



“The spider ripped loose and swung free”: a corpus based study of the resultative V (n) Adj pattern

Μία μελέτη του σχεδίου αποτελέσματος Ρ(Ο)Ε βασισμένη σε σώμα κειμένων

Vassiliki RIZOMILIOTI

This paper is concerned with an area in lexico-grammar which is of particular difficulty for learners of English and especially those whose mother tongue does not include an equivalent structure. More specifically it explores quantitatively and qualitatively the encoding of the resultative pattern V (n) Adj in a large corpus (i.e. the COCA). It identifies the adjective - verb combinations in the pattern and distinguishes the semantic categories they fall into. It further analyses each of these combinations giving their collocation profile and frequencies in the corpus. It is argued that a detailed account of this highly idiomatic structure which is hardly, if at all, included in descriptive and pedagogic grammars and teaching materials, would be enlightening for language teaching and the training of translators and could contribute to a better understanding and mastery of it. A study of this type can shed light on the complexity and variability of a particular multi-word sequence, which would not be possible without the use of corpora and corpus linguistic methods, and might provide other schools of linguistics focusing on this area with some useful insights.

∞

Το άρθρο αυτό εστιάζει σε ένα λεξικο-γραμματικό φαινόμενο το οποίο παρουσιάζει ιδιαίτερη δυσκολία για τους μη φυσικούς ομιλητές της Αγγλικής, ιδιαίτερα όταν η μητρική τους γλώσσα δεν περιλαμβάνει ένα αντίστοιχο φαινόμενο. Συγκεκριμένα ερευνά ποιοτικά και ποσοτικά το σχήμα του αποτελέσματος Ρήμα Ουσιαστικό Επίθετο (Ρ.Ο.Ε.) σε ένα μεγάλο σώμα κειμένων (το COCA). Ταυτοποιεί τους συνδυασμούς επιθέτων και ρημάτων σε αυτό το σχήμα και τους κατηγοριοποιεί με σημασιολογικά κριτήρια. Επιπλέον αναλύει τον κάθε συνδυασμό ξεχωριστά και παραθέτει το συμφραστικό τους προφίλ και τη συχνότητα που παρουσιάζουν στο συγκεκριμένο σώμα κειμένων. Υποστηρίζουμε ότι η λεπτομερής περιγραφή αυτού του σχήματος, το οποίο εμφανίζεται ελάχιστα ή καθόλου σε βιβλία γραμματικής και σε εγχειρίδια εκμάθησης της Αγγλικής, μπορεί να χρησιμεύσει στη διδασκαλία της γλώσσας και την εκπαίδευση των μεταφραστών αφού μπορεί να καταστήσει πιο κατανοητή τη χρήση του. Μελέτες αυτού του είδους μπορούν να βοηθήσουν στην κατανόηση της πολυπλοκότητας και της ποικιλότητας συγκεκριμένων πολυ-λεξικών ακολουθιών, το οποίο δεν θα ήταν δυνατό χωρίς τη χρήση σωμάτων κειμένων και των

σχετικών μεθόδων ανάλυσης, καθώς και να προσφέρουν χρήσιμα στοιχεία σε άλλες σχολές γλωσσολογίας που ασχολούνται με το θέμα αυτό.

Keywords: resultatives, grammar patterns, corpus, COCA, grammar, language teaching

1. Introduction

Resultatives, by definition, are structures which express the end result of an action e.g. *push* a door *shut* and *tear* something *to pieces*. They have long been the object of study of Post-Chomskyeian linguistics including Lexical-Functional Grammar (e.g. Simpson 1983) and Construction Grammar (e.g. Goldberg 1995, Boas 2003, Goldberg and Jackendoff 2004 and Iwata 2006). However, in descriptive and applied linguistics this seems to be an area that has been rather neglected. Therefore it is rather poorly, if at all, represented in pedagogical grammars (with the exception of Grammar Patterns I which, however, does not refer to this pattern as a resultative) and EFL/ESP textbooks. Hence it is expected that the use of resultatives will be limited in non-native speakers' productive repertoire and possibly in certain cases it will be difficult to decode. This seems to be even more the case with speakers of Greek, Romance, Semitic and Slavonic languages (Horrocks and Stavrou 2003), whose mother tongue contains no equivalent structure.

