* and I'm thinking all about Christmas |
| 4 | KB7 3277 | Mm I know you can *take* them *along* with you nowadays can't you and into a |
| 5 | KB7 14332 | Still *trotting along* . |
| 6 | KB8 476 | Don't *fiddle along* in the middle |
| 7 | KB8 5564 | And anyway I *carried* him half way *along* and I had to put him down |
| 8 | KB8 5789 | sorted out and then I just *walk along* and pick up Stephanie. |
| 9 | KB8 7876 | so you know it was just *flowing along* smoothly, you couldn't see that there was a wi er weir there |
| 10 | KB9 3885 | Then when you've finished this off, yeah, *bring* it *along* there and I'll have a look at it. |

**AROUND**

| | | |
|---|---|---|
| 1 | KB2 2403 | Oh you've got to *shop around* |
| 2 | KB2 4401 | Ah but what it means, I've got to *walk around* and look at it this and look at it that! |
| 3 | KB3 316 | Scott and the men got out and *looked around*. |

| | | |
|---|---|---|
| 4 | KB5 64 | Yeah I'll *get around* to it. |
| 5 | KB5 188 | All right up round here ideal, up and down the bumps over the guard, but when you get it out on the road, very hard work, similar sort of ride, well I suppose it will be, run around the you've gotta *push around* |
| 6 | KB6 493 | They're not *swimming around*, yeah they're staying at the top as well aren't they? |
| 7 | KB6 1547 | Well we've been *rushing around* haven't we? |
| 8 | KB7 1063 | He don't have to keep calling and *wandering around* after us. |
| 9 | KB7 12922 | If I want it *spread around*. |
| 10 | KB8 2248 | That's a horse box for *carrying* horses *around*. |

**DOWN**

| | | |
|---|---|---|
| 1 | KB0 845 | Our communion service is part of the rich tradition which has been *passed down* to us from Jesus Christ. |
| 2 | KB0 966 | There is no blueprint that one could *lay down* but with a on the infinite versatility of God to use and deploy the gifts that we are able to offer to his service. |
| 3 | KB0 2006 | the ones you've *written down*? |
| 4 | KB0 2190 | And the second point too, is to say is to ask, at least to consider, whether then in some centres the work of the Synod ought to be *trimmed down* to match the particular work that is being done. |
| 5 | KB0 2991 | Do anything different, you still turn it the same way to *lock* it *down* it's just |
| 6 | KB1 558 | She said, well our John's *coming down* tonight, she said, just get me twenty. |
| 7 | KB1 1093 | And how can you have, *hold* a a job *down* |
| 8 | KB1 1560 | Look, *slow down*, or you're driving me mad. |
| 9 | KB1 1747 | I'm me and Colin are *settling down* a lot compared to what we were five year ago. |
| 10 | KB1 2189 | No Peter wants about them finally *closing* his business *down*. |

**OFF**

| | | |
|---|---|---|
| 1 | KB0 731 | So they *started* their ministry *off* together, and I think it's something quite special to me and to recognise that we have sent three people off on a journey and three people, two here, have come to the end of a journey and just part of the journey and are beginning to discover that will be discovered in the life of the three human beings, human beings at the time. |
| 2 | KB0 731 | So they started their ministry off together, and I think it's something quite special to me and to recognise that we have *sent* three people *off* on a journey and three people, two here, have come to the end of a journey and just part of the journey and are beginning to discover that will be discovered in the life of the three human beings, human beings at the time. |
| 3 | KB0 2537 | Sorry about *cutting* the top of your head *off* but, never mind, you know! |

4 KB0 2862 It would be worth *copying* all that *off*.
5 KB1 1805 Er, Derek, *paid* him *off*,
6 KB1 5256 They take it back to nest to like feed the others so that *kills* them *off*.
7 KB6 565 Gotta *sand* it *off*.
8 KB6 566 The Polyripple *peels off* though Zoe.
9 KB6 665 I gotta *finish* the kitchen *off* with the Polyripple.
10 KB6 1608 Zoe goes to me why don't you have it all *chopped off*

