A Corpus-Based Model of the English Phrasal Verb Construction: Attraction

Ekaterina Golubkova
Moscow State Linguistic University
Chaikina street, dom 6, kv. 150
125315 Moscow
The Russian Federation
katemg@yandex.ru

Alexander Trubochkin
Moscow State Linguistic University
Bibliotechnaya street, dom 16, kv. 12
141406 Moscow oblast, Khimki,
The Russian Federation
nalugu@mail.ru

Abstract

The article investigates the semantic of English phrasal verbs (PhVs) which are viewed as lexico-grammatical constructions. Triangulation of introspective, cognitive and corpus methods of analysis allows us to identify the semantic dimensions which feature the semantic pattern of the PhV-construction. The construction reveals the features of attraction involving new verbs provided the action or motion event is identical. Depending on the attraction strength level between the verb and the particle a new verb may be accepted to fill in the corresponding slot of the construction, which gives rise to a new phrasal verb. It allows us to categorise PhVs according to the attraction level and spot their PhV-patterns on corpus data.

Keywords: attraction; corpus data; phrasal verbs; construction

DOI: 10.28995/2075-7182-2021-20-278-288

1 Introduction

According to the viewpoints of different researchers, the phrasal verb (PhV) is an indivisible linguistic unit with a certain structure. From this perspective, in line with a basic tenet of the theory of Construction Grammar, namely, that constructions are form–meaning pairings [3], so the meaning of construction
cannot be formed compositionally but is shaped by the interaction of semantics and grammar, we assume that the phrasal verb can be viewed as a construction, too.

The aim of the current research is to define characteristic features of the phrasal verb construction (PhV-construct) and to determine the leading factors due to which the semantics of the phrasal verb construction can change. To this effect, we argue that this semantic change is linked to a variable, which we call ‘attraction strength’ [1], which can be defined as the ability to collocate and, specifically for new verbs, to be accepted by the construction to fill in the corresponding slot specifying the integrity and the unambiguity of the construction represented by the phrasal verb.

Another task of this research is to investigate the semantic behavioural pattern of phrasal verbs that can establish interconnectedness between the elements of the phrasal verb construction by measuring and examining the attraction strength.

The statistical basis of the research was: The BNC [10] and The Intelligent Web-based Corpus iWEB [11]. The experimental base was the phrasal verb cluster ‘Leaving’ (45 phrasal verbs) with the particle out taken from Longman phrasal verb dictionary [8]. The methods used to conduct the following measurements are: the collexeme analysis [4], the polynomial approximation of the result data which is used to describe alternately ascending and descending values for the analysis of a sizeable dataset of an unstable value.

2 Attraction strength in phrasal verb constructions

2.1 Initial data

To start the analysis of the functioning of a phrasal verb construction, we will turn to one of the clusters in the segment of phrasal verbs accompanying the particle out, namely, the cluster ‘Leaving’ of 45 phrasal verbs displayed in Tables 1 and 2, and try to reveal some semantic dimensions of an action associated with the phrasal verb construction based on empirical data assigned to the amount of contribution of the agent to perform an action, where three degrees of intensity are singled out: low contribution = 1, average contribution = 2, high contribution = 3.

The intensity is the empirical quantitative parameter which specifies semantic dimensions of action based on the data retrieved from the BNC [10] and represents the semantics of phrasal verbs. Table 1 indicates a random distribution of the degree of intensity of the semantic dimensions of action (manner, strain, speed, duration, intention, morality, physicality, reversibility etc.) among the phrasal verbs under analysis. The classification of manner adverbs and the semantic dimensions is based on the offline introspection analysis [7] involving a native English speaker from the UK in the experiment. After Talmy we assume that the component of manner of action in phrasal verbs is likely to be expressed within the verb itself. We added a few semantic dimensions to the general concept of manner, relying on the poll taken with the native speaker of English, and placed them in the table header with a view to indicate the intensity of each semantic dimension corresponding to each test phrasal verb. Thus, Table 1 prototypes the semantics of the phrasal verbs in a digital manner, which we call ‘the semantic matrix’ of a phrasal verb cluster.

In order to uncover the possible regularity of change of contribution of the semantic dimensions depicted in Table 1, we research the behaviour pattern of the phrasal verbs using the collexeme method of analysis [2].