This article focuses on a particular type of resultative occurring in the pattern V (n) Adj (after Francis, Hunston and Manning 1996), in which a verb may be followed by a noun and always by an adjective, and may denote, in addition to result, cause, manner or intensification. Addressing the difficulties mentioned above, it aims to provide a detailed account of the pattern which is hoped to inform language teaching and pedagogic grammars. Using the rich possibilities offered by a large corpus, namely the COCA (the Corpus of Contemporary American English, Davies 2008-), it will identify the verb-adjective combinations of the pattern and their frequencies, as well as the semantic categories they tend to fall into. This paper will first refer to the nature and exponents of resultatives and then will review briefly some relevant literature. Next it will explain the method used to identify the attested instances in the corpus. Subsequently it will present the semantic categories of verb-adjective combinations identified and their frequencies in the corpus under examination. Finally it will present the collocation profile of each category of the resultative pattern identified in this study and will discuss the implications for language teaching.

2. The resultative V (n) ADJ pattern: An overview

In the literature, resultatives have been considered to involve clauses, phrases, and constructions or patterns consisting of subject +verb+ Complement, which may contain an adjective, a prepositional phrase or a phrasal particle, describing the end result indicated by the verb, as shown in the following examples taken from Simpson (1983), Horrocks and Stavrou (2003), and Goldberg and Jackendoff (2004).

1. *Mary wiped the table clean.*
2. *Susan hammered the metal smooth*
3. *He screamed himself hoarse*

4. The pond *froze solid*
5. He *pushed the door shut*.
6. I *ainted the car yellow*
7. Bill *hammered the nail into the wall*
8. The truck *rumbled into the station*
9. Bill *rolled the ball down the hill*
10. He *sang himself to exhaustion/to boredom/to (a state of) exhilaration*
11. The boxer *knocked John out*.
12. The critics *laughed the play off the stage*

This study will be concerned with the resultatives of the type shown in the examples 1-5, and partly example 6, in the pattern V (n) Adj. Following previous studies, it distinguishes between the resultative meaning of this pattern and the depictive or current one e.g. *bring* (a child) up *healthy* and *return* a letter *unopened* (Quirk et al 1985: 1198), which 'are adjuncts and ...do not designate states that are contingent on the action described by the main verb' (Goldberg and Jackendoff 2004: 536). As shown in all five examples above, a particular process (*wiping, hammering, screaming, freezing* and *pushing*) leads to a specific result, which is expressed through an adjective. An alternative structure in English involves V+*until*, where a process leads to a result. However, as Boas (2003) notes, in this case it is the duration rather than the result that is important, which is shown in the following contrasting examples from the COCA: *stir* in milk *until smooth* -The metal was *worn smooth* by a lifetime of use. A search of the COCA shows that the verbs which *until* co-occurs with are mainly those associated with cooking such as *bake, stir, beat, simmer, heat, cook, refrigerate, stir-fry, roast, freeze, fry, broil, steam, blend* and *grill*, which is not the case with the verbs in the pattern under study.