**ON**

1 KB0 77 Mm, well the thing is there's some similar conversation *going on* in
2 KB0 930 We will *move on* .
3 KB0 1155 The story, of course, was a happy ending, that she *struggled on* and she did it.
4 KB0 1840 Er, there is a a little orange leaflet which has been placed on the seats during the day that many of you, I hope, already have er, for anyone who hasn't may I perhaps place these on the front table, there's a the , there's another supply over there and, could I please ask that some responsible representative from each district would please take a few more of these away with you so that they are distributed in district meetings in the near future, and attention drawn to them there er, if there are not enough copies er, then I'm sure the provincial office on receiving a, a request from you will make sure there's more that *passed on* to you.
5 KB0 3593 Er whether he did say in a conversation that he, he knows when this nervousness er er and depression is *coming on* and he takes medication and it's alright.
6 KB1 1132 I mean, they're begging 'em you to ke they're begging you to *keep* 'em *on* at school, and yet you can't get no help to keep 'em on.
7 KB1 2126 Well, she'll say to him, put kettle on and butter some bread, and he'll sit there, and he's smoking, and he's continuing what he's doing, you know, and she'll go and do what she's doing, and she, have you flicking arse-hole you to do, and, you know, any, it just goes in that ear, comes out 'ther ear, and just *sallies on*, and don't take blind bit of notice.
8 KB2 1856 yeah, the, that's the awful part I tried one of them with a big bit here and I *tried* it *on* and it looked like a tit on a pimple, I said god what am I gonna do?
9 KB2 5693 could of could of *walked on* .
10 KB6 126 I *chatting on* there.

**OUT**

1 KB0 383 Mm, we *started out* in convoy in Liverpool
2 KB0 1013 Well maybe they can like any other church was the an , or is, the Annual Church ge the Annual General Meeting and as John *pointed out* this morning of course, we look at what we've done in the past.
3 KB0 1173 So what, are you *trying* it *out* for somebody are you?
4 KB0 1277 But I mean even now you can you can *read* that thing *out* to me.

5 KB0 1318 On the notice you *sent out* the other day for Monday's meeting.
6 KB0 1335 Oh yes, I was assuming that erm a I do , I didn't really *set* it *out* as a formal agenda just as a
7 KB0 3263 Erm because we've got a printing system for the school th they're, they're now *letting out* their printing services to others in the community.
8 KB1 29 I don't know, they've *sold out* a dozen at Broadway this week, well int last fortnight, so White Gates were telling me, so, well if we do, we do, if the bungalow goes before we sell well, we'll have to come and live with me mum until we find another one .
9 KB1 118 *cleaning* a mucky fire *out* again.
10 KB1 640 'Cos I've been this morning and I've *cleared* fireplace *out*, washed

**OVER**

1 KB1 2856 That's why he'll *join* you *over* I mean, he'll be leaving it on to get ready to go
2 KB1 5452 How long did you *go over* with her?
3 KB2 191 Oh we've had er, there was this wait Chris rung us up, she's *coming over* in April
4 KB2 547 go down and see him, if he'll *check* mine *over*
5 KB2 918 Well no it for the, the heating's *swapped over* cos
6 KB2 1127 she's here telling me how they *sent over* and she said oh don't call for the next two week because we're going to Italy
7 KB2 1311 It's so easy to keep clean that and that it only wants *wiping over*, you know.
8 KB2 3525 But they've *changed* that *over*, but they won't
9 KB2 3702 So the attendant says to her, have you got a wrist watch and she hadn't got her wrist watch on, but he spotted her wedding ring and he said, I'll take that and she said, she had to *hand* her wedding er ring *over* and she vowed when she put that on that she would never
10 KB2 5518 *covered over*.

**THROUGH**

1 KB4 90 *hoover through*.
2 KB7 2229 *air* it *through*.
3 KB7 3550 which was his job and and had everything there and he, he *patched through* to this computer this place and different computers that he had.
4 KB7 9687 Well it was if it's only just *come through* from the fryer
5 KB7 12127 Can you *get through* to town there's no through road that way, other end, but couldn't is there any short cuts you get into town that way?
6 KB8 8862 you know when they were two days old, Trevor *took* me *through* to the hospital
7 KBB 6237 well *cut* it *through* and open it and put a bit in
8 KBB11410 They're *shooting through*.
9 KBD 3113 What it is is, the ventilation on the roof, ventilation shafts when the wind's driven it drives under and *leaks through*.

