A PRINCIPLED COGNITIVE LINGUISTICS ACCOUNT OF ENGLISH PHRASAL VERBS

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ABSTRACT

There have long been attempts to discover some systematicity in the semantics of
English phrasal verbs. However, previous research has focused exclusively on the
contribution of the multiple meanings of the prepositions in phrasal verbs and assumed a
single meaning for the verb. No studies have recognized that the verbs also have multiple
meanings, nor how these contribute to the multiple meanings of phrasal verbs. The
current corpus-based study advances our understanding of phrasal verbs by examining
the semantic interaction of the polysemy networks of sixteen frequent and highly
polysemous English phrasal verbs with *up, out, off* and *over*.

Tyler and Evans’ (2003) approach to polysemy is used for the semantic networks
of the particles. Following the methodology set out by Tyler and Evans, in conjunction
with Langacker’s (1991) analysis of verbs, a polysemy analysis of the semantics of *get, take, turn* and *hold* is laid out. The analysis revealed that a range of independently
established meanings of the verb can combine with a range of meanings of the
preposition. The result is a systematic, compositional set of meanings for each phrasal
verb. The Cognitive Linguistics (CL) analysis of the semantics of phrasal verbs provides
evidence for their non-arbitrary, compositional nature, demonstrating that the meanings
of a phrasal verb can be systematically accounted for if one considers the interaction of
the polysemy networks of the verb and preposition. Among the principles of cognition
examined in CL literature, the notion of embodiment was found to play a particularly important role in understanding the meanings of phrasal verbs.

Further analysis of verb-particle combinations showed that lexical aspect is partially compositional in phrasal verbs. The situation type meaning in a phrasal verb is formed through the combination of the situation types denoted individually by the verb and the particle. Depending on the construal, particles can make contributions to certain characteristics of a situation, which explains why they tend to combine with certain meanings of the verbs. Finally, a comparison between high and low frequency particles in the corpus revealed a tight relationship between frequency of use and the embodied meanings of the particle.
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“When life *knocks* you *down*, try to *land on* your back. Because if you *look up*, you can *get up.*”

_Les Brown_
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Chapter 1  Introduction

Phrasal verbs and their multiple meanings are a well-recognized challenge in English. The multiple meanings of these lexical units have been mostly regarded as arbitrary and unpredictable by linguists and language instructors (Celce-Murcia & Larsen-Freeman, 1983; Fraser, 1976; Lipka, 1972). Traditional approaches, in general, have not provided a systematic account for the semantic behavior of phrasal verbs. Moreover, most studies using this approach have not been consistent in their explanation of the semantic features of phrasal verbs (Bolinger 1971; Fraser, 1976; Kennedy, 1920; Live, 1965). However, recent approaches in Cognitive Linguistics (CL) have begun to provide some evidence for the systematicity of these constructions, most of which pertain to the polysemous nature of prepositions and particles (Brugman & Lakoff, 1988; Lakoff, 1987; Lindner, 1981; Rudzka-Ostyn, 2003; Taylor, 2002; Tyler & Evans, 2001, 2003). Despite the insightful research carried out within this approach, CL studies have not yet provided a detailed explanation of the semantics of phrasal verbs, and the study of these construction using CL methods is still in its early stages of development. Thus far, the semantics of phrasal verbs have only been described in terms of the meanings of the particle, and the polysemy networks of the verb have not been recognized as contributing to the complexity of this construction. This study moves the research on phrasal verb analyses forward by examining the interaction between the polysemy networks of the verb and the particle in a set of frequent and highly polysemous phrasal verbs. The study will provide a detailed account of the complex semantic structure of these phrasal verbs,
showing that the multiple meanings are compositionally formed through the interaction between the polysemy networks of both the verb and the particle.

CL research has shown that word and construction polysemy is motivated, suggesting that the multiple meanings of phrasal verbs exhibit some degree of systematicity (e.g. Brugman & Lakoff, 1988; Dirven, 2001; Goldberg, 1995; Lakoff, 1987; Lindner, 1981; Rudzka-Ostyn, 2003; Taylor, 2002; Tyler & Evans, 2001, 2003). A primary concern of CL research has been with the semantics of the particles and their polysemous nature (also see Evans, 2006, 2009 Theory of Lexical Concepts and Cognitive Models or LCCM for analysis of nouns and Newman, 1996 for analysis of give). According to CL studies, many of the multiple meanings associated with prepositions and particles are related in organized ways, forming systematic polysemy networks (e.g. Deane, 2005; Lakoff, 1987; Littlemore and Low, 2006; Taylor, 2002; Tyler & Evans, 2001, 2003). The cognitive semantic framework proposed by these studies have produced useful models for accounting for much of this polysemy in terms of the radial categories and semantic networks extending from a central or prototypical sense. The underlying principle central to all these studies is that particles are complex categories, and in order to determine their complex array of meaning we should identify the cognitive mechanisms used by humans in real language.

Despite providing a thorough analysis of prepositions and particles, the CL approaches have not yet provided an adequate explanation for the semantics of phrasal verbs. A number of studies have gone so far as developing some teaching materials for phrasal verbs based on a CL-based analysis of the particles alone (e.g. Rudzka-Ostyn,
2003; Lindstromberg, 2010). Not much has been devoted to the theoretical issues inherent to the semantics of these constructions and the analysis of phrasal verb meanings is still in its early stages. The ways in which the two components in a phrasal verb interact with each other has not been the subject of study in CL literature. Although a few studies have focused on the polysemy of individual verbs (e.g. Csabi, 2002; Newman 1996), no study to date has looked at the nature of the verbs participating in phrasal verbs and the way they interact with the multiple meanings of particles. My hypothesis is that understanding the internal working of phrasal verbs can provide a more accurate, systematic account of their highly polysemous nature, and can shed light on the uncertainties concerned with the semantics of these lexical items. Moreover, identifying the various meanings of verbs and particles can provide insight into what motivates the new uses. More specifically, this study aims to achieve the following goals:

1) To provide a CL analysis of a set of highly frequent and polysemous English phrasal verbs by applying Tyler and Evans’ (2003) Principled Polysemy Model.

2) To investigate the ways in which the semantic networks of the verb and particle in phrasal verb constructions interact with each other, and to identify a set of principles that constrain the various meanings of verb-particle combinations.

The phrasal verbs selected for the analysis consist of a set of highly frequent and polysemous English verb-particle combinations. The particles to be examined in this study are the highly polysemous particles up, out, off and over, which combine with the polysemous verbs get, take, hold, and turn. The semantic analysis of up, out and over are based on Tyler and Evans’ (2003) proposed polysemy network of these spatial particles,
and the semantic networks for off, and the verbs are suggested in the present study. The analysis of these phrasal verbs is based on a set of naturally occurring data extracted from the Corpus of Contemporary American English (COCA) (http://corpus.byu.edu/coca). The data includes 200 instances of each of the sixteen verb-particle combinations (3200 total tokens).

The dissertation provides a detailed account for the sixteen phrasal verbs. The multiple meanings of each phrasal verb including the central sense along with the extended senses were identified in this study. The analysis of phrasal verbs provides evidence for their compositional nature, showing that the multiple meanings are subsumed through the interaction of the polysemy networks of the verb and the particle. Langacker’s (1987; 1991) approach to partial compositionality is used as a framework for explaining the internal relations between the two components of the phrasal verb. Based on this analysis, the meaning of a phrasal verb is formed by the conceptual integration of the substructures of the component entities i.e. the verb and the particle. The meanings of the phrasal verb highlight only limited aspects of the composite meanings alone, and the rest is provided by the speaker’s background knowledge and conceptualization of the social-physical world. Along the same lines, the notion of embodiment was found to play an important role in understanding the various meanings of a phrasal verb. The way humans experience and interact with objects around them influences the way they conceptualize the world. Consequently, most of the meanings of a phrasal verb can be explained by reference to embodied experience and conceptualization of the physical world.
In addition to identifying the polysemy networks, the analysis of phrasal verbs in this study involves identifying a set of constraints that restrict the meanings of verb-particle combinations. Specifically, the study investigates the reasons for why particular senses of the verb and particle combine in phrasal verb constructions. In general, while some senses of a verb and particle in a phrasal verb integrate with each other, other senses of the words do not combine. In order to investigate this phenomenon, the polysemy networks of the verb and the particle, and their interaction were carefully examined in the corpus data. One constraint, which was found to impose a number of restrictions on phrasal verb constructions, is the interaction between the ‘situation types’ of the verb and the particle. Following Radden and Dirven (2007), I will use the term ‘situation type’ to refer to ‘lexical aspect’ or the properties of the situation denoted by the verbal predicate (Filip, 1999; Smith 1991; Vendler, 1967). Previous studies such as Bolinger (1971) and Brinton (1988) have identified some situation types in particles. However, the analysis of situation type meanings in this study differs from the previous analysis in a number of ways. First, examination of phrasal verbs in the corpus data exhibited a variety of situation type contributions made by particles. More than just a telic contribution was identified for each particle. Second, unlike previous studies, the analysis of particles in this study takes into account the situation type meanings of the various senses of particles used in real language. Moreover, the analysis accounts for the various aspectual contributions made by the particle in combination with multiple verbs. While the particle denotes a particular aspectual meaning in one use, it may denote a very different meaning in combination with another verb. Finally, consistent with the partial
A compositional view of meaning, our embodied experience and knowledge of the world were found to play a crucial role in identifying the situation types displayed by certain particles.

In addition to situation type, a number of other constraints for verb and particle combinations were identified based on frequency analyses of particles in COCA. A comparison between high and low frequency particles in the corpus showed a tight relationship between frequency of use and embodied meanings of the particle. The reason for why certain particles including *up*, *out*, *off* and *over* appear so frequently in phrasal verbs is mainly due to a larger set of embodied experiences and a more complex semantic network associated with these particles. On the other hand, low frequency particles such as *through*, *under* and *for* appear less frequently in phrasal verbs due to the nature of the embodied meanings motivating these uses. Within-group comparison of low frequency particles provides further evidence for the important role of embodiment in phrasal verb constructions. Spatial particles such as *after* and *above* were found to be more frequently used than their contrastive pairs *before*, and *below* due to the difference in embodied meanings. Finally, implausible constructions such as *hold under* and *drop up* were found to be explainable by examining the basic embodied meanings of the verb and the particle.

The rest of the dissertation is structured as follows: Chapter (2) provides an overview of the previous approaches to phrasal verb analysis discussed in the literature. Chapter (3) explains the methods of analysis that were used in the study. Chapter (4) provides a detailed semantic analysis of the verbs, particles, and phrasal verbs.
investigated in this study followed by a summary of the frequency counts in COCA. Chapter (5) and (6) discuss the constraints involved in verb particle combinations including ‘situation type’ contributions, and the relationship between frequency of use and embodied meaning(s) of the particle. Chapter (7) presents the main conclusions and limitations of the study. Finally, Chapter (8) presents the pedagogical implications and contributions of the study to future research.
Chapter 2  Review of Literature

2.1 Introduction

The literature review is divided into five main sections. Section 2.2 provides a definition of phrasal verbs and how the term is accounted for in this study. Section 2.3 presents traditional approaches to the semantics of phrasal verbs. Following this, 2.4 explains the most influential studies in CL analysis of spatial particles, underlining the important contributions of these studies to the understanding of the semantics of phrasal verbs. Section 2.5 presents the different approaches to the study of meaning and compositionality. The final section provides a discussion of embodiment and cognitive mechanisms involved in interpreting the meanings.

2.2 Definition of phrasal verb and how the term is accounted for in this study

The term phrasal verb is usually applied to a two (or three) part verbal construction with a variability of combinations. The COBUILD dictionary of phrasal verbs defines these constructions as “combinations of verbs with adverbial or prepositional particles” (p. IV). Phrasal verbs that include a combination of a verb and an adverbial particle are also known as verb-particle constructions (VPC), and are often contrasted with prepositional verbs (VPP), which include in their construction a verb and a non-adverbial particle or preposition (Bolinger, 1971; Lindner, 1981; O’Dowd, 1998). In formal terms, an adverbial particle functions as an adverb modifying the verb as in *up* in *Look up the word in the dictionary*, and a prepositional particle functions as a preposition linking the complement to the context in which the phrase occurs; for
instance into in *Look into the new method* has a prepositional role. Some constructions may also involve both a particle and a preposition combining with the verb as in *get up to* and *put up with*, which form more complex constructions.

For the most part, the traditional approaches have tried to identify phrasal verbs based on their syntactic structure (e.g. Bolinger, 1971; Fraser, 1976; Kennedy, 1920; Lipka, 1972; Live, 1965; Sroka 1962). These studies have mostly focused on the distinction between VPC and VPP on a basis of tests involving invented sentences. The tests are designed to provide predictable patterns for prepositions and particles. Among these tests are word order, stress, adverb placement and the behavior of the particle in nominalization and gapping construction. The common principle underlying these tests is that in in VPC, the particle constructs closely with the verb, adopting an adverbial function, while in VPP it constructs closely with the following NP, and assumes a prepositional function. However, an examination of these tests shows that overall they do not provide consistent and clear-cut results (Lindner, 1981; O’Dowd, 1998). As mentioned by Lindner (1981) the criteria proposed by the syntactic approaches are best thought of as “characteristic tendencies of each construction” rather than absolute defining features (p.6).

The cognitive semantic approaches have been more promising in identifying the different categories (Lakoff, 1987; Langacker, 1987, 1991; Lindner, 1981). These studies have focused on categorizing the types based on cognitive and pragmatic characteristics. Among these approaches Lindner (1981) provides a cognitive semantic approach to identifying phrasal verbs. According to Lindner, both prepositions and particles are
extended locative relations, denoting a relational status between the Trajector (TR) and
the Landmark (LM) of the Verb-P construction\(^1\). The TR and the LM are spatial elements
in the scene, referring to the focus element and the background element respectively
(Langacker, 1987). For Lindner, the main difference between a preposition and a particle
is that the former specifies the LM, while the later “sublexicalizes” the LM or leaves it
unspecified (p. 246). For instance, in the sentence *He ran up the hill*, the LM (hill) is
specified while in *He ran up* the LM is not lexicalized. Rather than considering them as
two distinct categories, Lindner assumes the two classifications the same intrinsic
semantic structure, with the difference lying at the level of construction or the way the
substructures are linked in the Verb-P construction.

O’Dowd (1998) tackles the issue of categoriality in prepositions and particles (P-
forms) extensively by using a cognitive and discourse-functional framework. According
to O’Dowd, the categoriality of P as a preposition or particle is not an inherent property
of the form but rather a contextual one, determined partly by the specific construction and
the semantic-pragmatic function in which its being used (p. 40). O’Dowd draws on
Lindner’s (1981) classification by highlighting the notion of saliency in construing the
landmark as an important factor motivating the categories. According to O’Dowd, the
main role of P is to serve as an *orientating* element, involving the two pragmatic
functions of *situating* (predicating states) and *linking* (introducing contextual
information) (p.11). O’Dowd argues that particles situate and prepositions link, and the
choice of one form over the other is determined by the pragmatic focus and the speaker’s

\(^1\) ‘P’ stands for the general category of prepositions and particles.
perspective. Following Bolinger, O’Dowd introduces the notion of “adprep” as an
alternative category for certain P-forms, which serves a dual function of situating and
linking. An example of this is off in the sentence She swept off the stage (departed
majestically). In this use off contributes meaning both to the verb and to the following
noun phrase; it adds a resultative meaning to the verb, and also serves as a preposition
representing a prototypical motion event \(^2\) (Talmy, 1985) (p.31). According to O’Dowd,
the adprep category provides evidence for the flexibility of P-forms, and is an indication
that clear-cut binary categories suggested in the traditional accounts may be misleading.
A more realistic analysis views the individual P-forms on a continuum of specialization
between exclusively situating (pure adverbial particle) and exclusively linking (pure
preposition), with the degree of specialization varying depending on the function of the P
and the context in which it is being used \(^3\).

The main goal of the current study is to provide a systematic and rational account
of the semantics of phrasal verbs. While the formal distinctions explained above are
acknowledged, categoriality is not the main concern of this analysis. For the purpose of
this study, the generic term ‘phrasal verb’ and ‘spatial particle’ are used to describe the
linguistic forms under investigation. Unless otherwise specified, I will use the term
phrasal verb to account for both VPC and VPP constructions. The analysis attempts to
account for a motivated, detailed account of the various meaning associated with the set

\(^2\) The figure \([she]\) follows a path \([off]\) in relation to a ground NP \([the stage]\).

\(^3\) O’Dowd argues that the difference between prepositional Ps such as in and on, and pure prepositions such
as of and at is the degree of specialization as linking elements. In the same way, the main difference
between particle Ps such as up and out, and pure adverbs such as too is their degree of specialization as
situating elements. Other P-forms, such as through, and over, are less specialized in either direction,
and their meanings as adpreps or particles are usually derived from the spatio-directional domain (p.
160).
of Verb-P constructions falling under the general category of phrasal verbs. The various meanings of phrasal verbs are identified through principled methods and careful examination of the ways in which the network of the verb and the spatial particle interact with each other in each construction.

2.3 Traditional approaches to the semantics of phrasal verbs

A number of studies within the traditional approach have primarily focused on the semantics of phrasal verbs, which are inconsistent in their arguments pertaining to the compositional nature of phrasal verbs. In this approach, the meaning of phrasal verbs is represented as falling on a continuum of highly arbitrary structures to recognizing some minimal degree of systematicity. The following section explains some of these approaches and highlights the strengths and weaknesses of each approach.

Fraser (1976) is among the studies that has considered phrasal verb as fully arbitrary lexical units. According to Fraser, particles do not play a role in the overall meaning of verb-particle combinations due to their idiomatic nature. In his view, particles mostly do not have literal meanings and are semantically non-additive in comparison to adverbs, which often add some literal or standard meaning to the overall semantics of the expression. For instance, Fraser considers *up* and *out* in *look up* and *eke out* idiomatic and therefore analyzes them as particles. On the other hand, *up* and *out* in *toss up* and *take out* are analyzed as adverbs because the semantic interpretation of these lexical items is considered to be additive and non-idiomatic. In Fraser’s view since particles are non-

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4 Fraser uses the term ‘literal’ to refer to the central or spatial sense of the word.
additive, no particular semantic component can be associated with phrasal verbs and they are essentially arbitrary in nature.

Despite proposing the strict view of non-compositionality and random nature of phrasal verbs, Fraser later argues that some phrasal verbs are more systematic than others. He divides phrasal verbs into three groups: literal, completive, and figurative. The literal group involves those phrasal verbs in which the literal meaning of the particle is maintained in the new combination as \textit{out} in the following example \textit{Please take out the apples}. The second group involves those in which the particle denotes a completive or resultant sense to the overall meaning as \textit{out} does in the sentence \textit{The light faded out slowly}. Here \textit{out} adds a sense of completion. Finally, the figurative phrasal verbs are those in which there is no systematic way of describing the semantics of the verb and the particle in the new combination. An example of this is \textit{out} in \textit{Look out! There are many rocks around here}. In Fraser’s view, the literal and completive forms are the groups which show some level of systematicity while the figurative group is inherently unsystematic in that there is no consistent process of verbal formation and “we have nothing but a frozen form” (1976:7). By Fraser’s account, this group, which involves a large number of phrasal verbs in English, is non-literal in nature and therefore cannot be semantically analyzed. While Fraser attempts to make some sense of the semantics of phrasal verbs, he fails to provide a full account of phrasal verbs.

Traditional researchers including Kennedy (1920) and Bolinger (1971) have accounted for some semantic compositionality and systematicity of phrasal verbs. Kennedy assumes certain semantic “values” for the sixteen particles he discusses in his
study. He argues that while in many combinations the particle maintains its spatial meaning, in some cases the value of the particle differs from its original meaning by acquiring a new semantic value. In other rare cases, the verb and particle are so merged that the particle no longer seems to have an independent value. Among the particles that he examines is the frequently used particle *down*. According to Kennedy, this particle exhibits two main values. In some spatial combinations such as *burn down*, *get down* and *kneel down* the particle denotes a purely directional spatial orientation. The same value is manifested in numerous combinations of what he terms “transferred use” such as *back down* “to recede downward from a position” or *cut down* “to diminish”. More frequently used is the sense of *down* implying diminution or complete cessation of state or action, which adds a perfective sense to the verb. Phrasal verbs of this type are *calm down* and *shut down*. Kennedy also mentions a group of verbs that lie somewhere in between these two semantic groups as in *talk down* and *run down*, whose exact values are difficult to determine. The question concerns whether these verbs suggest a minimal sense of downward motion in addition to the perfective sense. For instance, he argues that *run down* (trace successfully) may elicit the details of the chase in the mind of the speaker. In this respect, Kennedy seems to be suggesting some relation between the central sense and the additional meanings although he does not explicitly argue for this. Finally, he makes a note that in some cases the meaning of the simple verb makes the use of the particle almost unnecessary. He further explains that in this type, the particle may serve the

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5 Despite identifying different senses for *down*, Kennedy (1920) does not offer analysis of how these additional meanings are related to the central meaning.
function of giving emphasis or balancing the speech rhythm. Phrasal verbs of this kind include *bend down*, *fall down*, and other combinations like *pile up*, *rise up* and *bulge out*.

Kennedy accounts for some degree of systematicity in the various semantic values that he proposes for the different types. However, his analysis includes some variants of phrasal verbs that are fully arbitrary and that their meanings cannot be attributed to either the verb or particle (e.g. *ball up to*: confuse and *blow in*: to spend). Overall, his account of the systematicity of phrasal verbs is not extensive, and there is no explanation for the so-called arbitrary forms. In addition, while Kennedy does admit the creative nature of phrasal verbs, he considers some uses to be improper language “beyond all these, there lie a great number of colloquial or slang combinations which should not be encouraged, not merely because they are bizarre…but largely because they detract from the simple expression of the unqualified idea.” (Kennedy, 1920, p. 45)

According to Bolinger (1971) particles appearing most frequently in phrasal verbs are the ones that assume a dual function of an adverb and preposition in the VP construction. He refers to this set of particles as *adpreps*. Constructionally, adpreps seem to be close to the verb as much as they belong to the following NP. Most typically they also denote an additional completive meaning. One example is *off* in the sentence *She pulled the tablecloth off the table*. Here *pull off* can be viewed as a VPC, adding a completive adverbial meaning (the action of pulling the table cloth is completed), and *off the table* can be considered as a prepositional phrase modifying the preceding clause by specifying the location. Thus, depending on our perspective, *off* can contribute meaning to both the verb and the following noun phrase in this type of construction.
Bolinger asserts some relation between the original and extended meanings of particles including *up*. Bolinger argues that the original directional meaning of *up* was most likely modified (or extended) to three aspectual senses. The three perfective senses include 1) “the resultant condition” as in *he laced up his shoes*. 2) “completion or inception” as in *he filled up the barrel*, and 3) “attaining high intensity” as in *lets brighten up the colors* (p.99). Like Kennedy, Bolinger also points out that the distinction between the spatial and the extended meaning is not always clear-cut; for instance *grow up* is both directional and perfective. Similarly, *stand up* is perfective but the original meaning of the words is still maintained. While Bolinger sees some relation between the meanings of a certain particle, he does not provide a systematic account of the various meanings. In addition, most of his analysis is focused on the perfective aspect of the particles and not much is devoted to other aspects of phrasal verb meaning.

Other researchers in the field have also looked at the aspectual sense of particles (e.g. Brinton, 1988; Crume, 1913; Lipka 1972; Poutsma, 1926; Live, 1965). Among them Live (1965) has referred to the general aspectual case of particles. Bolinger considers Live to be cautious in her definition of aspect, calling the features “quasi-aspectual” instead of the general aspectual term (p.97). According to Live, the aspectual feature is not consistently applied to all particles. For instance, she claims that *turn out* and *spin out* can be taken as mostly iterative, while *write out, print out* and *put out* are perfective. With respect to this, Bolinger believes there should be a gradient rather than a clear division between aspectual and non-aspectual uses. More explanation on the different approaches to analyzing aspect in particles will be provided in chapter 5.
Overall a number of studies in the traditional approaches have made an attempt to explain the semantic behavior of phrasal verbs. While these studies have taken the initiative to explain some of the systematicity of phrasal verbs, the traditional approaches have in general failed to account for the majority of meaning associated with these lexical units. In addition, most studies have focused on the aspectual features of certain particles, leaving other semantic features of particles unexplained and the contribution of particles which do not make aspectual contributions unexamined.

2.4 CL Approaches to the semantics of phrasal verbs

This section reviews the most influential studies in CL analysis of phrasal verbs including: Lakoff (1987), Brugman and Lakoff, (1988), Lindner (1981), Rudzka-Ostyn (2003), and Tyler and Evans (2003). Unlike the traditional approaches, these studies argue for a non-arbitrary view of phrasal verb meaning. For the most part, they have been oriented towards explaining the polysemy of a set of particles and their contribution to the meaning of phrasal verbs. The cognitive semantic frameworks proposed by these studies provide useful models for accounting for much of this polysemy in terms of the radial categories and semantic polysemy networks extending from a central sense.

Claudia Brugman (1981; Brugman & Lakoff, 1988) was among the first linguists that proposed a fine-grained, lexical-semantic analysis of English over. Based on her ground breaking work, Lakoff (1987) proposed a highly fine-grained analysis of over which is known as the full-specification approach. Central to this account is the view that the various senses of particles are grounded in spatial experience and can be presented in terms of image-schemas. Image schemas are abstract conceptual structures that emerge...
directly from our everyday interaction as a matter of construal of the world (Johnson, 1987; Lakoff, 1987). In Lakoff’s analysis the distinct senses identified for *over* are structured with respect to the central or prototypical image-schema. Image-schemas include two key elements in their structure: a Trajector (TR), which is the focus element and a Landmark (LM), which is the ground element. The extended image-schemas are developed by further information, including variants such as the properties of the LM and the relation between the TR and LM. For instance, Lakoff (1987) points out LMs that can be horizontally (X) and/or vertically (V) extended, and hypothesizes that these variations in geometrical dimensions gives rise to two distinct meanings of *over*:

i) The bird flew *over* the yard. (X – LM is horizontally extended)

ii) The butterfly flew *over* the wall. (V – LM is vertically extended)

In (i) the bird flies across the horizontally extended LM, and in (ii) the butterfly flies across the wall that is in a vertical position. Another proposed property, which results in a new sense, is the contact between the TR and LM. While in the above examples there is no contact between the TR and LM, Lakoff proposes that in some cases (e.g. *John walked over the hill*) the contact variant is present and this property by itself gives rise to a distinct sense. Despite its important contributions to the study of polysemy, Lakoff’s analysis has received criticisms concerning the absence of clear methodological principles for identifying the distinct senses (e.g. Kreitzer, 1997; Sandra, 1998; Sandra & Rice, 1995; Tyler & Evans, 2001; 2003). Tyler and Evans (2003) argue that the distinct sense of *over* related to contact or the absence of contact, is not an inherent aspect of the semantics of *over*, and derives from the integration of *over* with other contextual
information. Along the same lines, Sandra (1998) argues that viewing all context-dependent usages of prepositions as instances of polysemy can mislead the cognitive linguist to fall in what he calls “polysemy fallacy”. This term denotes the false belief that all or many of the various meanings (including the contextual meanings) associated with a lexical item are instances of polysemy and should be included in the semantic network, rather than contextually derived interpretations.

Lindner (1981) provides a detailed cognitive semantic analysis of the particles *up* and *out*. The central claim of this study is that particles almost invariably contribute to the meaning of verb-particle constructions (VPCs). In Lindner’s view, previous approaches including Fraser (1976) incorrectly claimed that particles do not have meaning and the majority of phrasal verbs are listed in the lexicon as arbitrary forms. Challenging this view, she provides a detailed CL analysis of the two particles, suggesting that these lexical items have both concrete and abstract meanings, with each set of meanings participating in a unified single semantic network. This analysis assumes a central super schema for each particle from which the rest of the senses are extended in some organized way. Perhaps, the most remarkable finding by Lindner (mentioned also by Brugman & Lakoff 1988) is the identification of ‘reflexive trajectors’ for particles such as *out*. Phrasal verbs of this type appear in sentences like *He stretched out his hand* or *He spread out the map*. In the spatial scene denoted by this sense of *out*, the TR becomes its own LM or in other words the TR equals the LM. Based on this analysis, Lakoff and Brugman (1988) developed the reflexive sense of *over* as in *roll the log over*. In this use of *over*, part of the entity is moving out relative to its own initial boundaries. In the above
example part of the log (about half) is moving above and beyond the rest of it, and in this scene the LM equals the TR (Brugman & Lakoff 1988). Similarly, Tyler and Evans (2003) rely on the reflexive account in their analyses of spatial particles *over, in* and *out*. They define reflexivity in terms of an entity with multiple positions conceptualized such that “two salient positions occupied by the entity are integrated into a TR–LM spatial configuration” (p.103)

Despite Lindner’s insightful analysis, her study has a number of shortcomings. One is related to the semantics of the verb. While Lindner discusses some aspects of the verb’s syntactic properties participating in VPC constructions, not much attention is dedicated to the semantics of the verbs and their polysemous nature. In addition, the methodology for identifying the central sense and the various senses of *up* and *out* is not fully explained in this study, rendering it challenging for a replicable analysis of the particles and the phrasal verb constructions in which they participate.

Rudza-Ostyn’s (2003) study of phrasal verbs is one of the few studies that applies the CL analysis of verb-particle combinations to course materials. In order to present the CL analysis of phrasal verbs, she offers her own view of plausible motivations for a large number of phrasal verbs. In this approach the different meanings of the particles are categorized based on a central image-schema involving a specific relationship between TR and LM. The analysis allows for a diagrammatic representation of each particle’s spatial meaning. Extended image schemas are further identified for each particle based on the relation between the TR and the LM. In order to motivate many of the extended meanings of prepositions and particles, Rudzka-Ostyn draws on the theory of conceptual
metaphor by Lakoff (1987). Metaphor is a type of conceptual thinking, and conceptual metaphor asymmetrically maps structure from source domain to target domain. For instance, in the idiomatic expression: *I was boiling with anger*, the target domain ANGER is structured in terms of HOT FLUID which is the source domain. Metaphor is considered to be an important cognitive principle for analyzing the meaning of phrasal verbs in Rudzka-Ostyn’s approach. According to Rudzka-Ostyn the metaphor HUMAN BODY/MIND IS A CONTAINER motivates the use of a number of phrasal verbs including *stuck out* and *thought out* in the following sentences:

i) The little girl *stuck out* her tongue.

ii) She was so clever, she always *thought out* a solution to the problem.

In sentence (i) the mouth of the little girl is conceptualized as a container from which the tongue is moving from inside the mouth to the outside region, and in sentence (ii) the mind is conceptualized as a container from which thoughts emerge (a metaphor for finding a solution to a problem).

Despite of offering some systematicity for the multiple meanings of phrasal verbs, a number of shortcomings are concerned with Rudzk-Ostyn’s approach. One major problem is the failure to provide a methodology for identifying the central sense of the particle. Nor does she account in any systematic way for how the different meanings are extended from this basic sense. In addition, the reasoning behind determining some of the senses are not explained and not all the examples seem to accurately represent a

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6 In Tyler and Evans’ (2003) account the sense of *out* participating in (i) is the Reflexive Sense and in (ii) is the Knowing Sense.
designated sense. Finally, there are some problems at the level of representation. In this analysis, the many meanings of each particle are presented through highly abstract images. While these images are intended to provide learners with contextual schemas, they do not seem to reflect the main ideas underlying each sense and in some cases the representations are very similar or identical, even though the meanings are different.

The study by Andrea Tyler and Vyvyan Evans (2003) provides one of the most comprehensive tools in CL approach to lexical polysemy, in particular the polysemy of prepositions. Motivated by the goals of providing a replicable methodology, the researchers developed a framework of semantic analysis named the Principled Polysemy Model. The model takes up the challenge by Sandra (1998) and Sandra and Rice (1995) calling for clear principles that offer consistent and objective semantic analysis. The principles aim to provide 1) a replicable method for identifying the central or basic sense from which the more complex senses are derived systematically, 2) a set of criteria for determining whether a specific sense of a particles should be considered as a distinct sense. These principles are important because they address methodological issues that had not been previously accounted for by other CL approaches such as Brugman and Lakoff (1988) and Lakoff (1987).

In this approach, the analysis of prepositions relies on recognized principles of cognition such as knowledge of force dynamics and embodied experience (Johnson, 1987; Lakoff & Johnson, 1980, 1999; Mandler, 1992; Sweetser, 1990; Vandeloise, 1991). Tyler and Evans argue that language directly refers to the human conceptual system rather than the ‘real world’ and meaning is conceptual in nature. The conceptual structure
is largely mediated by how we as humans experience and interact with objects in our
environment; in other words, experience is embodied. Consequently, many of the
meanings of prepositions are derived from our embodied experience and
conceptualization of the spatial-physical world. For instance, the asymmetrical structure
of our bodies has given rise to the meaning of up. In addition to embodiment, the model
relies on cognitive processing including pragmatic inferencing and experiential
correlation (Grady, 1997, 1999; Hopper & Traugott 1993; Johnson, 1999; Lakoff, 1987;
Langacker, 1987; Talmy 2000; Traugott, 1989). Experiential correlation together with
pragmatic inferencing implies that the frequent correlation between two events in every
day experience can lead to the association of a new meaning with a particular lexical
form. The association occurs through the continued use of the form in particular contexts
in which the implicature occurs. For instance, in our daily experience we encounter
recurring correlation between quantity and vertical elevation such as when objects are
added to a pile or liquid is added to a container. In these instances an increase in quantity
correlates with increase in vertical elevation. The ubiquitous observation of these two co-
occurring phenomena results in a strong cognitive association between the two. This
conceptual association, in turn, is reflected in language such as *The prices have gone up*,
which refers to an increase in amount rather than an increase in vertical elevation (Grady,
1997; Johnson, 1999; Lakoff, 1987).

As mentioned above, one of the main principles of this approach is to determine
the distinct senses of a particle via a replicable methodology. According to Tyler and
Evans, two criteria must be met, in order for a particular sense of a preposition to count
as a distinct sense: 1) the sense must contain a non-spatial meaning or a TR-LM configuration which is different from the central sense and, 2) there must be instances of the sense that are independent from the context, and that cannot be inferred from the other senses. To see how these criteria apply we can look back at the examples: *The bird flew over the yard* and *The butterfly flew over the wall*. In these examples both instances of *over* denote the same spatial relation, and neither of them contains a non-spatial meaning. Therefore, the first criteria is not met, and the two uses are not recognized as distinct senses. Since we have already reached a conclusion about the non-distinctive quality, the second criteria does not apply. According to Tyler and Evans, the sense of *over* participating in these examples is the Above Sense. This sense can be compared to another distinct sense of *over* as in *Jane nailed a board over the hole in the ceiling*. Note that in this example, the board is not vertically elevated in relationship to the hole in the ceiling. In this use, the meaning of *over* is different from the Above Sense. First, unlike the previous examples, the meaning of *over* does not adhere to the central spatial configuration of a TR being vertically elevated in relation to a LM. Moreover, the meaning is not purely spatial: part of the meaning is related to the notion of Covering (because the LM hole has obscured from the TR’s view). Finally, this covering meaning is not strictly derivable from context. Knowing that some entity is above another does not necessarily imply a covering meaning and therefore the Cover Sense should be recognized as a distinct sense for *over*. In some cases, one particular conceptualization can give rise to multiple senses. Tyler and Evans term the set of senses deriving from one complex conceptualization, a cluster of senses. For instance, the A-B-C trajectory cluster
for *over* includes five distinct senses (Above-and-beyond (Excess I), On-the-other-side-of, Completion, Temporal and Transfer), all which derive from the complex conceptualization of sentences such as *The cat jumped over the wall* 7.