With regard to the V (n) Adj pattern, the crucial questions involve the types of adjectives and verbs which are co-selected, to use Sinclair's (1991) terms. Referring to the adjectives, a restricted number of them tend to occur in this pattern, for instance *clean* and *dry* (e.g. He *wiped* it *clean/dry*), but not *dirty* or *wet, solid* but not *slippery*, e.g. 'the puddle *froze solid*' (Wechsler 2001: 20) and *sick* rather than *ill* in 'she ate herself *sick*' (Goldberg and Jackendoff 2004: 561). The literature concerned with the resultatives has attempted to suggest certain semantic constraints in order to account for the possible adjectives occurring in this construction (except for instances which are purely idiomatic) such as gradability or 'scalarity'. Goldberg (1995), cited in Wechsler (2001), for instance, claims that the allowable adjectives tend to be 'non-gradable' (e.g. *dry*). Wechsler (2001, 2005), on the other hand, does not accept adjectives such as *dry* as being non-gradable as they can be pre-modified by 'completely' and used in comparative forms. Instead he proposes a distinction between, on the one hand, closed-scale gradable adjectives with *maximum* end point such as *dry*, and closed-scale adjectives with *minimal* endpoint such as *wet* and *dirty* which, unlike closed-scale gradable adjectives, need only a small quantity of a substance to qualify as such; on the other, open-scale adjectives such as *wide* and *short* which have no end-point and thus could not be intensified by *completely*. Wechsler suggests that it is closed-scale gradable maximum end-point adjectives that tend to be involved in resultative structures. He notes though that *dead*, which may occur in such structures, is a non-gradable adjective. We could also add more adjectives such as *awake, senseless* and *unconscious* which denote a non gradable state of consciousness. However, while Wechsler's observation is interesting and useful and can account for a large number of the adjectives possible in this pattern, on its own it cannot provide and account for a complete list of resultative adjectives.

Concerning the verb types in this pattern, Levin (1993: 100, 101) argues that they include a wide range of classes except for stative verbs (e.g. *The teacher hated the pupils angry), directed motion verbs, for example *arrive*, and verbs of perception (for example *Midas touched the tree *gold*, Simpson 1983). De-adjectival verbs (e.g. *awaken*) have also been noted to be incompatible as they already encode the resultant state (Fong et al 2001). Concerning the 'allowable' verb-adjective pairs in this construction, Wechsler (2001) argues that 'durative' verbs tend to combine with 'maximal-end point closed-scale gradable' adjectives (e.g. Mary hammered the metal *flat*: *ibid* 19), while 'punctual' verbs with 'non-gradable' adjectives (e.g. he *was* shot *dead*). Although this seems to be a general tendency, there are non-gradable adjectives such as *awake*, *senseless* and *unconscious*, mentioned above, which are preceded by durative verbs (e.g. *shake* awake and *beat* unconscious).

The attempts of formalist approaches to specify the 'allowable' adjectives and verbs in this pattern provide useful insights into an area hardly touched upon by applied linguists, as mentioned above. For applied linguistic purposes there seems to be a need for a detailed study of this pattern which will focus on what is actually said rather than on what cannot be said, as Hunston and Francis (2000: 263) maintain in a similar context. This is only attainable by identifying the attested instances of use in large corpora, as will be shown below.

3. Method

This paper follows a corpus-based approach and relies on the data yielded by a large corpus. The corpus selected was the COCA, a 'monitor' corpus which is updated every year and is well balanced (Davies 2010), and at the moment of writing this paper it has reached 410 million words at the moment of writing. The starting point of the search of the corpora has been the possible adjectives occurring in this pattern. The list of adjectives was compiled from two sources and from the writer's own search for possible candidates in the corpora in question. One of them was Boas' (2003), the most comprehensive one in the literature, which includes the adjectives *awake*, *black*, *clean*, *crooked*, *dead*, *dry*, *flat*, *full*, *hoarse*, *open*, *shut*, *sick*, *silly*, *smooth*, *soft*, *solid*, *sore*, *stupid*, *thin* and *unconscious*. The other was Francis, Hunston and Manning (1996), which will be discussed in detail below. The verbs preceding the adjectives were identified and the instances of those used as resultatives were noted using the left sorting facility of the corpus at a span of 4, capturing thus both continuous and discontinuous instances of the pattern. Subsequently their frequency and collocation features were recorded and semantic categories were distinguished.

It should be pointed out that this study, unlike other studies such as Boas (2003), will not be concerned with lexical resultative verbs, to use Goldberg and Jakendoff's (2004) term, such as make (*something smooth*), or render (*somebody unconscious*) describing only the result in which the action is performed, but it will include verbs, such as *slam* (*something shut*) or *wear* (*something thin*), which also denote the manner in which the result has been accomplished, literally or metaphorically. Furthermore, for practical purposes, it will not include most instances of the pattern referring to a deliberate change of colour as in example 6 above. It will include, however, instances involving colour, such as '*beat someone black and blue*' and '*bleed white*', which express the end result of an action or procedure which had not been intended to change the colour, as it would have been in the case of '*paint a wall red*'.