2.2 Attraction of verbs to the ‘Verb+out’ construction using collexeme analysis

In order to measure attraction, we apply the collexeme analysis to estimating the attraction of the verb (and the particle further) attracted by the slots of the construction. The collexeme analysis that deals with indivisible items such as lexemes appears to be applicable to our task because, from the viewpoint of Construction Grammar, constructions are already inseparable units, which enable us to substitute them for lexemes in the co-lexeme analysis. Moreover, the algorithm of co-lexeme analysis is not mathematically cumbersome and consists in probability calculation and comparison of the probability of success (positive outcome) of a certain word form of a certain lexeme in the corpus with the threshold value that is defined as the probability of success of the corresponding word form of all the lexemes of the same part of speech in the corpus. In terms of Construction Grammar, it comes to the calculation of
the probability of success\(^1\) of a certain phrasal verb construction in the corpus compared to the threshold value that is defined as the probability of success of the Verb+\textit{out} construction, in other words, the probability of success of all the analogous constructions in the corpus. Having compared these two values, we get the value of attraction. Thus, the collexeme analysis is chosen as the most convenient method for our research.

<table>
<thead>
<tr>
<th>Phrasal verb</th>
<th>Manner</th>
<th>Strain 1- low 2- avr. 3- high</th>
<th>Speed 1- low 2- avr. 3- high</th>
<th>Duration 1- low 2- avr. 3- high</th>
<th>Intention 1- uninit. 2- hesit. 3- intent.</th>
<th>Morality 1- immoral 2- suspect 3- moral</th>
<th>Physicality 1- nearly 0 2- limited 3- real</th>
<th>Reversibility 1- irrevers. 2- partially 3- reversible</th>
<th>Toolability 1- toolless 2- auxiliary 3- toolful</th>
<th>Agents 1- one 2- a few 3- a lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>allow \textit{out}</td>
<td>Controlled</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>back \textit{out}</td>
<td>Renegade</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>bail \textit{out}</td>
<td>Forceful</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>break \textit{out}</td>
<td>Challenging</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>breeze \textit{out}</td>
<td>Lighthearted</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>bug \textit{out}</td>
<td>Disorderly</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>bust \textit{out}</td>
<td>Secretive</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>buy \textit{out}</td>
<td>Gentle force</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>coax \textit{out}</td>
<td>Careful</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>check \textit{out}</td>
<td>Ordery</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>clock \textit{out}</td>
<td>Careful</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>come \textit{out}</td>
<td>Neutral</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>draw \textit{out}</td>
<td>Careful</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>duck \textit{out}</td>
<td>Secretive</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>encourage \textit{out}</td>
<td>Careful</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>fail \textit{out}</td>
<td>Accidental</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>fly \textit{out}</td>
<td>Forceful</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>get \textit{out}</td>
<td>Neutral</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>go \textit{out}</td>
<td>Neutral</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>let \textit{out}</td>
<td>Controlled</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>light \textit{out}</td>
<td>Disorderly</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>fig \textit{out}</td>
<td>Ordery</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>move \textit{out}</td>
<td>Ordery</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>pile \textit{out}</td>
<td>Disorderly</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>pop \textit{out}</td>
<td>Sudden</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>pour \textit{out}</td>
<td>Controlled</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>pull \textit{out}</td>
<td>Controlled</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>punch \textit{out}</td>
<td>Desperate</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>put \textit{out}</td>
<td>Forceful</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>run \textit{out}</td>
<td>Desperate</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>salary \textit{out}</td>
<td>Aggressive</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>see \textit{out}</td>
<td>Protectful</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>set \textit{out}</td>
<td>Ordery</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>ship \textit{out}</td>
<td>Specific</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>shoot \textit{out}</td>
<td>Sudden</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>show \textit{out}</td>
<td>Friendly</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>sign \textit{out}</td>
<td>Ordery</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>slip \textit{out}</td>
<td>Secretive</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>spring \textit{out}</td>
<td>Uncontrolled</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>start \textit{out}</td>
<td>Orderly</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>step \textit{out}</td>
<td>Orderly</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>storm \textit{out}</td>
<td>Aggressive</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>strike \textit{out}</td>
<td>Decisive</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>want \textit{out}</td>
<td>Reluctant</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 1: A random distribution of 45 phrasal verbs in cluster ‘Leaving’ and the values of intensity of their semantic dimensions (the semantic matrix of the phrasal verb cluster ‘Leaving’)

Table 2 indicates the results of the queries to the corpus necessary to calculate attraction strength of the phrasal verbs under analysis. The value of attraction in the 0-line of Table 2 indicates the attraction threshold \(P(\text{threshold}) = 0.008\) of the Verb+\textit{out} construction. In other words, the verbs with the value of \(P(a)^2 > 0.008\) are attracted by the construction and if \(P(a) < 0.008\) then the construction repels them.