Another key component to the precise analysis of all polysemy networks is to identify the central or core meaning. The central sense is the one from which the rest of the meanings are extended systematically. Tyler and Evans propose a number of criteria for identifying the central sense which are listed below:

1) Considering the etymological roots including the earliest attested meaning
2) Taking into account the predominance of the sense in the polysemy network
3) Investigating the relations to other prepositions

First, since prepositions generally represent a closed class, one likely candidate for the central sense of a preposition is its historical or early attested meaning. In some instances, traces of the original meaning can still be found in the new meaning of the preposition. For example, *over* is related to the Sanskrit *upan* ‘higher’ and the Old Teutonic form *ufa* ‘above’. In both cases *over* denotes a spatial configuration in which the TR is higher than the LM, referring to the Above Sense. The second criterion concerns the dominant feature of the sense in the semantic network. The central sense is considered to be usually the most frequently observed sense in the data and most related to the other senses. For instance, Tyler and Evans note that eight out of sixteen distinct

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7 Note that Tyler and Evans (2003) do not assign motion to prepositions. They argue that the movement assigned to prepositions such as *over* as in *The cat jumped over the wall* is not designated by *over*, but rather arises from the verb and the integration of the linguistic prompts at the conceptual level (p. 71). Some studies such as Deane (2005) and Lakoff (1987) have seen the potential of movement in particles. Deane (2005) recognizes motion for the proto-scene of *over*. According to this account, in a sentence such as *Sam walked over the hill*, the preposition denotes a scene with a kinetic-space representation (p.261).
senses of *over* were associated with the Above Sense, providing further evidence for this sense to be the central sense. The third criterion looks at the relation of the spatial particle to other prepositions, which according to Tyler and Evans can include contrast sets. Contrast sets are groups of particles that divide spatial dimensions into related sub-sets. For instance *above, over, under* and *below* form a contrast set. While *over* and *under* designate spatial relations that are physically closer to the LM, *above* and *below* designate relations that are further away. By comparing these spatial differences we can more easily identify the ‘proximity’ distinction for *over*. Finally, the fourth criterion, grammatical predictions, includes the ability to find for each distinct sense, a set of sentences whose context provides the implicature for the additional meaning. An example of this is the sentence *The tablecloth is over the table*. In this sentence the Cover Sense of *over* is inferred from our knowledge of tablecloths (being larger than the table and hence covering it) rather than independently understood. This example contrasts with the context independent meaning of covering as in *Jane nailed a whole over the hole in the ceiling* discussed before. The former example shows that ‘above’ is a potential candidate for the primary sense and the Covering Sense is extended from this central sense.

In addition to the above criteria, Tyler and Evans (2003) emphasize that the central meaning of each preposition involves the spatial configuration between a TR and a LM as well as a functional element. The functional element is an important part of the central sense, which represents the humanly salient consequences of the TR and LM being in that specific spatial configuration. For instance, Tyler and Evans posit the functional element of *over* to be the relation of ‘proximity’ or one in which “the TR and
LM are in each other’s sphere of influence” (p.67). A consequence of such relation between the two elements is that in certain construals the TR which is the higher entity in this relation can possess power and control over the LM. The significance of the functional relation between the spatial elements in a scene has been mentioned by other studies such as Coventry and Garrod (2004) and Vandeloise (2005). These studies have argued that a purely geometrical approach is not sufficient for explaining the spatial relations coded by prepositions. In a study by Coventry and Garrod (2004), the researchers concluded that a TR being in a LM involves more than just simply being surrounded by the LM. A more accurate description of the relation labeled by in should include functional relationship between the TR and LM. In the case of in the functional element is ‘containment’ which has a number of consequences such as locational control of the TR by the LM. For instance, in the scene involving apples in the bowls, the apples are piled up such that some of the apples are actually higher than the rim of the bowl and thus not surrounded by the bowl. The bowl (LM) is nevertheless in a location control relation with the apples (TR) such that if a person moves the bowl, the apples will move with it.

The cognitive semantic framework proposed by the CL studies have in general provided useful models for accounting for much of the polysemy by proposing systematic semantic networks for each spatial particle. Among these studies Tyler and Evans’ (2003) Principled Polysemy Model offers one of the most comprehensive frameworks to the semantic analysis of particles by accounting for many of the issues previously addressed
for the analysis of this lexical items, and hence, their proposed model will be used in the current study.

2.5 Compositionality

This section presents a literature review on different approaches to the study of meaning and compositionality. First, the three approaches to meaning, including the arbitrary view of meaning, full compositionality approach, and partial compositionality approach, are briefly explained. Following this, three different insights to partial compositionality proposed by CL studies are presented and compared in terms of their potential application to phrasal verb analysis. A summary of all the different accounts concludes this section.

2.5.1 Arbitrary view of meaning

Structuralists including Bloomfield (1933) believe that lexical units are essentially vague and arbitrary in nature. To Bloomfield “The statement of meanings is…the weak point in language-study, and will remain so until human knowledge advances very far beyond its present state” (p.140). In this approach, the main concern of language study is the cooperation of speakers by means of language signals. Following Saussure (1964), Bloomfield proposed that together morphemes and their meanings form simple lexical signs. Each lexical sign has a fixed definite meaning, different from another linguistic sign in the same language (Matthews, 2001). The meaning of a morpheme is unanalyzable the same way that a meaning of a phoneme is unanalyzable. The lexical signs with morphemes as the “smallest signals” consist of different combinations of phonemes or “signaling units” and each combination of this type “is arbitrarily assigned
to some feature of the practical world” (Bloomfield, 1933, p. 162). Meaning is thus taken to possess an arbitrary feature. In addition, when two or more forms are spoken simultaneously as constituents of a complex form, the units together build a construction. The meaning of a construction to a certain extent depends on the selection of its constituents. Bloomfield notes that the features of selections are “often highly arbitrary and whimsical” (p.165). For instance, the morpheme (-ess) combines with the words *prince* and *author* but not with *king* and *painter*. Complications such as this provide evidence that the study of meaning is by nature vague and there is no clear definition of meaning. To structuralists the meaning of a grammatical form is only analyzable to the extent that it can be observed and scientifically explained; otherwise, it is considered to be random and arbitrary (Bloomfield, 1933; Matthews, 2001; Taylor, 2002).

Generativists including Chomsky have taken a similar approach. According to Chomsky, all systematicity resides in the syntax and the lexicon is a repository for a list of arbitrary words. Taking such approach to meaning, Chomsky (1995) states “I understand the lexicon in a rather traditional sense: as a list of “exceptions”, whatever does not follow from general principles”. (p.235) Models following this approach have mostly represented polysemous forms as lists of unrelated and idiosyncratic lexical items.

### 2.5.2 Full compositionality approach

Many traditional approaches including formal semantics, suggest a modular view of language (Gamut, 1991; Montague, 1974; Quine 1970). In such approaches the study of meaning is independent from those aspects that are related to the speaker’s psychological state and the socio-cultural aspects of the context in which the utterances
are made. In the formal semantics, meaning is taken to be rule-governed in the same way that syntax of a language is rule-governed. Lexical items are viewed as “building blocks” that are stacked in different arrangements to form complex expressions, with meaning being constructed out of simply putting together the linguistic components. In this view, the core meaning of a sentence is its truth-conditions i.e. the conditions under which the sentence holds true. Truth-conditions are equated with its propositional content, which is inherently independent from the context. For instance, the sentence *It is raining outside* is true if and only if it is raining outside regardless of the intention of the speaker. In semantics this is known as the full compositionality approach, which assumes a clear distinction between semantics and pragmatics. According to this approach, for the most part meaning of lexical items such as phrasal verbs can be directly derived from the composite structure itself and other facets of the meaning can be explained by pragmatics (Cann, 1993; Langacker, 1987, 2008; Taylor, 2002).

2.5.3 Partial compositionality approach

Unlike the traditional approaches, cognitive semantics claims that semantics and pragmatics form a gradation, with no strict boundary between the two. Instead of being fully predictable, meaning of lexical items is based on domains of knowledge and background information. A wide range of cognitive principles provide evidence for a non-strict view of compositionality. Cognitive mechanisms including metaphor, metonymy, blending and mental spaces are evidence to this fact. According to this approach, meaning is conceptual in nature and the ways of *construing* the content is an important part of the meaning. The cognitive semantics approach does not deny the
existence of the compositional patterns, but considers them insufficient in explaining meaning. The meaning produced from the semantic composition provides only one of the resources used in the process of conceptualizing complex expressions. Other sources of meaning include our knowledge of the world, the meaning provided by the context and cognitive mechanisms such as metaphor, metonymy and mental spaces. In cognitive semantics, language is only partially compositional rather than fully compositional (Evans & Green, 2006; Goldberg, 1995; Langacker 1987, 2008; Taylor, 2002). The following section presents three approaches to partial compositionality, providing a description of each approach and its potential application to the analysis of phrasal verb meaning.

*Goldberg’s (1995) approach.* Goldberg accounts for partial compositionality in its weakened form by recognizing the existence of *meaningful constructions*. In this account, the meaning of an expression is the outcome of the integration of its lexical units into the meaning of the construction. According to Goldberg, lexical units are taken to be constructions if some aspect of their form or meaning is not strictly predictable from the component parts or from other constructions present in that language. This view of meaning is in some ways related to Saussure’s (1964) view of linguistic signs and the arbitrariness of meaning explained above. Like Saussure, Goldberg assumes that morphemes are inherently fixed-definite notions, and therefore, should be considered as clear instances of constructions (p.4). In this account, however, instead of being unstructured entities, constructions are characterized as meaningful and highly systematic patterns of interrelated information. This entails that constructions can exhibit polysemy
networks with one central meaning getting extended into various other meanings much like the polysemy network of prepositions. An example of this is the ditransitive construction (cause-to-receive) (e.g. *Mary passed John the book*), which exhibits the case for *constructional polysemy*. According to Goldberg, the central sense of this construction is the successful transfer of an object to a recipient by an agent. The meaning of the ditransitive is, however, not a single abstract sense but instead the central sense gets extended to a number of other senses such as “conditions of satisfactory” (e.g. *I promised Mary a book*) and “future cause to receive” (e.g. *I reserved Mary a room*) (p.38). While these extended senses are not the best exemplars for the cause-to-receive meaning, they nevertheless exhibit some aspects of the semantics of the so-called ditransitive construction.

One crucial aspect of this approach is that it does not investigate verb polysemy, i.e Goldberg does not consider a need for assigning a polysemy network to each verb in the language. Instead there are different constructions and a verb, depending on its semantics, is licensed to occur in one of these constructions. For instance, there is no need to account for one separate sense of *bake* that occurs in the ditransitive construction and a different sense that occurs in a simple transitive construction. Rather verb meaning remains the same across constructions, with each construction adding meaning to the overall utterance. This view is different from the other approaches to partial compositionality such as Langacker (1987) in that the lexical components of a complex structure (in this case the verb and particle in phrasal verb constructions) by themselves
do not exhibit multiple meanings, and instead, the polysemy network proposed for the constructions is the main concern of the analysis.

*Rudzka-Ostyn’s (2003) approach.* Another approach to the semantics of complex structures such as phrasal verbs has taken meaning to be partially compositional by focusing on only one of the components as the main source of meaning. In this approach, the particle is considered to play a more important role in contributing to the overall meaning of the phrasal verb, and as a result, the meaning of the verb is less in focus. Rudzka-Ostyn (2003) is among the studies that have adopted such approach to phrasal verb meaning. The study accounts for the multiple meanings of phrasal verbs by identifying the semantic network of only the particle component. According to Rudzka-Ostyn the meaning of a large number of verb-particle combinations can be explained by knowing the metaphorical meaning of the particle. As previously explained, the main concern of Rudzka-Ostyn’s study has been to determine the spatial and metaphorical meanings of the most frequently used English particles. In this approach, Lakoff’s (1987) theory of conceptual metaphor is applied to a wide range of English phrasal verbs including those which exhibit highly figurative meanings. While this approach offers some analysis of the multiple meanings of particles, it does not account for the ways in which the meanings of the verb and particle in a phrasal verb interact.

*Langacker (1987)’s approach.* Langacker’s approach to the semantics of composite structures was found to be the most insightful and is considered as a framework for analyzing the semantics of phrasal verbs in this study. In analyzing the meaning of symbolic structures Langacker speaks of there being “a grammatical valence
relation” between the component structures. Valence relations are the ways in which the internal structures of two components interact to subsume a new linguistic meaning. The relations consist of four major factors two of which are related to the analysis presented in this study including: 1) correspondence and 2) profile determinacy. Correspondence can be regarded as an “overlap between two conceptions that permits their integration to form a coherent scene” (p. 278); they can also be viewed as “instructions for assembling a composite structure from its components.” (p.278) Profile determinacy refers to “the extent that the profile of a component structure is adopted as the profile of the composite structure.” (p. 288)

Langacker presents the structure of the simple phrase UNDER THE TABLE as an example for identifying valence relations. The two elements integrated in this conceptualization are UNDER (a predicate) and THE TABLE (a more elaborate prediction). UNDER profiles a static relationship and THE TABLE has a complex matrix (e.g. domain of 3D space and contextual uniqueness). The integration of the two predictions depends on the correspondence between the landmark of UNDER and the profile of THE TABLE. These are the substructures within the component predictions which are identical with reference to the unified conceptualization. According to Langacker (1987) “A composite structure is formed by superimposing corresponding entities and merging their specifications. The component predictions are thereby integrated by virtue of their overlapping sub-structures and the matrix of the composite structure consists of the union of the matrices of its components” (p. 281). The composite structure UNDER THE TABLE is similar to UNDER in that it profiles a static relation,
but it is different as it inherits more specification i.e. it elaborates the specification of TABLE. The profile determinant in this relation is UNDER since the ultimate composite structure profiles a static relation and not a nominal.

Langacker states that composite structures such as this which inherit a relationship with specific properties including that of nouns are prototypical. However, not all composite structures need to have a nominal component. Composite structures can be formed from any two component types including those of relational status. An example of this is English past participle such as GONE which inherits two relational components GO and PRTC.

The composite structure which is formed this way has certain characteristics, one being that it is “experientially distinct from recognition of the individual components” the other “it may involve entities and specifications beyond those provided by the components.” (p.281) Typically the composite structure inherits most of its features from the component structure by “effecting their union through merger of shared entities” (Langacker 1987, p.281). Identifying these correspondences is required for the full description of a construction since they provide information on the nature and degree of compositionality.

A similar type of analysis can be applied to phrasal verbs. Frequently used phrasal verbs such as get up are conventionalized and inherit a unit status in the proficient speaker’s mind and need only to be activated, yet their composite structure can be explained by examining the component structures. For instance, the two semantic components of get up are: GET (predicate 1) & UP (predicate 2). In this construal GET
profiles a dynamic relation, while UP profiles a static relation between the spatial elements: trajector (TR) and landmark (LM); both are in the domain of space. The integration of the two predicates depends on the correspondence between the process profiled by GET and the schematic relational status of TR and LM serving as the base for the particle. By merging the specifications of these corresponding entities and adopting the profile of UP we obtain the composite structure which designates the dynamic relation constituting the process of GET and the spatial configuration denoted by UP. In this relation, since the overall meaning of the phrasal verb designates a dynamic relation (a process which unfolds through time), GET is the profile determinant of the construction. The overall correspondence between the two relational predictions must be understood as subsuming a series of more detailed correspondences including that of their TRs, their LMs and the relational status of the TR and LM. While in some constructions such as UNDER THE TABLE, the nominal serves as the participant for the preposition, in phrasal verb constructions the verb and the particle are both relational and neither is considered the participant of the other.

Another topic related to compositionality is analyzability. Analyzability involves “the recognition of the contribution that each component makes to the composite conceptualization.” (Langacker, 1987, p.292) According to Langacker (1987) “The semantic import of analyzability reinforces the need for a view of meaning that takes both component and composite structure into account”. (p.293) A novel expression is fully analyzable to the speaker, because in order to come up with the desired meaning the speaker must attend to each component and the substructures that are merging to form a
complex expression. Once a composite structure achieves a unit status there is this possibility that the composite structure itself becomes conventionalized and can be autonomously activated in the mind of the speaker. Similarly, once a phrasal verb has become conventionalized in the mind of the language user, the meaning of the composite structure can be automatically activated and retrieved without much cognitive effort.

2.5.4 Summary of the semantic approaches

There are several approaches to meaning, each providing a potential account for explaining the complex semantics of phrasal verbs. The following provides a summary of these approaches:

1) *Arbitrary view of meaning.* Phrasal verbs are by nature arbitrary and there is no clear explanation for the internal semantic workings of these constructions.

2) *Full compositionality approach.* Phrasal verbs are fully compositional and the meaning of the whole can be directly derived from putting together the meaning of the two components: verb and particle.

3) *Partial compositionality approach.* Phrasal verbs exhibit only partial compositionality, with meaning resulting from the composite structures themselves as well as contextual information and knowledge of the world. There are three different versions to this final approach:

3a) Phrasal verbs are constructions and in order to account for their semantics, we should identify the polysemy network of the construction. For each construction, there is one central sense from which the other senses get extended systematically (Goldberg, 1995).
3b) Identifying the grammatical valence relations of the composite structures, in this case verb and particle, can provide insight into the internal working of phrasal verbs (Langacker, 1987).

3c) The multiple meaning of phrasal verbs can be explained by identifying the metaphorical extensions of only the particle component (Rudzka-Ostyn, 2003).

Each of these accounts provides a possible candidate for explaining the semantics of phrasal verbs. The analysis of phrasal verbs in this study shows that while frameworks within the partial compositionality approach offer insight into the internal structure of phrasal verbs, no approach to date has provided a comprehensive explanation of the internal workings of these lexical units. Among the different approaches, Langacker (1987; 1991)’s approach to composite structures was found to be the most insightful and is used as a framework for analyzing phrasal verb constructions in this study. Following this approach, the analysis of phrasal verbs involves examining the interaction between the composite structures as well as taking into account other cognitive mechanisms involved in the interpretation of the various meanings. Discussion of embodiment and the different cognitive resources involved in the analysis of phrasal verbs is provided in the following section.

2.6 The role of embodiment and cognitive processes in phrasal verb meanings

2.6.1 Embodied meaning

The ways in which different meanings of composite structures such as phrasal verbs are subsumed is an interesting phenomena and can be accounted for by the principle of partial compositionality. In most cases the meaning of a novel structure
highlights only limited aspects of the composite meaning alone, and the rest is provided by the speaker’s conceptualization and background knowledge of the world. The conceptual structure is for the most part mediated by how we as humans experience and interact with objects in our environment. Due to the unique nature of our physical bodies, our experience of the world is tied to our physiology and neural architecture; in other terms experience is embodied. The way we as humans perceive the world is different from the way another species perceives and experiences the same world. Thus, our unique anatomy and perceptual system is fundamental to our cognition (Evans and Green 2006; Gibbs 2006; Tyler & Evans 2003). Furthermore, our perceptual experience of the world is meaningful to us in various ways. Most importantly, the nature of our experience has inevitable consequences for survival including the way we react to critical situations and potential threats in our environment. For instance, knowing that certain entities such as fire, boiling water and wild animals are dangerous has important consequences for our survival. Therefore as argued by a number of studies (e.g. Grady 1997; Johnson 1987; Lakoff & Johnson 1980; Langacker 1987) our embodied experience of the world gives rise to conceptual structure. In other words, meaning is embodied in nature and conceptual knowledge is largely derived from our perception and interaction with the spatio-physical world (Grady 1997; Tyler & Evans, 2003; Evans, 2000; Talmy, 2000).

Analyzing the multiple meanings of phrasal verbs shows that embodiment is at the heart of understanding the many meanings of composite structures, in particular phrasal verbs. The significance of embodied experience to the analysis of English prepositions has been emphasized by a number of CL studies (e.g. Johnson, 1987; Lakoff
& Johnson, 1987; Mandler 1996, 2004; Tyler & Evans, 2003; Vandeloise, 2005). In his 1987 book, Johnson argues that fundamental concepts such as CONTACT, CONTAINER, and BALANCE are meaningful since they are linked to human experience which is directly mediated by the nature of our physical body. These concepts are a basic part of understanding prepositions such as in and out. The notion of containment is necessary to understanding these two prepositions. Certainly, interacting with containers has unavoidable consequences for human being as we encounter several experiences through interacting with containers in our daily lives. For instance, our default locations or homes where we spend extended periods of time are containers, and when we move from one room to another we are crossing the boundaries of the rooms or containers. Many of the objects we constantly interact with are containers such as kitchen appliances (e.g. cups and bowls), pieces of furniture (e.g. drawers and chests), and school kits all fall under the category of containers. Our bodies themselves are containers, which hold our organs and the vital fluid.

Human understanding of the notion of containment goes back to early years of life. According to Mandler (1992) infants develop preverbal concepts such as CONTAINMENT, PATH and SUPPORT during the first few months. Psychological experiments are evident to this claim (e.g. Baillargeon, Needham & Devos, 1991; Gelman, 1990; McDonough & Mandler, 1991; Leslie, 1988). In an experiment by Kolstad (1991), 5.5-months old infants showed surprise when seemingly bottomless containers held objects. This shows that infants of less than 6 months have an abstract understanding of certain properties of objects and how they interact with each other.
Mandler argues that it would be hard to explain how infants are able to infer notions such as containment by only relying on sensory-motor representations. Unless infants have developed an abstract schematic knowledge of containment and support, they will not be able to create expectations about containers and acknowledge when these expectations are not met. The schematic knowledge develops through the infant’s interaction with the environment and attention to specific attributes of objects and events. Mandler suggests that the preverbal concepts function as semantic primitives or image schemas forming conceptual categories that will lay the foundation for further language development.

The various distinct meanings of phrasal verbs can be explained by reference to embodied experience shaped from early years of our lives. For instance, the many meanings of *get up* can be explained through our bodily experience of dealing with gravity from the time we were born. Gravity is an objective feature of the world but our physical anatomy permits certain kinds of experiences, which are different from other species such as birds or reptiles. Due to our body’s nature we experience motion acts such as walking, running, crawling and flying in specific ways. Similarly a phrasal verb such as *get up* acquires distinct meanings from recurrent experience of elevation and interaction with gravity. *Get up* in its central sense denotes a meaning of an entity moving (or caused to be moved) from a lower position to a higher position which is formed compositionally from the combination of the verb and particle. The distinct or meanings of *get up* identified in this study including Become Upright, Waking and Moving Out of Bed and Organize an Event, can be directly explained through embodied experience.
The first sense: Become Upright, is closely related to the central sense and
denotes the movement of the body from the lower position (sitting or lying) to the upper
position (standing) which motivates uses such as Get up! or I got up and went to the
backdoor. An implicature of sitting or lying down is that typically we are less in control,
and objects surrounding us are less visible. Therefore the sitting or lying position is
‘down’ and the standing position is ‘up’. Metaphorical use of this sense can also be found
as in A good friend helps you get up when you fail. Instead of referring to a physical
upright position of a human body, the phrasal verb denotes a sense of being in control
and in a good position. The second sense: Waking and Moving Out of Bed is closely
related to the previous sense, but the interpretation is more specific. One interpretation
involves the actor (experiencer) moving from a state of being asleep to a state of being
conscious. Another interpretation designates the physical movement of the body from the
source location ‘bed’. This meaning is also directly related to our embodied experience
with the environment. In order to be out of bed, we move from the lying position to the
upright position. Due to the high frequency of this particular experience with our resting
location (or beds) this sense has become a conventionalized sense and get up has acquired
this highly entrenched meaning which motivates the use I got up late. Finally, the third
meaning: Organize an Event denotes organizing or preparing for an event or meeting. In
this construal, events are conceptualized as objects that can be lifted from a lower
position to a higher position. A consequence of being up is that we are more in control
and in the sense of readiness. Thus by being in the upper position the event (LM) is
inducing the person (TR) to be in a state of ongoing activeness such as in the usage Let’s
get up an entertainment for Christmas (more explanation of the different senses of get up is provided in Section 4.2.2)

The notion of embodiment is thus crucial for understanding the different meanings of get up. Similarly, a wide range of phrasal verb meanings can be derived from the unlimited repository of human experiences. The various meanings of phrasal verbs which we employ in our everyday communication are mainly a consequence of our unique bodily experience with the world. Hence, the contribution of embodiment to the comprehension of phrasal verb meaning should not be underestimated.

2.6.2 Experiential correlation

Experiential correlation is a clear example of human experience giving rise to conceptual meaning. According to Grady (1997; 1999), a result of the nature of certain interactions between humans and their environment is that particular events or experiences become frequently correlated. In some instances, numerous encountering of certain correlations gives rise to new meaning being associated with a particular form. One frequently recurring experiential correlation explained in the previous sections, is the relation between increase in quantity and vertical elevation such as when liquid is added to the container or objects are stacked together. This conceptual association is reflected in the use of certain particles such as up and over. These set of particles designate spatial relations along the vertical axis and in certain uses can denote a More/Excess meaning as a result of this recurring experiential correlation. The following examples demonstrate the

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8 Previous studies such as Grady (1997, 1999) and Lakoff and Johnson (1999) have accounted for experiential correlation in terms of primary metaphors, explained more in the following section.
More Sense of *up* and the Excess Sense of *over* (Tyler and Evans, 2003) used in phrasal verbs:

1. Government officials *turned up* the thermostats when they realized that sales of space heaters were peaking in summer.

2. The reservoir will inevitably fill with silt and the river will *flow over* the dam.

Parallel to the above analysis, particles such as *down* and *under* have developed a Less Sense (Tyler & Evans, 2003). Based on an independently motivated experiential correlation between vertical elevation and quantity, lower amount of an entity has come to be associated with less of the entity, which is also a highly productive use. The following examples from the corpus illustrate the use of the two particles in the Less Sense:

3. If your goal is to *slim down* and stay healthy, there are some high tech ways to keep you on track.

4. Seventy percent of the jobs created in the past few years pay *under* $29,000 a year.

In addition to particles, certain meanings of the verbs examined in this study were found to be derived from commonly encountered experiential correlations. For instance, the recurring correlation between states and location has given rise to the Become Sense of *turn*. According to Grady (1997), a recurring correlation between a state and the location in which the state is experienced has given rise to the conceptualization of states in terms of locations (see also Lakoff & Johnson, 1999). Similarly, as a result of the frequent correlation between physically turning an object and the state of the object
changing, *turn* has come to denote a change of state from one state to another (e.g. *The sky turned blue*). For instance, in order to separate two binded objects we can *turn* the two pieces in our hands and the result can be separation or the change of state of the objects (more explanation is provided in section 4.1.3). Such experiential correlations are inevitable consequences of the nature of human experience as we are constantly interacting with the environment. As noted by Tyler and Evans (2003), the fascinating aspect of correlated experiences is that two clearly distinct concepts such as states and locations become closely associated or conceptually linked, providing a rich resource for conventionalized forms appearing in every day use of the language. Experiential correlation is one of the key cognitive processes motivating many meanings of phrasal verbs in this study.

### 2.6.3 Pragmatic strengthening

Another cognitive process involved in the creation of new meanings of lexical items is the process termed as pragmatic strengthening. According to a number of studies (e.g. Bybee, Perkins, & Pagliuca.; 1994; Evans, 2000; Traugott, 1989; Tyler & Evans, 2003) through recurrent usage, inferences deriving from our commonly encountered experiences can come to be conventionally associated with a particular lexical form. In such cases, recurrent use of the word in appropriate contexts in which the implicature occurs gives rise to a new meaning associated with the lexical item such as prepositions and particles. Once the new meaning is instantiated in long-term memory, the additional or extended sense can be used in new contexts, independent of the context, which originally motivated the use.
One important cognitive factor resulting in conventionalization of meaning is the notion of *entrenchment*. Entrenchment refers to the process by which a new word becomes part of the lexicon of a language (Schmid, 2007). According to Langacker (1987) linguistic forms fall along a continuum of entrenchment in our mental organization. Each instance of use of a linguistic form has a positive impact on the degree of entrenchment, while extended periods of non-use have a negative impact. Through repeated use “a novel structure becomes progressively entrenched, to the point of becoming a unit” (p.59). The degree of variability of each linguistic unit is different, as “units are variably entrenched depending on the frequency of their occurrence” (p.59).

Pragmatic strengthening was found to play an important role in the conceptualization of phrasal verb meanings. One example of pragmatic strengthening in phrasal verbs is the Accessibility Sense of *out* identified in this study. This sense participates in a large number of phrasal verbs including *get out*, *put out* and *turn out*. According to Tyler and Evans (2003), the central sense of *out* designates a spatial relation in which the TR is located exterior to a bounded LM. One consequence of being exterior to the boundaries of LM (container) is that the TR or object inside the LM becomes inaccessible due to the qualities of the LM. This is particularly the case with opaque LMs that are sealed on all sides (e.g. money in a locked safe). Once the TR is *out* of the container it is no more confined by the boundaries of the LM and as a result it can become available and accessible to the experiencer. Due to the recurring observation of such spatial scenes and our knowledge of how containers work this sense has come to be associated with *out* and is inferred in appropriate context in which the implicature occurs.
Therefore, through pragmatic strengthening, the experiential correlation of being located outside of the container and having access to the entity has given rise to a distinct sense of *out*, which is the Accessibility Sense.

### 2.6.4 Conceptual metaphor and metonymy

The significance of metaphors in human cognition has been underscored by contemporary theories of metaphor (e.g. Kovecses, 2003; Grady 1997, 1999; Lakoff, 1987; Lakoff & Johnson, 1980). Metaphor is no longer considered merely a linguistic phenomenon, but a fundamental aspect of thought and embodied meaning. According to Lakoff and Johnson (1980), conceptual metaphors are cognitively construed by a cross-domain mapping from one conceptual domain, the so-called source domain, to another conceptual domain or the target domain. Source domains are typically more concrete, and more clearly delineated concepts than the corresponding target domains. Some common source domains are human perception, physical forces and objects. These domains are used to understand the more abstract target domains such as emotions, thought and knowledge. Some common metaphors observed in the analysis of phrasal verbs encompassing these domains are EMOTIONS ARE PHYSICAL FORCES (e.g. His lifestyle *turns off* some people.), IDEAS ARE OBJECTS (e.g. The question was *taken up* by the government.), and KNOWING IS SEEING (The news *got out*). Specific details pertaining to each metaphorical use will be explained in chapter 4.

A number of CL studies have argued for a bodily basis of many frequently used metaphors (e.g. Gibbs 1990; Grady, 1997,1999; Kovecses 2010; Lakoff & Johnson 1980; Sweetser 1990). According to these studies, our spatio-physical experience and
interaction with the world around us plays an important role in the interpretation of a large number of conceptual metaphors. As human beings we are constantly interacting with the physical world through our cognitive and perceptual system, which in turn mediates our understanding of more abstract concepts. Therefore, it is not surprising that many metaphors are motivated by our bodily experience. The primary metaphor proposed by Grady (1997) is one example of experientially grounded metaphors. According to Grady, primary metaphors are based on commonly encountered experiential correlations. Some examples of this type of metaphor are MORE IS UP, KNOWING IS SEEING and DIFFICULTY IS HEAVINESS. Primary metaphors are distinct from other types of metaphors (e.g. resemblance metaphors) in that our experience with the world is key to the interpretation of the targeted concept. For instance, one of our basic experiences with carrying or manipulating a heavy object is that we may experience tension or pressure. This primary human experience forms the basis for the DIFFICULTY IS HEAVINESS metaphor. On the other hand, more complex metaphors such as THEORIES ARE BUILDINGS or SOCIAL ORGANIZATIONS ARE PLANTS do not directly arise from our bodily experience in the same way as primary metaphors do (Grady, 1997). There is no direct human experience, which explains buildings in terms of theories or social organization in terms of plants, and hence these metaphors are not included in this category.

Another example for the embodied basis of metaphors is the set of metaphors that involve direct reference to the human body. Body parts constitute the source domain of certain metaphorical uses such as the heart of the problem or the head of the department
In the above metaphors, the target domains problem and department are conceptualized as a person with the specific body part. Moreover, a number of metaphors have their experiential basis in the way human body functions. Among these metaphors are the ‘heat’ metaphors including ANGER IS HEAT and INTENSITY IS HEAT. These metaphors are reflected in many expressions including phrasal verbs such as turning up the heat in a debate, or be burned up by someone’s behavior. As mentioned by Kovecses (2003), the experiential correlation between our emotional experience of anger or tension, and bodily experience of heat has given rise to such metaphorical uses, providing further evidence for the embodied nature of certain metaphors.

Like metaphor, conceptual metonymy plays an important role in the processing of figurative conceptual structures. The main difference between the two processes lies in the way the conceptual structures are linked together in the figurative construction. While metaphor involves the mapping of concepts across two separate domains, metonymy involves mapping of the concepts within a single domain. In a CL account, a conceptual metonymy is considered as a cognitive process in which the more salient concept (vehicle) provides mental access to the less salient concept (target) within the same domain (Kovecses, 2010; Lakoff, 1987). In most cases, the particular association between the two conceptually close entities (vehicle and target) motivates larger groups of metonymies that are characterized by a particular relationship between the two entities.

Some examples of frequently encountered metonymic relationships in every day

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9 Lakoff and Johnson (1980) consider such expressions as isolated instances of metaphorical concepts in which typically one instances of the used part is specified. Thus, in a use such as foot of the mountain, the foot is the only utilized part of the metaphor A MOUNTAIN IS A PERSON. Other body parts are not mapped as in shoulder or trunk of the mountain. However, novel metaphorical uses are possible.
language are THE PRODUCER FOR THE PRODUCT (e.g. *Do you sell Hemingway?*), THE CONTROLLER FOR THE CONTROLLED (e.g. *Nixon bombed Hanoi*) and PART FOR WHOLE (e.g. *All hands are busy*). In all these examples, one conceptual entity such *Hemingway* (the PRODUCER), stands for another conceptually close or “contiguously-related” entity *the book written by Hemingway* (the PRODUCT) (Kovecses, 2010, p.145).

THE PLACE FOR THE INSTITUTION metonymy showed up a few times in the corpus data for phrasal verb uses including the contextualized expression *getting out the vote*. The expression is used in sentences such as *Barack Obama is focus on getting out the youth vote*. In this use, the lexical phrase ‘the vote’, is a metonymy for the young people who vote. The phrase ‘the vote’ provides specific information about encouraging the movement of the TRs (people) to the exterior of the LM (default locations or homes) for the purpose of voting. The meaning also draws on our background knowledge concerning US presidential elections.

The cognitive processes explained above provide important tools for analyzing the meaning of phrasal verbs. The following section presents the methods used in this study for the semantic analysis of phrasal verbs.
Chapter 3  Methods

In the dissertation, the analysis of sixteen phrasal verb constructions (Table 1), which share the same five particles, will be presented. The verbs participating in the constructions include get, take, turn and hold. These verbs are selected due to their polysemous nature, their high frequency, and because they become phrasal verbs with the frequent and polysemous particles up, out, off and over. An examination of the COBUILD dictionary of phrasal verbs and the corpus data showed that these particles participated in numerous phrasal verb constructions. The frequency measures in the Corpus of Contemporary American English (COCA) for the verbs, adverbial particles and the phrasal verb constructions are provided in tables 2, 3 and 4.