10 KBF 2730 Water *pouring through* into the kitchen water pouring down the electric wire of the lamp in the study!

**UP**

1 KBO 64 erm, but er, you know,wh whether it'll be a good thing to *link up* with somebody I don't know yet

2 KB0 80 No, oh, I mean personally I think it would be better for the United Reformed to *join up* with the shared pastures instead of joining up with the Methodist because the Methodist have got plenty of churches in their area, haven't they?

3 KB0 92 of course he'll be *coming up* tomorrow

4 KB0 199 No, I'll put them in this, why *use up* your carrier bags, anyhow this is an easier way to carry

5 KB0 293 Well largely because we couldn't afford a house in the area where we both *grew up*.

6 KB0 427 You had everything *packed up* already

7 KB0 821 And, that again, might be me but many of you when you've heard me say it in a service I've *ended up* with my asking at the end of a sermon asking the congregation to smile.

8 KB0 1491 Erm oh well maybe yours can be *saved up* for another time?

9 KB0 1958 Now, nobody er er,a at this stage at the er Financial Resources Committee er, challenge us on this figure, I think we will just stage of of doing arith arithmetic of *adding* it *up*, but no doubt that the staff will be comparing what going to be, er what within a but have prepared for next year with what we're supposed to do this year and ours is an increase of another percent.

10 KB0 2181 Really, two things *brought up* investigation to consider the first is with trusts the very important piece of work that's done by trusts on behalf of the provence another provence may or may not know that there are the trusts have now been er, between trusts erm South Wales trusts erm

# Appendix II

**The instructions for respondents:**
This is one of a series of questionnaires designed to find out what sort of events in English language can be stopped and finished – can you tell the difference? For each of the sentences below, check *yes* if you consider it a grammatically acceptable English sentence or *no* if the sentence is not acceptable in your opinion.
Please bear in mind that the sentences are to be judged as when referring to events that take place once only. For example, *Mary stopped jumping* will be judged as unacceptable as it is unlikely that she should stop during a single jump. *John stopped drinking* should not be read as if John stopped his drinking habit but only that he stopped drinking on a single occasion, a single drink.
This is not a test of your grammatical knowledge. Do not worry if you should have too many *yes* or too many *no* answers, either. Thank you for your participation.

**Sentences used in acceptability judgement surveys:**

**ABOUT**
The child stopped playing with the frog.
The child stopped playing about with the frog.
The child finished playing with the frog.
The child finished playing about with the frog.

The dog stopped following Mary.
The dog stopped following Mary about.
The dog finished following Mary.
The dog finished following Mary about.

John stopped walking.
John stopped walking about.
John finished walking.
John finished walking about.

The bird stopped flying.
The bird stopped flying about.
The bird finished flying.
The bird finished flying about.

John stopped carrying his laptop.
John stopped carrying his laptop about.
John finished carrying his laptop.
John finished carrying his laptop about.

John stopped wandering.
John stopped wandering about.
John finished wandering.
John finished wandering about.

The car stopped trundling.
The car stopped trundling about.
The car finished trundling.
The car finished trundling about.

The child stopped larking.
The child stopped larking about.
The child finished larking.
The child finished larking about.

John stopped swapping the broken heating.
John stopped swapping the broken heating about.
John finished swapping the broken heating.
John finished swapping the broken heating about.

Mary stopped roaming.
Mary stopped roaming about.
Mary finished roaming.
Mary finished roaming about.

**ALONG**
Mary stopped coming.
Mary stopped coming along.
Mary finished coming
Mary finished coming along.

John stopped going.
John stopped going along.
John finished going
John finished going along.

The car stopped driving.
The car stopped driving along.
The car finished driving.
The car finished driving along.

Mary stopped taking the dog with her.
Mary stopped taking the dog along with her.
Mary finished taking the dog with her.
Mary finished taking the dog along with her.

The horse stopped trotting.
The horse stopped trotting along.
The horse finished trotting.
The horse finished trotting along.

Mary stopped fiddling with her hair.

Mary stopped fiddling along with her hair.
Mary finished fiddling with her hair.
Mary finished fiddling along with her hair.

John stopped carrying his laptop.
John stopped carrying his laptop along.
John finished carrying his laptop.
John finished carrying his laptop along.

John stopped walking.
John stopped walking along.
John finished walking.
John finished walking along.