In this study the following adjectives occurring in the pattern V (n) Adj were identified: *adrift*, *awake*, *bare*, *black and blue*, *blind*, *clean*, *closed*, *crooked*, *dead*, *deaf*, *dry*, *dumb*, *flat*,

free, full, hard, helpless, hoarse, loose, naked, open, raw, senseless, shiny, shut, sick, silly, smooth, solid, spotless, stiff, stupid, thin, threadbare, unconscious and white. The semantic groups which are involved in the pattern identified in this study are presented in the following section.

3.1. Semantic classification of the V (n) ADJ pattern

The fundamental notion around which this study revolves is the ‘pattern’ which is expounded in the two volumes of the pioneering Grammar Patterns (1996 and 1998) by Francis, Hunston and Manning, based on corpus evidence from the Bank of English, and in Pattern Grammar (2000), the theoretical account of the Grammar Patterns by Hunston and Francis as well, in Hunston, Francis and Manning (1997) and Hunston and Francis (1998). Unlike other pedagogical grammars, the object of Pattern Grammar is to identify and give a detailed account of a large number of lexico-grammatical structures and the meanings they are associated with. Among the patterns it is concerned with is the pattern in question, though not explicitly referred to as resultative, as its starting point is the pattern and not the function. Grammar Patterns (1996) distinguishes the following inter-related patterns: *V Adj* (i.e. intransitive use of verb, e.g. *he broke free*, *ibid 77*), *V n Adj* (i.e. verb with object and object complement: *ibid 281*, e.g. *she forced the door open*). In addition the patterns with ergative verbs that can occur either as (*ibid 502*) *V Adj* (e.g. *The lock jerked free*) or as *V (n) Adj* (e.g. *He snapped his box shut*).

In the Grammar Patterns (1996), the pattern *V Adj* includes ‘*the slide open group*’ with the adjectives *open* and *shut*, and the *break free group*, with the adjectives *free* and *loose*. The patterns *V (n) Adj* and *be V-ed Adj* are associated with *the make group* in which the ‘verbs are concerned with having a particular effect on someone or something’ and ‘the adjective indicates the final condition or attribute of something after the action has been completed’ (*ibid: 282*). The verbs are subdivided further into a number of groups, of which only those related to the resultatives under study will be mentioned, namely 1) the ‘*pull open*’ group ‘with adjectives indicating the position of something after the action has been completed’, with the adjectives *open, shut* and *tight* (*ibid 283*); 2) the ‘*squash flat*’ group with adjectives ‘indicating the physical state of a person or thing after the action has been completed’ (*ibid*), with adjectives such as *flat, dry, full, loose, free, clean* and *dead*; 3) the ‘*drive mad*’ group, with adjectives ‘indicating someone’s mental or psychological state after the action has been completed’ (*ibid*), such as *unconscious, awake, stiff/rigid*, and *dumb/blind* in the passive (*ibid*), and 4) the ‘*paint yellow*’ group with ‘adjectives indicating colour after the action has been completed’ (*ibid*). Under Ergative verbs, in the same pattern (i.e. *V n Adj* and *V Adj*) Grammar Patterns distinguish the ‘*slam*’ group with the adjectives *open* and *shut* as well as the ‘*work free*’ group with the adjectives *free* and *loose* (*ibid 502*).