\(^1\) The Probability of success, known as one of the key decision factors in Probability Theory, is the ratio of success cases or, in terms of our research, desired occurrences of specific lexical items (in particular, verbs, particles or PhV-constructions) over all outcomes of the same kind derived from the corpus data.

\(^2\) In the paper we call the attraction strength \(P(a)\), the attraction threshold – \(P(\text{threshold})\). \(P\) is a capital to not be confused with the \(p\)-value in statistics which we conduct to assess the reliability of the findings (Section 2.3, cf. Table 4). We assigned attraction strength to the capital \(P\) since the calculation of attraction is strongly connected to the calculation of the probability of success.
<table>
<thead>
<tr>
<th>Phrasal verb</th>
<th>Occurrence of verbs</th>
<th>Variable B</th>
<th>Occurrence of the Verb+P(out)+OUT constructions</th>
<th>Variable C</th>
<th>Variable D</th>
</tr>
</thead>
<tbody>
<tr>
<td>all verbs</td>
<td>15735322</td>
<td>VERB+</td>
<td>VERB+ out rp</td>
<td>125695</td>
<td>VERB+ out rp</td>
</tr>
<tr>
<td>1 storm out</td>
<td>659</td>
<td>STORM v</td>
<td>95</td>
<td>STORM v out, STORM v _pp out</td>
<td>0.1442</td>
</tr>
<tr>
<td>2 pull out</td>
<td>12921</td>
<td>PULL v</td>
<td>1747</td>
<td>PULL v out, PULL v _pp out</td>
<td>0.1352</td>
</tr>
<tr>
<td>3 sally out</td>
<td>39</td>
<td>SALLY v</td>
<td>5</td>
<td>SALLY v out, SALLY v _pp out</td>
<td>0.1282</td>
</tr>
<tr>
<td>4 step out</td>
<td>5520</td>
<td>STEP v</td>
<td>692</td>
<td>STEP v out, STEP v _pp out</td>
<td>0.1264</td>
</tr>
<tr>
<td>5 bail out</td>
<td>355</td>
<td>BAIL _v</td>
<td>143</td>
<td>BAIL v out, BAIL _pp v out</td>
<td>0.1211</td>
</tr>
<tr>
<td>6 set out</td>
<td>38829</td>
<td>SET v</td>
<td>4608</td>
<td>SET v out, SET v _pp out</td>
<td>0.1187</td>
</tr>
<tr>
<td>7 pour out</td>
<td>3448</td>
<td>POUR v</td>
<td>391</td>
<td>POUR v out, POUR v _pp out</td>
<td>0.1134</td>
</tr>
<tr>
<td>8 spill out</td>
<td>1335</td>
<td>SPILL v</td>
<td>151</td>
<td>SPILL v out, SPILL _pp v out</td>
<td>0.1131</td>
</tr>
<tr>
<td>9 pop out</td>
<td>1966</td>
<td>POP v</td>
<td>154</td>
<td>POP v out, POP _pp v out</td>
<td>0.0787</td>
</tr>
<tr>
<td>10 slip out</td>
<td>4697</td>
<td>SLIP v</td>
<td>339</td>
<td>SLIP v out, SLIP v _pp out</td>
<td>0.0728</td>
</tr>
<tr>
<td>11 duck out</td>
<td>581</td>
<td>DUCK v</td>
<td>40</td>
<td>DUCK v out, DUCK _pp v out</td>
<td>0.0688</td>
</tr>
<tr>
<td>12 break out</td>
<td>17394</td>
<td>BREAK v</td>
<td>1106</td>
<td>BREAK v out, BREAK _pp v out</td>
<td>0.0637</td>
</tr>
<tr>
<td>13 check out</td>
<td>9355</td>
<td>CHECK v</td>
<td>592</td>
<td>CHECK v out, CHECK _pp v out</td>
<td>0.0633</td>
</tr>
<tr>
<td>14 run out</td>
<td>38304</td>
<td>RUN v</td>
<td>2139</td>
<td>RUN v out, RUN v _pp out</td>
<td>0.0588</td>
</tr>
<tr>
<td>15 strike out</td>
<td>7059</td>
<td>STRIKE v</td>
<td>333</td>
<td>STRIKE v out, STRIKE _pp v out</td>
<td>0.0472</td>
</tr>
<tr>
<td>16 come out</td>
<td>143322</td>
<td>COME v</td>
<td>6435</td>
<td>COME v out, COME v _pp out</td>
<td>0.0449</td>
</tr>
<tr>
<td>17 back out</td>
<td>4150</td>
<td>BACK v</td>
<td>177</td>
<td>BACK v out, BACK v _pp out</td>
<td>0.0427</td>
</tr>
<tr>
<td>18 punch out</td>
<td>911</td>
<td>PUNCH v</td>
<td>38</td>
<td>PUNCH v out, PUNCH v _pp out</td>
<td>0.0417</td>
</tr>
<tr>
<td>19 fly out</td>
<td>8571</td>