Water finally stopped flowing.
Water finally stopped flowing along.
Water finally finished flowing.
Water finally finished flowing along.

Mary stopped bringing the dog with her.
Mary stopped bringing the dog along with her.
Mary finished bringing the dog with her.
Mary finished bringing the dog along with her.

**AROUND**
Mary stopped shopping.
Mary stopped shopping around.
Mary finished shopping.
Mary finished shopping around.

John stopped looking.
John stopped looking around.
John finished looking.
John finished looking around.

John stopped walking.
John stopped walking around.
John finished walking.
John finished walking around.

Mary stopped getting to working.
Mary stopped getting around to working.
Mary finished getting to working.
Mary finished getting around to working.

John stopped pushing the pedals.
John stopped pushing the pedals around.
John finished pushing the pedals.

John finished pushing the pedals around.

Mary stopped swimming.
Mary stopped swimming around.
Mary finished swimming.
Mary finished swimming around.

John stopped rushing.
John stopped rushing around.
John finished rushing.
John finished rushing around.

Mary stopped wandering.
Mary stopped wandering around.
Mary finished wandering.
Mary finished wandering around.

Mary stopped spreading the news.
Mary stopped spreading the news around.
Mary finished spreading the news.
Mary finished spreading the news around.

John stopped carrying his laptop.
John stopped carrying his laptop around.
John finished carrying his laptop.
John finished carrying his laptop around.

**DOWN**
Mary stopped passing the recipe to her children.
Mary stopped passing down the recipe to her children.
Mary finished passing the recipe to her children.
Mary finished passing down the recipe to her children.

John stopped laying his blueprint for victory.
John stopped laying down his blueprint for victory.
John finished laying his blueprint for victory.
John finished laying down his blueprint for victory.

Mary stopped writing a letter.
Mary stopped writing down a letter.
Mary finished writing a letter.
Mary finished writing down a letter.

John stopped trimming the tree.
John stopped trimming down the tree.
John finished trimming the tree.
John finished trimming down the tree.

Mary stopped locking her computer.
Mary stopped locking her computer down.
Mary finished locking her computer.
Mary finished locking her computer down.

John stopped coming.
John stopped coming down.
John finished coming.
John finished coming down.

Mary stopped holding her job.
Mary stopped holding her job down.
Mary finished holding her job.
Mary finished holding her job down.

The car stopped slowing.
The car stopped slowing down.
The car finished slowing.
The car finished slowing down.

John stopped settling in London.
John stopped settling down in London.
John finished settling in London.
John finished settling down in London.

Peter stopped closing his business.
Peter stopped closing his business down.
Peter finished closing his business.
Peter finished closing his business down.

**OFF**
John stopped sanding the finish on the cabinets.
John stopped sanding off the finish on the cabinets.
John finished sanding the finish on the cabinets.
John finished sanding off the finish on the cabinets.

Mary stopped peeling the wine label.
Mary stopped peeling off the wine label.
Mary finished peeling the wine label.
Mary finished peeling off the wine label.

Mary stopped finishing the letter.
Mary stopped finishing off the letter.
Mary finished finishing the letter.
Mary finished finishing off the letter.

John stopped chopping the branch.
John stopped chopping off the branch.

John finished chopping the branch.
John finished chopping off the branch.

John stopped starting in the cattle business.
John stopped starting off in the cattle business.
John finished starting in the cattle business.

John finished starting off in the cattle business.

Mary stopped sending the parcel.
Mary stopped sending the parcel off.
Mary finished sending the parcel.
Mary finished sending the parcel off.

Mary stopped cutting her nail.
Mary stopped cutting her nail off.
Mary finished cutting her nail.
Mary finished cutting her nail off.

John stopped copying the file.
John stopped copying off the file.
John finished copying the file.
John finished copying off the file.

Mary stopped paying her loan.
Mary stopped paying off her loan.
Mary finished paying her loan.
Mary finished paying off her loan.

John stopped killing the ants.
John stopped killing off the ants.
John finished killing the ants.
John finished killing off the ants.

**ON**
The conversation stopped going like this.
The conversation stopped going on like this.
The conversation finished going like this.
The conversation finished going on like this.

The train stopped moving.
The train stopped moving on.
The train finished moving.
The train finished moving on.

John finally stopped struggling.
John finally stopped struggling on.
John finally finished struggling.