Table 1. Selected phrasal verbs

<table>
<thead>
<tr>
<th>Verb</th>
<th>Particle</th>
</tr>
</thead>
<tbody>
<tr>
<td>GET</td>
<td>GET UP</td>
</tr>
<tr>
<td>TAKE</td>
<td>TAKE UP</td>
</tr>
<tr>
<td>TURN</td>
<td>TURN UP</td>
</tr>
<tr>
<td>HOLD</td>
<td>HOLD UP</td>
</tr>
</tbody>
</table>

Table 2. Frequency of the verbs in COCA

<table>
<thead>
<tr>
<th>Verb</th>
<th>Total tags as V</th>
<th># as PV</th>
<th>% as PV</th>
</tr>
</thead>
<tbody>
<tr>
<td>GET</td>
<td>1147958</td>
<td>83702</td>
<td>7.3</td>
</tr>
<tr>
<td>TAKE</td>
<td>770075</td>
<td>66384</td>
<td>8.6</td>
</tr>
<tr>
<td>TURN</td>
<td>253930</td>
<td>65927</td>
<td>26</td>
</tr>
<tr>
<td>HOLD</td>
<td>202102</td>
<td>27935</td>
<td>13.8</td>
</tr>
</tbody>
</table>

Note. PV=Phrasal verb
Table 3. Frequency of adverbial particles in COCA

<table>
<thead>
<tr>
<th>Particle</th>
<th>Total tags</th>
<th># as RP</th>
<th>% as RP</th>
</tr>
</thead>
<tbody>
<tr>
<td>UP</td>
<td>1022672</td>
<td>890560</td>
<td>87.1</td>
</tr>
<tr>
<td>OUT</td>
<td>1062303</td>
<td>783003</td>
<td>73.7</td>
</tr>
<tr>
<td>OFF</td>
<td>334791</td>
<td>210689</td>
<td>62.9</td>
</tr>
<tr>
<td>OVER</td>
<td>587338</td>
<td>192578</td>
<td>32.8</td>
</tr>
</tbody>
</table>

Note. # = token frequency. RP=Adverbial Particle

Table 4. Frequency of phrasal verbs in COCA

<table>
<thead>
<tr>
<th>Verb</th>
<th>Particle</th>
<th>UP</th>
<th>OUT</th>
<th>OFF</th>
<th>OVER</th>
</tr>
</thead>
<tbody>
<tr>
<td>GET</td>
<td>UP</td>
<td>22252</td>
<td>23987</td>
<td>6640</td>
<td>3262</td>
</tr>
<tr>
<td></td>
<td>OUT</td>
<td>12192</td>
<td>15769</td>
<td>18066</td>
<td>11046</td>
</tr>
<tr>
<td>TAKE</td>
<td>OFF</td>
<td>7288</td>
<td>30277</td>
<td>5485</td>
<td>7510</td>
</tr>
<tr>
<td>HOLD</td>
<td>OVER</td>
<td>12488</td>
<td>6691</td>
<td>1058</td>
<td>462</td>
</tr>
</tbody>
</table>

COCA was used for investigating the different uses of the phrasal verbs in natural occurring data. The corpus consists of a variety of genres including spoken (unscripted conversation) from TV and radio programs, fiction, magazine, news and academic journals. Two hundred instances of each phrasal verb were randomly extracted for a total of 3200 tokens. The decision for sampling 200 instances involved a bottom-up approach. First, I selected 50 instances of one phrasal verb ‘get up’ and examined the uses for the central and extended senses. After going through the examples I discovered that not all frequent uses suggested in the dictionaries and which I was intuitively aware of were covered in this selection. Consequently, I went through the next 50 instances and examined the distinct uses of the phrasal verb. This process was repeated until a total of 200 randomly selected instances were examined. Investigating the 200 instances yielded
the most frequently used senses of the phrasal verb. Initial examination of the corpus for
the phrasal verbs *take up* and *hold up* showed a similar pattern and thus a decision was
made to sample 200 instances for each of the phrasal verbs considered in this study.

The coding scheme involves a recursive process, which is slightly different for the verbs and the particles.

For the verbs, the first step in the analysis involves identifying the central or core meaning. For this purpose, I began by establishing the etymological roots of the verbs based on the information provided in the Online Etymology Dictionary (http://www.etymonline.com). For instance, the earliest attested meaning of *get* provided in this dictionary is *geta* (obtain). If this original meaning is still currently in use and frequent, I posited this sense as the central meaning (For instance, this was the case for *get* for which the ‘obtain’ sense constituted 56 of 200 randomly sampled uses).

Next, I consulted online resources including WordNet and Cambridge Dictionary for potential extended meanings of the verbs. For instance, according to WordNet *get* has 37 ‘distinct senses’. However, close analysis of the sentential contexts revealed that many of these ‘distinct’ (extended)\(^{10}\) senses are contextual variants, with much of their purported ‘distinctness’ arising from context and not from the verb. This situation is analogous to the overly fine-grained polysemy analyses of prepositions discussed by Tyler and Evans (2001; 2003). Using established CL principles for meaning extension, such as embodied experience and conceptual metaphor, I identified a more restricted set of meanings for the verb. Following Tyler and Evans, I adopted the criterion that a

\(^{10}\) Distinct senses are also referred to as extended senses in this study. The extended senses are the set of senses derived from the central meaning of the lexical item.
distinct sense must contain additional meaning not apparent in other proposed senses. In contrast to a central sense for a verb, an additional, extended sense: 1) need not be strictly physical/spatial in meaning; or 2) the extended sense prompts for a different spatial scene.

For instance, one clearly established spatial sense for hold is the ‘grasp’ meaning as in *She held the cup in her hand*. Grasping an object is a salient experience for human beings and entails a number of experiential correlations. One consequence of holding an object is that we are keeping it in the same state, which gives rise to the ‘maintain/keep’ meaning as in *The music held my interest the entire time*. Here the interpretation goes beyond simply grasping the object; rather the interpretation focuses on maintaining the person’s interest for a certain period. Using this methodology, the dictionary meanings for the verbs were consolidated into substantially fewer categories. Moreover, the analysis of the various senses of the verbs shows that one broadly defined sense predominates the other senses. For instance, for hold the ‘grasp’ meaning was very closely related to 15 of the 36 dictionary uses, and for get the meaning ‘obtain/acquire’ was very closely related to 21 of the purportedly 37 distinct uses.

The conceptualization of the central sense was developed in the process of identifying the distinct senses. As mentioned above, I was guided by the hypothesis that the earliest attested meanings would be a potential central sense. A second important tenet was that the extended meanings could be traced back to the central sense in straightforward ways using established CL principles for meaning extension, such as experiential correlation and shifting construals on a scene. Considering the earliest attested meaning for both verbs showed that the early meanings were closely related to
the predominate senses. Hypothesizing that these predominate meanings were the central senses for each verb, the remaining consolidated uses were analyzed to determine if these senses could be straightforwardly related to the hypothesized central sense. The analysis revealed that all but a handful of uses could be related to the proposed central senses.

For analyzing up, out, and over, I initially applied the polysemy network of these particles proposed by Tyler and Evans (2003). The proposed semantic networks for these particles were refined in the course of analyzing the phrasal verb meanings in the data. For instance, the analysis revealed an Accessibility Sense for out which was not discussed by Tyler and Evans. The spatial particle off is not explored by Tyler and Evans. Therefore, following their proposed polysemy model, a semantic network for this particle was proposed in this study.

In identifying the different meanings for the verb-particle combinations, I relied heavily on the COBUILD dictionary of phrasal verbs and Merriam-Webster online dictionary. After a preliminary analysis, I re-evaluated and consolidated the categories from the COBUILD dictionary, similar to the process used for establishing the verb senses. Next, I formulated a coding rubric for the central and distinct senses of each targeted phrasal verb construction and applied it to the COCA data. The final refinement of the coding rubric involved a recursive process. In the course of identifying the distinct uses of the phrasal verbs, I was continually guided by the distinct contributions of the verb meanings and the particle meanings. As mentioned above, in the course of this phase of the analysis, I discovered uses of the particles, which had not been part of the initially posited polysemy networks. These new uses were added to the rubric as the data
demanded. Once the rubric was refined, two native speakers of English independently coded 10% of the data, yielding an inter-rater reliability percentage of 94% agreement. The inter-rater reliability results shed light on the areas of the analysis, which required further modification and offered some insight for a fuller more comprehensive representation of the various senses.
Chapter 4  Analysis

This chapter provides a detailed CL analysis of the sixteen phrasal verbs selected for this study. First, the central and extended meanings of each of the verbs get, take, turn and hold are presented. Following this, the semantics of each of the particles up, out, off, and over and the phrasal verbs produced from the combination of each verb with these particles is presented. As previously mentioned, the analysis of up, out and over is based on Tyler and Evans’ (2003) proposed Principled Polysemy Model for these particles. The analysis of the particle off, and the verbs get, take, turn and hold are proposed in this study. The final section briefly discusses the frequency of senses in phrasal verbs.

4.1 Summary of Verb Meanings

4.1.1 Get

The verb get is highly polysemous in addition to being highly frequent. The WordNet Dictionary lists up to 37 meanings for get; however, based on the CL analysis conducted in this study one central sense and 3 distinct senses were identified for this verb. The extended senses include Grasp (e.g. We finally got the suspect), Change of State (I got hungry, I got cold) and Move (e.g. I got there on time).

The senses of get which participate in instances of phrasal verbs found in the COCA corpus and examined in this study exhibit only the central sense and two of the extended meanings. The senses participating include the Move Sense, where the TR moves or is moved from one location to another, and the Change of State Sense, where the TR undergoes an experience or change in condition. The analysis shows that these meanings are extensions from the Obtain Sense, which originates from the meaning of to
obtain from the Old Norse word *geta* (Online Etymology Dictionary) and which represents the central or core sense of the verb *get*. Figure 1 represents the central sense of *get* proposed in this study. Following Langacker, the meaning of the verb *get* is represented by a series of relationships between the TR and LM, which unfold through time. At first the hand is moving toward the object and at the final stage the hand is wrapped around the object and obtains it. The time element is shown by an arrow. The Obtain Sense highlights the final TR-LM configuration in which the human participant has successfully grasped the targeted object.

![Figure 1. Central sense of get](image)

The following example illustrates the core sense of *get*:

(1) I got a book/I got a present

Embodied experience sheds light on how the core Obtain Sense became extended to the Move Sense. In order for humans to obtain an object, they typically must move part or all of their body. For instance, in order to obtain food we might have to move our entire selves to the kitchen and obtain what we want. Frequent experiences such as this, which necessitate moving our bodies (or part of them) for obtaining objects, have given rise to the Move Sense of *get*. 

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The Change of State Sense of *get* is also an extension of the Obtain sense. In English and some other languages a person’s bodily state is frequently conceptualized in terms of possession. For instance, in English we use the verbs *have* and *catch* to indicate that we are in a particular state of health as in *I have* an allergy or *I caught* a cold. In French, adjectives of bodily state such as hunger and fear are accompanied by the verb *avoir* meaning *have*, as in *J’ai* faim (I *have* hunger) and *J’ai* peur (I *have* fear). In the same way, the change of state meaning of *get* is extended from the obtain sense. For instance, when a person gets a cold they go from a state of feeling healthy to a state of having a cold. In addition, the notion of viruses existing inside the body seems to be conceptualized as the person obtaining these viruses. Similarly, when a person gets (becomes) sad, conditions in the physical or social environment influence a person’s emotion and as a result cause a change of state in the person’s mood. These environmental factors are often conceptualized as movement, as in *I was moved to tears*.

The extension of *get* to the Change of State Sense can be explained by a series of metaphors CAUSES ARE FORCES (Lakoff, 1990) and EMOTIONS ARE PHYSICAL FORCES (Kovecses, 2010). In this construal, mental or emotional forces are conceptualized in terms of physical forces that can change the state of the TR. The construal involved in the scene *I got sad* is similar to cases in which the verb *get* is used in a more physical sense such as *I got the ball*. In the physical use, the ball goes from a state of ‘not in the hand’ to a state of ‘in the hand’. In the non-physical uses as in *I got sad*, the emotional feeling of sadness is conceptualized as an object that is transferred to
the person’s body and consequently the person’s bodily state changes from ‘being happy’ to ‘being sad’.

The following examples provide minimal pairs, which illustrate the three different meanings of get: the core Obtain Sense and the two extended senses, the Move Sense and the Change of State sense.

(2) I got a book/I got a present (core Obtain Sense)

(3) I got across the bridge/I got to school on time (Move Sense)

(4) I got hungry/I got sad when I heard the news (Change of State Sense)

4.1.2 Take

The WordNet dictionary lists 41 distinct meanings for take. However, the CL-based analysis of take established a central sense and 5 distinct extended senses for this verb. The extended senses include the Extended Use (EU)/Occupy (e.g. I took my seat at the concert), Convey (e.g. Can you take these books to the librarian?), Accept (e.g. Take my gift), Change of location/state (e.g. I took a short walk) and Understand (e.g. Don’t take this the wrong way). The senses of take participating in instances of phrasal verbs found in the COCA corpus were limited to the central sense and one extended meaning; the EU/Occupy Sense.

Take’s etymological origin is from Old English tacan, which meant grasp or lay hold of (Online Etymology Dictionary). After recursive coding of the data, it was determined that the central sense of take is the Get Hold Of and Remove Sense. Figure 2 represents the central sense of take proposed in this study. The meaning of take is depicted by a series of scenes in which a hand is initially moving toward an object, then
grasps the object and, subsequently the hand and arm move the object toward the actor (as indicated by the final bent elbow in the diagram). Thus, the central sense of *take* involves movement of the TR (object), as well as movement of the actor’s hand. Notice that the action depicted in the Get Hold Of and Remove Sense is punctual in nature, as in the sentence *The squirrel took the nut*. The final two TR-LM configurations, grasping the object and removing it from its initial position, are highlighted in the central sense of *take*.

![Figure 2. Central sense of take](image)

In addition to the central meaning, I identified one extended sense for this verb in the corpus, the Extended Use or Occupy Sense. A consequence of grasping an object is that the agent becomes collocated with it, and with appropriate LM objects a sense of occupying the LM or using it arises. Importantly, not all instances of an agent being collocated and using an object involve physically grasping the object. For example, if a person *takes a table at the library* we conceptualize the spatial scene as the TR (the agent) sitting at, or using the LM (the table) and not physically holding the table and potentially moving it. Frequent observation of this type of collocation between an agent and a LM has given rise to the meaning of EU/Occupy for *take*. The EU/Occupy Sense has, in turn, been extended into the temporal domain. In most cases occupying or using
an object (e.g. *taking a table*) presupposes a durational event as opposed to a punctual event (e.g. *taking a pen from the desk*). This durational quality is an important part of the temporal extension in expressions such as *take the time to do it right*.

The following examples provide minimal pairs which illustrate the two different meanings of *take*: the core Get Hold Of and Remove Sense and the EU/Occupy Sense.

(5) I *took* a book/ I *took* the job (core Get Hold Of and Remove Sense)

(6) Please *take* a seat/It *took* time to write my dissertation (EU/Occupy Sense and Temporal extension)

### 4.1.3 *Turn*

The WordNet dictionary lists up to 26 separate senses of *turn*. However, the CL-based analysis of *turn* established a central sense and one distinct extended sense for this verb: the Become sense (e.g. *My face turned red*). The word *turn* originates from Old English *turnian*, which meant *to rotate* or *revolve* (Online Etymology Dictionary). After recursive coding of the corpus data, the Rotate Sense was determined to be the core meaning of this verb. Figure 3 represents the central sense of *turn* proposed in this study. The meaning of *turn* is represented by a hand rotating an object around an axis or center. The vertical line represents the axis and the arrow around the line represents the rotating movement. As illustrated in figure 3, initially the object is oriented to the left and after the rotation is completed the object is oriented to the right. Note that not all instances of *turn* involve an object. The object is optional i.e. the hand may be turning by itself. For instance, we can think of a context where a person is teaching magic tricks: *Turn your hand around and spread your fingers*.
apart. In the figure, the time element is shown by a horizontal arrow and the bolded objects are profiled in the scene.

![Diagram of turn](image)

*Figure 3. Central sense of turn*

The central sense of *turn* involves different spatial configurations. One includes the movement of the body around the axis as in *I turned around to see him*. In this case, the person’s body is both the agent (the cause of the movement) and the patient (the entity undergoing the movement). Another spatial scene involves the person’s hand as the agent and the object undergoing the rotation as the patient as in *I turned the lid of the jar to release pressure*. Finally, the action of turning may involve the hand turning from palm up to palm down (either just the hand itself or the hand holding something) as in *I turned the bottle in my hand*. What is common to all these spatial scenes is that the object (TR) is moving around an axis, hence there is a rotating movement. The schematic image proposed for *turn* shows only one specific type of rotation, which can nonetheless be considered a reasonable prototypical illustration.

The Become Sense participated in the phrasal verbs examined in this study. This sense denotes the change of state of the TR from state A to state B as in *The water turned into ice*. In this scene, the TR or the water goes from the state of being a liquid to the state of being a solid object. The Become Sense extends from the central sense through an experiential correlation of the central sense. First of all, the embodied experience of
turning involves a change of physical location. This requisite change of location inherent in the meaning of *turn* gives rise to the Become Sense. Once we change location by turning our bodies, we may experience change in the environment which is often accompanied by change in the self. For instance, if we are sitting outside and the sun is behind us, once we turn our head around and face the sun we will receive more sunlight on our face and if this is too long we get sunburnt. Another frequent experience of turning also gives rise to this extended sense. Turning or changing the position of objects can also result in a change of state in the object. For instance, when cooking we turn the food in the pan so that both sides of it (as in two sides of a sliced potato) is finely cooked. In this case, we can say that the object goes through a change of state as a result of being physically turned.

The following examples provide minimal pairs, which illustrate the two different meanings of *turn*: the core Rotate Sense and the extended Become Sense.

(7) *Turn* your head to the left/ *Turn* the page (core Rotate Sense)

(8) The sky *turned* blue/ The water *turned* into ice (Become Sense)

**4.1.4 Hold**

The WordNet dictionary lists 36 separate senses of *hold*. The CL-based analysis conducted in this study identified a central sense and 4 distinct extended senses for this verb. The extended senses include Contain (e.g. *The bottle holds about 4 cups of water*), Possess (e.g. *Lee holds a degree in finance*), Control (e.g. *Hold your breath*) and Maintain (e.g. *The music held my interest the entire time*). Only the Maintain Sense and the Control Sense participated in phrasal verbs in this study.
After recursive coding of the corpus data, it was determined that the Grasp Sense is the core meaning of *hold*. This sense derives from Old English *haldan*, which meant *to grasp* or *to contain*. Holding is a very frequent and salient experience for human beings and entails certain important experiential correlations. For example, human beings can only physically hold onto objects for a limited period of time before their hands or arms become fatigued. This physical experience gives rise to an implicature of bounded duration associated with *hold*. Figure 4 represents the central meaning of *hold* suggested in this study. The meaning of the verb is shown by a hand grasping an object. Note that, unlike the other verbs analyzed in this study, *hold* profiles a static relation between the hand and object, thus there is no movement of the hand or the object involved in the meaning of *hold*. The time element is shown by an arrow and the bolded objects are profiled in the scene.

![Figure 4. Central sense of hold](image)

Two extended senses of *hold* were identified in the analysis of the phrasal verbs in this study, the Control Sense and the Maintain Sense. The Control Sense derives from the Grasp Sense due to the embodied experience of how we prevent force-dynamics from exerting influence on the object that we grasp (Csabi, 2002). For example, when grasping an apple we prevent gravity from exerting its influence on the apple and we keep it from
falling to the ground. In another scene, we might hold a bird in our hand with the intention of preventing it from flying. In this case we are keeping it from moving in an upward direction. Thus, by holding an object in our hands (agent), we are exerting control over the object (patient).

The Maintain Sense draws on the implicature of support which derives from the embodied experience of grasping an object in the hand. By controlling the object and helping it to resist the force dynamics that would otherwise work on it, we are keeping the object in the same state. If the force dynamics are not resisted, a change could happen to the object’s state or condition, e.g. the object would move in a downward or upward direction. To note, the Maintain Sense typically involves a temporal element of bounded duration, which is rooted in our embodied experience of holding objects only for a limited time.

The following examples provide minimal pairs which illustrate the three different meanings of hold: the core Grasp Sense and the two extended senses, Control and Maintain.

(9) I *held* the book/ I *held* her in my arms (core Grasp Sense)

(10) *Hold* your tongue/ *Hold* your breath (Control Sense)

(11) She always *held* herself as a lady/ The photograph *held* my attention (Maintain Sense)

4.2 Analysis of phrasal verbs with *up*

This section presents the semantics of *up* and the phrasal verbs produced from the combination of each verb (*get, take, turn, put*) with this particle.
4.2.1 Tyler and Evans’ Analysis of *up*

According to Tyler and Evans (2003), the polysemy network of *up* is complex compared to many other particles. This is because there is a large set of embodied experiences and important consequences that correlate between a human being in a physically elevated position and how humans interact with their environment. Tyler and Evans’ discussion of *up* focuses on explaining the central sense and one cluster of senses: the Quantity cluster. For the most part, the analysis of the particle involves drawing on the asymmetrical nature of the human body and embodied experience. Humans have a top-bottom anatomical asymmetry due to the fact that we are biped and thus have a physical top-bottom asymmetry. Moreover, our vital sensory organs are located on our heads. The following section briefly presents the central sense and extended meanings of *up* by Tyler and Evans.

4.2.1.1 Central sense of *up*. Tyler and Evans (2003: 136) posit that the central sense of *up* designates a relation in which “the TR is directed towards the top of an oriented LM”. The LM is conceptualized as having a top part and a bottom part, and the TR is construed as being oriented. The meaning of *up* is formed by the relation between the oriented TR and the asymmetrical LM. Some examples of the central sense are provided below:

(12) The bird flew *up* the chimney.

(13) Jennifer climbed *up* the mountain.

Although, in some cases, the LMs are not necessarily asymmetrical, the asymmetry of the human body seems to project onto these structures. For instance, we
can talk about the ‘top’ of the chimney or the ‘peak’ of the mountain. The human body offers a schema for the LM which is reflected in the central sense. Figure 5 shows the central sense of *up* suggested by Tyler and Evans.

![Figure 5. Central sense of up (Tyler & Evans, 2003, p.173)](image)

In this figure, the ‘stick’ person represents the LM which has a highlighted head or top that is in focus. The highlighted TR is represented by the dark sphere. The orientation of the TR is represented by the direction of the arrow rising from the sphere. The functional element or the interactive relation between the TR and LM posited for the scene is that of positive value. According to this analysis, there is a correlation between the actor being in a high position (or physically elevated) and the actor being in the state of readiness and increased control over the environment. For instance, when objects are raised to a vertically elevated position, they often become more visible or accessible to the actor. This tight set of experiential correlations with *up* have given rise to a number of senses that were not explored in depth by Tyler and Evans, but which participate in the phrasal verbs using *up*.

**4.2.1.2 The Quantity Cluster.** The quantity cluster of senses primarily utilizes the previously discussed experiential correlation between quantity and vertical elevation, where an increase in quantity correlates with an increase in height. The concept of
increase in amount has become so entrenched in up’s polysemy network that, through pragmatic strengthening, it has become an independent, established meaning which no longer necessarily refers to the original spatial scene. The extended meanings identified in this cluster are mostly non-spatial in nature even though they are inherently grounded in spatial scenes related to the central sense.

**More Sense.** As previously mentioned, many times quantity and vertical elevation are conceptually related due to the frequent co-occurrence of these two phenomena. According to Tyler and Evans, the association between the two gives rise to the More Sense of up. The following examples from Tyler and Evans illustrate this meaning of up:

(14) The maid plumped *up* the cushions.

(15) Turn *up* the volume.

In both examples, an increase in upward orientation correlates with greater amount. Although in (14) the context could possibly induce the meaning, in (15) the implicature is not available from the context, which indicates that it is an essential part of the meaning of *up*.

**Improvement Sense.** A consequence of having more of a particular entity is that it often becomes better in quality or in some ways improved. An obvious example of this is how having a higher income leads to a higher standard of living. Due to this use, *up* has developed a conventionalized Improvement Sense. Tyler and Evans note that not all instances of *up* in this sense denote physical elevation; however, the goal of the action is in some ways related to the notion of improvement.

(16) I read *up* on British history after watching the movie.
(17) Kirsten decided to get dressed *up* and go to a nice restaurant.

As we can see in both examples, the TR is not physically elevated or necessarily greater in amount. However, the presence of *up* implies a sense of betterment, so in (16) the speaker is improving their knowledge skills and in (17), by dressing, the person is appearing in a better state.

*Completion Sense.* Another consequence of increasing in amount is that in some cases, a limit or an endpoint is reached and the increase in quantity is complete. The most common example of this correlation is related to our repeated interaction with containers. For instance, if water is poured into a cup, the quantity of water increases and at some point, the limit of the cup is reached. According to Tyler and Evans, there is a correlation between a liquid increasing (or being up) and the capacity of the container being completely used, and in this way *up* has developed a sense of completion. The following examples illustrate this sense of *up*:

(18) Be sure to gas *up* the car for the trip.

(19) Lets load *up* the truck and get going.

Through pragmatic strengthening this implicature has given rise to a conventionalized meaning of completion. Interestingly, a different type of experiential correlation denotes a different aspect of the meaning of completion. The sense of completion here seems to involve the notion of depletion, which can be seen in the following examples:

(20) The flashlight won’t work. We must have used *up* the battery.

(21) Turn in your papers, time is *up*!
In (20) \textit{up} denotes that all the energy is consumed and in (21) \textit{up} denotes that the time allocated for testing is finished. Tyler and Evans argue that the meaning of depletion derives from our basic experience of taking a drink to the mouth and consuming it and, through pragmatic strengthening, the association between \textit{up} and depletion has become conventionalized. Thus different kinds of experiential correlations can motivate meanings which are different but closely related.

The following section presents the analysis for the different verb-particle combinations with \textit{up}. For each phrasal verb, a central sense and a number of distinct meanings are identified. The analysis involves a detailed explanation of each sense, followed by a number of examples from the corpus\textsuperscript{11}.

4.2.2 \textit{Get up}

4.2.2.1 Central sense of \textit{get up}. The phrasal verb \textit{get up} in its central sense denotes a meaning of ‘an entity moving (or caused to be moved) from a lower position to a higher position’. This meaning is compositionally formed through the combination of the extended sense of the verb and the central sense of the particle. In this use, \textit{get} denotes ‘movement from State A to State B’ and \textit{up} highlights ‘the relation between the oriented TR and the top part of the asymmetrical LM’\textsuperscript{12}. Figure 6 shows the potential central sense for \textit{get up} proposed in this study. The circle represents the TR and the rectangle represents the LM. The time element is shown by an arrow and the bolded

\textsuperscript{11} Some sentences in COCA corpus were missing information such as part of speech (e.g. subject or object) or were judged to be ungrammatical by native speakers. Consequently, some examples from the corpus have been minimally revised in order for the sentence to be grammatically correct.

\textsuperscript{12} In some cases such as in examples (22) and (23) \textit{get} seems to have this additional meaning of struggling or overcoming a barrier. This is a natural consequence of overcoming the force of gravity in order to move from a lower position to a higher position. In (22) moving from the base of the mountain to the top is challenging, and in (23) getting up into space seems to be a hard task for the astronaut.
objects are profiled in the scene. Note that the full meaning of \textit{get} is represented in three spatial scenes: 1) the TR is collocated with space A; 2) the TR is located in between spaces A and B; and 3) the TR is collated with space B.

![Diagram](image)

\textit{Figure 6. Central sense of get up}

Two examples for the central sense of \textit{get up} are provided below:

(22) If you’re going to be a mountain climber, you’ve got to try and \textit{get up} there.

(23) The astronaut says “\textit{Getting up} and back is the hardest thing, and while you're up there it's not that benign either.” (\textit{up there} refers to outer space)

In addition to this basic meaning, some metaphorical extensions of this sense were observed in the corpus including the following two sentences:

(24) I told him not to \textit{get} his hopes \textit{up}, but is worth giving it a shot.

(25) We \textit{got} our guts \textit{up} and went in the room.

In the above examples, the emotional/mental states ‘hope’ and ‘guts’ (a metaphor for ‘courage’) are conceptualized as objects that can be elevated. This conceptualization
makes it possible for us to talk about our emotions and feelings in terms of objects that can be lifted, and consequently becoming closer to the visual field and thus more salient.

4.2.2.2 Distinct senses of get up. Analyzing the data using CL tools and the corpus yielded three distinct senses for get up.

**Become Upright.** This sense denotes that the TR (an animate being) is rising to a standing position. As with the central sense, the meaning of *get* participating is the Move Sense and the meaning of *up* is the central sense. The spatial configuration denoted by this scene is similar to the central sense in that the TR is in state A at the beginning of the time scale, and is in state B at the end of the time scale. In distinction with the central sense in state A the TR (animate being) is necessarily sitting or lying down and in state B it is in the standing position. This meaning is directly tied to our embodied experience and the physical nature of our bodies. A consequence of sitting or lying down is that typically we are less in control and objects surrounding us are less visible. On the other hand, when we are standing up we tend to be more in control of our surroundings, are in a state of readiness and have more visual access to our surroundings. Therefore, the sitting or lying position is ‘down’ and the standing position is ‘up’. The following examples from the corpus illustrate this sense of the verb:

(26) I tried to get up, but he leaned over and forced me on my back.

(27) If a lady gets up from the table, you stand up, manners make a man.

Some metaphorical extensions of this sense were also observed in the data which did not refer to the physical upright position of a human body. Instead, the use of *get up* in this case denoted a sense of being in control and in a superior position as opposed to
being inferior which is extensively tied to the embodied experience explained above. The
following example in the corpus denotes this sense of \textit{get up}:

(28) White people are always going to try to keep you down, and the only
question you have to answer is if you're going to keep \textit{getting up}.

\textbf{Waking and Moving Out of Bed.} This sense denotes both awakening and the
physical movement of the body from a horizontal, resting position to an upright position.
Multiple senses of both \textit{get} and \textit{up} are involved in this use. The first spatial scene
involves the actor/experiencer moving from a state of being asleep or unconscious to a
state of being conscious. The meaning of \textit{get} is the extended Change of State Sense and
the meaning of \textit{up} is the Awake Sense discussed by Lakoff and Johnson (1980).
According to Lakoff and Johnson (1980), there are a wide range of physical experiences
that humans associate with being upright. One of the most basic experiences is being
awake or conscious. The second spatial scene involves the movement of the body from a
resting position to an upright position. The sense of \textit{get} participating is the extended
Move Sense and the sense of \textit{up} participating is the central sense. Due to the high
frequency of this type of experience with our resting location (or beds) this sense has
become conventionalized and \textit{get up} has acquired this highly entrenched meaning. The
meaning can be understood disregarding the contextual information in which it occurs
such as in the sentence \textit{I got up late}, referring to the speaker rising and moving away
from their bed late in the day and not just the general meaning of Become Upright. Other
examples in the corpus are mentioned:

(29) Every day we \textit{get up}, wash, and eat soup.
(30) She would wake me up in a very special way. If she got me up that way now, I might think I'd died and gone to heaven.

Organize an Event. In this use, get up is compositionally formed through the combination of the extended Change of State Sense of get and the extended Activity sense of up. As previously noted, a consequence of being up is that the TR/actor is in a state of readiness or active engagement. This sense of up is illustrated in a sentence such as: Hey, what are you up to? Which is commonly interpreted as ‘What activities are you currently engaged in?’ In this use of the phrasal verb, events are conceptualized as objects that can be lifted from a lower position to a higher position with an unplanned activity having low saliency and a planned activity having much higher saliency in the mind. The following examples illustrate this sense of get up:

(31) There were usually more people around at Christmas, so you could almost always get up a game.

(32) We are trying to get up an event for the Vineyard.

4.2.3 Take up

4.2.3.1 Central sense of take up. The central sense of take up denotes ‘an entity in the hand moved from a lower position to a higher position’. The meaning of take in this combination is the central Get Hold Of and Remove Sense and the meaning of up is the central sense of ‘the TR being situated in a higher position’. In order to take an object up, the actor’s hand moves towards the object, gets hold of the object, and moves it to a vertically elevated position. Figure 7 demonstrates the central sense of take up suggested in this study.
The spatial scene explained above is what I propose to be the central sense of *take up*. However, unlike the central senses identified for other phrasal verbs in this study, this sense occurs relatively infrequently. Examples found in the corpus include:

(33) The supporters on the street had *taken up* weapons, butchered their neighbors and made the country ungovernable.

(34) The boys went over and *took up* the wreaths and brought them towards the church, and the one in front wore roses around his neck like a horse that has won and can smile.

4.2.3.2 *Distinct senses of take up.* Two distinct senses of *take up* were found in the COCA data which are presented in the following section.

*Get Engaged with an Activity or Idea.* Another sense of *take up* refers to the actor becoming involved with an idea, issue or activity. The sense of *take* participating in this use is the central Get Hold Of and Remove Sense, and the sense of *up* is saliency. A consequence of objects being in the vertical position is that they are typically more
visible and salient. Similarly, by taking ideas or activities up, we are conceptualizing
them as objects that can be brought closer to the visual field and therefore become more
salient and highlighted. This extended meaning of take up crucially relies on the
conceptual metaphor IDEAS ARE OBJECTS. The following sentences illustrate this sense
of take up:

(35) The question was later on taken up by the government
(36) Joy made the best of her school and took up cheerleading.
(37) I took up sports after I graduated.

In all of these examples, getting engaged with the activity is considered
something positive to the speaker, and by using take up (and not just take) the speaker is
giving a sense of saliency and preference to the idea or activity.

**Occupy Space or Time.** In the spatial scene denoted by this sense, the TR is
occupying or using some parts of the LM. The meaning of the verb in this use is
EU/Occupy Sense. The meaning of up participating in this sense is the Completion Sense
or in more precise terms the notion of ‘depletion’, which was discussed in the analysis of
up. The experiential correlation between getting hold of an object and occupying it
subsumes this sense. A consequence of grabbing an object is that the person gets
collocated with it and if the object (or the LM) is bigger than the person (or the TR) then
we can say the person is occupying or using it. The following sentences demonstrate this
sense of the phrasal verb observed in the corpus:

(38) You can fix it so it takes up less time.
(39) The passenger was judged for taking up 2 seats.
In (38) the person is using a certain amount of time to fix the object. In (39) the person is sitting on the seat and as a result of collocating with it (either by their body or by an object like a bag) we say that they are occupying some space, in this case 2 seats in a bus.

4.2.4 Turn up

4.2.4.1 Central sense of turn up. The phrasal verb turn up in its central sense denotes a spatial meaning of ‘moving (an object) to an upward position or direction’. In this use the meaning of turn is the central Rotate Sense and the meaning of up is the central sense of ‘the TR being situated in a higher position’. Figure 8 represents the central sense of turn up proposed in this study. In order to turn up an object, the actor’s hand moves from a horizontal position to a vertical position and consequently the object comes to be in an upright position.

![Figure 8. Central sense of turn up](image)
Some examples of the central sense of *turn up* are provided below:

(40) It was the kind of thing they did, he *turning up* the collar of her coat when it was wrong, she straightening his tie.

(41) He looked up at me from behind his magazine, one eyebrow quirked, lip *turned up* and slightly parted to show off the scissor-fine edge of a fang.

(42) The dead mice were always on their backs with their feet *turned up* in the air, their tiny front teeth protruding from their mouths.