<td>FLY v</td>
<td>339</td>
<td>FLY v out, FLY v _pp out</td>
<td>0.0396</td>
</tr>
<tr>
<td>21 ship out</td>
<td>1562</td>
<td>SHIP v</td>
<td>60</td>
<td>SHIP v out, SHIP v _pp out</td>
<td>0.0384</td>
</tr>
<tr>
<td>22 bust out</td>
<td>236</td>
<td>BUST v</td>
<td>9</td>
<td>BUST v out, BUST v _pp out</td>
<td>0.0381</td>
</tr>
<tr>
<td>23 clear out</td>
<td>6094</td>
<td>CLEAR v</td>
<td>230</td>
<td>CLEAR v out, CLEAR v _pp out</td>
<td>0.0377</td>
</tr>
<tr>
<td>24 go out</td>
<td>239133</td>
<td>GO v</td>
<td>8493</td>
<td>GO_v_out, GO_v _pp out</td>
<td>0.0359</td>
</tr>
<tr>
<td>25 coax out</td>
<td>307</td>
<td>COAX v</td>
<td>10</td>
<td>COAX v out, COAX v _pp out</td>
<td>0.0326</td>
</tr>
<tr>
<td>26 shoot out</td>
<td>7203</td>
<td>SHOOT v</td>
<td>234</td>
<td>SHOOT v out, SHOOT v _pp out</td>
<td>0.0325</td>
</tr>
<tr>
<td>27 log out</td>
<td>483</td>
<td>LOG v</td>
<td>14</td>
<td>LOG v out, LOG v _pp out</td>
<td>0.029</td>
</tr>
<tr>
<td>28 get out</td>
<td>211006</td>
<td>GET v</td>
<td>6101</td>
<td>GET v out, GET v _pp out</td>
<td>0.0285</td>
</tr>
<tr>
<td>29 fail out</td>
<td>25943</td>
<td>FALL v</td>
<td>714</td>
<td>FALL v out, FALL v _pp out</td>
<td>0.0276</td>
</tr>
<tr>
<td>30 move out</td>
<td>37220</td>
<td>MOVE v</td>
<td>971</td>
<td>MOVE v out, MOVE v _pp out</td>
<td>0.026</td>
</tr>
<tr>
<td>31 draw out</td>
<td>21401</td>
<td>DRAW v</td>
<td>519</td>
<td>DRAW v out, DRAW v _pp out</td>
<td>0.0243</td>
</tr>
<tr>
<td>32 put out</td>
<td>67040</td>
<td>PUT v</td>
<td>1616</td>
<td>PUT v out, PUT v _pp out</td>
<td>0.0241</td>
</tr>
<tr>
<td>33 eat out</td>
<td>34194</td>
<td>EAT v</td>
<td>785</td>
<td>EAT v out, EAT v _pp out</td>
<td>0.0233</td>
</tr>
<tr>
<td>34 clock out</td>
<td>349</td>
<td>CLOCK v</td>
<td>6</td>
<td>CLOCK v out, CLOCK v _pp out</td>
<td>0.0172</td>
</tr>
<tr>
<td>35 start out</td>
<td>39316</td>
<td>START v</td>
<td>491</td>
<td>START v out, START v _pp out</td>
<td>0.0125</td>
</tr>
<tr>
<td>36 pile out</td>
<td>1012</td>
<td>PILE v</td>
<td>12</td>
<td>PILE v out, PILE v _pp out</td>
<td>0.0119</td>
</tr>
<tr>
<td>37 bag out</td>
<td>196</td>
<td>BAG v</td>
<td>1</td>
<td>BAG v out, BAG v _pp out</td>
<td>0.0101</td>
</tr>
<tr>
<td>38 allow out</td>
<td>24741</td>
<td>ALLOW v</td>
<td>232</td>
<td>ALLOW v out, ALLOW v _pp out</td>
<td>0.0094</td>
</tr>
<tr>
<td>39 light out</td>
<td>31422</td>
<td>LIGHT v</td>
<td>107</td>
<td>LIGHT v out, LIGHT v _pp out</td>
<td>0.0034</td>
</tr>
<tr>
<td>40 want out</td>
<td>3385</td>
<td>WANT v</td>
<td>11</td>
<td>WANT v out, WANT v _pp out</td>
<td>0.0033</td>
</tr>
<tr>
<td>41 sign out</td>
<td>8782</td>
<td>SIGN v</td>
<td>14</td>
<td>SIGN v out, SIGN v _pp out</td>
<td>0.0016</td>
</tr>
<tr>
<td>42 see out</td>
<td>181678</td>
<td>SEE v</td>
<td>204</td>
<td>SEE v out, SEE v _pp out</td>
<td>0.0011</td>
</tr>
<tr>
<td>43 show out</td>
<td>57617</td>
<td>SHOW v</td>
<td>36</td>
<td>SHOW v out, SHOW v _pp out</td>
<td>0.0007</td>
</tr>
<tr>
<td>44 encourage out</td>
<td>44</td>
<td>ENCOURAGE v</td>
<td>0</td>
<td>ENCOURAGE v out, ENCOURAGE v _pp out</td>
<td>0</td>
</tr>
<tr>
<td>45 breeze out</td>
<td>11073</td>
<td>BREEZE v</td>
<td>0</td>
<td>BREEZE v out, BREEZE v _pp out</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 2: An ordered distribution of 45 phrasal verbs in cluster ‘Leaving’ according to their attraction strength to the PhV-construction – Variable D