John finally finished struggling on.

Mary stopped passing the recipe to her children.
Mary stopped passing on the recipe to her children.
Mary finished passing the recipe to her children.
Mary finished passing on the recipe to her children.

Mary's headache stopped coming.
Mary's headache stopped coming on.
Mary's headache finished coming.
Mary's headache finished coming on.

John stopped keeping his job.
John stopped keeping on his job.
John finished keeping his job.
John finished keeping on his job.

Mary stopped sallying when she saw me.
Mary stopped sallying on when she saw me.
Mary finished sallying when she saw me.
Mary finished sallying on when she saw me.

John stopped trying the hat.
John stopped trying the hat on.
John finished trying the hat.
John finished trying the hat on.

John stopped walking.
John stopped walking on.
John finished walking.
John finished walking on.

Mary finally stopped chatting.
Mary finally stopped chatting on.
Mary finally finished chatting.
Mary finally finished chatting on.

**OUT**
John stopped starting in the cattle business.
John stopped starting out in the cattle business.
John finished starting in the cattle business.
John finished starting out in the cattle business.

Mary stopped pointing that to me.
Mary stopped pointing that out to me.
Mary finished pointing that to me.
Mary finished pointing that out to me.

Mary stopped trying the new recipe.
Mary stopped trying out the new recipe.
Mary finished trying the new recipe.
Mary finished trying out the new recipe.

John stopped reading the story to Jane.
John stopped reading out the story to Jane.
John finished reading the story to Jane.
John finished reading out the story to Jane.

Mary stopped sending the parcel.
Mary stopped sending the parcel out.
Mary finished sending the parcel.
Mary finished sending the parcel out.

John stopped setting to work.
John stopped setting out to work.
John finished setting to work.
John finished setting out to work.

The company stopped letting its service to the public.
The company stopped letting out its service to the public.
The company finished letting its service to the public.
The company finished letting out its service to the public.

Mary stopped selling the dress.
Mary stopped selling out the dress.
Mary finished selling the dress.
Mary finished selling out the dress.

Mary stopped cleaning the oven.
Mary stopped cleaning out the oven.
Mary finished cleaning the oven.
Mary finished cleaning out the oven.

Mary stopped clearing the fireplace.
Mary stopped clearing out the fireplace.
Mary finished clearing the fireplace.
Mary finished clearing out the fireplace.

**OVER**
Mary stopped joining Susan.
Mary stopped joining Susan over.
Mary finished joining Susan.
Mary finished joining Susan over.

John stopped going.
John stopped going over.

John finished going.
John finished going over.

John stopped coming.
John stopped coming over.
John finished coming.
John finished coming over.

Mary stopped checking the dress.
Mary stopped checking the dress over.
Mary finished checking the dress and bought it.
Mary finished checking the dress over.

John stopped swapping the broken heating.
John stopped swapping the broken heating over.
John finished swapping the broken heating.
John finished swapping the broken heating over.

Mary stopped sending the parcel.
Mary stopped sending the parcel over.
Mary finished sending the parcel.
Mary finished sending the parcel over.

John stopped wiping the counter.
John stopped wiping the counter over.
John finished wiping the counter.
John finished wiping the counter over.

John stopped changing the tire.
John stopped changing the tire over.
John finished changing the tire.
John finished changing the tire over.

Mary stopped handing the ring to him.
Mary stopped handing the ring over to him.
Mary finished handing the ring to him.
Mary finished handing the ring over to him.

John stopped covering the bed.
John stopped covering the bed over.
John finished covering the bed.
John finished covering the bed over.

**THROUGH**
Mary stopped hoovering.
Mary stopped hoovering through.
Mary finished hoovering.
Mary finished hoovering through.

John stopped airing his room.
John stopped airing his room through.
John finished airing his room.
John finished airing his room through.

Mary stopped patching John to the boss.
Mary stopped patching John through to the boss.
Mary finished patching John to the boss.
Mary finished patching John through to the boss.

The train stopped coming.
The train stopped coming through.
The train finished coming.
The train finished coming through.

John stopped getting to town.
John stopped getting through to town.
John finished getting to town.
John finished getting through to town.

Mary stopped taking her guest to the living room.
Mary stopped taking her guest through to the living room.
Mary finished taking her guest to the living room.
Mary finished taking her guest through to the living room.