In all the above examples, the TR (collar, lip, feet) is moved to an upward position or direction.

### 4.2.4.2 Distinct senses of *turn up*.

Applying the CL tools to the corpus data yielded three distinct senses of the phrasal verb.

**Discover an Entity.** This sense denotes that an entity is found or discovered usually after a period of investigation. The meaning of *turn* participating is the extended Become Sense and the meaning of *up* is the central sense. The Discover meaning seems to be derived from two salient human bodily experiences. One is related to the frequent experience of changing the orientation of our bodies. Due to our eyes being located on the front side of our head, we can only see objects that are available to our immediate visual field. Once we turn around, a new realm of vision becomes available to us and thus entities that were previously invisible become visible and salient. The particle *up* also denotes a sense of salience as a consequence of the TR being in a vertical position. In addition, our embodied experience with digging seems to give rise to the discovery sense. From the early ages, human beings have been involved in agriculture. They were digging
in the soil and turning the soil for plantation. In some cases, flipping the soil can lead to
discovering objects such as coins or bones. This kind of experience may have given rise
to the discovery sense of *turn up* in the more contemporary uses. The following examples
illustrate the discovery sense of *turn up*:

(43) A gun could be seen inside the vehicle, and a search *turned up* a second
firearm.

(44) Astronomers expect the satellite to *turn up* the first Earth-like planets in the
next year or two.

**Arrive.** This sense is closely related to the previous sense. The meaning of *turn*
participating in this use is the extended Become Sense and the meaning of *up* is the
central sense. The combination of the meaning of the verb and the particle subsumes
the overall sense of the TR’s arrival and appearance at a particular location. As with the
previous use, this meaning of *turn up* is tightly related to the embodied experience of
physical turning. When we turn around a new horizon becomes available to us, and
consequently entities that were previously imperceptible become salient to us. Unlike
the previous sense, in this use of *turn up* the TR is typically a person or an animate being.

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13 As we can see from the analysis, in some phrasal verbs such as *turn up*, the same meaning of the verb is
involved in the production of the distinct meanings. The fact that the same sense is used in multiple
combinations supports the hypothesis that the semantic network of the phrasal verbs rises, compositionally,
from the interaction between the meanings of the verb and the particle. Additionally, other resources of
meaning including context and cognitive mechanisms are involved in conceptualizing the expression. This
analysis provides further evidence for the non-arbitraryness of the meaning of particles and their significant
contribution to the overall meanings of phrasal verbs.

14 Another experiential correlation might also be at play in this use. When two people are facing each other,
they are in an immediate spatial and visual access with respect to each other. However, when they turn
around they are no more in the same presence as they were in the face-to-face interaction. Due to the tight
correlation between changing our bodily orientation to face someone and being in their immediate
presence, *turn* has developed a sense of a person becoming physically present and visible to the viewer’s
eye. Frequent exposure to this type of experience has given rise to the Arrive Sense associated with *turn up*.
who becomes physically present at location in an abrupt or unexpected manner. The following examples from the corpus denote this sense of *turn up*:

(45) Half a dozen visitors *turned up* to view the Castle, and Vern showed them through the public rooms.

(46) Wright's peaceful life ended abruptly when Portuguese police *turned up* at his small, two-story house.

**Increase in Amount.** *Turn up* here denotes that the TR has increased in its quantity. The meaning of *turn* participating in this use is the central Rotate Sense and the meaning of *up* is the extended More Sense. The meaning of the phrasal verb is related to our experience with electronic objects such as thermostats and radios, which have a knob for controlling the degree. Usually rotating the knob in an upward direction results in a higher degree of heat or sound. Recently, due to enhancements in technology, electronic objects are controlled by devices such as remote controls or buttons, which do not have a rotating function. However, *turn up* is still used in these contexts denoting the sense of increase in amount or degree. The following examples denote this sense of *turn up*:

(47) Molly always *turns up* the heat in her exercise room.

(48) *Turn up* the television and close the curtains to keep out the construction sounds.

Metaphorical extensions of this sense were also observed in the corpus including the following two sentences:

(49) Obama *turns up* the heat on the Congressional holdouts who could doom health care reform.
In recent weeks, that company has turned up the pressure.

This use can be related to the metaphor INTENSITY IS HEAT. In this construal, ‘intensity’ is conceptualized as an object with temporal properties that can increase and expand in amount (Kovecses, 2003).

4.2.5 Hold up

4.2.5.1 Central sense of hold up. The phrasal verb hold up in its central sense denotes a spatial meaning of ‘an object grasped by the hand which is moved from a lower position to a higher position’. In this use, the meaning of hold is the central Grasp Sense and the meaning of up is the central sense of ‘the TR being situated in a higher position’. Figure 9 represents the potential central sense of hold up. The meaning of hold is shown by a hand grasping an object and the meaning of up is shown by a TR being oriented towards the top part of an asymmetrical LM. The time element is depicted by an arrow and the bolded objects are profiled in the scene.

Figure 9. Central sense of hold up
Some examples of the central sense of *hold up* are provided below:

(51) Betty *held up* the jar to examine it.

(52) John *held up* a bag of three melons.

In both sentences, the TR, or the person is grasping the LM (‘the jar’ and ‘a bag’), and moves it from a lower position to a higher position.

In some metaphorical uses observed in the corpus, *hold up* denotes the meaning of making a person’s behavior salient. As previously mentioned, a consequence of objects being in the vertical position is that they are typically more visible and salient to the visual field. For instance, a person may *hold up* a baby for everyone in a crowd to see. Similarly, by *holding up* someone’s behavior we are conceptualizing behavior as an object that can be lifted and brought closer to the visual field and therefore making it more salient. Examples from the corpus denoting this sense of *hold up* are provided below:

(53) California is often *held up* as one of the most organized public education systems.

(54) The guy *holds up* himself as a talented dancer.

In sentence (53) California is a metonymy for the people of California who are part of the public education system. These people are considered a good example and are *held up* to the viewer’s perception. Similarly, in (54) the guy is brought up as a good example of someone who can dance very well.

### 4.2.5.2 Distinct senses of *hold up*.

*Hold up* has three distinct senses determined by the application of CL tools and a search in the COCA corpus.
**Prevent an Object from Falling.** The meaning of *hold* participating in this sense seems to be the extended Control Sense and the meaning of *up* is the central scene of the particle. This meaning is tightly related to our embodied experience of holding objects in our hands. By grasping an object we are exerting force on it and stopping it from moving downwards or upwards; in other words, we are controlling the object. Similarly, when two objects are on top of each other, object (A) exerts force on object (B), which is situated on top of it. Object (A) can act as a support for object (B) and can prevent it from collapsing. In this use the two notions of control and support are tightly related as evident in the following examples:

(55) The massive beams have *held up* the roof since the 1970’s.

(56) The books *held up* the bed.

In sentence (55), the TR (massive beams) prevents the LM (the roof) from collapsing and in sentence (56), the TR (books) kept the bed from collapsing (onto the floor).

Some metaphorical extensions of this sense were observed in the corpus data which did not refer to the physical sense of supporting an object. Instead, these uses of *hold up* referred to the abstract sense of maintaining an idea, speech or plan by continuing the action rather than stopping it. The following examples from the corpus demonstrate this sense of the verb:

(57) The man allowed the pedant to *hold up* the other end of the conversation.

(58) The company’s reputation was smeared after failing to *hold up* its own end of the deals.
**Cause Delay.** The meaning of *hold* in this use is the central Grasp Sense and the meaning of *up* is the central sense of ‘the TR being situated in a higher position’. *Hold* denotes a bounded or temporary process. The boundedness is related to our typical experience of holding objects; we can only hold objects for a certain time period, after which our hands can no more bear the weight of the object or the action can be terminated as the actor falls asleep. The sense of *up* participating in this meaning seems to be related to our life-long embodied experience with obstacles, which are often perceived as being in an up position vis-à-vis the ground. Due to the small configuration of the human body, obstacles such as walls are encountered in the vertical position. This experience seems to carry on to adulthood, as we frequently face obstacles which are in an elevated position such as buildings, hills, and tall people (e.g. when we are in a movie theatre and the screen is blocked by the person sitting in front of us). Thus, the meaning of *hold up* in this use is very much rooted in our embodied experience of objects which are *up* as barriers to forward motion. The following examples illustrate this sense of the verb:

(59) The company temporarily *held up* construction of a new airport.

(60) The guy said “*Hold up* Luke, wait a minute with me.”

**Remain in Good Condition.** This sense of the phrasal verb denotes that an object can sustain its quality for a long period of time. The meaning of *hold* in this combination is the Maintain Sense. The meaning of *up* contributing to this sense is the central sense. As previously mentioned, a consequence of objects being in high position (or physically elevated) is that they can be more in control and in a state of readiness, which in some
cases implies a positive value associated with the TR. In this use, the TR maintains a good state or condition for a relatively long duration due to its high quality. The following examples from the corpus denote this sense of *hold up*:

(61) He needs an instrument that would *hold up* for a long time.

(62) She would have to buy some knocking-around clothes, stuff that could *hold up* for long walks or fishing.

There were also some metaphorical extensions of this sense observed in the corpus data including the following examples:

(63) How is her daughter *holding up* through all this?

(64) How are you and the boys *holding up* this morning?

This sense seems to be related to the metaphor EMOTIONAL FORCES ARE PHYSICAL FORCES. In this construal, emotional forces are conceptualized in terms of physical forces that can exert pressure on the actor. As a result of being *up* the TR or the person can overcome the external forces and maintain their state.

Another non-spatial sense of the verb is related to the metaphor WORDS ARE OBJECTS. The metaphor is known as the ‘conduit’ metaphor proposed by Reddy (1979). In this construal, WORDS are conceptualized as OBJECTS that travel along a conduit. Similar to objects, ideas and words can *hold up*. When ideas or words *hold up*, they remain convincing and effective. The following examples illustrate this sense of the phrasal verb:

(65) None of his stories would *hold up* in public.

(66) The results of the study *held up* when checked against the national sample.
In (65), the stories told by the speaker did not maintain their validity in public, meaning they were not believable. On the other hand, sentence (66) implies that the results of the study have turned out to be convincing.

4.3 Analysis of phrasal verbs with *out*

This section presents the semantics of *out* and the phrasal verbs produced from the combination of each verb (*get, take, turn, hold*) with this particle.

4.3.1 Tyler and Evans’ Analysis of *out*.

In Tyler and Evans’ (2003) analysis, *in* and *out* fall under a category of spatial particles that are sensitive to certain dimensions of the LM, which typically involve a bounded area. Bounded LMs are conceptualized as three-dimensional objects which possess an interior, a boundary and an exterior. Human interaction with these objects has functional consequences, the most prominent one being the notion of containment. Bounded LMs constrain the movement of their TRs, as liquid in a bottle. In the case of a water bottle, the water is restricted to the space of the interior of the bottle in which it is located. In certain cases, delimiting the movement of the TR can give rise to the notion of support, such as a cup containing a straw helping support the straw to remain upright. The quality of the LM (opaque or clear) can also affect the type of construal, with opaque LMs blocking the view of the interior region. Thus, different aspects of our experience with containers can be coded in spatial particles *in* and *out*. The central meaning of *out* designates ‘a relation in which the TR is exterior to a bounded LM’. The LM is covert, which means it is not profiled by *out*. While the functional element (or the interactive relation between the TR and LM) associated with *in* is ‘containment’, *out* denotes the
functional element of ‘non-containment’. The central sense for *out* is illustrated in Figure 10.

![Figure 10. Central sense of out (Tyler and Evans, 2003, p. 201)](image)

The various senses of *out* are classified under clusters of meaning derived from the central sense, reflecting the various configurational and functional elements associated with bounded LMs. Table 5 illustrates the cluster of senses and the distinct senses proposed for *out*. The examples are from Tyler and Evans (2003).

The first cluster of senses identified for the extended meaning of *out* is the Location Cluster. This cluster of senses derives from the locational function provided by a bounded LM. Bounded LMs are often conceptualized in terms of locations and as a result of this specific relationship to the LM, the TR has also developed a locational interpretation. The three extended meanings Not in Situ Sense, No More Sense and Completion Sense are subsumed under this cluster. In all spatial scenes, the TR is no more in the location that it originally was located with surety.
Table 5. Tyler and Evans’ (2003) analysis of out

<table>
<thead>
<tr>
<th>Clusters</th>
<th>Senses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1- Not in Situ Sense: The TR is not in its default location where it spends extended periods of time. e.g. She’s out (for lunch) vs. She’s in.</td>
</tr>
<tr>
<td></td>
<td>2- No More Sense: There is no longer any of TR in the container so there is no more of the TR available. e.g. We’re out of milk.</td>
</tr>
<tr>
<td></td>
<td>3- The Completion Sense: The TR is leaving a particular LM and the process of leaving is complete. e.g. The jacket needs to dry out.</td>
</tr>
<tr>
<td><strong>The Location Cluster</strong></td>
<td>4- The Exclusion Sense: The TR is excluded from the interior environment of the LM. The exclusion is often an intentional act and being out is construed as undesirable e.g. The poor are left out in the cold.</td>
</tr>
<tr>
<td></td>
<td>5- The Lack of Visibility Sense: The TR is located exterior to the LM and the vantage point is located within the bounded LM so the TR becomes invisible e.g. Switch the light out. London was blacked out.</td>
</tr>
<tr>
<td><strong>The Vantage Point Interior Cluster</strong></td>
<td>6- The Visibility Sense: The TR is located exterior to the LM and the vantage point is also located exterior to the bounded LM so the TR becomes visible e.g. The moon is out.</td>
</tr>
<tr>
<td></td>
<td>7- The Knowing Sense: The TR is visible and as a consequence it becomes known in certain construals. e.g. They figured out the truth.</td>
</tr>
<tr>
<td><strong>The Vantage Point Exterior Cluster</strong></td>
<td>8- The Distribution Sense: The TR is separated from the LM and the purpose of separation is distribution. e.g. The teacher handed out the papers.</td>
</tr>
<tr>
<td><strong>The Segmentation Cluster:</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9- The Reflexive Sense: The LM is also the TR and the TR comes to be located exterior to the original boundary of the LM. e.g. He stretched out his hand.</td>
</tr>
</tbody>
</table>

The second cluster of senses is the Vantage Point Interior cluster. In this construal, the viewer is located inside the LM or container. Tyler and Evans argue that a number of implicatures arise from this particular vantage point, motivating a number of distinct senses. The Exclusion Sense and the Lack of Visibility Sense are subsumed by...
this cluster. In these construals, the TR is located exterior to the LM and the viewer who is located inside the LM does not have physical or perceptual access to the TR.

The third cluster of senses is the Vantage Point Exterior Cluster. Unlike the previous cluster, in this construal, the vantage point is located exterior to the LM, meaning it is no longer inside the container. This viewpoint has given rise to a number of distinct senses including the Visibility Sense and the Knowing Sense. In these construals, the TR and vantage point are both located exterior to the LM and as a result the TR becomes visible and in certain construals it becomes known. This sense is in contrast with the Lack of Visibility Sense. Tyler and Evans hold that due to viewing the spatial scene from multiple perspectives, we can see why there are contrary readings. For instance the sentence: *The light is out* (can no longer be seen) includes the Lack of Visibility sense while the sentence: *The sun is out* (can be seen) includes the Visibility Sense.

The fourth cluster of senses is the Segmentation Cluster. Bounded LMs serve to delimit their environment and consequently the interior and exterior region of the bounded object is separated. As a result of this segmentation and our experience with containers *out* has developed a Distribution Sense. In this use the particle denotes distribution of an entity as a result of separation (e.g. The teacher handed *out* the papers). Finally, *out* denotes a Reflexive Sense in which the LM is identical to the TR and the TR comes to be located outside the original boundaries of the LM. The boundaries of the LM are defined with respect to the original position occupied by the LM. For instance, in the sentence *Please spread out the paper*, the outer limits of the paper constitute its final
position and as a result of acquiring this new position, the paper becomes exterior to its original boundary.

The following section presents the analysis for the different verb-particle combinations with *out*. For each phrasal verb, a central sense and a number of distinct meanings are identified. The analysis involves a detailed explanation of each sense, followed by a number of examples.

4.3.2 *Get out*

4.3.2.1 Central sense of *get out*. The central sense of *get out* is a spatial scene meaning ‘an entity moving from the inside to the outside region of a container’. The location the entity is moving out of is typically conceptualized as a bounded LM and in most cases is covert or unarticulated. In this use the meaning of *get* is the Move Sense, and the meaning of *out* is the central sense of designating ‘a relation in which the TR is exterior to the bounded LM.’ Figure 11 shows the central sense of *get out* proposed in this study. The time element is depicted by an arrow and the bolded objects are profiled in the scene.

Some examples of the central sense of *get out* are provided below:

(67) Ethan *gets out*, moves into the driveway, lines up his camera and snaps a photo.

(68) She *got out* two forks and handed them to me.

In (67) the TR (actor) is moving from the interior space of the bounded LM (the car), to the exterior space. In (68) the actor is causing the TR (forks) to move out of the LM, which is unspecified (probably the kitchen drawer).
4.3.2.2 Distinct senses of get out. Three distinct senses of the phrasal verb were identified. The following section explains the different senses of get out and provides examples for each sense.

**Not in Situ.** This sense is closely related to the central sense. The key difference is that the container (LM) is the home or place in which the TR is typically located. Additionally, the LM is usually not specified. The construction means not being in that typical place where the TR resides. This sense draws on the extended Move Sense for get and the extended Not In Situ Sense for out as in:

(69) You should get out more. It’s not good to sit at home alone day after day.

(70) Come on. Let’s get out and see a movie.

The data also contained a special, contextualized version of this sense in sentences such as the following:
(71) He recommends George H. W. Bush's courtesy, Bill Clinton's total recall of names and faces, and Barack Obama's focus on *getting out the youth vote*.

(72) Unlike Coakley, she'll share the ballot with Obama and other Democrats, meaning that the party's local machines will have no choice but to get out the vote—something they were accused of slacking on last time around.

The interpretation is that action was taken to encourage voters (TRs) to leave their typical locations (their homes or workplaces) for the purposes of voting. This contextualized variant always occurs with lexical phrase ‘the vote’, which is a metonymy for the people who vote. The phrase ‘the vote’ provides specific information about the purpose for moving the TRs to the exterior of the LM. The meaning also involves our background knowledge concerning US elections.

**Become Known.** In this use *get out* denotes that the TR is becoming known to the viewer. A consequence of the TR being out of the LM is that it often becomes visible or perceptually accessible to the viewer whose vantage point is exterior to the LM. According to Tyler and Evans, the frequent occurrence of the TR previously located inside the bounded LM and not being visible subsequently becoming located exterior to the LM has given rise to *out* developing a Visibility Sense. Once an object is visually accessible, it can be examined and hence information can be gathered about it, i.e., it can become known. This conceptualization is reflected in the prevalent metaphor KNOWING IS SEEING, as expressed in sentences such as, *I see what you mean*, which is generally interpreted as ‘I understand you’. Through pragmatic strengthening, the experiential correlation of being able to see an entity and knowing about the entity has given rise to a
distinct sense of *out*, which is the Knowing Sense. Similarly, the phrasal verb *get out* has developed the distinct sense of Become Known. The meaning of *get* participating in this sense is the extended Change of State Sense, with the TR going from a state of unknown to known. The following examples illustrate this sense of *get out*:

(73) My story had *gotten out* and suddenly I became the expert among my friends.

(74) Are we *getting* the message *out*? Are we telling the full story?

In sentence (73), the speaker’s story went from a state of being unknown to the friends, to the state of being known. In (74), the message goes from a state of being unknown to a certain set of people, to being known.

**Become Available.** This sense denotes that the TR has become available. Another consequence of the TR being out of the LM is that it can become available and accessible, as opposed to out of reach. The sense of get participating in this meaning is extended Change of State Sense in which the TR moves from inaccessible to an accessible state, and the sense of out participating is what I call the Accessibility Sense. Tyler and Evans do not identify this sense as a distinct sense for out. However, the analysis shows that there seems to be a sense of out which is related to the notion of accessibility. This sense is related to the Visibility Sense discussed above and can be explained in terms of our experience with containers. One consequence of being exterior to the LM (container) is that the TR or object inside the LM is inaccessible due to the features of the LM. This is especially true when the LM is closed on all sides. Once the TR is out of the container it is no more restricted by the LM and as a result it can become accessible to the experiencer. For instance, when sweets are in a jar with a tight lid they are not accessible
to a small child (unless the child is strong enough to open it). In this way out has come to
develop an Accessibility Sense. In the following examples the TR (invitation, report)
have become available to the users:

(75) I finally got my invitations out for the wedding.
(76) The company got the report out on time.

In (75), the invitations go from a state of being inaccessible to the people being
invited, to being accessible. In (76) the report (and the information contained in it) went
from a state of being inaccessible to the public, to being accessible.

4.3.3 Take out

4.3.3.1 Central sense of take out. The central sense of take out denotes a spatial
meaning of ‘a human hand removing an entity from a container’. In most instances the
LM is covert and filled by inference. The meaning of take in this combination is the
central meaning of Get Hold Of and Remove, and the meaning of out is the central
meaning of designating ‘a relation in which the TR is exterior to a bounded LM’. Figure
12 represents the central sense of take out proposed in this study. The meaning of take is
shown by the image of a hand getting hold of an object and subsequently moving the
object from its original location. The meaning of out is the central sense of the TR
located exterior to the LM. The time element is depicted by an arrow and the bolded
objects are profiled in the scene.
Note that the TR is initially located in the interior of the bounded LM. In the final stage the hand has moved the TR such that it is located exterior to the LM.

The following examples demonstrate the central sense of the phrasal verb:

(77) He took out a notepad and wrote a few sentences.

(78) I can’t turn this off without taking out the battery.

4.3.3.2 Distinct senses of take out. Three distinct senses of take out were identified in the corpus. The following section explains the different senses of take out and provides several examples for each meaning.

Obtain a Legal Arrangement. The spatial configuration denoted by this scene is similar to the central sense in that the actor is removing an object from the container or the bounded LM. In this conceptualization the LM is an institution such as a bank or court from which a legal arrangement can be obtained. Historically, our recurrent experience with banks usually involves money transactions in which the person can...
physically obtain some money (this is still our experience with ATMs). Due to the high frequency of this type of experience with institutions such as banks, this sense has become conventionalized and *take out* has acquired this highly entrenched meaning of obtaining a legal arrangement. The meaning can be understood without considering the contextual information as in the use *I took out cash*, meaning the person withdrew cash from a local bank. The following examples illustrate this sense of the phrasal verb:

(79) The notion of *taking out* a bank loan left a bad taste in his mouth.

(80) FGS are often reluctant to *take out* student loans to pay for college.

**Destroy an Entity.** This sense denotes that an entity is being terminated or destroyed by another entity. The meaning of *take* in this use is the central Get Hold Of and Remove Sense. The verb designates the sense of getting control over the TR and exerting force on it\(^1\). The meaning of *out* is the extended No More Sense. Tyler and Evans argue many of our experiences with containers involve a consumable entity such as food or beverage, which are by default located inside the region of the container. When the TR is consumed it is no longer located in the LM, and as a result the TR is no longer available. An experiential correlation between a TR being exterior to the LM, and the consequence of the TR no longer being available or in existence has given rise to the No More Sense of *out*. The following examples illustrate this sense of *take out*:

(81) John and Sam were still shooting as they *took out* soldiers, one by one.

(82) A small airforce could swiftly *take out* the entire country’s airforce.

\(^1\) In some cases *take* means killing or taking one’s life. This use can be considered a metaphorical extension of the central sense. In this use, life is conceptualized as objects that can be manipulated by the actor as a result of the embodied experience of taking an object and subsequently possessing and controlling it.
**Having a Date.** This sense of *take out* denotes the meaning of accompanying someone to an establishment or activity outside the home. The meaning of the verb participating is the same Get Hold Of and Remove Sense, which includes the meaning of moving the TR from its original location. Often having a date involves one person taking an active, agentive role and inviting the other to join in the activity which is consistent with this meaning of *take*. The meaning of the particle is Not in Situ Sense. As previously mentioned, in certain construals the TR is no longer in its default location such as its home, where it is normally located. Due to this conceptualization *out* has developed the sense of ‘exterior to the base location or home’. Dating usually involves meeting with someone in a location outside the home, such as a restaurant or a bar, which is denoted by this extended sense of *out*. Due to the frequency of occurrence of this use in our daily experience *take out* has acquired the meaning of having a date with a person as in the following examples:

(83) For my 17th birthday, Harry took me out for ribs at the Singapor.

(84) He always likes to take her out to a very nice restaurant.

Note that the basic activity in both these sentences could be articulated simply with the verb *take*. It seems that *out* provides an emphasis on moving from the TR’s home, which can give rise to the inference of the activity having a special significance, which would be attached to a date.

4.3.4 Turn out

4.3.4.1 Central sense of turn out. *Turn out* in its central sense denotes a spatial meaning of ‘a hand rotating (an object) in an outward direction’. The meaning of *turn* is
the central Rotate Sense and the meaning of the particle is the extended Reflexive Sense in which the TR comes to be located exterior to its original boundary. Figure 13 represents the central sense of *turn out* proposed in this study. The meaning of *turn* is shown by a hand changing the orientation of the object. The meaning of *out* is shown by the outer limits of the LM extending into its new position represented by the bolded square. The time element is depicted by an arrow and the bolded objects are profiled in the scene.

![Diagram](image)

*Figure 13. Central sense of turn out*

The meaning of *turn out* is shown by a hand rotating an object in an outward position or direction. Note that the object itself is optional and represented in dotted lines.

Some examples of the central sense of the phrasal verb are provided below:

(85) Kneel on your right knee, left leg *turned out* so your inner thigh is facing forward (context: exercise)

(86) *Turn* your jackets inside *out* before putting them in the washing machine.

### 4.3.4.2 Distinct senses of turn out

Applying the CL tools to the corpus data yielded five distinct senses of the phrasal verb.
**Find to Be in a Certain State.** In this use, the meaning of *turn* is the extended Become Sense and the meaning of *out* is the extended Knowing Sense. This use of *turn out* is closely related to *turn up* in the Discover an Entity Sense. The meaning of *turn* in this use is related to our embodied experience of physically rotating our bodies. When we turn around, a new visual field becomes available to us, and consequently our knowledge of the environment increases. In addition, the experience of physically digging in the ground and finding objects seems to motivate this use of *turn*. As previously explained, an experiential correlation of being able to see an object is to know about that object and through pragmatic strengthening the knowing sense has become associated with certain particles including *out*. The combination of the verb and the particle subsumes the overall meaning of discovering some information about an entity. Unlike *turn up*, most uses of *turn out* appeared in cleft constructions with “it” as evident in the following examples:

(87) I called the phone number by the door and it turned out Mrs. Angela was at a cafe across the street enjoying a beverage.

(88) It turned out that the management was trying to integrate the apartments.

**Deactivate.** This use denotes that the TR, which is a source of power, has become deactivated. The meaning of the verb participating in this use is the central sense and the meaning of the particle is the extended No More Sense. The meaning of the phrasal verb in this use is related to our experience with switches by which we control the function of electrical tools, particularly lights. Turning the knob in a certain direction deactivates the power. The selected corpus data for this phrasal verb shows that instances of *turn out* in
the Deactivate Sense involved only the lights as the TR. The following examples
demonstrate this sense of *turn out*:

(89) Sleep well. I'll *turn* the lights *out*.

(90) Go into the kids' room, *turn* the lights *out* and wait there until I come get you.

It might be argued that *turn out the lights* is a collocation or fixed expression
rather than an extended use of *turn out*. Nonetheless, due to the syntactic characteristic of
the construction this use was included as an extended sense for *turn out*. Additionally,
this sense constituted 2.5% of the uses of *turn out* in the sample data \(^\text{16}\).

**Participate.** This sense denotes that the TR (actor) is joining an event outside of
their default locations including their homes or workplaces. The meaning of the verb is
the extended Become Sense and the meaning of the particle is the extended Not in Situ
Sense. As previously noted, in the Not in Situ Sense, the TR is no longer in its default
location where it usually spends time. In most cases the TR is a mass or group of people
intentionally showing up at a particular location in order to support a cause or an event.
The following examples demonstrate this use of *turn out*:

(91) Today, most of New York's elected officials *turned out* to support the
President.

(92) Liberals *turned out* together in force for the protest to show the widespread
anger at the military.

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\(^{16}\) Historical background might explain why *turn out* in the Deactivate Sense appears with lights and not with other power sources. In early times, when candles were the only source of illumination, blowing out the candles was a very prevalent experience. One cannot blow out other sources such as gas or water, and thus the use of *out* in the sense of terminating the source of illumination has remained to be used only with lights.
Produce. The meaning of the verb in this use is the extended Become Sense and the meaning of the particle is the extended Accessibility Sense. The combination of the meaning of the verb and the particle subsumes the overall meaning of causing an entity to become available to public use. As noted before, a consequence of the TR being out of the LM is that it can become available and accessible, as opposed to being unavailable. This type of experience has given rise to the Accessibility Sense of out in certain phrasal verbs including turn out, get out and put out. In all these uses out denotes a sense of the TR becoming accessible to the user as in the following examples:

(93) Local band turns out rock’ n roll that reflects the diversity of music along the Gulf Coast.

(94) This restaurant already turns out superb food in a sleek room.

Outcome. This use denotes a sense of outcome or result associated with TR (event or object), after the TR has gone though some process. This use also draws on the extended Become Sense of turn and the extended Accessibility Sense of out. This sense seems to extend through an experiential correlation of the central sense of turning. Many times our experience with rotating or moving objects around is to achieve a particular result such as opening or closing, tightening or loosening. Examples of this use include: Turn a lid or Turn a key. In such cases, turning the object correlates with achieving an outcome and through frequent exposure to such experiences, phrasal verbs such as turn out have come to denote an Outcome Sense. The following examples demonstrate this sense of turn out:
(95) The trip turned out great, with plenty of grizzly sightings, spectacular tundra camping, and the conception.

(96) When the first piece turned out amazingly well, I continued to buy dryer duct and other home improvement items.

4.3.5 Hold out

4.3.5.1 Central sense of hold out. The phrasal verb hold out in its central sense denotes a spatial meaning of ‘stretching a hand (that is grasping an object) in front of the body’. In this use, the meaning of hold is the central Grasp Sense and the meaning of out is the extended Reflexive Sense in which the TR or the hand comes to be located exterior to its original boundary and acquires a new position in space. Figure 14 illustrates the potential central sense of the phrasal verb. The meaning of the phrasal verb is represented by a hand grasping an object and subsequently stretching in an outward direction. The time element is depicted by an arrow and the bolded objects are profiled in the scene.

![Diagram of hold out](image)

Figure 14. Central sense of hold out

Other examples of the central sense of hold out are provided below:

(97) I hold out a handful of pebbles, and Belly joins me on the ledge.
Amy rose to her feet and held the sword out in her two hands.

Note that not all instances of hold out involve an object. In some cases the phrasal verb denotes a scene in which the hand itself is moving to an outward direction as in the following examples:

(98) She held out her hand to the dog.
(100) He held out her hand and guided him to sit beside her.

4.3.5.2 Distinct senses of hold out. Analyzing the data yielded two distinct senses for hold out which are explained in the following section.

Continue to Resist. This sense denotes that the TR or the actor can stay strong in a challenging situation. The meaning of hold participating is the extended Maintain Sense and the meaning of out is the central sense of the particle. The meaning of hold is tightly related to our embodied experience of holding objects in our hands. As previously noted, by grasping an object we are controlling it and helping it overcome the force dynamics that could otherwise affect it, and thus we maintain the object’s position in space. The meaning of the particle contributing to the scene is tightly related to our embodied experience of interacting with bounded LMs. Bounded LMs can delimit the movement of the TR or in other words constrain its freedom much like when a person is imprisoned. Therefore, being in a bounded region is associated with the notion of confinement and being out of it is associated with non-restriction and power. As previously noted, states and situations can be conceptualized as locations due to the tight correlation between the two. Thus, hold out has come to denote the sense of maintaining strength as a result of being out of a challenging state or situation. This use of the phrasal verb can be compared
with *give in* which denotes an opposite meaning of surrender. The following examples from the corpus demonstrate this sense of the phrasal verb:

(101) Some question how long the country can *hold out* in the face of the gathering double-dip recession.

(102) If they didn't *hold out*, the Russians had the chance to roll up the German defenses on the Eastern Front.

**Last for a Certain Period.** This sense is closely related to the previous sense, and denotes that an entity, usually a substance such as money or water lasts for a certain period of time. The meaning of the verb participating in this sense is the same Maintain Sense and the meaning of the particle is the extended Reflexive Sense. In this construal the entity sustains its quantity beyond its original capacity, which entails that there is enough of the entity to consume in a certain time frame. The following examples illustrate this sense of the phrasal verb:

(103) We decided to stay in that place as long as the water *held out*.

(104) Get as many copies as you like as long as the printer toner *holds out*. Some metaphorical extensions of this use were also observed in the corpus including the following sentences:

(105) Like me, I think, he's still *holding out* hope that the best days aren't gone.

(106) Ideally, whatever else a first page proposes, it *holds out* the promise of a story.

In the above examples ‘hope’ (non-physical force) and ‘promise’ are conceptualized as objects that can be maintained over time.
This section begins by presenting the semantics of *off*. The analysis of *off* proposed in this study is based on Tyler and Evans’ (2003) proposed polysemy model for identifying the semantic network of spatial particles. Based on their polysemy model the central and extended senses of *off* were identified and a semantic network is proposed for this particle. Following the semantics of *off*, the analysis of phrasal verbs produced from the combination of each verb (*get*, *take*, *turn*, *hold*) with this particle is presented. The analysis of phrasal verbs in this section is summarized, and accompanied by visual networks of the verb and particle combination. More details pertaining to the analysis of phrasal verbs with *off* is provided in Appendix A.

### 4.4.1 Analysis of *off*

#### 4.4.1.1 Central sense of *off*

Based on Old English (O.E) the particle *off* is related to Old Norse (O.N) *af* and German *ab*. Since the medieval period, O.N *af* has split into two prepositions, *of* and *off*, with the stressed form *off* used only as an adverb. The primary meaning of *off* in O.E is *away from*, which was not firmly fixed until it split from the original *af*. In its original sense, *of* was used to convey a wide range of notions including that of removal, separation, privation, derivation, origin and source (Online Etymology Dictionary; Shulze 1994; Tyler & Evans 2003). Consistent with the historical evidence, this study found the notion of ‘separation’ to be the central meaning of *off*. This sense also fulfilled the rest of the criteria for the primary sense discussed by Tyler and Evans, including predominance in the semantic network and relation to other prepositions. As for frequency, the majority of the distinct senses were found to profile a
spatial configuration in which the TR is separated from the ground element or the LM. The preposition was also compared with two other closely related prepositions *on* and *away*, providing further evidence for the Separation Sense representing the core meaning for *off*.

In certain construals, *off* can be contrasted with the preposition *on*. Both spatial particles profile aspects of the scene along two-dimensional space, typically those that give rise to the notion of surface or a schematic horizontal line. The following examples demonstrate relational predicates profiled by *on* and *off*:

(107) The vase is *on* the table.

(108) The cat is *off* the mat.

In the above examples, *table* and *mat* are canonical LMs. They constitute a ground entity that is concrete, solid and larger in size than the TR, making the conceptualization of the LM as a surface more salient. Due to the flexibility of human conceptualization, non-canonical LMs such as *field* or *river* (multiplex-mass entities) can also be conceptualized as a surface on which a certain entity is located (e.g. *The house is on the field*).