The value of the variable B in the 0-line indicates the number of instances of all verbs in any form represented in the corpus except all the modals as they do not shape phrasal verbs. The value of the variable C in the same line indicates the occurrence of the Verb+out phrasal verb constructions with any form of all verbs found in the corpus. Other lines indicate the same values but regarding the number of instances of the particular verb and the variable D represents the probability of success which is calculated by the formula P(a) = C÷B. Comparing this result value of each line (C÷B) with the 0-line (C÷B0), we can get the attraction strength of each tested verb to the Verb+out construction. To represent the data, we grade the phrasal verbs from Table 1 according to their attraction strength and put them in Table 2.

This distribution of the phrasal verbs to attraction strength reveals three distinct groups:
(a) Group 1 with high attraction strength (coloured green);
(b) Group 2 with moderate attraction strength (coloured white);
(c) Group 3 with low attraction strength (coloured red).

\(^3\) Attraction strength is assigned to the comparison of values of the variable D for each verb with the attraction threshold displayed in the 0-line P(threshold) = 0.008, which allows us to grade phrasal verbs according to their attraction strength in a descending sequence.
It can be seen in Figure 1 below that the phrasal verbs with the particle *out* fall into 3 groups:

(a) Group 1 takes the value of attraction strength $P(a) > 0.8$;
(b) Group 2 takes the value of $P(a)$ which falls in $P(\text{threshold}) \leq P(a) \leq 0.8$;
(c) Group 3 takes the value of $P(a) < P(\text{threshold})$, where $P(\text{threshold})$ is at 0.008 marked with the red line in Figure 1.

![Figure 1: The distribution of the attraction strength of the verbs to the Verb+out construction](image)

According to the attraction strength of the verbs to the Verb+out construction (cf. Figure 1 and Table 2) we regroup the phrasal verbs in Table 1 as follows, in Table 3.