John stopped cutting the paper.
John stopped cutting the paper through.
John finished cutting the paper.
John finished cutting the paper through.

The daffodil bulb stopped shooting.
The daffodil bulb stopped shooting through.
The daffodil bulb finished shooting.
The daffodil bulb finished shooting through.

Water stopped leaking.
Water stopped leaking through.
Water finished leaking.
Water finished leaking through.

Water stopped pouring into the kitchen.
Water stopped pouring through into the kitchen.
Water finished pouring into the kitchen.
Water finished pouring through into the kitchen.

**UP**
John’s company stopped linking with Mary’s.

John’s company stopped linking up with Mary’s.
John’s company finished linking with Mary’s.
John’s company finished linking up with Mary’s.

Mary stopped joining with John at the station.
Mary stopped joining up with John at the station.
Mary finished joining with John at the station.
Mary finished joining up with John at the station.

John stopped coming.
John stopped coming up.
John finished coming.
John finished coming up.

John stopped using this resource.
John stopped using up this resource.
John finished using this resource.
John finished using up this resource.

The three stopped growing.
The three stopped growing up.
The three finished growing.
The three finished growing up.

Mary stopped packing.
Mary stopped packing up.
Mary finished packing.
Mary finished packing up.

John stopped ending as a colonel.
John stopped ending up as a colonel.
John finished ending as a colonel.
John finished ending up as a colonel.

Mary stopped saving the file.
Mary stopped saving up the file.
Mary finished saving the file.
Mary finished saving up the file.

John’s business stopped adding to his wealth.
John’s business stopped adding up to his wealth.
John’s business finished adding to his wealth.
John’s business finished adding up to his wealth.

Mary stopped bringing legal action against John.
Mary stopped bringing up legal action against John.
Mary finished bringing legal action against John.
Mary finished bringing up legal action against John.

# Appendix III

**The results of the acceptability judgment surveys.**

Legend:

acceptable with *stop* – the number of responses (out of 10) that judged the verb root (V) or the phrasal verb (PV) as acceptable in a *stop*-test sentence

acceptable with *finish* – the number of responses (out of 10) that judged the verb root (V) or the phrasal verb (PV) as acceptable in a *finish*-test sentence

p – p value as a result of the computation of the assocation between the type of verb (verb root or P) and acceptability by Fisher's chi-square two-tailed test

SS – the information on statistical significance: *yes* – statistically significant, *no* – not statistically significant