One consequence of the TR being located *on* the LM is that it is can be in contact with the LM or the ground entity. For instance, when we are located on an object such as a mat, we are in contact with the mat. Along the same lines, a number of studies have considered the notion of ‘contiguity’ to be an important aspect of the central sense of *on* (e.g. Cooper 1968; Leech 1969; Lindstromberg 2010; Rudzka-Ostyn 2003). Some studies, however, have argued that contiguity is not a necessary or sufficient condition for
using *on*; rather, the notion of ‘support’ is more central to the meaning of the preposition (Herskovits 1986; Vandeloise 1991). Evidence for this claim is provided by expressions such as *The book is on the table*, which can refer to a scene where the book is located on a pile of papers and not in direct contact with the table. What these studies attempt to show is that geometry alone is not sufficient for understanding spatial relations, and that in order to identify the complete range of spatial uses of a preposition, both geometrical and functional relations between the elements in the scene need to be explored.

Parallel to the analysis of *on*, the two notions of loss of contact and loss of support were found to represent important aspects of the central sense of *off*. The functional component or the interactive element between TR and LM proposed for *off* is ‘detachment’. In its central meaning, the particle denotes ‘a spatial relation in which the TR is separated from the LM’. Figure 15 demonstrates the central sense for *off* proposed in this study:

![Figure 15](image)

*Figure 15. Central sense of off*

The vantage point for this construal is off-stage. The TR or the element in focus is represented by a small circle and the LM is represented by a horizontal line schematic for an entity conceptualized as a surface. The dotted line underneath the objects shows that
the TR and LM are in proximal relation. The central sense for off is illustrated in the following sentences:

(109) The child fell off the swing and started crying.

(110) He quickly got off his bicycle.

(111) She took the pan off the heat.

In all of the above examples, the particle profiles a relation of separation between the TR and LM. The spatial scene denoted by off can be compared with the closely related particle away. The two spatial particles denote the notion of separation and distance. However, unlike off, the particle away implies that the TR is oriented ‘away’ from the LM and distal from it such that the LM is no longer in the realm of influence and reach of the LM. It is difficult to find minimal pairs with off and away precisely because they encode different meanings. However, we could imagine the following two scenarios: He got off the bicycle vs. He got away from the bicycle. The first sentence is interpreted as the actor leaving his bicycle or descending from it, and the second sentence can be understood as the actor leaving the bicycle and moving further at a distance from it. For the second interpretation, we can imagine a context where the actor was suspicious of an explosive being located in the bicycle, so he moved further away from it to protect himself. Thus, unlike off, in the spatial scene denoted by away the TR and LM are no longer in the vicinity of each other.

\footnote{Following Tyler and Evans’ (2003) criteria for identifying the central sense, the semantic network of related prepositions are compared in this study. While away is not a preposition, the spatial scene denoted by this adverbial particle provides an interesting comparison with off. Thus, it is labeled as a spatial particle rather than a preposition and compared with off in terms of proximity. More examples of away appearing in phrasal verbs in the COCA include turn away (e.g. Each year thousands of students are being turned away), and put away (e.g. He was convicted and they put him away for 10 years).}
4.4.1.2 Extended meanings of off. This section presents the extended meanings identified for off in this study. The four senses: Departure, Stop, Completion and Reduction were found to be the most frequent distinct senses of this particle, which participated in phrasal verbs analyzed in this study.

**Departure.** This sense of off denotes that the TR is departing from the ground object. One consequence of the TR being separated from the ground is that it abandons its original location and if the entity is movable it begins a path in motion. By leaving its original location, the TR, which was previously supported by the LM, is no longer in contact with it and starts a new path in space. This construal has given rise to the meaning of off in the Departure Sense. The following examples demonstrate this meaning of the particle:

(112) Jean went off to the garden to check the flowers.

(113) The plane took off an hour late but we landed on time after all.

**Stop.** This sense of off denotes that the TR is stopped or deactivated. The meaning of off in this use can be derived from our life-long experience with obstacles such as walls and barriers. Due to the small configuration of our bodies, obstacles, in particular those that are vertical and large, often prevent us from moving forward. In a similar way, the natural flow of entities such as light, water and electricity can be blocked by interrupting their stream. The interruption is usually mediated by separating the entity from its original supply. The correlation between separating an entity from its origin, and

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18 This sense is often associated with verbs of motion. However, it can also combine with non-motion verbs such as: I’m off now, or Where are you off to?
the entity no longer functioning, has given rise to *off* developing a Stop Sense. The following examples demonstrate this sense of *off*:

(114) Use the soap, then rinse your hands and turn *off* the water.

(115) The turbines are shut *off* when the wind is blowing very hard.

Metaphorical extensions of this use were observed in other domains including speech and thought. The use of *off* in this domain can be related to the ‘conduit metaphor’ (Reddy, 1979), in which words are conceptualized as objects that travel on a conduit from the speaker to the hearer. When used in this context, *off* designates the interruption or disconnection of the flow of speech or thought.

(116) The singer was cut *off* during her speech but later she thanked the British public for their support.

(117) My thought was cut *off* by little Gavroche dashing into the Café and running into me.

**Completion.** Unlike the stop sense above, *off* here denotes that an action is finished or completed. The meaning of *off* in this sense is derived from an experiential correlation of leaving an entity and the action of leaving being eventually completed. With respect to this, the completion meaning of *off* is similar to the Completion Sense of *out* proposed by Tyler and Evans (2003). In both construals the particle highlights the end point of the action. While the LM is bounded in the relation profiled by *out*, it is more likely to be conceptualized as a surface in the spatial relation profiled by *off*. For instance, in the sentence *He dried off his feet after taking a shower*, the surface of the object or the skin on the feet is conceptualized as the LM. Through pragmatic strengthening the
meaning of ending and completion associated with such spatial scenes have given rise to the Completion Sense of *off*. The following examples demonstrate more uses of *off* in the Completion Sense:

(118) She would most likely return to the office and polish *off* the paper work that she had been idling on.

(119) She finished *off* her thesis a few weeks after the party.

**Reduction.** This sense is a distinct sense and denotes a decrease in the amount of an entity. This sense of *off* is derived from an experiential correlation between separating some part of an entity and the amount of that entity simultaneously decreasing. For instance, when a piece of chocolate is separated from a chocolate bar, there remains smaller amount of chocolate in the bar. Similarly, when a book is separated from a pile of books, the remaining has a smaller number of books. Recurrent observation of such experiential correlations between separation and decrease in amount has given rise to the Reduction Sense of *off*. In some cases, the meaning of *off* can be understood without considering the contextual information, as in *The dress is 10% off*, in which *off* clearly denotes the reduction meaning. More examples of this sense are as follows:

(120) They took 5% *off* this beautiful gown.

(121) The number of registered students dropped *off* drastically.

The following section presents the analysis for the different verb-particle combinations with *off*. For each phrasal verb, a central sense and a number of distinct meanings are identified. The analysis of the extended senses involves a summary of each
sense, followed by the proposed visual network of the verb and particle combination and some examples from the corpus.

4.4.2 Get off

4.4.2.1 Central sense of get off. The central sense of *get off* is a spatial scene meaning ‘an entity leaving the ground (LM) which is conceptualized as a surface’. In this construal the entity looses its contiguity from the ground object such that it is no longer in contact with it. The meaning of *get* is the extended Move Sense and the meaning of *off* is the central Separation Sense. Figure 16 shows the potential central sense for *get off* proposed in this study.

![Diagram of get off](image)

*Figure 16. Central sense of get off*

The following examples demonstrate the central sense of *get off*:

(122) We need to get ready to *get off!* *(airplane is the unspecified LM)*

(123) " Mommy! Mommy! Pigpen has our tricycle. Make him *get off*!"
4.4.2.2 Distinct Senses of get off. This phrasal verb has four distinct senses determined by applying the CL tools and search in the corpus. Each sense is explained and followed by several examples from the corpus.

**Remove.** This sense is closely related to the central sense and denotes the removal of the TR from the ground object or LM. The meaning of the verb in this use is the extended Move Sense, and the meaning of the particle is the central Separation Sense. Figure 17 shows the interaction between the senses of get and off in the Remove Sense identified in this analysis.

![Diagram](image_url)

*Figure 17. Get off- Remove Sense*

The following examples demonstrate this use of get off:

(124) I can’t wait to get this damn thing off so I can hug you properly (‘thing’: the helmet).

(125) I am just trying to think how I can get my pants off without you seeing my knee braces.

**Escape a Potential Threat.** This sense is a distinct sense, denoting that the actor has escaped a potential danger. The meaning of the verb in this use is the extended Move Sense and the meaning of the particle is the central Separation Sense. Due to the tight
correlation between locations and states, moving away from an unpleasant situation correlates with escaping certain potential dangers or threats. Through pragmatic strengthening this sense has become a distinct sense. The interaction of the senses in this combination is similar to figure 17. The following examples demonstrate this use of the phrasal verb:

(126) The defendants most likely to get off death row are the ones who accept responsibility.
(127) She finally got off on the murder charges.

**Be Temporarily Relieved from Duty.** This sense denotes that the actor has received permission to be absent from their job. The meaning of the verb in this use is the central Obtain Sense and the meaning of the particle is the extended Stop Sense. The combination of the meaning of the verb and particle subsumes the overall meaning of obtaining a break from work. The interaction between the senses of *get* and *off* in the Remove Sense is illustrated in Figure 18.

*Figure 18. Get off- Be Temporarily Relieved from Duty Sense*

The following examples from the corpus illustrate this sense of the phrasal verb:

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19 The meaning of the phrasal verb in this use is very close to the ‘escape’ meaning associated with the phrasal verb *get away (with).*
She has dorm duty this weekend so she can’t *get Christmas off*.

The wedding is in January— that’s when we could *get* the most time *off* and you’re all invited.

*Stop Using*. This sense denotes that the TR (actor) has stopped using a substance usually medication or drugs. The meaning of the verb participating in this use is the extended Change of State Sense and the meaning of the particle is the extended Stop Sense (illustrated in figure 19). The combination of the meaning of the two subsumes this sense of *get off* in the appropriate context of use.

![Figure 19. Get off- Stop Using Sense](image)

The following examples demonstrate this use of *get off*:

(130) It's unclear why patients were able to *get off* diabetes meds so soon after surgery, before losing significant weight.

(131) If you really care about me, help *get me off* the drug.

4.4.3 *Take off*

4.4.3.1 Central sense of *take off*. The central sense of *take off* denotes the meaning of ‘a human hand removing an entity from the LM which is conceptualized as a surface’. The LM is usually covert and filled by inference. The meaning of *take* in this combination is the Get Hold Of and Remove Sense, and the meaning of *off* is the central
Separation Sense. Figure 20 represents the potential central sense of *take off* suggested in this study.

The following examples from the corpus demonstrate the central sense of the phrasal verb:

(132) Go ahead *take off* the gloves!

(133) He unbuttoned his gray trench coat but did not *take it off*.

![Figure 20. Central sense of take off](image)

4.4.3.2 *Distinct Senses of take off*. Four distinct senses of *take off* were identified in the data. Each sense is explained and followed by several examples from the corpus.

*Leave*. *Take off* can be used to refer to the TR (a mobile entity) departing from the ground object. The meaning of *take* participating is the Get Hold Of and Remove Sense. A consequence of removing an object from the LM is that it leaves the LM, and it is no longer in contact with the LM. Similarly, in this use the TR intentionally undertakes the
action of leaving the LM. The meaning of *off* participating is the extended Departure Sense in which the TR is separated from the ground and takes on a new path in motion. Figure 21 illustrates the potential interaction between the senses of *take* and *off* in the Leave Sense identified in this analysis.

![Figure 21. Take off - Leave Sense](image)

The following examples demonstrate this meaning of *take off*:

(134) In 1929 he became the first pilot to *take off* and land "flying blind ".

(135) The question is: What had prompted this sparrow to *take off* again when it had finally found shelter?

**Become Popular or Successful.** This meaning is closely related to the previous sense and denotes that the TR has become popular or successful. The meaning of the verb is the central sense and the meaning of the particle is the extended Departure Sense. Being in a high position correlates with being successful. Frequent experiences such as this have given rise to *take off* denoting the sense of becoming prosperous and successful. The interaction of the senses in this construction is similar to figure 21.

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20 Note that intentionality or agency is an important semantic component of *take* and is in focus here. It can be argued that in uses such as *The plane took off*, ‘the plane’ which is in the agent position is metaphorically in charge of the movement.
The following examples illustrate this sense of *take off*:

(136) The human genome has opened the way for the field of genetic counseling to *take off*.

(137) “What really helped them to *take off* in many cases was the participation of other people globally,” says Joel. (‘them’ refers to the business)

**Stop Working Temporarily.** This sense denotes that a person has withheld their duty for a certain time period. The meaning of the verb is the central Get Hold Of and Remove Sense, and the meaning of the particle is the extended Stop Sense (illustrated in Figure 22). The meaning of *take off* in this use is very similar to the meaning of *get off* in the Be Temporarily Relieved from Duty Sense.

![Figure 22. Take off- Stop Working Temporarily Sense](image)

The following examples illustrate the meaning of *take off* in the Stop Working Sense:

(138) Now I guess I can smile, maybe I can *take* a day *off*, but I can't wait to get back to our businesses.

(139) McKeen says he'll possibly *take* a week *off* to go to Toronto and another to head to Hawaii.
Provide a Discount. This use of *take off* denotes the sense of giving a discount on the price of a product. The meaning of *take* in this use is the central Get Hold Of and Remove Sense, and the meaning of the particle is the extended Reduction Sense. Figure 23 demonstrates the interaction between the senses of the verb and particle in the Leave Sense.

![Figure 23. Take off- Provide a Discount Sense](image)

Through frequent use of the phrasal verb in the context of marketing, this use has become conventionalized, as in the following examples:

(140) I'm requesting that you *take 40% off* my bill to bring it down to what is usual and customary.

(141) Use discount code SKID15 to *take 15% off* at SKIDDERS.com.

4.4.4 Turn off

4.4.4.1 Central sense of *turn off*. The phrasal verb *turn off* in its central sense denotes a spatial meaning of ‘the TR diverging from a path or LM’. This meaning is formed through the combination of the central Rotate Sense of *turn* and the central Separation Sense of *off*. Figure 24 represents the central sense of *turn off* proposed in this study. Unlike the previous illustrations for the central sense of *turn*, in this configuration
the hand itself is not profiled (although technically the actor is still in control of the object) and thus represented in dotted lines. The phrasal verb profiles a scene in which the TR (the bolded arrow) is diverging from its original path on to a new path.

![Diagram](image)

**Figure 24. Central sense of turn off**

The following examples illustrate the central sense of *turn off*:

(142) When we turned off the back road and saw the signs for the A92, I realized that I had forgotten to brush my teeth.

(143) *Turn off U.S. 285 between mile markers 135 and 136, 14 miles northwest of Salida.*

In the above examples the actor is in control of the car (in other words rotating the car) and *turn off* denotes the vehicle changing direction from its current path or LM.

**4.4.4.2 Distinct Senses of turn off.** Two distinct senses of *turn off* were identified. Each sense is explained and followed by several examples.

**Deactivate.** This use denotes that the TR, usually an electronic device, has become deactivated. The meaning of the verb participating is the central Rotate Sense
and the meaning of the particle is the extended Stop Sense (see Figure 25). As with *turn out*, the phrasal verb denotes that the stream of the focus entity (e.g. light) is stopped.

![Figure 25. Turn off- Deactivate Sense](image)

The following examples demonstrate this sense of *turn off*:

(144) Please *turn off* the lights and lock the doors.

(145) As soon as I am done speaking you will *turn off* your cell phone and remove the battery and the SIM card.

**Cause Loss of Interest.** This use denotes that the TR has lost interest as a result of an action carried out by the LM. The meaning of the verb in this use is the extended Become Sense and the meaning of the particle is the extended Stop Sense (see Figure 26).

The combination denotes the change of state from a positive attitude to a negative attitude towards a person or a thing. More examples from the corpus demonstrate this use of *turn off*:

(146) The candidate’s opposition to the Dream Act could *turn off* Latinos.

(147) He doesn’t flaunt that lifestyle which would *turn off* some people.
4.4.5 Hold off

4.4.5.1 Central sense of hold off. The phrasal verb in its central sense denotes a spatial meaning of ‘an object grasped by the hand is kept at a distance from a ground object’. The meaning of the verb in this use is the central Grasp Sense and the meaning of off is the central Separation Sense. Figure 27 represents the potential central sense of hold off proposed in this study.

Figure 26. Turn off- Cause Loss of Interest Sense

Figure 27. Central sense of hold off
The following examples demonstrate the central sense of *hold off*:

(148) She *held* the glass *off* the table while he cleaned up the spilled wine.

(149) She *held* the p29 lid *off* for a quick peek, and sneezed at the dust.

**4.4.5.2 Distinct Senses of *hold off***: Two distinct senses of *hold off* were identified in the data which are explained in the following section.

**Resist an Opponent.** This use denotes the sense of preventing the opponent from winning a fight or a competition. The meaning of the verb in this use is the extended Control Sense and the meaning of the particle is the extended Stop Sense (see Figure 28). In some uses the phrasal verb appeared in contexts of sports, denoting the victory of one team or contestant over the other, as illustrated in the following examples:

(150) Bryant and the Lakers couldn't make big plays down the stretch to *hold off* Dirk Nowitzki and the Dallas Mavericks.

(151) At 6-4 and 290 pounds, Lanier seemingly has the size to *hold off* linemen, but needs to show he has the quickness to get out and tie up linebackers.

![Figure 28. Hold off- Resist an Opponent Sense](image)

---

21 It could be argued that such uses of *hold off* in the physical sense are not technically phrasal verbs. However, these constructions seem to be similar to O’Dowd’s adprep construction as in I *knocked it off the bed*, in which the particle denotes both a situating and linking function. While, its not clear in her analysis whether adprep constructions count as phrasal verbs *per se*, it is clear that such uses do not serve a pure prepositional function but rather have a more complex role.
**Defer an Action.** This sense denotes the meaning of postponing a prearranged action or event. The meaning of the verb participating is the central Grasp Sense. The meaning of the particle is the extended Stop Sense. This meaning of the phrasal verb is similar to the Cause Delay Sense of *hold up* in which the action is temporarily impeded from taking place. Figure 29, shows the interaction between the senses of the verb and particle identified in this analysis.

![Diagram](image)

*Figure 29. Hold off- Defer an Action Sense*

The following examples demonstrate this sense of *hold off*:

(152) Mayor Day tells us a steel company planning to invest in Thomasville will *hold off* until its foreign workers feel more welcome.

(153) The U.S. attorney's office asked us to *hold* the press release *off* for a week.

### 4.5 Analysis of phrasal verbs with *over*

#### 4.5.1 Tyler and Evans’ Analysis of *over.*

The central sense of *over* in Tyler and Evans’ (2003) analysis denotes a spatial relation in which “the TR is higher but within potential contact of the LM” (p.65). A proximal relation exists between the two spatial elements such that in certain construals
the TR can come to be in contact with the LM. The functional element resulting from this spatial relation is that the TR and LM are within the sphere of influence of each other.

Figure 30 demonstrates the central sense associated with *over*. The shaded sphere represents the TR and the thick horizontal line represents the LM. The proximal area, or the region conceptualized as “within potential contact of the LM” is bounded by the dashed line. (p.65)

![Figure 30. Central sense of over (Tyler & Evans, 2003, p. 66)](image)

The complex conceptualization of the central sense has given rise to 14 distinct senses under 5 clusters of meaning for *over*. The distinct senses are a result of repeated reanalysis of the central sense based on human knowledge of the world and embodied experience. The extended meanings of *over* are summarized in Table 6. The examples are from Tyler and Evans (2003).
Table 6. Tyler and Evans’ (2003) analysis of over

<table>
<thead>
<tr>
<th>Clusters</th>
<th>Senses</th>
</tr>
</thead>
</table>
| **The A-B-C Trajectory Cluster** | 1. *On-the-other-side-of*: The TR is located on the other side of the LM relative to the vantage point.  
  e.g. The old town lies *over* the bridge.                                                                 |
|                         | 2. *Above-and-beyond (Excess I)*: The TR moved beyond the intended or desired goal or target, represented by the LM.  
  e.g. Your article is *over* the page limit.                                                                 |
|                         | 3. *Completion*: The spatial location of the TR at the end point C is conceptualized as the end of a process.  
  e.g. The film is *over*.                                                                                  |
|                         | 4. *Transfer*: Movement of the TR from one point to another.  e.g. Sally turned the keys to the office *over*  
  to the janitor.                                                                                            |
|                         | 5. *Temporal*: The TR has a temporal relation with a LM that is a period of duration.  e.g. The festival will  
  take place *over* the weekend.                                                                            |
| **Covering**            | 6. *Covering*: The TR physically intervenes between the viewer and the LM, obscuring all or at least a  
  significant portion of the LM.  e.g. The tablecloth is *over* the table.                                |
| **Examining**           | 7. *Examining*: The TR’s vantage point is profiled, and the TR’s line of vision is directed at the LM.  
  e.g. Mary looked *over* the manuscript quite carefully.                                                   |
|                         | 8. *Focus-of-attention*: The LM is the object being examined by the TR and takes on primary focus.  e.g.  
  The little boy cried *over* his broken toy.                                                               |
| **Up Cluster**          | 9. *More*: Experiential correlation of greater elevation and greater quantity leads to conceptualizing the TR as having a higher quantity than the LM.  
  e.g. He has *over* forty kinds of shells.                                                                   |
|                         | 10. *Over-and-above (Excess II)*: There is ‘too much’ of the TR in relation to the LM.  e.g. The heavy rains  
  caused the river to flow *over* its banks.                                                                 |
|                         | 11. *Control*: The TR has power over the LM due to the experiential correlation of physically higher entities having control over physically lower entities.  
  e.g. She has a strange power *over* me.                                                                      |
|                         | 12. *Preference*: The TR is preferred over the LM due to conceptualization of TR as being physically higher.  
  e.g. I would prefer tea *over* coffee.                                                                       |
| **Reflexive**           | 13. *Reflexive*: Two salient positions occupied by the TR are profiled.  e.g. The fence fell *over*.        |
|                         | 14. *Repetition*: The TR engages in iterative action.  e.g. After the false start, they started the race *over*. |
The different senses in the A-B-C trajectory cluster all derive from complex conceptualization of frequently used utterances including *The cat jumped over wall*. The conceptualization profiles a sequentially evolving process conceptualized in a summary format: the cat is first at point A (the ground), then point B (above the wall), and finally point C (the other side of the wall). While point A, B and C do not simultaneously exist in the real world (the cat cannot be at all points at the same time), by conceptualizing the spatial scene, the points on the trajectory come to be related and through entrenchment lexical forms which are related to point B can be employed to reference senses related to point C.

In the Covering Cluster, the TR is conceptualized as being larger than the LM and the vantage point is shifted from off-stage to higher than the TR. The shift in vantage point prompts for a new conceptualization and an additional implicature of covering arises in certain contexts (e.g. *The tablecloth is over the table*). Through pragmatic strengthening this sense has become a distinct sense in the semantic network.

In the Examining Cluster, the vantage point is the TR and the TR’s line of vision is focused on the LM. A typical way of examining objects is that the TR (viewer) is physically higher and close to the LM (object being examined), and there is a conceptual connectedness between the TR-LM. In this construal, the TR is directing its attention towards the LM in addition to simply observing it. With appropriate linguistic prompts the examining implicature is derived in certain contexts of use (*e.g. Mary looked over the manuscript quite carefully*).

The Up Cluster arises from construing the TR as being physically higher or
vertically elevated relative to the LM. The four senses in the Up cluster are derived from our prevalent experience with upward orientation and height. For instance, one consequence of being physically higher and within potential contact of an object is that we can exert control over the object, which motivates the Control Sense as in *She has a strange power over me*. In another construal, being physically elevated correlates with greater quantity, giving rise to the More Sense. Thus, different construals of a scene in which an upward orientation is assigned to the TR give rise to uses of *over* in the Up Cluster.

In the Reflexive Cluster two salient positions occupied by the entity are profiled by *over*. Like the A-B-C trajectory, the TR cannot simultaneously occupy the different positions, but rather the dynamic process is conceptualized in a summary format. In this construal two temporarily situated locations of the TR-LM are merged into a single spatial configuration (e.g. *The fence fell over*). Thus, through reanalysis of the dynamic process of reflexivity, the particle comes to denote a static scene, in which one entity is perceived as both the TR and LM.

The analysis of phrasal verbs in this section is summarized, and accompanied by a number of corpus examples and visual networks of the verb and particle combination. Appendix A provides more description of the meanings of phrasal verbs with *over*.

### 4.5.2 Get over

#### 4.5.2.1 Central sense of get over. The central sense of *get over* is a spatial scene meaning ‘transcend or surpass a barrier’. In this use the TR surpasses a physical object, conceptualized as an obstacle or barrier to the TR’s forward motion. The meaning of *get*
participating in this use is the extended Move sense and the meaning of *over* is derived from the A-B-C Trajectory Cluster associated with this particle (Tyler & Evans, 2003). The combination of the meaning of these two components gives rise to the central sense of *get over*. Figure 31 represents the central sense of the phrasal verb proposed in this study. The final scene involves the TR moving from point A (situated on the left side of the barrier) to point C (situated to the right side of the barrier) and transcending the physical barrier. Point C is highlighted in the figure.

*Figure 31. Central sense of get over*
Some examples of the central sense of *get over* are provided below:

(154) There's enough ways to *get over* the border that the risk is small.

(155) That's how I *got over* the hill, and then I radioed forever, and no one responded.

**4.5.2.2 Distinct Senses of *get over.*** Applying the CL tools to the corpus data yielded two distinct senses of the phrasal verb.

*Transcend Non-physical Barrier.* This sense is closely related to the central sense and denotes that the TR surpasses a non-physical entity conceptualized as a barrier to the TR’s forward motion. The meaning of *get* participating in this use is the extended Change of State sense and the meaning of the particle is derived from the A-B-C cluster for *over.* (illustrated in Figure 32). This conceptualization motivates the use of *get over* in the following examples:

(156) They had to adjust to that loss and *get over* their anger.

(157) She's in therapy now trying to *get over* the stuffed shark.

![Figure 32. Get over—Transfer Non-physical Barrier Sense](image)

**Arrival.** This sense denotes that the TR has arrived at a particular destination. The meaning of *get* is the extended Move Sense and the meaning of *over* is the extended
Transfer Sense (illustrated in Figure 33). In the Transfer Sense the LM is conceptualized as a ‘goal’ rather than a barrier to the TR’s movement. In addition to the Transfer sense, *over* denotes a sense of Completion to the action of reaching the destination in location C. The following examples demonstrate this use of *get over*:

(158) I will *get over* there ASAP to send the money!

(159) Kiss the girls good-bye, son, and *get over* to London.

![Diagram](image)

*Figure 33. Get over- Arrival Sense*

### 4.5.3 Take over

#### 4.5.3.1 Central sense of *take over*. The phrasal verb *take over* in its central sense denotes a spatial meaning of ‘transferring an entity from one location to another’. In this use, the meaning of *take* is the central Get Hold Of and Remove Sense and the meaning of *over* is the extended Transfer Sense in which the TR is moved from location A to a new location C. Tyler and Evans (2003) observe that there is an experiential correlation between changing the location of an entity and transferring the entity. Through pragmatic strengthening this implicature is conventionalized as a distinct sense of *over*. Figure 34 illustrates the potential central sense of the phrasal verb. The meaning of *take over* is
shown by a hand getting hold of an object and moving it to a new location. The phrasal verb profiles the final half of the transfer (between points B and C on the A-B-C trajectory).

![Diagram of take and over]

*Figure 34. Central sense of take over*

Some examples of the central sense of *takeover* are provided below:

(160) He split the money and *took* the rest *over* to his wife.

(161) The southern route would *take* Israeli planes *over* Saudi Arabia and then into Iran?

**4.5.3.2 Distinct senses of take over.** Analyzing the data yielded one distinct sense for *take over* presented below.

*Assume Control.* This sense is a distinct sense derived from the central sense and denotes that the TR is assuming some control or responsibility over the LM. *Take* indicates possession or control of an object as a result of an embodied experience of getting hold of the object. The particle denotes the extended Control Sense in which the
TR exerts power and influence over the LM. In addition, the particle designates a sense of transferring the TR from the previous source of power to a new source. Thus, in this construal the particle exhibits double resonance of control and transfer from one source to another, featuring both senses. Figure 35 illustrates the complex interaction between the senses of *take* and *over* identified in this analysis.

The following examples demonstrate this use of *take over*:

(162) There is a lack of medical products, and regime forces have *taken over* makeshift hospitals.

(163) As part of its expanded presence in New York, Delta has *taken over* the former US Airways terminal at La Guardia Airport.

(164) The nephew of late saxophonist Clarence Demons will be *taking over* some of his uncle's sax duties on the forthcoming Bali tour.

*Figure 35. Take over- Assume Control Sense*
4.5.4 Turn over

4.5.4.1 Central sense of turn over. The phrasal verb *turn over* in its central sense denotes a spatial meaning of ‘changing the position of an object by rolling, inverting or flipping it’. The meaning of *turn* is the central Rotate Sense, and the meaning of *over* is the extended Reflexive Sense. The particle mediates a relation in which two salient positions taken by the entity are merged into a single TR–LM spatial configuration.

Figure 36 represents the potential central sense of *turn over* proposed in this study. The meaning of *turn* is shown by a hand rotating an object. The meaning of *over* is shown by the Reflexive Sense in which the TR and LM are the same entity. The two positions occupied by the entity are merged into one spatial configuration.

![Figure 36](image)

*Figure 36. Central sense of turn over*

The following illustrates some examples of the central sense of *turn over*:

(165) The children *turned* the page *over*, and the examiner read each pair of words.
(166) As I turned over and twisted in bed the full horror of the news sank in upon me.

(167) A mother and her small child suffered only minor injuries when their SUV turned over.

The central sense of turn over involves different spatial configurations of the TR and LM. Example (165) denotes the hand moving the object (page), while (166) denotes the body’s movement around an axis, and sentence (167) denotes the inversion of the object (car). The different spatial configurations share the same underlying spatial relation i.e. the TR is moving around an axis and a reflexive movement is denoted by the phrasal verb. The schematic image proposed for turn over, which is closer to example (165) is considered to be a fine prototypical illustration for the various spatial configurations denoted by this phrasal verb.

4.5.4.2 Distinct senses of turn over. Three distinct senses of turn over were identified in the corpus. The following section explains the different senses and provides examples for each meaning.

Submit. This sense denotes that an entity is transferred to the LM. The sense of turn participating in this use is the central Rotate Sense. The meaning of the over in this use is the extended Transfer Sense. The meaning of the phrasal verb is conceptualized as the actor placing the object into the hands or custody of the other party. The following examples demonstrate this use:

22 Most instances of the central sense in the corpus denoted the spatial configuration depicted in figure 301. More examples include:
1) Carefully turn the patties over and place the pan in the oven.
2) He opened the book, gently turning over the leaves.
3) How many of the pictured cards must you turn over to see if any break this rule?
(168) The bicycle driver took the package home and \textit{turned it over} to police the following day after realizing it was an explosive.

(169) Legally, engineering firms need to \textit{turn over} all documents related to a lawsuit.

Figure 37 shows the interaction between the senses of \textit{turn} and \textit{over} in the Submit Sense.

![Diagram of Figure 37: Turn over- Submit Sense](image)

\textbf{Evaluate.} This use denotes that a person is consciously thinking about a situation and evaluating it in their mind. The meaning of the verb in this use is the central Rotate Sense and the meaning of the particle is the extended Examining Sense (see Figure 38). The two elements of examination - being proximal to the object and within its sphere of influence - match the proto-scene of \textit{over} and thus the particle has come to develop an Examining Sense. The meaning of \textit{turn} in this use is rooted in our embodied experience of examining physical objects. For instance, to carefully inspect a piece of jewelry such as a carved stone we can rotate it in our hand and observe it from different angles. Similarly, thoughts or ideas can be conceptualized as objects that are turned around in the person’s head and studied from different angles. This conceptualization has given rise to
the meaning of the verb, and its combination with the particle gives rise to the Evaluate Sense as evident in the following examples:

(170) Dimitri went about his business in the village, *turning* the situation *over* in his head as he washed glasses or stock the cooler with water.

(171) Archer *turned* a new plan *over* in his mind.

\[\text{Figure 38. Turn over - Evaluate Sense}\]

4.5.5 *Hold over*

4.5.5.1 *Central sense of hold over.* The phrasal verb *hold over* in its central sense denotes a spatial meaning of ‘an object grasped by the hand is kept higher and within potential contact of the LM’. In this use, the meaning of *hold* is the central Grasp Sense and the meaning of *over* is the central sense of designating a relation in which “the TR is higher but within potential contact of the LM” (Tyler and Evans, 2003, p.65). Figure 39 represents the potential central sense of *hold over*.

Note that the image proposed for the central sense of *hold over* is similar to the central sense of *hold off*. In spite of this similarity, there is an important distinction between the central senses of the two phrasal verbs. The functional element associated with *hold over* involves a relation of proximity between TR and LM, while the functional
element of *hold off* is separation between the two spatial elements. The difference in the functional elements of the two phrasal verbs marks the seemingly contrastive difference in the meaning of the two.

![Diagram](image)

*Figure 39. Central sense of hold over*

Some examples of the central sense of *hold over* are provided below:

(172) Lay tortilla on wire cooling rack and *hold over* stove burner set on high heat.

(173) You know how in sports the athletes *hold* the trophies *over* their head when they win the big championship?

4.5.5.2 Distinct senses of *hold over*. Analyzing the data yielded three distinct senses for *hold over* presented below.

**Have Control or Advantage.** This sense is derived from the central sense and denotes that the TR has some control or advantage over the LM. In this use, *hold* denotes assumption of control of an object as a result of an embodied experience of preventing gravity from exerting its influence on the object. The particle denotes the extended
Control Sense in which the TR exerts power or authority over the LM. The interaction between the senses is illustrated in Figure 40.

The following examples illustrate this sense of \textit{hold over}:

(174) John and Ken’s top-rated show seems to \textit{hold} great influence \textit{over} Republicans in Sacramento.

(175) Hien would \textit{hold} this \textit{over} Tom until they were toothless old men.

\textit{Postpone}. This sense denotes that the TR delays or hinders the course of action.

The meaning of the verb participating is the central Grasp Sense. The implicature of a bounded duration associated with \textit{hold} gives rise to \textit{hold over} denoting only a temporal impediment of the action or in other words postponing the action. The meaning of \textit{over} is the Temporal Sense in which the TR has a temporal relation with a LM that is a period of duration. Figure 41 demonstrates the interaction between \textit{hold} and \textit{over} in the Delay Sense.

The following examples demonstrate this use of the phrasal verb:

(176) The vote won’t happen now. There’s a senator who wants to \textit{hold} it \textit{over} for a week.
With this decision to *hold over* the brigade for four months, the U.S. will maintain troop levels for now.

**Figure 41. Hold over- Postpone**

*Sustain.* This sense denotes that the TR is a source of nourishment (e.g. gustatory, monetary) that sustains the position of the LM until an implied endpoint where the necessary resource will once again become more prevalent. The meaning of the verb is the extended Maintain Sense and the meaning of the particle is the extended Temporal Sense. The combination subsumes the overall meaning of the TR sustaining the position of the LM for a certain time period. Figure 42 illustrates the interaction between the senses of *hold* and *over* in this use.