The distribution of the verbs inside Group 2 (coloured white) shown in Table 3 suggests that the verbs with more intensity of strain (the value is 3) and manner tend towards Group 1 (coloured green) and the verbs with less intensity of strain (the value is 1) and manner tend towards Group 3 (coloured red). The choice of the intensity value was guided by the experiment on the basis of the behavioral S → R scheme [9], or the stimulus–reaction scheme, in which the native speaker of English was instructed to evaluate their reaction response for each semantic dimension to a given stimulus – as soon as a construction with a test phrasal verb was uttered by another participant in the experiment.

After the experiment all the collected data were analysed from the viewpoint of the offline introspection [7], assigned with an integer value from 1 to 3 and put in Table 1, which allowed us to arrange the data by the value of specific dimensions such as ‘manner’ or ‘strain’ and present them in Table 2.

The preliminary observation of the arranged data leads us to two assumptions:

(i) Phrasal verbs with the manner of action, such as aggressive, forceful, tend to belong to Group 1, and verbs with the opposite manner, such as friendly, careful, lighthearted, reluctant, respectful, gentle, tend to belong Group 3 in accordance with the attraction strength of the verb to the phrasal verb construction. Thus, the weaker attraction strength to the construction the verb has, the ‘softer’ the manner of the verb is, while the more attraction strength the verb has, the ‘harder’ its manner is.

(ii) Phrasal verbs with greater ‘Strain’ tend to the top of this category revealed by the distribution in Table 3 (Group 1) and phrasal verbs with weak ‘Strain’ tend to stay at the bottom (Group 3). Thus, the greater attraction strength to the construction the verb has, the greater strain of the action assigned to the verb is.

This inference can be observed in Figure 3 in comparison with Figure 2. The diagram in Figure 2 indicates the behaviour of the semantic dimension ‘Strain’ at the random distribution (cf. Table 1) of phrasal verbs where we observe no dependence of the semantic dimension on the distribution.
### Table 3: An ordered distribution of the phrasal verbs according to their attraction strength and the intensity of their semantic dimensions

<table>
<thead>
<tr>
<th>Verb</th>
<th>Particle</th>
<th>Manner</th>
<th>Strain 1-3</th>
<th>Speed 1-3</th>
<th>Duration 1-3</th>
<th>Intention 1-3</th>
<th>Morality 1-3</th>
<th>Physicality 1-3</th>
<th>Reversibility 1-3</th>
<th>Toolability 1-3</th>
<th>Agents 1-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>storm out</td>
<td>aggressive</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pull out</td>
<td>controlled</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sally out</td>
<td>aggressive</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>step out</td>
<td>orderly</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>fall out</td>
<td>careful</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>set out</td>
<td>orderly</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pour out</td>
<td>controlled</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>spill out</td>
<td>uncontrolled</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pop out</td>
<td>sudden</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>slip out</td>
<td>secretive</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>duck out</td>
<td>secretive</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>break out</td>
<td>challenging</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>check out</td>
<td>orderly</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>run out</td>
<td>desperate</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>strike out</td>
<td>decisive</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>come out</td>
<td>neutral</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>back out</td>
<td>nonaggressive</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>punch out</td>
<td>nonaggressive</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>fly out</td>
<td>forceful</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>skip out</td>
<td>specific</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>bust out</td>
<td>secretive</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>clean out</td>
<td>forceful</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>go out</td>
<td>neutral</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>coax out</td>
<td>careful</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>shoot out</td>
<td>sudden</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>log out</td>
<td>orderly</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>get out</td>
<td>neutral</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>fall out</td>
<td>accidental</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>move out</td>
<td>orderly</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>draw out</td>
<td>careful</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>put out</td>
<td>careful</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>let out</td>
<td>controlled</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>clock out</td>
<td>orderly</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>start out</td>
<td>orderly</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pile out</td>
<td>disorderly</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>bug out</td>
<td>disorderly</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>buy out</td>
<td>gentle force</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>allow out</td>
<td>controlled</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>light out</td>
<td>disorderly</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>want out</td>
<td>reluctant</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sign out</td>
<td>careful</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>see out</td>
<td>respectful</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>show out</td>
<td>friendly</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>encourage out</td>
<td>careful</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>brave out</td>
<td>cautious</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 2:** A random distribution of empirical data of the semantic dimension 'Strain' of 45 test phrasal verbs according to Table 1.
An ordered distribution of empirical data of the semantic dimension ‘Strain’ of 45 test phrasal verbs according to Table 3.