| particle | verb root | acceptable with *stop* | | p | SS | acceptable with *finish* | | p | SS |
|---|---|---|---|---|---|---|---|---|---|
| | | V | PV | | | V | PV | | |
| **about** | play | 9 | 8 | 1.0000 | no | 8 | 5 | 0.3498 | no |
| | follow | 10 | 10 | 1.0000 | no | 2 | 2 | 1.0000 | no |
| | walk | 8 | 8 | 1.0000 | no | 5 | 8 | 0.3498 | no |
| | fly | 8 | 9 | 1.0000 | no | 2 | 4 | 0.6285 | no |
| | carry | 5 | 6 | 1.0000 | no | 3 | 3 | 1.0000 | no |
| | wonder | 10 | 8 | 0.4737 | no | 5 | 8 | 0.3498 | no |
| | trundle | 6 | 4 | 0.6563 | no | 1 | 2 | 1.0000 | no |
| | lark | 3 | 6 | 0.3698 | no | 4 | 4 | 1.0000 | no |
| | swap | 1 | 3 | 0.5820 | no | 5 | 3 | 0.6499 | no |
| | roam | 9 | 8 | 1.0000 | no | 5 | 5 | 1.0000 | no |
| **along** | come | 2 | 5 | 0.3498 | no | 1 | 0 | 1.0000 | no |
| | go | 5 | 2 | 0.3498 | no | 2 | 1 | 1.0000 | no |
| | drive | 5 | 4 | 1.0000 | no | 0 | 4 | 0.0867 | no |
| | take | 4 | 6 | 0.6563 | no | 0 | 0 | 1.0000 | no |
| | trot | 7 | 9 | 0.5820 | no | 7 | 4 | 0.3698 | no |
| | fiddle | 10 | 5 | **0.0325** | **yes** | 5 | 1 | 0.1409 | no |
| | carry | 5 | 5 | 1.0000 | no | 3 | 0 | 0.2105 | no |
| | walk | 8 | 8 | 1.0000 | no | 5 | 3 | 0.6499 | no |
| | flow | 8 | 5 | 0.3498 | no | 6 | 0 | **0.0108** | **yes** |
| | bring | 4 | 7 | 0.3698 | no | 0 | 0 | 1.0000 | no |
| **around** | shop | 6 | 8 | 0.6285 | no | 9 | 4 | 0.0573 | no |
| | look | 9 | 8 | 1.0000 | no | 8 | 5 | 0.3498 | no |
| | walk | 8 | 9 | 1.0000 | no | 5 | 7 | 0.6499 | no |
| | get | 1 | 0 | 1.0000 | no | 2 | 0 | 0.4737 | no |
| | push | 6 | 6 | 1.0000 | no | 4 | 6 | 0.6563 | no |
| | swim | 10 | 7 | 0.2105 | no | 1 | 6 | 0.0573 | no |
| | rush | 8 | 7 | 1.0000 | no | 2 | 5 | 0.3498 | no |
| | wander | 10 | 10 | 1.0000 | no | 5 | 10 | **0.0325** | **yes** |
| | spread | 7 | 9 | 0.5820 | no | 9 | 7 | 0.5820 | no |
| | carry | 5 | 5 | 1.0000 | no | 3 | 1 | 0.5820 | no |
| **down** | pass | 2 | 6 | 0.1698 | no | 5 | 2 | 0.3498 | no |
| | lay | 4 | 3 | 1.0000 | no | 4 | 7 | 0.3698 | no |
| | write | 6 | 2 | 0.1698 | no | 10 | 5 | **0.0325** | **yes** |
| | trim | 10 | 8 | 0.4737 | no | 10 | 8 | 0.4737 | no |
| | lock | 7 | 4 | 0.3698 | no | 8 | 8 | 1.0000 | no |
| | come | 2 | 6 | 0.1698 | no | 1 | 4 | 0.3034 | no |
| | hold | 3 | 0 | 0.2105 | no | 10 | 0 | < **0.0001** | **yes** |
| | slow | 2 | 6 | 0.1698 | no | 0 | 4 | 0.0867 | no |
| | settle | 0 | 0 | 1.0000 | no | 3 | 5 | 0.6499 | no |
| | close | 2 | 3 | 1.0000 | no | 8 | 8 | 1.0000 | no |
| **off** | start | 9 | 2 | **0.0055** | **yes** | 0 | 3 | 0.2105 | no |
| | send | 5 | 4 | 1.0000 | no | 5 | 6 | 1.0000 | no |
| | cut | 0 | 4 | 0.0867 | no | 10 | 8 | 0.4737 | no |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | copy | 9 | 6 | 0.303 | no | 9 | 6 | 0.6285 | no |
| | pay | 6 | 8 | 0.6285 | no | 10 | 10 | 1.0000 | no |
| | kill | 9 | 6 | 0.303 | no | 9 | 8 | 1.0000 | no |
| | sand | 8 | 8 | 1.0000 | no | 10 | 8 | 0.4737 | no |
| | peel | 9 | 8 | 1.0000 | no | 10 | 8 | 0.4737 | no |
| | finished | 1 | 1 | 1.0000 | no | 3 | 5 | 0.6499 | no |