The following examples demonstrate this sense of *hold over*:

(178) I told Scamz, “Just need something to *hold* me *over* until one of these jobs come through.” 

(179) Some of them pool their money to split a five-dollar bag of junk to *hold* themselves *over* until the night.
4.6 Sense frequency in phrasal verbs

This section briefly discusses the frequency of the senses identified for the phrasal verbs in the sample COCA data. The frequency counts and percentage of use for each sense of the phrasal verb appearing in the sample is provided in Appendix B. Table 7 below provides a summary of the frequency results including the first and second most frequent, and the least frequent sense identified for the phrasal verbs.

Overall the frequency of the central and extended senses examined in the sample varies considerably across the different phrasal verbs. The central sense was found to be the most frequent sense in seven phrasal verbs constituting almost half the total number of the targeted constructions. Phrasal verbs of this type include hold up, get off, take off, get out, take out, hold out and hold over. Interestingly, the central sense did not exhibit high frequency in phrasal verbs with turn, in particular turn up, turn out and turn off.\(^\text{23}\)

\(^{23}\) The frequencies reported in this section are the frequencies of the sample data (200 instances). It is not certain how well the numbers reflect the frequency in the entire corpus.
Table 7. Most, second most and least frequent senses for phrasal verbs in COCA

<table>
<thead>
<tr>
<th>Phrasal verb</th>
<th>Most freq.</th>
<th>Second most freq.</th>
<th>Least freq.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GET UP</td>
<td>become upright</td>
<td>move out of bed</td>
<td>organize an event</td>
</tr>
<tr>
<td>TAKE UP</td>
<td>get engage with an activity</td>
<td>occupy</td>
<td>central</td>
</tr>
<tr>
<td>TURN UP</td>
<td><strong>arrive</strong></td>
<td>increase in amount</td>
<td>central</td>
</tr>
<tr>
<td>HOLD UP</td>
<td><strong>central</strong></td>
<td>remain in good condition</td>
<td>prevent from falling</td>
</tr>
<tr>
<td>GET OUT</td>
<td><strong>central</strong></td>
<td>become known</td>
<td>not in situ</td>
</tr>
<tr>
<td>TAKE OUT</td>
<td>central (<strong>remove</strong>)</td>
<td>having a date</td>
<td>obtain an arrangement</td>
</tr>
<tr>
<td>TURN OUT</td>
<td>find to be in a state</td>
<td>produce</td>
<td>deactivate</td>
</tr>
<tr>
<td>HOLD OUT</td>
<td><strong>central</strong></td>
<td>last</td>
<td>continue to resist</td>
</tr>
<tr>
<td>GET OFF</td>
<td>central (<strong>remove</strong>)</td>
<td><strong>remove</strong></td>
<td>escape a threat</td>
</tr>
<tr>
<td>TAKE OFF</td>
<td><strong>central</strong></td>
<td><strong>leave</strong></td>
<td>provide a discount</td>
</tr>
<tr>
<td>TURN OFF</td>
<td>deactivate</td>
<td>cause loss interest</td>
<td>central</td>
</tr>
<tr>
<td>HOLD OFF</td>
<td>defer an action</td>
<td>resist an opponent</td>
<td>central</td>
</tr>
<tr>
<td>GET OVER</td>
<td>transcend non-phys. barrier</td>
<td><strong>arrival</strong></td>
<td>central</td>
</tr>
<tr>
<td>TAKE OVER</td>
<td>assume control</td>
<td>central</td>
<td>-</td>
</tr>
<tr>
<td>TURN OVER</td>
<td>submit</td>
<td>central</td>
<td>evaluate</td>
</tr>
<tr>
<td>HOLD OVER</td>
<td><strong>central</strong></td>
<td>having control</td>
<td>postpone</td>
</tr>
</tbody>
</table>

Note that there are different ways of understanding frequency when it comes to the central sense. There are two potential assumptions: 1) the central sense is the most salient i.e. the most frequently used sense in the data, 2) the central sense is the sense which other extended uses are related to i.e. the most dominant in the semantic network of the word. Tyler and Evans’ (2003) criteria for identifying the central meaning (section 2.4) accounts for the second interpretation, which is also adopted in this study. Based on this interpretation, the central meaning of a phrasal verb is not necessarily the most frequently used sense, but rather the one that is most frequently linked to the other senses in the network. Therefore, it is not a surprise that, the central sense is the most frequently used sense for some but not all phrasal verbs examined in the data.
As can be seen in Table 7, the three senses: Arrive, Remove and Leave are highly frequent senses, representing the central and extended senses of a number of different phrasal verbs. The Arrive Sense is the most frequent sense in *turn up* and the second most frequent sense in *get over*. Remove is the most frequent sense in *take out* and *take off*, and the second most frequent sense in *get off*. Leave represents the most frequently used sense in *get off* and the second most frequent sense in *take off*. What is common to these three senses is that they all represent highly frequent human experiences. In comparison, an observation of the less frequently used senses in Table 7 shows that these senses involve more specific or restricted uses. For instance, *take out* in the Obtain a Legal Arrangement and *take off* in Provide a Discount are more specific uses than the Remove Sense, which represents the central sense of both phrasal verbs. Thus, some of the low frequency uses are more specialized senses, which tend to appear in particular contexts.

In order to further examine the frequency of phrasal verb senses in COCA, three case studies of phrasal verbs with *turn* were re-sampled in the COCA data. For this purpose, another 200 instances of *turn up*, *turn out* and *turn off* were randomly selected and recoded for the central and extended senses. The results showed a different frequency count for the senses of *turn out* and slightly different counts for *turn up* and *turn off*. Additionally, one new sense: the Expel Sense\(^{24}\) was identified for this phrasal verb, which was later added to the semantic network. While, the case studies are not representative of all the targeted phrasal verbs, the analysis proposed in this study seems to account for much of the frequently used senses of phrasal verbs. It is possible that

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\(^{24}\) The following provides some example of the Expel Sense in the corpus:
1) The emergency room, they can't *turn you out* if you're unconscious.
2) He'd never felt such pain, not even when his own family *turned him out.*
some of the less frequently used senses did not show up in the sample data, and consequently not all senses of the phrasal verb are included in the semantic analysis proposed in this study.

Another important variable related to frequency is the type of data examined. The COCA data investigated in this study, mostly involves excerpts from official language use including social media (e.g. TV, radio programs), news, novels and academic journals. It is possible that some of the less formal or colloquial uses do not appear in the COCA data. Depending on the genre and register of the corpus, we might observe a different frequency count for the phrasal verb senses analyzed in another corpora.

Finally, the corpus data examined for identifying the senses included mainly two hundred instances of each phrasal verb. Without investigating a larger corpus data and consulting more resources, no claim can be made that all the extended senses of each phrasal verb has been accounted for in the analysis. Further case studies of the phrasal verbs can provide more insight into the extended senses, offering a more comprehensive representation of the meanings.
Chapter 5  Constraint I: Situation types in phrasal verbs

5.1 Introduction

Verbal particles are claimed by a number of researchers to exhibit ‘aktionsart’ meaning (e.g. Brinton, 1988; Curme, 1913; Kruisinga, 1931; Lindner, 1981; O’Dowd, 1998). Aktionsart (German term for ‘kind of action’) signifies the ‘lexical aspect’ of a particular situation\(^{25}\) (Comrie, 1976; Filip, 1999; Vendler, 1967). In its classical use, lexical aspect refers to the properties of the situation denoted by the verbal predicate including features of “dynamicity, durativity and telicity” (Smith 1991, p.6). The term aktionsart is often contrasted with ‘aspect’, which refers to the traditional perfective/imperfective distinction expressed by grammatical morphemes. This domain of aspect has been mostly referred to by scholars as ‘grammatical aspect’ (Bache, 1982; Comrie, 1976; Leech, 1971; Olsen 1997; Smith 1991). According to these studies, while the lexical aspect of a given situation is concerned with the aspectual properties of the verb, the grammatical aspect is concerned with the speaker’s viewpoint of a situation, or the designated “perspective which focuses [on] all or part of the situation” (Smith 1991, p.xv). The perfective viewpoint construes the event in its entirety, while the imperfective viewpoint focuses on only a portion of the event, allowing for a progressive view. The distinct interpretations are perceived in construals such as *Mary built a house* (perfective)

\(^{25}\)The term ‘situation’ is adopted from Comrie (1976) and used by a number of researchers including Brinton (1988). Brinton, uses ‘situation’ for referring to ‘actions’ or entities in the world denoted by verbs or predications. Similarly, Radden and Dirven (2007) use the term ‘situation’ for referring to ‘events that happen or states that things are in’ (p.47)
vs. Mary built houses for living (imperfective). The speaker’s viewpoint on the situation creates slightly different meanings in the two sentences (Smith, 1991).

The following section explains how aktionsart in verbal particles has been treated in previous literature. Next, a summary of Radden and Dirven (2007)’s cognitive approach to aktionsart is provided. Finally, I will present a CL analysis of aktionsart (or situation type) in spatial particles proposed in this study.

5.2 Previous approaches to aktionsart properties of verb-particles

There has been a strong tendency in the literature to use the terms ‘aspect’ and ‘aktionsart’ interchangeably and particles are no exception to this. Traditional approaches, (in particular studies prior to the 1970’s) have referred to particles as ‘aspectual markers’ and have considered particles as exhibiting a ‘perfective meaning’. Among the studies that have proposed such aspectual meanings is Kennedy (1920)’s study of English particles. Kennedy points out that particles may exhibit “intensive” or “perfective” values. (p.27) The particles up and down are among the aspectual particles that he examines in detail. According to Kennedy, the most common meaning of up is the perfective value, in which the particle gives the verb a sense of “bringing to or out of a certain condition” as in build up, work up and cook up (p.24). Similarly, the most frequent sense of down implies a sense of “diminution or complete cessation of state or action” which adds a perfective sense to the verb (p.19). Phrasal verbs of this type are calm down and cool down. In another analysis, Kennedy argues that the particle up may express a ‘definite end of the act’ or the ‘finality of the action’ in phrasal verbs such as
line up and follow up (p.24). In this case Kennedy is clearly referring to the aktionsart rather than the aspectual properties of particles.

For Bolinger (1971) the aspectual sense of a particle is an important facet of its nature. According to Bolinger, the particle in its literal meaning must contain two features: “motion through location” and “terminus or result” (p.85). Both conditions should be satisfied in order for a word to count as a particle. While the definition provided by Bolinger is questionable²⁶, it shows the extent to which the aspectual properties of particles are considered to be an important factor in some of the earlier studies. Among the particles that Bolinger analyzes is the frequently used particle up. As noted before Bolinger identifies three aspectual senses for up including: 1) “the resultant condition” as in he laced up his shoes, 2) “completion or inception” as in he filled up the barrel, and 3) “attaining high intensity” as in lets brighten up the colors (p.99). Lipka (1972) also points out that particles may exhibit a perfective sense, with the meaning of “all of, completely, to the end” (p.115). This meaning is similar to Bolinger’s second aspectual sense mentioned above. Examples of this type include copy out a letter and eat up one’s dinner. In his view, a wide range of terms have been used to imply the aspectual features of particles, among which ‘completive’ seems to be more representative of the notion of completeness of the action.

Among the studies that have looked at aktionsart in particles more thoroughly, is Brinton’s (1988) study of the English aspectual system. Brinton explicitly refers to particles as markers of telic aktionsart. According to Brinton, rather than marking aspect, particles may add “the concept of goal to durative situations which otherwise have no

²⁶ This definition seems to exclude particles such as in and on.
necessary terminus” (p. 168). Brinton explains that the notion of goal can be used in its broad sense. In some instances, the goal may be quite definite and the endpoint of the goal can be determinate as in *drink down the juice*, or *open up the package*. In other cases, however, the goal may not be as explicit as in *warm up the coffee*, or *slow down a car*. Similar claims have been made by other researchers for the various interpretations of the notion of goal. Lindner (1981) mentions that a goal may be either a final state on a degree scale or “the degree at which the change is salient” (p.206). Lipka (1972) goes further in saying that phrasal verbs express the notion of *degree* along a scale rather than goal. He particularly refers to ‘de-adjectival’ phrasal verbs including those such as *thicken up* (make thicker), *sweeten up* (make sweeter) and *thin out* in which degree is the optional feature of the underlying adjective. According to Brinton, even in these cases the goal of the action is quite definite, and there is a norm implicit in the underlying scalar adjective. For instance, to *sweeten up the cake*, implies a norm of sweetening for the cake which constitutes the goal of the action. Thus, in all different uses, the notion of goal is conveyed either overtly or implicitly by phrasal verbs.

In order to explain the aktionsart properties of particles, Brinton (1988) and others have adopted Vendler (1967)’s classical verb typology. The lexical view of aspect originated from Vendler (1967)’s categorization of verb meanings in his description of the philosophy of action. Vendler makes a four-way distinction between ‘states’, ‘activities’, ‘accomplishments’ and ‘achievements’. These categories can be described in their simplest way by a number of binary semantic features including [± stative], [±durative] and [±telic]. The first category: states, includes situations that are non-
durative, with no necessary endpoint and no internal structure (e.g. *know, contain, love*).

The second group: activities are durative atelic situations, which go on for a period of time and have an arbitrary endpoint (e.g. *run, walk*). Accomplishment situations are durative telic events, which are complex, consisting of a process of successive stages and have a necessary endpoint (e.g. *destroy, build a house, walk a mile*). Finally, achievements are punctual situations that occur at a specific point in time (e.g. *leave, born, recognize*).

While Vendler’s model provides important insight into the semantic properties of verbs and their aktionsart qualities, a number of criticisms have been made against his approach. First, the model only focuses on lexical aspect and the influence of perfective and imperfective aspect on the overall aspectual properties of a given situation is neglected. As Mourelatos (1978) points out, in any study of aktionsart the relationship between lexical and grammatical aspect should be taken into account. By restricting the view to verbal semantics many of the distinctions between the two domains will be unexplained, while “in fact they involve fundamental linguistic categories reflected partly at the lexical and partly…at the morphological and syntactic level” (p.419). Second, the influence of elements other than the verb on the aktionsart of the situation is not accounted for by this approach. In the list of examples provided for different verb types, Vendler includes both verbs and verb phrases. For instance, *walk* is listed as an activity verb, while *walk a mile* is taken to be an accomplishment verb. Similarly, *write* is an activity verb and *write a letter* is an accomplishment verb. The nature of the direct object
including whether it is mass/count, single/plural is neglected in this analysis (Brinton, 1988; Dowty 1979; Mourelatos, 1978).

Adapting Vendler’s model, Brinton (1988) proposes some re-analysis of aktionsart in particles. According to Brinton, in a prototypical aktionsart construction a telic particle turns an activity verb into an accomplishment verb. Examples of this type include sentences such as *He wrote up the novel* and *I drank up the water*. Brinton argues that the particles most frequently participating in this type of constructions include *up, down, out* and *off*. Phrasal verbs denoting aktionsart meanings are typically equivalent to expressions such as *to the end, completely* and *until it is finished*. The following examples from Brinton illustrate phrasal verbs denoting this sense:

a. The children are *eating up* the candy.
b. The management decided to *close down* the camp.
c. You should *shut off* the electricity.

In all the examples above, the particle is marking the endpoint of the action or the point at which the action is completed. However, not all the verbs participating in these constructions are activity verbs. According to Brinton, telic particles do interact with verb types other than activities. In some cases, telic particles combine with verbs that on the surface look like stative verbs such as *be* and *have* as in *I’ll be right up* and *I had some friends over*. Telic particles are also compatible with achievement verbs. The verb *shut* in (d) is an achievement verb. Finally, telic particles can accompany accomplishment verbs as in *heal up, clean up* and *fill up*. In this use, the particle seems to profile the goal or in Traugott (1982)’s terms the particle’s role is to make “a covert” endpoint “overt” (p.252).
Brinton’s analysis offers some insight into the aktionsart properties of particles. However, a number of weaknesses are associated with this approach. First, this kind of analysis does not take into account the interaction between the polysemy networks of the verb and particle, and their multiple meanings. In other words, the various aspectual contributions made by the particle in combination with multiple verbs are simply ignored. For instance, the particle *over* denotes the endpoint of the action in some uses (e.g. *It was possible to get over the steep rocks*) and an iterative meaning in other uses (e.g. *He read the assignment over and over*). In addition, more meanings than just the four aktionsart properties identified by Vendler are contributed by the particles. For instance, particles can exhibit a continuative meaning as in *She held out some hope for the children*. In this use, *out* seems to add a sense of continuation to the action of maintaining the state of the TR (in this case ‘hope’). A more detailed analysis of the aktionsart properties in phrasal verbs should take into account the aktionsart meaning of the various senses of particles used in real language. Finally, the notion of embodiment and its important role in understanding the aktionsart properties of the verb and particle are not discussed in this analysis. The importance of embodied experience is foundational to Tyler and Evans’ (2003) analysis of the semantics of English prepositions. Given the central role embodiment plays in the analysis of prepositions, one would assume it will also play a major role in the semantics of phrasal verbs. Moreover, as previously noted, a large number of phrasal verb meanings are closely tied to our unique bodily experience with the world. Thus, the important contribution of embodiment to the understanding of the aktionsart in verbs and particles cannot be neglected.
5.3 Situation types: a cognitive approach

Radden and Dirven (2007) is one of the few studies that has provided a CL approach to aktionsart. The analysis of aktionsart in this approach includes identifying the conceptual principles involved in construing different types of events. Instead of using the term aktionsart, Radden and Dirven use the term ‘situation types’. They emphasize that a careful distinction between situation types is important as they interact with aspect in systematic ways. Their approach provides a basis for the analysis of situation types in particles proposed in the current study, and hence the main parts of the analysis will be discussed briefly in the following section.

According to Radden and Dirven, the notion of ‘boundedness’ is at the heart of understanding the distinction between the basic aspectual classes and situation types. The term was originally used by Talmy (2000) to explain the key differences in construal between the classical perfective/imperfective distinctions. According to Talmy, the notion of boundaries is not only useful in describing entities that exhibit continuity in space, but also those that exhibit continuity in time. In other words, the concept of boundedness can be extended from the spatial domain to the temporal domain. When an event is understood as unbounded it has no intrinsic endpoint as if the event continues indefinitely in time (e.g. *He is playing the piano*). On the other hand, a bounded event is construed as having intrinsic boundaries and thus can be conceptualized as an individuated entity (e.g. *She dressed in 10 minutes*). Drawing on the notion of boundedness in the temporal domain, Radden and Dirven propose three aspectual classes
in English: Bounded events, Unbounded events and Lasting states, which will be briefly explained in the subsequent sections.

Radden and Dirven define aspect as the speaker’s “particular view of a situation” with two distinct forms in English: the progressive and the non-progressive aspect (p. 176). The progressive aspect is typically expressed by a construction with be V-ing and the non-progressive is expressed by the simple verb. The two forms of aspect are characterized based on viewing frames; while the non-progressive is characterized by maximal viewing frame, the progressive is characterized by a restricted viewing frame. In a maximal view we take an external view to the event, conceptualizing it as a bounded event with a clear beginning and an end. For instance, the event *Ann cuddled the baby* is bounded and is seen as a whole. On the other hand, a restricted viewing frame takes an internal view to the event, conceptualizing it as unbounded event with implicit boundaries. For instance, the event *Ann is cuddling the baby* is unbounded with the temporal boundaries only implicitly existing i.e. based on our background knowledge of the world we know that the act of cuddling the baby cannot last forever and the event will at some point terminate. In Radden and Dirven’s analysis, the two viewing frames are applied to events and states giving rise to the three aspectual classes: 1) Bounded events, which are expressed by the non-progressive aspect (e.g. *Ann cuddled the baby*), 2) Unbounded events with implicit boundaries, expressed by progressive (e.g. *Ann is cuddling the baby*) and 3) Lasting states, which are expressed by the non-progressive aspect (*Ann lives with her parents*) (p. 177-178)
According to Radden and Dirven, the aspectual classes interact with situation types in systematic ways. In this model, the two criteria of telicity and duration are identified as determining factors giving rise to important distinctions in the event’s construal. The element of duration distinguishes between durational and punctual events, while telicity distinguishes between events that are telic (have a conclusive endpoint) and atelic (lack a conclusive endpoint). The two factors allow us to identify four situation types in bounded events referred to as accomplishments, activities, achievements and acts. The first three situation types identified in this model correspond to Vendler’s verb classifications for aktionsart described before. The final category ‘acts’ consists of atelic instantaneous events, which are momentary in nature and can be schematically represented by a single vertical line. Figure 43 illustrates the four types of bounded events and their schematic representations identified by Radden and Dirven.

![Figure 43. Types of bounded events and their time schemas (Radden & Dirven, 2007, p. 180)](image)

When canonically bounded events are construed from a restricted viewing frame (progressive aspect), the four event types are viewed in their “internal progression” and hence become unbounded events (p.180). In this construal, a limited segment of the event is viewed by the speaker, with the beginning and endpoint of the event only
implicitly existing. Since there is a shift involved in the progressive view, the event is necessarily durative, and thus punctual events are ruled out in this construal. Imposing a restricted viewing frame on bounded events alters some of their characteristics in terms of situation types. In this analysis, four types of ‘activities’ are identified, which correspond to their respective bounded situation types. Figure 44 presents the four types of unbounded events and their schematic representations identified by Radden and Dirven.

Like accomplishments, ‘accomplishing activities’ are telic situations; however, they differ from their bounded counterpart in that the focus is on the duration of the activity. The endpoint while expected, need not to occur in this construal. ‘Unbounded activities’ focus on the progression of the event with implicit boundaries, causing subtle difference in the meaning compared with the bounded counterpart. The third category ‘culminating activities’ focus on “the build-up phase preceding the achievement”, while the final category ‘iterative acts’ are “quick succession of punctual acts”, conceptualized as single duration event. (p. 181-182).

Figure 44. Types of unbounded events and their time schemas (Radden & Dirven, 2007, p. 181)
‘States’ are the final type of events proposed in this model. Like the previous event types, states are divided into a number of sub-categories; the two main ones include ‘lasting states’ and ‘temporary states’. Lasting states are viewed with a maximal viewing frame, allowing for an infinite conceptualization and hence considered as unbounded (e.g. Ann lives with her parents). Temporary states, however, are viewed with a restricted viewing frame, generating an internal view of an event with implicit boundaries (e.g. Ann is living with her parents). The difference between the two state types lies mainly in the way the speaker conceptualizes a particular static situation.

5.4 CL analysis of situation types in particles

The previous section provided an overview of Radden and Dirven’s (2007) CL analysis of situation types. In this section, I will provide a CL analysis of situation types in particles. Following Radden and Dirven, I will use the term ‘situation types’ instead of aktionsart to avoid potential confusions as discussed previously in literature.

The analysis of situation types in this study addresses some of the important issues that have not be taken into account by previous studies. First, verbs are by nature polysemous; the same verb can exhibit different situation types depending on the context in which it occurs and which meaning is used. For instance, see is a state verb in one use and an activity verb in another use. In the sentence I see your point, the verb see means ‘understood’, and is a state verb. In another use I saw the movie, the verb means ‘watch’ and the situation type of the verb is an activity verb. In addition, particles are highly polysemous, which adds to the complexity of the interaction between the situation types denoted by each lexical item in a verb-particle combination. For instance, the particle off
denotes the endpoint of the action in the use *I turned off the TV*. However, in another use: *The plane took off*, the same particle denotes the starting point of the action, which is a non-telic contribution. Finally, the important role of embodied experience in understanding the various situation types in phrasal verbs will be emphasized in this analysis.

Previous studies including Brinton (1988) have focused mostly on the telic nature of particles, and not much has been dedicated to other aspects of a particle’s contribution to situation types. However, the analysis of phrasal verbs in the corpus data demonstrated a variety of contributions made by particles in addition to the telic situation type. Depending on the construal, particles can make contributions to the following characteristics of a situation: 1) endpoint, 2) starting point, 3) terminative, 4) resultative, and 5) whether the situation is construed as being iterative or continuative. Table 8 demonstrates the situation types contributed by each particle based on the polysemy networks and the uses identified in the corpus.

5.4.1 ENDPOINT. This section presents some uses of phrasal verbs in the data which exhibit an endpoint meaning. In this use, the particle denotes the endpoint of the action or the point at which the action is perceived to be finished or completed. The endpoint situation type is compatible with the Completion Sense identified for all four particles in this study. The combination of this meaning of the particle with the situation type of the verb subsumes a telic or conclusive event.

*Table 8. Situation types in particles*

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<tr>
<th>Particle</th>
<th>Situation type</th>
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In its central sense the phrasal verb get up is ambiguous between a directional meaning and endpoint contribution to the situation type (e.g. We helped our guests get up the hill safely). The situation types of the verb and the particle seem to be giving rise to the endpoint contribution of get up. The meaning of get in this construal is “intentional movement from the initial state (A) to the final state (B) in a cumulative fashion within a certain duration”. Here, get is acting as an accomplishment verb and the particle profiles the endpoint of the action. Our embodied experience with get involves a process of movement in which at one point in time the action of get is completed. Thus, in certain construals, the addition of up seems to highlight the endpoint of the action. The completion meaning of up is related to our embodied experience with liquids and containers. The frequently encountered experiential correlation between a liquid increasing (or being up) and the capacity of the container being completely used has motivated the completion meaning of up (Grady, 1997; Tyler & Evans, 2003).
two extended senses of get up including Become Upright and Waking and Moving Out of Bed exhibit similar situation type interactions to the central sense.

5.4.4.2 Take out-central sense. Like get up, the central sense of take out is ambiguous between a directional meaning and an endpoint contribution to the situation type (e.g. He took out a notepad and wrote a few sentences.) The meaning of take in this combination is the central Get Hold Of and Remove Sense, and the meaning of out is the central meaning of ‘the TR is exterior to a bounded LM’. The verb take is an accomplishment verb and the particle profiles the endpoint of the action. Our embodied experience with take involves movement of one’s hand to grasp the object in which at a certain point in time the action of taking the object is completed. In certain construals, the addition of out seems to highlight the endpoint of the action. According to Tyler and Evans (2003), the experiential correlation between an entity leaving a container and the process of leaving being completed has given rise to the completion sense of out. Thus, out in take out seems to denote that the act of removing the object from the container is completed.

5.4.4.3 Take off-central sense. In its central sense the phrasal verb take off is ambiguous between a directional meaning and an endpoint contribution to the situation type (e.g. Go ahead take off the gloves!). The verb take is an accomplishment verb and the particle profiles the endpoint of the action in addition to the separation meaning. The central sense of off denotes that an object that was previously in contact with the LM loses is its contiguity with it. Thus, off marks the completion of the action of separation. The completion meaning of off is similar to the Completion Sense of out proposed by
Tyler and Evans (2003). In both construals the particle highlights the endpoint of the action. The experiential correlation between an entity leaving the LM and the process of leaving being completed has given rise to the completion sense in the two particles. While the LM is bounded in the relation profiled by *out*, it is more likely to be conceptualized as a surface in the spatial relation profiled by *off*. Through pragmatic strengthening the meaning of ending and completion associated with spatial scenes such as this have given rise to the Completion Sense of *off*.

5.4.4.4 Turn over- Transfer Sense. This sense denotes that an entity (person/object) is transferred from the TR to the LM (e.g. *He turned the keys over*). In this use the meaning of *turn* is the Become Sense and the meaning of *over* is the Transfer Sense.

In the central sense, the verb *turn* is an activity verb, denoting a sense of rotation around an axis/center. The physical action of rotating can be conceptualized as a durative activity, which can take place over a time period with an arbitrary endpoint. For instance, a person turning around can only undergo the action for a certain time period after which the person becomes tired and no longer able to continue. However, in this use of the phrasal verb, *turn* denotes a Become meaning in which the TR goes under a change of state (e.g. *She turned red*). The Become meaning of *turn* can be considered an accomplishment type since we can assume an inherit endpoint to the action of changing state.

The meaning of *over* in this use is the Transfer Sense, in which an entity is transferred from location A to location C in the A-B-C trajectory for *over* (see section
4.5). At point C the action of transferring the entity is completed and due to this conceptualization over denotes an endpoint situation type. The combination of the endpoint meaning inherent in the verb and particle subsumes an overall endpoint contribution i.e. the action of transferring an entity from the TR to the LM is completed.

5.4.2 STARTING POINT. This section presents examples of phrasal verbs observed in the data, which denote a starting point meaning. In this use, the particle denotes the starting point of the action or the point at which the action initiated. The particles up and off exhibit this situation type when used in the appropriate context. The combination of the starting point meaning of the particle and the situation type of the verb highlights the initial point of the event.\(^\text{27}\)

5.4.2.1 Take off - Leave Sense. This sense of take off denotes that the TR (a mobile entity) is leaving the LM (e.g. *In 1929 he became the first pilot to take off and land "flying blind ")*. The verb take denotes an accomplishment situation type. The meaning of take is a metaphorical extension of the central sense, in which series of events or activities are conceptualized as objects that can be manipulated by the actor as a result of the embodied experience of taking an object and subsequently possessing and controlling the object.\(^\text{28}\) The particle off denotes the starting point of the action, in addition to the Separation Sense. The starting point contribution made by off can be explained with respect to its early attested form. The particle off is related to Old Norse

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\(^\text{27}\) Previous studies (e.g. Crume, 1913; Poutsma, 1926) have used the term *ingressive/inchoative aspect* to refer to the initial stage of the action or state specified by the aspectual properties of the situation. However, the notion of starting point defined in this study is considered to be a category of situation type (aktionsart) rather than grammatical aspect.

\(^\text{28}\) According to Lakoff and Johnson (1980) our everyday experience with physical objects motivates a wide range of ontological metaphors in which events, activities and emotions can be viewed in terms of entities and substances which have boundaries and can be manipulated.
In its original sense, *of* was used to convey a wide range of senses including among them a ‘source’ meaning (Online Etymology Dictionary; Shulze 1994; Tyler & Evans 2003). According to Tyler and Evans (2003), the central sense of *of* involves a part-whole relationship between the TR and LM, with *of* adding the notion of ‘source’ to the LM (e.g. *the top of the hill, the side of the road*). Based on this analysis, we can argue that the starting point contribution of *off* is related to the early attested meaning of ‘source’ inherent to *of*. Thus, in certain construals such as the Leave Sense, *off* seems to highlight the initial point of the action rather than the endpoint.

5.4.2.2 *Take up– Get Engaged with an Activity or Idea Sense*. This sense of *take up* denotes that the actor is becoming involved with an idea or activity (e.g. *He took up running after his retirement*). The meaning of *take* participating in this use is the central Get Hold Of and Remove Sense, and the meaning of *up* is saliency. In this construal, ideas or activities are conceptualized as objects that are brought closer to the actor’s visual field and consequently the actor begins to actively engage with the idea/activity. In this use, the action of *taking* an object exhibits an accomplishment situation type. The particle seems to be adding a starting point contribution by highlighting the initiation of the event. In this use, *up* denotes that the idea/activity has become prominent to the user and hence initiated by the actor. Thus, through the combination of the meaning of the verb and the particle the initial stage of the event is highlighted.

5.4.3 CONTINUATIVE. This section explains the continuative meaning of phrasal verbs. In this use, the particle denotes the continuous or enduring nature of the action. The particles *out* and *over* exhibit this situation type. The verb *hold*, in the
Maintain Sense was found to combine with the two particles in the continuative sense, due to the durational quality associated with \textit{hold}. The combination of the continuative meaning of the particle and the situation type of the verb motivates the continuous nature of the event.\footnote{Previous studies (e.g. Brinton 1988; Crume, 1913; Poutsma, 1926) have referred to the continuative aspect of the situation rather than a continuative situation type.}

\textbf{5.4.3.1 \textit{Hold out} - Last for a Certain Period Sense.} This meaning of \textit{hold out} denotes that an entity, usually a valued substance such as money or water, lasts for a certain period of time (e.g. \textit{We decided to stay in that place as long as the water held out}). The meaning of the verb participating in this sense is the extended Maintain Sense and the meaning of the particle is the extended Reflexive Sense (Tyler \& Evans, 2003). \textit{Hold} is a homogenous activity. It is considered an activity verb as opposed to a static verb since an energy source is involved. The meaning of \textit{hold} involves a temporal element of bounded duration, which is rooted in our embodied experience of holding objects only for a limited time. While the action of holding is confined within temporal limits, it does not have an endpoint in the same way that the verb \textit{get} has. \textit{Hold} is homogenous while \textit{get} is heterogeneous. Thus, while in \textit{get} at a certain time point the action is completed, we cannot say the action of holding an object is completed\footnote{We can say that the action of holding an object has stopped: \textit{I stopped holding the rope}, but this use does not convey the same sense of completion. Freed (1979) also points out that with \textit{stop} and \textit{cease} the goal of the action is not achieved, while other verbs such as \textit{finish} the achievement of the goal is highlighted.}.

In this use, \textit{out} seems to add a sense of continuation to the action of maintaining the state of the TR. The continuative meaning of \textit{out} can be explained in terms of our embodied experience with liquids and containers. When a liquid such as water is inside
the container it is limited by the boundaries of the container; however, once we pour the water out of the container, it flows and the path it takes can be conceptualized as a continuous path. Frequent observation of this kind of experience has given rise to the continuative situation type contribution of *out*.\(^{31}\) Similar uses of *out* in this sense include phrasal verbs such as *ride out* meaning ‘endure’ as in we *ride out the storm*.

**5.4.4 ITERATIVE.** This section explains the iterative meaning of phrasal verbs. The particles *up* and *over* were found to denote this situation type when used in the appropriate context. In this use, the particles denote the iterative or repeating nature of the action. The combination of the iterative meaning of the particle and the situation type of the verb gives rise to the iterative nature of the event.\(^{32}\)

**5.4.4.1 Turn over-Evaluate.** This sense denotes that a person is consciously thinking about a situation and evaluating it (e.g. *Dimitiri went about his business in the village, turning the situation over in his head*). The meaning of the verb in this use is the central Rotate Sense and the meaning of the particle is the Examining Sense. Part of our experience with examining objects involves viewing the object from different angles. In fact, with small objects we often rotate the object many times to study the different positions or study one side and then the other. This frequent embodied experience with examining objects gives rise to the *iterative* situation type contribution of *over* in this use.

In addition, Tyler and Evans (2003) identify a Repetition Sense for *over* through an

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\(^{31}\) Another observation, which seems to explain the continuative contribution of *out* is the difference between a substance being in and out of a container. For instance, water contained in a cup is a quantifiable individuated entity as opposed to when the water is outside the cup in which case it is a mass entity with a continuous nature and no limits.

\(^{32}\) Previous studies (e.g. Brinton, 1988; Crume, 1913; Poutsma, 1926) have discussed the *iterative aspect* of a situation rather than an iterative situation type.
extension of the reflexive meaning. *Turn* is an activity verb, denoting a sense of rotation which is highly compatible with the iterative sense of *over*. Drawing on the metaphor THOUGHTS/IDEAS ARE OBJECTS, *turn over* denotes the repetitive action of examining a topic in one’s mind, with *over* denoting an iterative situation type.

**5.4.5 TERMINATIVE.** This section presents some uses of verb-particle combinations in the data that denote a terminative meaning. In this use the particle seems to contribute a sense of termination to the situation, conceptualizing the event as becoming ceased or depleted. An investigation of the corpus data shows that this conceptualization is compatible with particles in the following senses: No More Sense of *out*, Stop Sense of *off* and the Depletion Sense of *up*. All three senses seem to highlight the terminative characteristic of the situation.