An overlaid trend line (coloured blue) shows the behaviour pattern of phrasal verbs regarding the semantic dimension of action ‘Strain’ which can be easily seen if we apply polynomial approximation known as the easiest conventional method to generalise empirical result data.

2.3 Attraction of the particle OUT to the Verb+out construction

The value of attraction of the particle can be measured by using collexeme analysis based on the corpus data. According to Gries’s [2] method of defining attraction strength, the threshold value of particle attraction was calculated (0.2742) which further should be compared with the ratio of occurrences of the out in the corpus (0.7810) which is 3 times as high as the threshold value. It led us to conclusion that the particle is strongly attracted to the verbal form. This level of attraction, as we can see, is strong enough to let us consider most cases of ‘Verb+out’ as an integral unit. As a result, we get the set of values of attraction strength of the particle out to the corresponding verbal construction.

The diagram in Figure 4 shows the distribution of the particle out attraction strength to the construction ‘Verb+out’, where the polynomial approximate curve indicates the same trend as shown above (cf. Figure 1) which confirms the attraction force between the particle out and the verb. In its turn, it illustrates a steady correlation between the particle and the verb as if they function as an indivisible unit. The trends of mutual attraction between the verb and the particle also coincide with the trend of the semantic dimension ‘Strain’ of the corresponding phrasal verbs (cf. Figure 3). These concordant trends make it
possible to assume that the semantic dimensions ‘strain’, ‘manner’ and the attraction strength also become concordant.

In fact, having graded the result data according to the attraction strength of the particle *out*, in Figure 5 we show the correlation between the attraction of the particle *out* to each of the 45 tested phrasal verbs and the change of ‘Strain’ which is their semantic dimension of action. This correlation is also confirmed by the correlation matrix (cf. Table 4) in which Pearson correlation coefficient (PCC) takes the value of 0.464 for the verb and 0.422 for the particle in respect of the correlation between the attraction level and the change of the semantic dimension ‘strain’ of the tested phrasal verbs. The PCC values of 0.337 and 0.353 account for the correlation between the semantic change of manner and the level of attraction between the verb and the particle respectively, which indicates the positive leaner correlations in either case.

![Figure 5: The correlation between the attraction strength of the particle to the PhV-construction and the semantic dimension ‘Strain’ of the tested phrasal verbs](image1)

![Figure 6: The correlation between the attraction strength of the tested phrasal verbs to the PhV-construction and their semantic dimension ‘Strain’](image2)

The statistical significance check p-values of 0.001 < 0.05 (for the verb) and 0.004 < 0.05 (for the particle) towards the correlation between the attraction level and the semantic change of the aspect ‘Strain’ along with the p-values of 0.024 < 0.05 (for the verb) and 0.017 < 0.05 (for the particle) towards the correlation between the attraction level and the semantic change of manner suggest that attraction features the change of certain semantic dimensions of phrasal verbs, in particular ‘strain’ and manner, where ‘strain’ stands for the amount of energy involved in performing an action.
Table 4: The correlation matrix of attraction and semantic variables of the tested phrasal verbs
(processed by Jamovi statistical software platform [12])

Evidently, all the considered p-values are less than the conventional statistical significance threshold \( p = 0.05 \) and in case of the semantic dimension ‘strain’ the p-values are less than the 0.01-threshold, which suggests that the correlations are statistically significant and confirms the hypothesis.

Whereas the distribution of the value of the semantic dimension ‘Strain’ is also affected by the particle, which can be seen from the comparison of the built-in diagrams in Figures 5 and 6, the tendency remains the same keeping agreement with the data distributions of the verbs and the particle attraction strength. These are shown in the diagrams in Figures 1 and 4 where their interdependence can be easily traced, a fact that demonstrates a verb-particle behaviour dependence. This behaviour pattern is represented in Figure 7.