| | chop | 8 | 5 | 0.3498 | no | 9 | 8 | 1.0000 | no |
| **on** | go | 5 | 1 | 0.1409 | no | 0 | 3 | 0.3034 | no |
| | move | 9 | 5 | 0.1409 | no | 4 | 1 | 0.3034 | no |
| | struggle | 10 | 4 | **0.0108** | **yes** | 4 | 2 | 0.6285 | no |
| | pass | 2 | 3 | 1.0000 | no | 5 | 4 | 1.0000 | no |
| | come | 1 | 4 | 0.3034 | no | 0 | 3 | 0.3034 | no |
| | keep | 0 | 0 | 1.0000 | no | 0 | 0 | 1.0000 | no |
| | sally | 4 | 4 | 1.0000 | no | 3 | 0 | 0.3034 | no |
| | try | 7 | 4 | 0.3698 | no | 7 | 9 | 0.5820 | no |
| | walk | 8 | 2 | **0.0230** | **yes** | 5 | 1 | 0.1409 | no |
| | chat | 10 | 3 | **0.0031** | **yes** | 8 | 1 | **0.0055** | **yes** |
| **out** | start | 1 | 2 | 1.0000 | no | 0 | 2 | 0.4737 | no |
| | point | 2 | 9 | **0.0055** | **yes** | 4 | 5 | 1.0000 | no |
| | try | 7 | 5 | 0.6499 | no | 4 | 8 | 0.1698 | no |
| | read | 9 | 6 | 0.3034 | no | 10 | 7 | 0.2105 | no |
| | send | 5 | 1 | 0.1409 | no | 5 | 3 | 0.6499 | no |
| | set | 1 | 3 | 0.5820 | no | 0 | 0 | 1.0000 | no |
| | let | 4 | 4 | 1.0000 | no | 0 | 3 | 0.2105 | no |
| | sell | 4 | 1 | 0.3034 | no | 5 | 2 | 0.3498 | no |
| | clean | 8 | 7 | 1.0000 | no | 10 | 10 | 1.0000 | no |
| | clear | 7 | 9 | 0.5820 | no | 10 | 9 | 1.0000 | no |
| **over** | join | 2 | 0 | 0.4737 | no | 4 | 1 | 0.3034 | no |
| | go | 3 | 4 | 1.0000 | no | 4 | 3 | 1.0000 | no |
| | come | 2 | 7 | 0.0698 | no | 1 | 3 | 0.5820 | no |
| | check | 6 | 3 | 0.3698 | no | 10 | 8 | 0.4737 | no |
| | swap | 1 | 2 | 1.0000 | no | 5 | 6 | 1.0000 | no |
| | send | 5 | 3 | 0.6499 | no | 5 | 4 | 1.0000 | no |
| | wipe | 9 | 4 | 0.0573 | no | 10 | 8 | 0.4737 | no |
| | change | 8 | 2 | **0.0230** | **yes** | 10 | 3 | **0.0031** | **yes** |
| | hand | 4 | 3 | 1.0000 | no | 4 | 5 | 1.0000 | no |
| | cover | 6 | 3 | 0.3698 | no | 8 | 5 | 0.3498 | no |
| **through** | hoover | 5 | 2 | 0.3498 | no | 9 | 4 | 0.0573 | no |
| | air | 7 | 3 | 0.1789 | no | 10 | 8 | 0.4737 | no |
| | patch | 3 | 2 | 1.0000 | no | 2 | 7 | 0.0698 | no |
| | come | 2 | 6 | 0.1698 | no | 1 | 5 | 0.1409 | no |
| | get | 0 | 1 | 1.0000 | no | 0 | 1 | 1.0000 | no |
| | take | 3 | 2 | 1.0000 | no | 6 | 4 | 0.6563 | no |
| | cut | 10 | 3 | **0.0031** | **yes** | 0 | 7 | **0.0031** | **yes** |
| | shoot | 4 | 4 | 1.0000 | no | 4 | 4 | 1.0000 | no |
| | leak | 1 | 7 | **0.0198** | **yes** | 3 | 1 | 0.5820 | no |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | pour | 10 | 7 | 0.2105 | no | 3 | 1 | 0.5820 | no |
| **up** | link | 4 | 7 | 0.3698 | no | 6 | 5 | 1.0000 | no |
| | join | 0 | 2 | 0.4737 | no | 1 | 3 | 0.5820 | no |
| | come | 2 | 5 | 0.3498 | no | 1 | 0 | 1.0000 | no |
| | use | 9 | 4 | 0.0573 | no | 8 | 5 | 0.3498 | no |
| | grow | 9 | 1 | **0.0011** | **yes** | 0 | 2 | 0.4737 | no |
| | pack | 8 | 8 | 1.0000 | no | 10 | 8 | 0.4737 | no |
| | end | 1 | 0 | 1.0000 | no | 2 | 0 | 0.4737 | no |
| | save | 6 | 8 | 0.6285 | no | 8 | 3 | 0.0698 | no |
| | add | 7 | 3 | 0.1789 | no | 3 | 1 | 0.5820 | no |
| | bring | 6 | 2 | 0.1698 | no | 4 | 1 | 0.3034 | no |

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