The terminative sense is distinct from the endpoint contribution in that the TR, typically an energy source or a consumable entity, is stopped or depleted. As previously explained, our everyday interaction with consumable entities such as food or drinks involves many situations in which the entity is consumed as a result of being out of the container or brought closer to the mouth, which is reflected in the Depletion Sense of *up* and the No More Sense of *out*. Furthermore, in many cases the natural flow of entities such as liquids can be blocked or stopped which is reflected in the Stop uses of *off*. Of course, a natural consequence of an entity being depleted is that the action of consuming the entity as in drinking up the liquid is completed or has reached an endpoint. However, this does not mean that all actions involving an endpoint or completive sense are motivated by the same experiential correlations. Therefore in this study, the end point
contribution and terminative situation type are recognized as two distinct situation type contribution made by certain particles.

Few studies have referred to some version of a terminative meaning for particles. Kennedy (1920) refers to such uses in particles denoting ‘exhaustion or extinction’ as in blot out, die out, wear out, and ‘riddance or extermination’ as in buy off, die off and call off. Lipka (1973) uses the term terminativeness (originally used by Poutsma, 1926) for particles that can be paraphrased as ‘to an end/until finished’. Examples of this type are burn out and live out. Lipka distinguishes such uses from completive particles as in write out and wash up. Although the distinctions he proposes are not entirely consistent, there are some similarities between his analysis and the terminative situation type identified in this study.

5.4.5.1 Take out- Destroy an Entity Sense. This sense of take out denotes that an entity is being terminated or destroyed by another entity (e.g. Last night four buildings were taken out by fire in my neighborhood.) The verb take denotes an assumption of possession or control of an object. The meaning of the particle is the extended No More Sense. In this use out refers to a terminative situation type in addition to denoting the endpoint of the action of destroying the TR, thus denoting multiple senses.

5.4.5.2 Turn off- Deactivate Sense. This use denotes that the TR, usually an electronic device, has become deactivated (e.g. Please turn off the lights and lock the doors). The meaning of the verb participating is the central Rotate Sense and the meaning of the particle is the extended Stop Sense. As previously noted, the correlation between separating an object from its original source, and the object no longer working, has given
rise to off being associated with the meaning of Stop. Turn is an activity verb denoting the action of rotating the knob or flipping the switch of an electrical device. Once the switch is turned to an off position, the object becomes deactivated. Thus, the combination of the meaning of the verb and the particle in appropriate context of use denotes a terminative situation type, in addition to the endpoint of the action.

5.4.6 RESULTATIVE. This section presents uses of phrasal verbs in the data which denote a resultative meaning. In this use, the particle highlights the resultative characteristic of the action or the result of the goal depicted by the contextualized verb. Analyzing the corpus data, showed that this use of the particle mostly combines with verbs denoting change of state as in get out (Become Known/Available), turn out (Outcome, Produce) and turn off (Cause Loss of Interest). The combination of the resultative meaning of the particle and the situation type of the verb motivates the resultative nature of the event.

Brinton (1988) argues for a restricted type of resultative meaning in particles. According to Brinton “Particles ‘may assume a resultative sense’ in the final position, not that they intrinsically convey it in any given position” (p.182). One of his arguments is that the resultative meaning comes from the aspectual properties of the sentence and not necessarily from the particle. Thus, while perfective and imperfective aspect exhibit the attainment of the goal, the imperfective does not convey a resultative meaning. For instance, he argues in the example “They are using up the supplies” there is no indication of the result (p.183). In comparison, the particle can denote a resultative sense when it appears in the final position as in “They are using the supplies up”. However, one can
argue that even in the first example (non-final position), there is some result inherent to the action, the simplest being that some of the supplies are used by the TR and there is less of them left to use. Furthermore, the argument can be made that despite the endpoint or result not being overtly expressed in the imperfective, it is still an inherent part of the meaning of the phrasal verb. As mentioned by Radden and Dirven (2007) unbounded events including accomplishing activities (e.g. *She is changing her clothes*) are telic situations. Thus, while the endpoint is not necessarily realized in this type, it can be implied from the context (in the same example the person will eventually change her clothes even though its not explicitly stated). Therefore, it seems reasonable to recognize a resultative sense for certain uses of particles.

5.4.6.1 *Get out- Become known.* This sense is a distinct sense and denotes that the TR or official information has become available to the public (e.g. *The secret got out*). The verb *get* is an accomplishment verb and the particle profiles a resultative situation type. The meaning of the verb participating is the extended Change of State Sense and the meaning of the particle is the extended Knowing Sense. In this use of *out*, the TR which was previously inside the LM and thus invisible, becomes visible. Thus, there is a change of perceptual state in this construal with *out* denoting the result of this change. *Get* denotes a Change of State meaning which is highly compatible with this use of *out*. The overall combination denotes the resultative situation type by profiling a scene in which the object (in this case information) has become known to the public as a result of change of state from unknown to known.
5.4.6.2 Turn off- Cause loss of interest. This meaning denotes that the TR (experiencer) is irritated or displeased as a result of an action carried out by the LM (e.g. *Saggy jeans turn me off*). The verb *turn* is an accomplishment verb, denoting the Become Sense. The meaning of the particle is the extended Termination Sense. More specifically, the particle denotes that the positive attitude of the experiencer towards the entity has been ended. In addition to the terminative meaning, the particle denotes a resultative sense. In this use the action carried out by the LM or its quality resulted in the TR’s loss of interest. The combination of the meaning of the verb and the particle denotes the overall resultative meaning in which the TR is no longer eager or enthusiastic about someone/something.

5.5 Summary and main points

Analyzing phrasal verbs using a CL-based analysis provided insight into the situation type contributions made by particles in different contexts of use. In addition, examining the different uses revealed some interesting findings pertaining to the ways in which the situation types of the verb and the particle in a phrasal verb interact. The analysis provides some evidence for the partial compositionality approach to lexical aspect in phrasal verbs. Based on the current analysis, lexical aspect in a phrasal verb is compositionally formed through the combination of the situation types denoted individually by each composite form, i.e. the verb and the particle. However, only limited information is obtained from analyzing the composite forms alone. Other cognitive mechanisms including conceptual metaphor and experiential correlation play an
important role in identifying the situation types in a given context, and thus should be taken into account.

Rather than being fully compositional, situation types in phrasal verbs are only partially compositional. This finding is consistent with the analysis of phrasal verb meanings suggested in this study. As previously noted, in a usage-based view of language, the different meanings of a particular phrasal verb cannot be simply derived from the semantic composition of its two components. In the same way, we cannot assign fix situation type meanings to each component and assume a straightforward combination for each use. In most cases the situation type meaning of a phrasal verb highlights only limited aspects of the composite meaning alone, and the rest is drawn from the speaker’s conceptualization and recurrent experience. Our experience of the world is largely mediated by the anatomy of our bodies, and therefore many of the situation type meanings are based on our bodily experience. New experiences give rise to new uses, and each use takes on a particular situation type role depending on the context.

Along the same lines, Langacker’s approach to the semantics of composite structure explained earlier in the dissertation can be also applied to describe situation type contributions in phrasal verbs. As previously noted, in order to explain partial compositionality, Langacker examines the grammatical valence relations between the component structures. The two major factors of valence relations including correspondence and profile determinacy become important in understanding situation type meanings in phrasal verbs. The valence relations involved in the endpoint situation type meaning of get over in the central sense are presented below as an example.
The two semantic components of *get over* are: GET (predicate 1) & OVER (predicate 2). In this construal GET profiles a dynamic relation in the domain of space. It denotes an accomplishment situation type with a complex nature, consisting of a process of successive stages and a necessary endpoint. In this use, OVER profiles a static relation between the spatial elements and marks the endpoint of the action. The integration of the situation types denoted by the two predicates depends on the correspondence between the specifications of GET and the schematic relational status of TR and LM serving as the base for the endpoint meaning of OVER. Following Langacker, the correspondence between the specifications of the two predicates is represented by dotted lines in figure 45. By merging the specifications of these corresponding entities and adopting the endpoint contribution of OVER we obtain the composite structure, which designates the overall telic meaning of the phrasal verb. As illustrated in figure 45, the endpoint of the action or the point at which the TR collates with the LM (point B) is highlighted in GET. In the spatial scene proposed for OVER (from Tyler and Evans, 2003 p.86), point C or the final location of the TR in the A-B-C trajectory is in focus. The specifications in the verb and the particle interact with each other, and as a result of the correspondence between the TR’s and LM’s of the two predicates the overall endpoint meaning of the construction is subsumed. Similar to the previous analysis of *get up*, GET is the profile determinant in this construction (bolded) since the overall combination profiles a dynamic relation and not a static one.
The situation type meanings in phrasal verbs exhibit fairly complex patterns with a number of variables at play for each sense. One important variable is the polysemy of the verb and the particle and the way they interact in each particular use. While the particle makes a specific contribution in one use, it can make a very distinct contribution in another. Due to this mutability, a single phrasal verb can denote multiple situation types depending on the contexts of use. For instance, take off denotes a starting point meaning in the Leave Sense, and an endpoint meaning in the central sense. Moreover, a single use of the phrasal verb can denote multiple situation types simultaneously. An example of this is turn off in the Deactivate meaning, which denotes a terminative situation type, in addition to the endpoint meaning.
To summarize, examining the various uses of phrasal verbs in the data showed that a number of criteria should be taken into account when analyzing situation types in phrasal verbs:

1) The aspectual class of the sentence (a bounded event vs. an unbounded event)
2) The situation type of the verb in the particular use
3) The situation type of the particle in the particular use
4) The way the two components interact in the construction:
   a) Accounting for the conceptual meaning of the situation type combination and the embodied experience
   b) Accounting for all (i.e. more than one) contributions made by each particle

Finally, the analysis of situation types proposed in this study is limited to a total of 16 phrasal verbs. In order to provide a more comprehensive account of situation types, more phrasal verbs and a larger corpus data should be investigated. Moreover, the corpus data is mainly based on news and academic registers, and consequently certain colloquial uses may not show up in the data. Investigating different genres of speech can incorporate situation types in more informal uses.
Chapter 6  Constraint II: The importance of embodiment

6.1 Introduction

As seen in the previous chapter, situation type contributions offer potential explanations for why certain verbs and particles tend to combine more frequently than others. In this chapter I will account for a number of other constraints on verb-particle combinations in addition to situation type. For this purpose, I will compare the spatial and embodied properties of a set of high and low frequency particles in COCA. The comparison between frequency of use and the embodied meanings associated with the spatial particle offers interesting insights into why certain particles tend to appear more frequently in phrasal verbs.

In this study, adverbial particles with a frequency ranking of below 10 are considered as high frequency particles (bolded in Table 9). Spatial particles with a ranking of above 10 are considered as low frequency since this group seems to appear considerably less frequently in phrasal verb constructions\textsuperscript{33}. Except for *off* and *away*, the spatial particles selected for the frequency analysis are among the set of particles analyzed by Tyler and Evans (2003). Spatial particles *back* (#3), *on* (#5), *around* (#9) and *about* (#10) which are not included in Tyler and Evans’ (2003) analysis were also not included in the frequency analysis.

Tables 9 and 10, present the frequency measures for the spatial particles examined in this section. Note that in COCA some spatial particles are tagged as adverbial particles.

\textsuperscript{33} Some studies including Gardner and Davis (2007) have similarly considered this set of adverbial particles as frequently participating in phrasal verbs.
(RP) and some are only tagged as prepositions (II). Therefore, the frequency measures are reported in two separate tables: one for RP and one for II. Some spatial particles are tagged as both adverbial particle (RP) and preposition (II) in COCA.\footnote{From among this group only the frequency measures of over and under are reported in both tables for later comparison between spatial particles presented in the proceeding discussion. When over and under are compared with adverbial particles their ranking as an adverbial particle is reported and when they are compared with other prepositions their ranking as a preposition is reported in the study.}

Section 2 explains the situation type contributions made by some low frequency particles, and compares them with the high frequency particles investigated in the previous chapter. Section 3, examines the spatial particles of vertical axis including up, over, above, down, under and below, comparing them in terms of frequency and embodied meaning. In section 4, I will investigate the different spatial and embodied aspects of particles with bounded LMs including out, in, into and through. In section 5, I will examine spatial particles of orientation including after, before, to and for, comparing the different uses in terms of frequency, relational status of TR and LM, and embodied meaning. Finally, section 6, presents a summary of the main points discussed in this chapter.

**Table 9. Ranking and Frequency measures of adverbial particles in COCA**

<table>
<thead>
<tr>
<th>Particle</th>
<th>Ranking</th>
<th># as RP</th>
</tr>
</thead>
<tbody>
<tr>
<td>UP</td>
<td>1</td>
<td>890560</td>
</tr>
<tr>
<td>OUT</td>
<td>2</td>
<td>783003</td>
</tr>
<tr>
<td>DOWN</td>
<td>4</td>
<td>373578</td>
</tr>
<tr>
<td>IN</td>
<td>6</td>
<td>230684</td>
</tr>
<tr>
<td>OFF</td>
<td>7</td>
<td>210689</td>
</tr>
<tr>
<td>OVER</td>
<td>8</td>
<td>192578</td>
</tr>
<tr>
<td>THROUGH</td>
<td>11</td>
<td>36878</td>
</tr>
<tr>
<td>UNDER</td>
<td>15</td>
<td>4046</td>
</tr>
<tr>
<td>AWAY</td>
<td>16</td>
<td>356</td>
</tr>
</tbody>
</table>

Note. # = token frequency. RP=Adverbial Particle
Table 10. Ranking and Frequency measures of prepositions in COCA

<table>
<thead>
<tr>
<th>Prepositions</th>
<th>Ranking</th>
<th># as II</th>
</tr>
</thead>
<tbody>
<tr>
<td>TO</td>
<td>2</td>
<td>4408597</td>
</tr>
<tr>
<td>INTO</td>
<td>9</td>
<td>761948</td>
</tr>
<tr>
<td>AFTER</td>
<td>13</td>
<td>358677</td>
</tr>
<tr>
<td>OVER</td>
<td>14</td>
<td>345720</td>
</tr>
<tr>
<td>BEFORE</td>
<td>19</td>
<td>198701</td>
</tr>
<tr>
<td>UNDER</td>
<td>20</td>
<td>185812</td>
</tr>
<tr>
<td>ABOVE</td>
<td>45</td>
<td>50070</td>
</tr>
<tr>
<td>FOR</td>
<td>51</td>
<td>44652</td>
</tr>
<tr>
<td>BELOW</td>
<td>65</td>
<td>20936</td>
</tr>
</tbody>
</table>

Note. # = token frequency. II= preposition

6.2 Situation type in low frequency spatial particles

In general, the low frequency particles do not show much tendency for situation type contribution. From among the low frequency particles only *through*, *for* and *to* exhibit some situation type characteristics explained in the following section.

According to Tyler and Evans (2003) the central sense of *through* designates a relation in which the TR occupies a contiguous series of spatial points with respect to a bounded LM. In this relation, the LM is conceptualized as having an interior, an exterior, and a boundary; the series of spatial points are connected from the entrance point of the LM to the exterior side or the exit point. The functional element associated with this spatial particle is that of *path*. Tyler and Evans argue that the functional element of path associated with *through* arises due to the way humans interact with the notion of goal in real life. In the course of obtaining a goal we typically start from a specific point in space and end in a particular point. Thus, the notion of path inherent to *through* is a result of a spatial goal being connected to a spatial source via a series of continuous points. While
motion seems to be relevant to the conceptualization of *through*, it is not part of the spatial meaning denoted by this particle (Tyler & Evans, 2003).

Since the notion of goal is fundamental to the interpretation of *through*, the particle can denote an endpoint contribution in a phrasal verb. The following examples from the corpus illustrate the endpoint meaning of *through*:

(1) All the information is in there, you may *look through* the documents in your own time.

(2) "You've got to put a gun to your head to *get through* the novel, " Mann said.

In the above examples the particle denotes the completion of the action designated by the verbs *look* and *get*. The completion meaning of *through* rises as a result of the exit point or far side of the LM being reconceptualized as completing the process (Tyler & Evans, 2003). In examples (1) and (2), the process of examining the applications (LM), and reading the book (LM) are conceptualized as reaching an endpoint, and hence completion.

Further investigation of *through* shows that in certain contexts of use the particle can denote a continuative situation type:

(3) She would let me *walk through* the water as long as I didn't get in much deeper than my ankles.

(4) The steel wrist and ankle cuffs used to *hold* him *through* full-moon night.

The continuative meaning of *through* arises due to the notion of path inherent to the central sense. In this construal, the TR occupies contagious series of spatial points with respect to LM, and therefore the path taken by the TR is conceptualized as being
continuous rather than momentary. The conceptualization of path in the spatial scene denoted by *through* in the continuous sense is similar to the path taken by the TR in *out*. As previously noted, the continuous meaning of *out* arises due to our frequent embodied experience with liquids and containers. Once the liquid is located exterior the boundaries of the LM (e.g. *water pouring out of the bottle*), the path it takes can be conceptualized as a continuous path.

The spatial particles *to* and *for* may also assume an endpoint contribution in certain contexts of use. In Tyler and Evans’ account, *to* and *for* are to some extent semantically similar in that they both denote the orientation of the TR towards the LM. A minimal pair illustrating this seemingly synonymous use is *John ran to the hills* vs. *John ran for the hills*. In both uses, the LM is conceptualized as a goal and the TR is oriented towards the goal. However, the two spatial particles differ in the functional element or the status of the TR and LM. While the central sense of *to* profiles a primary physical goal, the central sense of *for* profiles a secondary or oblique goal. For instance, in *John ran to the hills*, the TR (John) is oriented towards the LM (hills), which is conceptualized as the primary physical goal, and reaching the goal is emphasized. However, in *John ran for the hills*, reaching the hills in not the John’s primary goal, but rather provides a means to an ultimate purpose. Here John’s ultimate goal of running for the hills can be interpreted as winning the race, and so running for the hills is conceptualized as a secondary or oblique goal. Conceptualizing the LM as a means for achieving a certain purpose involves some degree of intentionality on the actor’s part. For instance, winning a race involves strategic and purposeful planning. Thus, as noted by Tyler and Evans (2003) intentionality is an
important property of the functional element associated with the spatial particle *for*, but not with *to*.

Based on the above analysis, it is clear that both *to* and *for* can denote an endpoint situation type. The following examples demonstrate more uses of *for* and *to*:

(5) I went *to* the store last week. (store=primary goal)

(6) Both of them reacted to the gunfire, dropping their cigars, and hurrying for the stairs. (office= secondary goal)

In certain construals, *for* can also denote the starting point of the action. In this use, the beginning of the action or the early stages of a journey undertaken by the TR is highlighted. The starting point meaning is a result of the TR’s intentional process of selecting a particular goal or destination and consequently initiating a course of action. The following examples illustrate this use of *for*:

(7) They *head for* town to buy groceries.

(8) Mary left the courthouse with her attorney and *departed for* New York the next day.

In the above examples, the combination of the verb and the particle (*head for*, *departed for*) highlights the beginning phase of a journey. The use of *for* rather than *to* in these sentences, can be explained by the notion of intentionality inherent to *for*. In general, early stages of a journey such as choosing a mode of travel, a certain path and destination is an intentional process, which is compatible with the semantics of *for* but not with *to* (see also Tyler & Evans, 2003, p.147).
In general, while low frequency particles such as *through*, *to* and *for* exhibit some situation type characteristics, there is not much variety in the meanings denoted by these particles. On the other hand, due to various embodied experiences associated with the high frequency particles and the dynamic functional element, these particles contribute more often to situation types in phrasal verbs. As illustrated in table 8, depending on the context, the particles *up*, *out*, *off* and *over* can denote up to 5 different situation types, providing evidence for their polysemous and highly developed nature compared to the low frequency particles.

The situation type properties of high frequency particles provide some explanation for why this group of particles participates more often in phrasal verbs than low frequency particles. As explained in the previous chapter, the integration of the situation types denoted by the two predicates depends on the correspondence between the specifications of the verb and the schematic relational status of TR and LM, which constitute the base for the particle’s meaning. Due to the larger semantic network and the variety of situation types in high frequency particles, the likelihood of correspondence between the specifications of the verb and particle increases in the combination. In other words, there is a greater chance of correspondence between the TR’s and LM’s of the two predicates when appearing in a phrasal verb construction. For instance, in the Evaluate Sense of *turn over*, the Repetition Sense of *over* corresponds to the iterative nature of the action denoted by the Rotate Sense of *turn*, and as a result the iterative situation type meaning of the phrasal verb is subsumed. However, with low frequency particles, there is overall smaller chances of correspondence between the situation types denoted by the
verb and particle. For instance, in comparison to *over*, the semantics of *for* allows only for endpoint and starting point situation types in certain contexts of use, and other types such as the iterative meaning are not denoted by *for*. Therefore, when combined with verbs of iterative nature such as *turn* or *go*, no correspondence takes place for generating the iterative situation type. Due to the constraints, certain situation type meanings are not subsumed from verb-particle combinations that include low frequency particles, and consequently there is lesser tendency for the verb and particle to combine.

As previously noted, a number of important variables are at play with regards to the situation types in phrasal verbs once they occur in context. These variables should also be taken into account in the analysis of low frequency phrasal verbs. Among these criteria are the aspectual class of the sentence, the situation type of the verb and particle in that particular use, and the way the verb and particle interact in the construction. The combination of all these variables gives rise to a fuller more comprehensive account of situation type in phrasal verbs.

### 6.3 Spatial particles of vertical axis

English has developed a subset of spatial particles that involve verticality. This set of particles include *up, down, over, under, above* and *below*. Interpreting the various meanings of these spatial particles necessarily involves some reference to the vertical axis. For instance, in the sentences *The painting is above the sofa* vs. *The ship is below the surface of the water*, the meanings of *above* and *below* cannot be understood without
reference to the vertical axis. This set of particles form lexical contrast sets such that understanding part of the meaning of each particle is dependent upon the meaning of another spatial particle in that domain. For instance, a number of patterns associated with *down* are inversely reflected in *up* including the functional element of the two particles. While the functional element of *up* is positive value, the functional element of *down* is negative value. A consequence of being *down* is that the TR becomes invisible and inaccessible and no longer exerts control or influence over the LM (Tyler and Evans, 2003). Although in terms of spatial configurations, these two particles seem to form opposites, they have developed quite different polysemy networks; many of the extended meanings are not necessarily in opposition. In some cases certain aspects of the meaning of the two seemingly opposite particles share the same spatial scene. For instance, both *up* and *down* denote a Completion Sense in which the endpoint of the action is marked by the particle.

An examination of this subset of spatial particles in COCA shows that particles involving a high vertical position including *up*, *over* and *above* are significantly more frequent than those involving a low vertical position including *down*, *under* and *below*. Frequency rankings for this subset of particles in COCA are as following: *up* (RP) #1 vs. *down* (RP) #4, *over* (RP) #8 vs. *under* (RP) #15, and *above* (II) #45 vs. *below* (II) #65. This finding is consistent with the main argument proposed in this study pertaining to our embodied experience with the world. Due to human anatomy and top-bottom nature of our bodies it is more likely that we interact with objects or entities that are located in a 35

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35 The importance of recognizing the vertical and horizontal axis in interpreting some spatial particles is also discussed in Langacker (1987) and Talmy (2000).
high or up position. In general, objects that are higher tend to be more visible, more familiar and accessible to human beings. Most often interacting with objects that are in a low or under position requires extra effort. For instance, objects that are above the ground’s surface are typically more accessible than objects that are below the grounds surface, and in order to gain access to the underneath world humans need to devote more time and effort. Moreover, as noted by Tyler and Evans, we are located on the earth’s surface, which provides the most basic LM for the orientation of our bodies, and considering that the earth’s surface is opaque we cannot easily access the underneath world. Taking this into consideration, it not surprising that most of the language we use for describing space involves spatial relations associated with the higher end of the vertical axis. Consequently, particles involving a high vertical position appear rather frequently in phrasal verbs.

Further examination of this subset of particles in COCA shows that particles denoting proximal relation between the TR and LM are significantly more frequent than those denoting distal relation. The comparison involves the spatial particles over (II) #15 vs. above (II) #45, and under (II) #20 vs. below (II) #65. Following Tyler and Evans, over and under denote a relation in which the TR is proximal and within potential reach of the LM, while above and below denote a distal relation between the two spatial components. Thus, what distinguish these particles from one another is the contrasting functional element of proximity and distance, which, in turn, affects the potential for interaction between the TR and LM. Recognizing this distinction is crucial to the
interpretation of the various uses of the particles, which code relative vertical location of
the TR with respect to the LM.

The fact that particles involving proximity are more frequent can also be
explained in terms of our embodied experience. As humans we tend to interact more with
objects that are closer and within potential reach. These objects are typically more salient
and accessible to us compared to objects that are located in a far location. We tend to
have more control over our immediate surrounding and potentially we are more aware of
it. Therefore, the language we use to describe the immediate environment is far more
frequent than the language we use for explaining distal relations such as when objects are
in a below or under relation with respect to the ground.

The notion of distal and proximal relations also applies to off (RP) #7 and away
(RP) #16, in the horizontal axis. As previously explained, the contrastive set off and away
differ in the way the distance between the TR and LM is conceptualized. The central
sense of off denotes a relation in which the TR is separated from the LM such that the two
remain in a proximal relation. However, in the spatial scene denoted by away, the TR is
oriented ‘away’ from the LM and is far from it such that the LM is no longer in the TR’s
realm of influence. Minimal pairs of sentences with off and away demonstrating this
difference are provided below:

(9) Please 

please take off your hat (result: the hat is removed from the person’s head and
probably in his hand)
(10) Please take away your hat\textsuperscript{36} (result: the hat is in a distance from its original location such that is no longer readily accessible)

(11) Keep those dogs off her (stop the dogs from touching or attacking her)

(12) Keep those dogs away from her (prevent them from getting near her/ make sure there is a considerable distance)

As can be seen from these examples, while both particles denote a sense of separation and detachment from the LM, spatial scenes including away underscore the distance between the spatial elements in the scene; implying the notion of ‘being out of reach’. This conceptualization is not necessarily implied with the uses of off. Similar to the analysis of particles in the vertical axis (e.g. over vs. above), the higher frequency of off compared to away, can be explained in terms of the notion of proximal vs. distal relations and our embodied experience. As mentioned above, our physiology and perceptual system is built such that we are typically more aware and in control of our immediate surroundings rather than remote locations, which largely influences the way we use language.

Another possible reason for the frequency distinctions between off and away can be related to the situation type characteristics denoted by the two particles. Unlike off, the spatial particle away does not denote a telic contribution; neither can it denote a starting point meaning. Rather in most contexts of use, away denotes a continuative situation type in which the enduring nature of the action is implied. For instance, in the sentence He moved away from the signpost, the particle denotes a sense of continuation to the actor’s

\textsuperscript{36} We can think of a context where a child is playing with the hat, and person A tells person B to take away their hat so that is no longer accessible to the child.
oriented movement further at a distance from the signpost (LM). Due to this characteristic, *away* rarely combines with achievement verbs such as *cut, leave* and *kick*, which imply a punctual event. On the other hand, *off* quite frequently combines with achievement verbs as in *cut off, leave off* and *kick off*. Consequently, a large number of verbs are excluded from the list of possible verbs combining with *away*, which in turn reduces the number of phrasal verbs with this particle.

### 6.4 Spatial particles with bounded LMs

A number of particles in English mediate a relation in which the LM is conceptualized as being bounded or contained. A bounded LM is defined in terms of a three dimensional object with an interior, a boundary and an exterior. The set of particles denoting spatial relations with bounded LMs include *in, into, out (of)* and *through*. As previously noted (Section 4.3.1), different aspects of our experience with bounded LMs can give rise to the various meanings of this subset of particles. The most prominent consequence of our interaction with bounded LMs is the embodied experience of containment. Containment involves a number of functional consequences including among them: delimiting the movement of the LM, providing support, lack of visibility (opaque LMs) and providing protection. These consequences are reflected in the meanings of *in* and *out*. Another important consequence of interacting with bounded LMs is our experience with traversing bounded LMs i.e. passing from one side of a bounded object to another side as in walking from one end of a tunnel to the other end (*walk through* the tunnel) or crossing the boundaries of the LM as in running from outside a
room to the inside region of the room (run into the room). In such experiences, a bounded LM is conceptualized as a path or trajectory traversed by the TR (Tyler & Evans, 2003).

The frequency data for this set of particles in COCA shows that \textit{out} (RP) #2 is significantly more frequent than \textit{in} (RP) #6 and \textit{through} (RP) #11. The high frequency of \textit{out} as an adverbial particle compared to \textit{in}, and \textit{through} can be explained in terms of our interaction with bounded LMs.

The functional consequences associated with the TR being exterior to the bounded LM has its own merits. Objects that are located exterior to the boundaries of the container are usually more salient and accessible compared to objects that are located inside. This is particularly the case with opaque LMs where the interior region is not visible to the viewer who is located in the exterior region. As mentioned before, objects that are more salient are usually more visible and hence known to the viewer. Additionally, objects that are \textit{out} are no longer constrained by the boundaries of the LM, and hence become more mobile and free. In other words, the location of the object is no longer assured by the location of the LM but rather the object becomes independently located.

The notion of non-restriction associated with \textit{out} can be best understood when compared with the different uses of \textit{in}. Unlike \textit{out}, the various uses of \textit{in} are mostly associated with the notions of restriction and delimitation. The following section briefly draws on some of these distinctions.

In Tyler and Evans’ analysis, the spatial scene of \textit{in} designates a relation in which the TR is located within a three-dimensional LM and the functional element involved in
the scene is that of ‘containment’. One ubiquitous consequence of containment is that bounded LMs constrain the movement of the TR or in other terms locate the TR with surety. For instance, liquid in the container (as in water in the bottle) constrains the liquid it contains, to the specific limits of the container. This aspect of containment has given rise to a commonly used cluster of senses for in termed as the Location Cluster (Tyler & Evans, 2003). The senses under this cluster imply that the movement or action of the entity is constrained as a result of being enclosed by the bounded LM. For example, the In Situ Sense denotes that the TR crucially remains co-located with the space highlighted by the LM for an extended time period and for a particular reason (e.g. *What are you in for?*-asked in a police station- or *He stayed in for the evening*). The State Sense is used with certain states including our mental or emotional states, which can be conceptualized as constraining the TR or posing certain difficulty for the TR (e.g. *We are getting in trouble, We are in debt*)37. Thus, what is common to all uses of *in* in the Locational cluster is the constricting nature of the experiences associated with *in*.

Parallel to *in*, some non-spatial experiences with *out* denote the notion of overcoming the surrounding restrictions. For instance, we frequently use *out* in contexts such as *getting out of trouble* or *holding out* in a bad situation. Similarly, the Not In Situ Sense of *out* denotes the person leaving the house (or their default location) for a more

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37 As mentioned by Tyler and Evans (2003) other particles such as *on* and *at* can also denote a State Sense. However, an important motivation for the use of *in* with particular states seems to be related to the notion of constriction. For instance, when someone is *in love*, they are committed to this feeling and cannot easily leave the emotional state of love. On other hand, when someone is *on the pill*, or *at peace* it is more likely that the person voluntarily chose this particular state and its easier for them to leave the state (p.188).
desirable situation as in going out on a date. There are of course some uses of out which appear in less desirable contexts such as objects no longer being available (e.g. run out of milk) or destroyed (e.g. taking out a country). However, examining the network of senses associated with the spatial particles in and out shows that unlike in most uses of out are associated with the notions of convenience and non-restriction.

Taking into account the functional consequences of non-containment, out seems to be a functionally enriched particle, providing potential explanation for why it appears so frequently in phrasal verb combinations.

There are potential reasons for why into (II) #9, and through (RP) #11 participate less frequently in phrasal verbs. Both into and through denote a sense of traversing or crossing the boundaries of the bounded LM. As previously noted, the central sense of through designates a relation in which the TR occupies a series of spatial points with respect to a bounded LM such that the LM is transected with respect to an entrance point and exit point (Tyler & Evans, 2003). The functional element associated with this spatial particle is that of path. In the relation denoted by through, the path is conceptually contained (e.g. I walked through the tunnel or I walked through the field) which restricts its use. In general our experience with paths is more often accompanied with certain types of verbs, in particular motion verbs. Examining the first 50 frequent verbs appearing in phrasal verb construction with through showed that 60% of the verbs are non-stative verbs encoding some type of motion as in walk, pass and sweep. Therefore, certain verb-particle combinations are implausible or highly infrequent with through. For instance, the verb hold is a non-motion verb and the phrasal verb hold through is among
these low frequency phrasal verbs. The following examples from COCA show the restricted uses of *hold through*:

(13) The director says that traffic may *hold through* the summer.

(14) Frost usually kills tender plants, but during the winter the garden retains a few herbs to *hold us through* the cool season.

This use of the phrasal verb is drawing from the Maintain Sense of *hold* and the Temporal Sense of *through* identified by Tyler and Evans (2003). Drawing on the notion of passage of time, the Temporal Sense denotes a time frame for which the action or state is continued. Similarly, in this use *hold through* denotes a sense of maintaining the state of the TR over a particular time period. The two contexts of use involve the extended uses of the phrasal verb. However, *hold through* in the central sense is not linguistically realized, meaning we cannot use the phrasal verb in the sense of physically holding an object in a conceptually contained path. After all there is no good reason for why one would perform such action, unless we think of a rare situation where two people would *hold hands through* a tube!

### 6.5 Spatial particles of orientation

A subset of particles in English involve an element of orientation i.e. in the spatial scene denoted by these particles either the TR or the LM is oriented. Among these particles are *up, down, after, before, to* and *for* (Tyler & Evans, 2003). The conceptual orientation of top/bottom or lateral partitioning associated with these particles arises as a result of the way humans interact with certain entities. Previous studies (e.g. Talmy, 2000; Fillmore 1971) have predicted a number of factors motivating orientation,
including among them our perception of the entity, its shape (pointed or flat), the entity’s movement and the way it is used. Thus, the notion of orientation motivating this set of particles is largely dependent upon our construal of the scene, as the same scene can be viewed in multiple ways (Tyler & Evans, 2003). For instance, we can think of a particular scene such as one involving a woman sitting outside her house. In one construal, the same scene can be viewed as neutral with respect to orientation since the women’s orientation is not necessary to our interpretation of her being located exterior to the house. In another construal, the orientation of the woman can become relevant to the scene as in *The women is walking to her house*. In this use, the woman is oriented towards her house, and the *house* (LM) is conceptualized as goal. Thus, the relational status of the entities and the construal of the scene are important in the way orientation is conceptualized by the language user.

As previously noted, the polysemy network of *up* is complex compared to other particles. This is mainly because there is a large set of embodied experiences and important consequences correlating between a human being in a physically elevated state and the way humans interact with their surroundings (Tyler & Evans, 2003; Lakoff & Johnson, 1980). The physical asymmetry of human body not only influences many of our interactions with the environment, but is also largely reflected in language, in particular the various uses of *up* and *down*. The basic orientational metaphors with *up* and *down* are evident to this fact (Lakoff & Johnson, 1980). Orientational metaphors give a spatial orientation to the concept. Some, which we encounter in our daily lives, are MORE IS UP, GOOD IS UP, HAPPY IS UP and the corresponding counterparts with *down* (Lakoff
and Johnson, 1980). The UP-DOWN spatialization metaphors are also fundamental to many uses of phrasal verbs such as rise up, go down, brighten up, and many more. Thus, due to the primary set of embodied experiences and important consequences correlating with humans being in a upright position, up and down have come to be among the most frequent, and highly polysemous particles in English and some other languages.