Figure 7: The correlation between the attraction strengths of the verb and the particle

The results suggest coordination between the particle, verb and some semantic dimensions (for example, manner, strain) that shapes an indivisible specific constructional unity allowing new verbs which exceed the attraction threshold set by the construction into the corresponding slot of the construction. These verbs provide for the specification of the meaning that corresponds to the meaning of the general construction which, in its turn, obtains this specification from the situation to which it is eventually linked. If the situation of communication has such specifications, that is, we deal with a specific form of the situation, it forces the construction into changing, attracting new verbs which are capable of conforming to the meaning of the situation in each specific case. This constructional unity can be called a phrasal verb construction (PhV construction). It seems reasonable to single out a specific phrasal verb construction that can retain its form and hold the general phrasal verb construction as an embedded structure which has to acquire a new form whenever the situation changes, for example (cf. Table 5).
Given the possibility of measuring attraction we can arrange phrasal verbs in new clusters of synonyms according to their level of attraction strength that defines the level of their stability in constructions. The higher level of attraction the verb has, the more stable the verb is. Then such constructions are also more stable, which also accounts for their indivisibility, and can be freely understood by the listener even if they are entirely new.

<table>
<thead>
<tr>
<th>New PhVs based on analogy</th>
<th>General PhV construction</th>
<th>Semantic modification</th>
<th>Specific PhV construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>to coffee up</td>
<td>X bucks Y up</td>
<td>of manner: using coffee</td>
<td>I had to work the night shift so I coffee myself up numerous times.</td>
</tr>
<tr>
<td></td>
<td>X perks Y up</td>
<td></td>
<td></td>
</tr>
<tr>
<td>to tea down</td>
<td>X calms Y down</td>
<td>of manner: using tea</td>
<td>He seems so keyed up, we can try to tea him down.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>to burn by</td>
<td>X comes by [prep] Y</td>
<td>of manner: quicker</td>
<td>Although she loves her, she rarely burns by at her mother’s.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>to spirit down</td>
<td>X brings Y down</td>
<td>of result: less animated</td>
<td>He was excited about new project. We had to spirit him down before the investors came.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>to fall near</td>
<td>X comes near [prep] Y</td>
<td>of manner: unexpectedly to get to know</td>
<td>He offered me a senior post soon after we had fallen near at the congress.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5: Attraction of new members of the PhV construction: semantic conformation of the general PhV construction to the meaning of the specific PhV construction

Constituting a PhV construction the particle and the verb hold mutual attraction to a Verb+Particle pattern forming a PhV lexical unit which steadily correlates with certain semantic dimensions disclosing the semantic behavioural pattern of the unit.

3 Conclusion

In the present paper we view phrasal verbs as lexico-grammatical constructions in line with the theory of Construction Grammar. Given this concept, the results of our investigation led us to believe that verb-particle attraction contributes significantly to shaping the set of semantic dimensions such as ‘strain’ and ‘manner’ of the phrasal verb, which could be expressed through the level of verb-particle attraction strength and subsequently digitalised. It allows us to represent the semantics of phrasal verbs through the semantic matrix, in which the values correspond to the verb-particle attraction levels. The results suggest the possibility of classifying phrasal verbs by verb-particle attraction levels, which play an important role in phrasal verb production.

Depending on the level of verb-particle attraction strength a new participant may be accepted to fill in the corresponding slot of the construction, which gives rise to a new phrasal verb. It allows us to categorise PhVs according to the attraction level and recognize their PhV-patterns.

Following the results of the comparison of the attraction indexes of both verbs and particles, it was demonstrated that the particle is much more stable than the verb in a phrasal verb construction, which also confirms the typology of English as a satellite-framed language [6] from the viewpoint of Corpus Linguistics. This fact enables us to conclude that the verb takes an open position in the construction, and can be replaced by a new verb which is attracted or ‘invited’ into the construction on terms of sufficient attraction strength exceeding the attraction threshold or otherwise repelled due to semantic restrictions. Thus, the new participants which may be accepted by the construction are verbs. As a consequence of this acceptance any new participant shapes a new phrasal verb. That is to say, attraction acts between linguistic constituents of the construction pulling in more and more new participants (verbs) and shaping more and more phrasal verbs according to the same PhV pattern.

The results also indicated the presence of coordination between verb-particle attraction and the semantic dimensions ‘manner’ and ‘strain’ involved in the description of the action or motion event [5], revealing the strength of attraction which admits new verbs into the construction triggering the corresponding semantic change of the meaning of the construction.
References


Corpora


Software