The contrastive pair after and before also denote orientation. Some examples of verb-particle combination with these spatial particles in the corpus are provided below:

(15) Fiona stood before the mirror in her bedroom.

(16) We are going to consider every option put before us by the Federal Highway Administration.

(17) Reporters often have to chase after newsmakers for the next big story.

(18) When he identifies a problem he goes after it.

After and before while spatial in nature, both denote a temporal sequence of events (Talmy, 2000; Tyler & Evans, 2003). Temporally located events, can be compared to sequences of objects in motion. For instance, in a marathon, a runner who is spatially ahead of others gets to the finish line earlier, in other words he arrives first. Due to the tight experiential correlation between motion and the sequence of events such as arrival and departure, before and after have developed a Sequential Sense (Tyler & Evans, 2003). Before denotes sequence of events such that the earlier event (the event that occurred earlier in time) is highlighted with respect to the later event as in I washed my hands before I had dinner. In this use, the event of washing hands occurred earlier in time with respect to the event of having dinner. Parallel to this analysis, after denotes sequence
of events such that the later event is highlighted in the scene as in *I had dinner after I washed my hands*.

An examination of the frequency data shows that *after* (II) #13 is more frequent than *before* (II) #19. Consistent with the previous analysis of spatial particles, the higher frequency of *after* can be explained in terms of our embodied experience and cognitive mechanism. According to Talmy’s Sequence Principle earlier events serve as Ground or reference points for more recent events, which serve as the Figure. Thus, in the sentence *I cried after I heard the news* the later event of crying (event 1) is the Figure and the earlier event of hearing the news (event 2) is the Ground. Events that occur later in time are more salient to us, since they are more recently on the scene and in the realm of awareness (Talmy, 2000; Evans & Green, 2006). According to the Implicational Universal (Talmy, 2000), languages means of expressing typical word order is always as simple or simpler. Therefore, *after* which marks the more salient event first in the sentence takes precedence in the inverse pair *after* vs. *before*. While in English the lexical means for expressing a *before* relationship is equally simple, some languages such as Atsugewi, the notion of *before* is expressed in a more complex way (in this case by adding two independent words to the *after* verb form) (Talmy, 2000). Nonetheless, the relationship denoted by *after* is less marked than the relationship denoted by *before* across languages. Thus, it is not a surprise that English speakers prefer using *after* more often than *before* in phrasal verb combinations. Based on this analysis, the discussion pertaining to the embodied uses of the two particles is consistent with the corpus finding that *after* is more frequent than *before*.
The spatial particles *to* and *for* also involve orientation. As previously noted, *to* and *for* are semantically similar in certain contexts of use. Both particles can denote orientation of the TR towards a LM, which is conceptualized as a goal (e.g. *John ran to the hills* vs. *John went for the hills*). However, the two spatial particles differ in the functional elements. While the central sense of *to* profiles a primary physical goal (e.g. *the hills*), the central sense of *for* profiles a secondary or oblique goal. In the above example, *the hills* are the secondary goal, and winning the competition is the primary goal or the ultimate purpose of the action. Due to the different conceptualization of the goal (LM), *to* and *for* have developed different networks of meaning.

An examination of the frequency data shows that *to* (II) #2 is far more frequent than *for* (II) #51. Some examples of verb-particle combinations with *to* and *for* in the corpus are provided below:

19. Only 19 percent of bank lending last year *went to* small businesses.

20. If the watch is not claimed in 30 days, the street sweeper *gets to* keep it.

21. Scientists and engineers were not encouraged to *look for* problems.

22. Who do you think *paid for* his education at BYU and Harvard?

The difference in frequency ranking can be explained in terms of the properties of the LM in the spatial configuration denoted by the two particles. As noted by Tyler and Evans (2003) in the central sense of *to*, the LM is given a high degree of saliency due to orientation of the TR towards the primary goal. For instance, in the example *The clock tower faces to the east*, the LM (the east) assumes a certain degree of focus. In certain contexts the role of the LM, which is to locate the TR, is even more prominent in the
scene, giving rise to the Locational Sense of *to*. In such uses of the particle, the TR is no longer oriented and the LM acts as a highly salient reference point with respect to the TR’s location. An example of this use is the sentence *Please take the book to the front of the class*. In this example, the front of the class (LM) is given particular saliency in the scene and its role is to locate the book (TR). Thus, the saliency of the goal is an important aspect of the meaning of *to*, which distinguishes it from *for*. As mentioned repeatedly in this study, entities that are salient are more familiar and hence more known to the viewer. Similarly, since primary goals are typically more salient, they are more known to the viewer compared to secondary goals. Therefore, the spatial particle *to* which profiles a primary goal is used more frequently compared to *for* which marks secondary goals. The difference in the conceptualization of the LM seems to provide some explanation for the higher frequency of *to* compared to *for*.

Further examination of the different senses of *to* shows that in most senses, the TR and LM are proximal to each other. The senses of *to* demonstrating proximal elements are the Locational Sense (explained above), the Contact Sense, the Attachment Sense, and the Comparison Sense. The Contact Sense denotes a relation of contact between the TR and LM arising due to the experiential correlation of achievement of a particular goal and contact/closeness between the elements in the scene (e.g. *Keep food from sticking to the bottom of the pot*). The Attachment Sense, which is closely related to the Contact Sense, denotes a relation of attachment or strong connection between the TR and LM (e.g. *John and Mary are married to each other*). Finally, the Comparison Sense is formed due to the act of comparison typically involving the embodied experience of
bringing two objects close to each other for examination. Through pragmatic
strengthening this sense has become a distinct sense for to (e.g. His writing is good
compared to his brother). In all these uses the TR is proximal to the LM such that in
certain contexts, the TR becomes in contact or attached to the LM. The fact that the TR-
LM relation denoted by to involve proximity provides another explanation for the
frequency of this particle compared to for. As previously noted, objects that are located in
our vicinity, are typically more salient, more under control and more accessible to us
compared to objects that are located in a far location. Therefore, the language we use to
describe our immediate environment is much more frequent than language used for
explaining distal relations.

6.6 Summary and main points

The comparison between high and low frequency spatial particles in COCA
shows a tight relationship between frequency of use and the embodied meanings of the
particle. The reason why certain particles appear so frequently in every day language is
mainly due to the association of a larger set of embodied experiences with the different
uses of these particles. On the other hand, low frequency particles appear less frequently
in phrasal verbs since there are fewer number of embodied experiences associated with
the meanings of the particles in this set. Consequently, in most cases lower frequency
particles come to develop a smaller semantic network with fewer extended senses.
Within-group comparison of low frequency particles provides further evidence for the
key role of embodiment. Spatial particles such as to, after and above are more frequently
used than their corresponding pair in the contrast set i.e. *for, before, and below* as a result of the type of embodied meanings.

Along the same lines, a number of reasons can be proposed for why certain verb-particles do not combine in a phrasal verb construction. One reason for the implausibility of certain constructions is simply because the combinations do not have correspondences in real life experiences. For instance, combinations such as *turn through, kick into, hit up, break over, and drink off* are not linguistically realized since there is no real human experience that maps on to these constructions. In other terms there is no corresponding embodied experience that motivates the use of such phrasal verbs in the first place. Another potential explanation for the implausibility of certain combinations is the contradictory embodied meaning associated with the verb and the particle. Among these phrasal verbs are *drop up, fall up, rise down*, and *grow down*. In all these combinations, the verb and particle highlight a particular pole on the vertical axis, and the embodied experience associated with the verb is incompatible with that of the particle. Moreover, while some contrast sets of phrasal verbs are grammatical in English (e.g. *give in vs. give out, look in vs. look out*) with some contrast sets, one combination is plausible, while the other is not linguistically realized. For instance, we use *hold over* but not *hold under*, and *look over* but not *look under*. Again some of this incompatibility can be explained in reference to our embodied experience and the anatomy of our bodies. In general, we are less often involved in actions pertaining to the lower end of the vertical axis rather than the higher end, which could be a potential reason. However, not all instances of implausible uses are easy to explain. For instance, it is more difficult to explain why *find*
"out" is linguistically realized but not "find in." Or it’s less clear why certain verbs combining with "up" and "out" have a completion sense and some are not used in this sense as in "fight up" or "fight out." Explaining the constraints in some verb and particle combinations requires further examination of the synchronic and diachronic uses of the verb and the particle across a wide range of data, which is not within the focus of this study.
Chapter 7  Conclusion

In this study, I have examined the internal workings of sixteen frequent and highly polysemous English phrasal verbs in a set of naturally occurring data. Tyler and Evans’ (2003) Principled Polysemy Model was used to analyze the semantics of the particles, while the meanings of the verbs were suggested in this study. Analyzing multiple meanings of the phrasal verbs provided strong evidence for the compositional nature of phrasal verbs, showing that the meaning of each phrasal verb is subsumed through the interaction of one sense of the verb with a particular sense of the particle. Rather than being fully compositional, the meaning of these phrasal verbs is largely based on our conceptual knowledge and background information of the world. Langacker (1987)’s approach to partial compositionality was used as a framework for explaining the internal relations between the two components of the phrasal verb. According to this analysis, the meaning of a phrasal verb is formed by the conceptual integration of the substructures of the component entities, which-in this case- are the substructures of the verb and the particle. In most cases the meaning of a novel structure highlights only limited aspects of the composite meaning alone, and the rest is provided by the speaker’s embodied experience and conceptualization of the physical world.

I have also proposed a number of constraints on verb and particle combinations, explaining why only certain meanings of the verb and particle tend to combine in a phrasal verb construction. A thorough analysis of the semantic networks of the verbs and particles shows that the situation type meanings associated with the composite forms in a phrasal verb impose certain restrictions on the construction. Unlike previous accounts to
lexical aspect in phrasal verbs, the situation type meanings identified in phrasal verbs in this study exhibit fairly complex patterns with a number of variables at play for each sense. Among these variables are the polysemy of the verb and the particle and the way they interact in each particular use. While the particle denotes a specific situation type contribution in one use, it can make a very different contribution in another. Due to this mutability, a single particle can denote multiple situation types depending on the construal, which provides some explanation for why it tends to combine with certain uses of the verb. Consistent with the semantic analysis of phrasal verb meanings proposed in this study, situation types in phrasal verbs were found to be compositional, with our cognitive mechanisms playing a crucial role in the formation of meaning.

The analysis of high and low frequency spatial particles provided further insight into the constraints. The comparison between the two groups showed a tight relationship between frequency of use and the embodied meanings of the particle. High frequency particles such as *up, out, off* and *over* are associated with a larger set of embodied experiences, and consequently have come to develop a larger, more complex semantic networks compared to low frequency particles. On the other hand low frequency particles such as *for, to* and *through* are semantically less enriched and have developed fewer embodied senses. Within-group comparison of low frequency particles (e.g. *after* vs. *before, above vs. below*) further supports this claim.

The findings pertaining to embodiment and frequency of use are consistent with the main principle advocated in this study i.e. the partial compositionality approach to meaning. The use of phrasal verbs in different contexts is not just confined to the literal
meanings of the composite structures alone but rather the various senses are deeply rooted in the embodied experiences and cognitive mechanisms originally motivating these uses. This view is different from the compositional approach to meaning which views lexical items as “building blocks” that are stacked in different arrangements in a complex form. In such accounts, the context and background knowledge associated with the lexical item are independent from its meaning. Yet, the analysis of phrasal verbs in this study shows that multiple cognitive resources are interacting in each use, with embodiment constituting an important role in the development of meaning.

The corpus used for identifying the senses included mainly two hundred instances of each phrasal verb. Due to the small sample size it is not clear whether the frequency counts suggested in this study reflect the frequency of phrasal verb senses in the entire corpus. Based on the findings in section 4.6, the coverage of senses the sampling of 200 instances provides seems to depend upon the raw frequency of the cases. For instance, *turn out* which has a much higher raw frequency (30,277) compared to *turn up* (7,288), and *turn off* (5,485) yielded a new sense and a different frequency count in the re-sampled data, while no additional senses were identified for the other two phrasal verbs. The higher the raw frequency, the higher the likelihood that resampling will reveal new meanings increases. Therefore, phrasal verbs with higher frequency counts deserve a larger dataset for the semantic analysis and 200 instances may or may not be an exhaustive coverage for the distinct senses. An alternative way of sampling the data would be to select the data proportionally based on the raw frequency of the phrasal verbs. In that case the sampling criteria is based on percentage rather than a fixed
number. For instance, for low frequency phrasal verbs such as *hold off* (1058) a reasonable minimum number can be analyzed (e.g. 10% or approximately 100 instances) and for higher frequency such as *turn out* (30277) a minimum percentage of the data (e.g. 1% or approximately 300 instances) can be selected. Sampling the data proportionally might provide a more representative set of senses for the phrasal verbs analyzed in the current study.

Another concern is the type of corpus used in this study. The COCA data investigated in this study, mostly involves excerpts from social media, news, novels and academic journals. Thus, the corpus does not represent all registers and it is likely that some of the less formal or colloquial uses do not appear in the COCA data. Examining phrasal verbs in informal speech occurring in every day interaction might provide a more full picture of these constructions.

Finally, while independent raters were used for coding the meanings, due to the nature of categorization, the model proposed in this study and other similar studies is partly subjective. Meanings of phrasal verbs and other lexical items are underspecified to a certain extent i.e. different interpretations can arise from the same word used in a particular sentence. This is not surprising as language users experience the world in a unique way and each individual may interpret similar sentences differently based on their conceptualization and background knowledge. More research carried out on the semantic analysis of phrasal verbs could minimize researcher bias.
Chapter 8  Future Implications of the study

The current study of the semantics of phrasal verbs sheds light on some of the complexities associated with verb-particle meanings discussed in literature. While previous studies in the CL approach have provided some insights into the polysemous nature of particles, none have looked at the semantics of the verbs and the way they interact with the multiple meanings of particles. The analysis of the internal working of phrasal verbs in this study provides a more accurate account of their polysemous nature, and tackles some of the theoretical questions concerned with the semantics of these lexical units. In addition, by analyzing the interaction between the components in a phrasal verb, we have been able to provide some explanations as to why specific meanings of certain verbs and particles are combining with each other, and what motivates the new uses, which are continuously increasing in every day language use.

This study has a number of implications for future research. In this chapter I will discuss the pedagogical implications of the study, followed by a discussion of other potential contributions of the study to future research.

8.1 Pedagogical implications

Foremost, the present study has potential implications for teaching phrasal verbs, as previous accounts have not provided a comprehensive and accessible rationale that can be adapted to learners. Different methods presented in grammar books and dictionaries present learners with some grammatical awareness; however, they do little to clarify the relationship between the various meanings of each verb and its particle, and how they can be used in real life contexts. Due to the belief that phrasal verbs are randomly paired,
learners often simply memorize all the various combinations independently. Textbooks
and dictionaries support this idea by treating phrasal verbs as “fixed expressions” within
a static model of grammar (e.g. Celce-Murcia & Larsen-Freeman, 1983). Celce-Murcia
and Larsen-Freeman (1983) define phrasal verbs as a highly productive lexical category
with certain unpredictability in meaning and form. For teaching the different variations,
they suggest using drills, short narratives and flashcards as learning aids. To test the
learner’s knowledge of the verbs, they recommend using tree diagrams and fill in the
blank exercises. Similarly, Richards, Hull and Proctor’s (2005) textbook presents learners
with a list of phrasal verbs, asking them to pair a certain phrasal verb and its definition.
While the sentences are intended to provide learners with useful clues to the meaning of
the constructions, there is no attempt made by the authors to explain the complexities
associated with the various meanings.

In summary, traditional approaches, in particular grammar books have failed to
provide a precise explanation for the semantic behavior of phrasal verbs. Language
learners can benefit from a methodology, in which the conceptual motivations behind the
various meanings of phrasal verbs and their systematicity are precisely explained. In fact
a number of studies in CL have called for the adoption of CL methodology in vocabulary
teaching (Boers & Lindstromberg 2006; Dirven 2001; Lindstromberg, 2010;
Lindstromberg & Boers 2005; Littlemore, 2009; Littlemore & Low 2006; Tyler & Evans
2004, Tyler, 2012) and few have discussed teaching phrasal verbs using a CL account
(e.g. Condon 2008; Rudzka-Ostyn, 2003). In a study by Condon (2008), CL treatment of
phrasal verbs was incorporated in an extended EFL course. The results of the study
suggested that CL insights can be beneficial for phrasal verb learning in particular when the link between the literal and figurative senses become more transparent to the learners. A more recent study by Tyler, Ho and Muller (2011) showed that a CL-based analysis of the polysemous prepositions to, for, and at, provided L2 learners with more plausible representations of the multiple senses of each preposition. The central sense of each preposition and the extended senses were presented to the learners through diagrams and numerous visuals. According to Tyler et al., the graphic representations of the meanings provide visual rubrics that can be beneficial for both teachers and leaners. Additionally, since the method draws heavily on embodied experience and experiential correlation arising from observation and interaction with the world, learners can relate the extended meanings to their own experiences.

Physical enactment of certain meanings of polysemous words can also facilitate the retention of the new senses. According to a number of studies (e.g. Lindstromberg & Boers, 2005; Duffelmeyer, 1980; Pavio & Walsh, 1993) physical enactment of vocabulary with motoric implication was found to enhance the retention of the figurative meanings in different proficiency levels. This type of instruction is consistent with a CL-based approach, which prompts for an embodied view of meaning. In a study by Lindstromberg and Boers (2005), advanced learners of English were exposed to Enactment and Mimed-based instruction (E & M) of a number of manner of movement verbs. The participants in the experimental group were asked to convey the meanings of a set of verbs to other participants in the same group through enacting the meanings and avoiding verbal descriptors. The results of the experiment showed benefits for both group
of participants i.e. the ones physically demonstrating the meaning and the one’s watching the demonstration. In particular, the E & M instruction was found to be a promising method for: 1) acquisition of words with motoric implications including manner of movement verbs, and 2) enhanced accuracy in the interpretation of metaphors containing the verbs (p. 205). Similarly, for teaching the phrasal verb meanings it might be useful to ask the students to act out some of the extended senses. Also depending on the meaning and context of use, simply watching the instructor demonstrate a particular sense might also facilitate learning.

Along the lines of a CL approach, the semantic analysis suggested in this study offers a basis for a motivated CL-based instruction of phrasal verb meanings. Explaining the polysemy networks of phrasal verbs through CL-based representations can provide learners with a much more systematic and transparent picture of English phrasal verbs. Potentially, the central sense of each phrasal verb can be presented through numerous visuals and aiding tools, followed by the CL-based explanations for the extended senses. The instruction can be also accompanied by a description of the cognitive and embodied motivation behind each extended sense through verbal explanation and/or enactment. Moreover, it might be possible to provide learners with a set of predictions that explain the constraints in the meanings of verb-particles combinations. Learners are often overwhelmed when confronted with a wide range of uses with several meanings. CL-motivated predictions can help learners better anticipate which senses of the verb and particle in a phrasal verb are combining with each other, hence providing a less daunting and more comprehensible representation of phrasal verb meanings.
Another direction for future research would be to examine the order and the variety of the extended senses presented to the learners. Potential research questions include 1) Whether teaching the most frequent extended senses first is more effective, and 2) Whether all the extended senses of a phrasal verb should be presented to the learners or only the more frequent senses should be focus. The mainstream methodology in CL studies has been to present the central (literal) sense first, followed by the extended (non-literal) senses (Boers & Lindstromberg 2006; Csabi, 2002; Condon, 2008; Lindstromberg, 2010; Rudzka-Ostyn, 2003; Tyler et. al. 2011). An interesting alternative would be to examine a method in which the most frequent senses are taught first (prior to the central sense), and to compare the efficacy of the different methods. Depending on the learners’ needs, it might be more beneficial for leaners to be presented with the repository of the most frequent senses of the phrasal verbs. In particular, some low frequency senses identified in the current study are archaic forms which are no longer prevalent in everyday language such as take up in the central sense or turn out in the Deactivate Sense. Yet, it is possible that some low frequency senses simply did not show up in this corpus data due to the small sample size or the genre of the corpus. Phrasal verbs of this type include: get out in the Not In Situ Sense, take off in Provide a Discount Sense, and hold over in the Sustain Sense. Teaching this set of senses might be useful for the learners since they are less likely to learn them through exposure.

8.2 Other implications

The semantic analysis of phrasal verbs in this study may have significance for other complex structures whose meaning is similarly considered opaque by the traditional
accounts including compound nouns and adjectives. A number of verb-particle combinations examined in this study have complex noun counterparts such as *getup*, *turnout* and *turnover*. Additionally, in some of these combinations the particle appears as a prefix such as *uptake* or *output*. It would be interesting to see whether the semantic analysis suggested for the phrasal verbs can be also applied to these complex constructions, and whether or not further extensions take place in the composite form. For instance, in a complex compound such as *turnout* (e.g. *Considering the rain there was a good turnout*) the combination subsumes a static noun rather than a verb.

Following Langacker (1987, 1991) in most instances a noun profiles a ‘thing’ rather than a relation, and hence the nouns subsumed from such combinations most likely do not exhibit a relational status. It is possible that in such combinations the specifications (TR-LM) of the verb and particle are interacting in somewhat different ways, giving rise to a different type of constructions with a different set of meanings.

The semantic analysis proposed in this study might provide some insight into the analysis of other multi-word expressions including idiomatic expressions and collocations. A number of CL studies have discussed the importance of our conceptual knowledge such as conceptual metaphor and metonymy in understanding and interpreting idioms and idiom-like constructions (e.g. Kovecses & Szabo, 1996; Gibbs, 1990; Nayak & Gibbs, 1990; Littlemore, 2001). According to these studies, the meanings of idioms arise from our knowledge of the world and embodied experience. Due to the conceptual motivations, the meanings of idioms are no longer seen as arbitrary, and many of them can be explained through conceptual tools. Of course idioms do vary in the degree of
transparency and conventionality. While, some are considered to be ‘frozen’ or less transparent constructions as in  

*Kick the bucket*, others are known to exhibit some degree of transparency and compositionality as in  *enough is enough*  (Leung, 2008). Along these lines, the partial compositionality approach to idioms and collocations might have potential applications for understanding the complex nature of these constructions. By looking at the internal workings of the component structures in an idiomatic expression such as  *under the weather*  we might be able to explain more clearly why an idiom has adopted the meaning it has in every day language. Thus, depending on the type of construction, the semantic approach implemented in this study might have implications for analyzing idioms. Hence, it might be possible to unravel some of the complexities underlying these multifaceted constructions.

Finally, it would be interesting to investigate syntactic variation in phrasal verbs. Few studies including Gries and Stefanowitsch (2004) have discussed the role of syntactic alternation in the meaning of verb-particle combinations. In their study, Gries and Stefanowitsch (2004) discuss the differences in meaning between the transitive verb-particle constructions in the Verb-Object-Particle [V OBJ Prt] and Verb-Particle-Object [V Prt OBJ] order. Based on a corpus analysis of phrasal verbs, the researchers find a tendency for [V Prt OBJ] to appear predominantly with non-idiomatic verb-particle combinations in which the particle denotes “a spatial goal or result” (p. 112). Examples of this type include the use of  *get out*  in  *When does the] library shut because I want to get a book out overnight*, and  *get back*  in  *Why did he get the money back?*  (p. 112).

Therefore, it might be the case that certain meanings identified for phrasal verbs in this
study are more likely to occur in a particular syntactic construction (although it may not be the case for every meaning). Future studies can look into the variations and the relationship between the distinct meaning of the phrasal verbs and the syntactic forms they appear in.
Appendix A  More analysis of phrasal verbs

with off & over

Central sense of get off. Some metaphorical extensions of the central sense were observed in the corpus. In this use ‘topic or issue’ is conceptualized as a ground object (LM), which the actor was standing on temporarily and then leaves once the discussion is over.

162) Usually I get off a topic for a bit, but I circle back around, eventually.

163) I want to get off politics for a second.

Get off- Remove Sense. Some metaphorical extensions of the Remove Sense were observed in the corpus. In this use, a person (e.g. police, girlfriend) is conceptualized as a burden that can be removed from the actor’s back and as a result the actor is relieved.

166) I need to get my girlfriend off my back.

167) I want to go to a police station and get these people off of us.

Get off- Escape a Potential Threat Sense. An experiential correlation between moving away from an entity including an object, person or location, is that the actor can protect himself or herself from a potential threat that could otherwise affect them. For instance, getting close to a wild animal can be dangerous, while remaining at a distance from it is more secure. As a result of the tight experiential correlation between locations and states, moving away from an unpleasant situation correlates with escaping certain potential dangers or threat. Through pragmatic strengthening this sense has become a distinct sense.

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Get off- Be Temporarily Relieved from Duty Sense. As previously mentioned, off denotes a sense of blocking in which the natural flow of an entity is interrupted as in Lights are off. Similarly, in this use of the phrasal verb, the working routine of a person is interrupted and the person is no more in the state of working. The combination of the meaning of the verb and particle subsumes the overall meaning of obtaining a break from work. Through frequent use of the verb in work-related contexts, this use has become conventionalized.

Get off- Stop Using Sense. One embodied experience of leaving LMs (objects or locations) is that the TR and LM are separated and the TR may no longer have access to the LM due to the distance between them. Similarly, a person who quits using drugs is conceptualized to be away from the drugs and no more in the state of using the drugs. Through pragmatic strengthening get off has acquired the sense of Stop Using.

Central sense of take off. The meaning of the phrasal verb is shown by a series of scenes in which the hand is initially moving toward an object, and then the hand grasps the object and separates it from the LM, which is represented by a horizontal line. Finally, the hand and arm move the object toward the actor.

Similar to the Removal Sense of get off, most examples observed in the data for this sense are related to the frequent experience of removing clothes. Few metaphorical uses were observed in the data, which can be explained by the metaphor EMOTIONAL FORCES ARE PHYSICAL FORCES. In this construal, emotional forces are conceptualized in terms of physical forces that can exert pressure on the person. Take off denotes the meaning of removing the pressure or burden from the LM (actor). The following examples demonstrate this use of the phrasal verb:
176) He'll appreciate your honesty, and it'll *take* the pressure *off* him.

177) We can *take* a load *off* your shoulders and save you a lot of frustration and time.

**Take off- Become Popular or Successful Sense.** A consequence of the TR leaving the LM is that it abandons its original location and takes on a new path in space. In many cases leaving the LM is an upward movement such as when a plane or a bird *takes off*. Note that a consequence of leaving the ground and being physically elevated is to have more control and influence over the environment. Thus, being in a high position correlates with being in a state of success. Frequent experiences such as this have given rise to *take off* denoting the sense of becoming prosperous and successful.

**Take off- Stop Working Temporarily Sense.** The meaning of *take off* in this use is very similar to the meaning of *get off* in the Be Temporarily Relieved from Duty Sense. In both uses the TR or the actor is spending some time away from work. A closer examination of the two phrasal verbs in the data showed a slight difference between the two uses. *Get off* mostly appears in contexts where permission from an authority is required for the person to have time off. On the other hand, *take off* appears in contexts in which the person is in charge of their own working schedule. The difference between the two uses can be explained through examining the verb meanings. *Get* has the Obtain Sense, which denotes obtaining permission from authority, while *take* has the Get Hold Of Sense, denoting assumption of possession and control.

**Turn off- Cause Loss of Interest Sense.** This use draws on the common metaphor EMOTIONS ARE PHYSICAL FORCES (Kovecses, 2000; 2010). In this use, emotions are conceptualized as forces that can affect our feelings. This use may also
involve sensory displeasure (e.g. The smell of broccoli turns her off) and physical repulsion (e.g. Guys with pony tails and tattoos really turn her off.) The frequent use of turn off in appropriate contexts related to a person’s attitude and feelings have given rise to this use of the phrasal verb.

Get over-Transcend Non-physical Barrier Sense. We commonly conceptualize our mental or emotional forces including fear, sadness and illness as obstacles to our physical and emotional well-being. In order to achieve our desired state we need to surpass these non-physical boundaries.

Turn over-submit. Similar to the Assuming Control sense of take over, some uses of turn over observed in the data denote transfer of power or responsibility from the previous source to a new source as in the following examples:

218) Old Frank turned the business over to Andrew, who had worked alongside his father.

219) Kossa turned the reins over to the Fleets two years ago.

In other contexts, the phrasal verb denotes a sense of surrender or submission of evidence (person/object) to an authority such as police or government officials. The following examples illustrate this sense:

220) DeKalb officials complete their preliminary investigation, turning initial findings over to the state.

221) I am not turning my daughter over to the police. She's too young.
Appendix B  Sense frequency for the phrasal verbs

The following provides the sense frequency and percentage of use for each phrasal verb in the sample of 200 concordance lines extracted from COCA.

UP

Table B.1. Frequency measures for senses of get up in COCA

<table>
<thead>
<tr>
<th>Sense</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (central)</td>
<td>44</td>
<td>22</td>
</tr>
<tr>
<td>1a (metaphorical)</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>2 (become upright)</td>
<td>86</td>
<td>43</td>
</tr>
<tr>
<td>3 (move out of bed)</td>
<td>55</td>
<td>27</td>
</tr>
<tr>
<td>4 (organize an event)</td>
<td>3</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Table B.2. Frequency measures for senses of take up in COCA

<table>
<thead>
<tr>
<th>Sense</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (central)</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>2 (get engaged with an activity)</td>
<td>120</td>
<td>60</td>
</tr>
<tr>
<td>3 (occupy)</td>
<td>68</td>
<td>34</td>
</tr>
</tbody>
</table>

Table B.3. Frequency measures for senses of turn up in COCA

<table>
<thead>
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<th>Frequency</th>
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</thead>
<tbody>
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<td>1 (central)</td>
<td>19</td>
<td>9.5</td>
</tr>
<tr>
<td>2 (discover an entity)</td>
<td>46</td>
<td>23</td>
</tr>
<tr>
<td>3 (arrive)</td>
<td>76</td>
<td>38</td>
</tr>
<tr>
<td>4 (increase in amount)</td>
<td>59</td>
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Table B.4. Frequency measures for senses of hold up in COCA

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<th>Frequency</th>
<th>%</th>
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</thead>
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<tr>
<td>1 (central)</td>
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<td>54</td>
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<tr>
<td>1a (metaphorical)</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>2 (prevent from falling)</td>
<td>17</td>
<td>8.5</td>
</tr>
<tr>
<td>3 (cause delay)</td>
<td>24</td>
<td>12</td>
</tr>
<tr>
<td>4 (remain in good condition)</td>
<td>43</td>
<td>21.5</td>
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</table>
Table B.5. Frequency measures for senses of get out in COCA

<table>
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<th>Frequency</th>
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</thead>
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<tr>
<td>1 (central)</td>
<td>136</td>
<td>68</td>
</tr>
<tr>
<td>2 (not in situ)</td>
<td>9</td>
<td>4.5</td>
</tr>
<tr>
<td>3 (become known)</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>4 (become available)</td>
<td>15</td>
<td>7.5</td>
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Table B.6. Frequency measures for senses of take out in COCA

<table>
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<td>1 (central)</td>
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<td>57.5</td>
</tr>
<tr>
<td>2 (obtain a legal arrangement)</td>
<td>18</td>
<td>9</td>
</tr>
<tr>
<td>3 (destroy)</td>
<td>24</td>
<td>12</td>
</tr>
<tr>
<td>4 (having a date)</td>
<td>43</td>
<td>21.5</td>
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Table B.7. Frequency measures for senses of turn out in COCA

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<td>2</td>
</tr>
<tr>
<td>2 (find to be in a state)</td>
<td>128</td>
<td>64</td>
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<tr>
<td>3 (deactivate)</td>
<td>5</td>
<td>2.5</td>
</tr>
<tr>
<td>4 (participate)</td>
<td>7</td>
<td>3.5</td>
</tr>
<tr>
<td>5 (produce)</td>
<td>29</td>
<td>14.5</td>
</tr>
<tr>
<td>6 (outcome)</td>
<td>27</td>
<td>13.5</td>
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Table B.8. Frequency measures for senses of hold out in COCA

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<td>1 (central)</td>
<td>165</td>
<td>82.5</td>
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<tr>
<td>2 (continue to resist)</td>
<td>13</td>
<td>6.5</td>
</tr>
<tr>
<td>3 (last for a certain period)</td>
<td>22</td>
<td>11</td>
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</table>
### Table B.9. Frequency measures for senses of get off in COCA

<table>
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<td>1a (metaphorical)</td>
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<td>19</td>
</tr>
<tr>
<td>2 (remove)</td>
<td>52</td>
<td>26</td>
</tr>
<tr>
<td>3 (escape a threat)</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>4 (temporal relief from duty)</td>
<td>13</td>
<td>6.5</td>
</tr>
<tr>
<td>5 (stop using)</td>
<td>12</td>
<td>6</td>
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</tbody>
</table>

### Table B.10. Frequency measures for senses of take off in COCA

<table>
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<tr>
<td>1a (metaphorical)</td>
<td>45</td>
<td>22.5</td>
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<tr>
<td>2 (leave)</td>
<td>41</td>
<td>20.5</td>
</tr>
<tr>
<td>3 (become popular)</td>
<td>11</td>
<td>5.5</td>
</tr>
<tr>
<td>4 (stop working temporarily)</td>
<td>28</td>
<td>14</td>
</tr>
<tr>
<td>5 (provide a discount)</td>
<td>2</td>
<td>1</td>
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</table>

### Table B.11. Frequency measures for senses of turn off in COCA

<table>
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</tr>
<tr>
<td>2 (deactivate)</td>
<td>168</td>
<td>84</td>
</tr>
<tr>
<td>3 (cause loss of interest)</td>
<td>24</td>
<td>12</td>
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</table>

### Table B.12. Frequency measures for senses of hold off in COCA

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<td>1 (central)</td>
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<tr>
<td>2 (resist an opponent)</td>
<td>77</td>
<td>38.5</td>
</tr>
<tr>
<td>3 (defer an action)</td>
<td>117</td>
<td>58.5</td>
</tr>
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Over

Table B.13. Frequency measures for senses of get over in COCA

<table>
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</tr>
</thead>
<tbody>
<tr>
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<td>16</td>
<td>8</td>
</tr>
<tr>
<td>2 (transcend non-physical barrier)</td>
<td>149</td>
<td>74.5</td>
</tr>
<tr>
<td>3 (arrival)</td>
<td>35</td>
<td>17.5</td>
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</table>

Table B.14. Frequency measures for senses of take over in COCA

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<td>1 (central)</td>
<td>61</td>
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<tr>
<td>2 (assume control)</td>
<td>139</td>
<td>69.5</td>
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</table>

Table B.15. Frequency measures for senses of turn over in COCA

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<th>Frequency</th>
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</thead>
<tbody>
<tr>
<td>1 (central)</td>
<td>84</td>
<td>42</td>
</tr>
<tr>
<td>2 (submit)</td>
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<td>55.5</td>
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<tr>
<td>3 (evaluate)</td>
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<td>2.5</td>
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</table>

Table B.16. Frequency measures for senses of hold over in COCA

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<tbody>
<tr>
<td>1 (central)</td>
<td>96</td>
<td>48</td>
</tr>
<tr>
<td>2 (have control or advantage)</td>
<td>80</td>
<td>40</td>
</tr>
<tr>
<td>3 (sustain)</td>
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<td>10</td>
</tr>
<tr>
<td>4 (postpone)</td>
<td>4</td>
<td>2</td>
</tr>
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</table>
References


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