This study adapting and extending these categories distinguishes the following resultative groups on the basis of the type of change effected, as shown in the examined corpora: 1) the Open/shut group (*open, shut* and *closed*), 2) the Detachment group (*adrift, free* and *loose*), 3) the Substance removal group (*dry, clean* and *shiny*), 4) the Change of shape/texture group (*flat, smooth, thin* and *crooked*), 5) the Layer removal group (*bare, naked* and *threadbare*), 6) the Make full-solid group (*full, hard, solid* and *stiff*), 7) the Physical/Mental change of state group (*awake, blind, dead, deaf, dumb, helpless, hoarse, senseless, sick, silly, stupid* and *unconscious*) and 8) the Colour change group (i.e. *white* and *black* and *blue*). The ‘Open/shut’ group denotes the change of position of an object (e.g. the door was *pushed open*) caused by the action expressed by the preceding verb. It includes verbs of movement

which can be subdivided into: a) those that entail forceful movement accompanied by *sound* (e.g. *bang and click*) and b) those that denote movement which can be slow (e.g. *slide and swell*) or quick and violent (e.g. *push and rip*).

The 'Detachment' group denotes detachment (i.e. *adrift, free and loose*) which is the result of the action encoded in the preceding verb. The 'Substance removal' group denotes removal of a substance such as a liquid (i.e. *dry*) or dirt (i.e. *clean and shiny*) from a surface. The 'Layer removal' group denotes the removal of the layer (or part of it) covering a surface (i.e. *bare, naked, raw, threadbare*). In the 'Change of shape/texture group' (i.e. *flat, smooth, thin, hard, stiff*), the change of shape or texture of a surface is most often due to a brisk or violent movement the manner of which is denoted by the preceding verb. In the 'make full/solid' group (i.e. *full, solid, hard and stiff*) the adjectives denote intensification of the action already mentioned in the verbal part of the pattern and could possibly be paraphrased by *completely* or *very*, as in the case of the phrases *booked solid, fill full and scared stiff*. The 'Physical/ Mental change of state' group entails a change in the state of consciousness (*awake, dead, senseless and unconscious*), physical condition (*blind, deaf, dumb, hoarse and sick*) and mental state (*silly and stupid*). Finally the 'Colour change' group in this account includes only the two resultative phrases mentioned above, that is, *white and black and blue*.

The types of verbs preceding the adjectives in this pattern were also examined in this study. The types of verbs favoured in the pattern, according to Simpson (1983: 146), are verbs of change of state (e.g. *freeze*) and verbs of contact (e.g. *kick and shoot*). The examination of the concordances in the corpus, however, shows that while verbs of contact accompanied by movement prevail, verbs of change of state occur less frequently. The types of verbs identified in this pattern include:

- 1) Verbs of movement indicating: a) forceful action (e.g. *thrust, pull, shake and squeeze*), b) gentle movement (e.g. *glide*).
- 2) Verbs indicating change of physical state (e.g. *melt and burn*).
- 3) Verbs which are de-nominal (i.e. they were initially used as nouns) often encoding the instrument and used either literally (e.g. *nail something shut*) or metaphorically (e.g. *milk an economy dry*).
- 4) Verbs which combine movement and sound (e.g. *click, hiss, clank a door open*).
- 5) Verbs involving a mental, physical or behaviour process which are often followed by a reflexive pronoun (e.g. *sing oneself hoarse; worry oneself sick and laugh oneself silly*).

3.2. Frequency of the V (n) ADJ Resultative pattern

As mentioned above, there are hardly any studies on this pattern in applied linguistics and therefore there are no quantitative accounts of the pattern as a whole. The only attempt at a numerical account of this pattern and the verbs the adjectives co-occur with is made by Boas (2003), who examines other resultative structures as well, using the British National Corpus (BNC). His study includes some of the resultative adjectives in the present study, as shown above, but it counts in lexical resultative verbs such as *make* and *drive*, and adjectives which collocate only with this type of verbs (e.g. *mad and insane*). Furthermore, it did not include instances of participial forms of verbs, such as, for example, *frozen, booked or rusted* with *solid* which were yielded by a search of the BYU-BNC (Brigham Young University-British National Corpus) Davies (2004-). Therefore the total of instances of adjective-verb

resultative combinations and the number of verbs revealed by that study would differ from those revealed by a search of the same corpus but using the criteria used in the present study. For instance the resultative pattern with *open* in Boas (ibid: 331) amounts to 393 instances and 34 different verbs, while a search of the BYU-BNC (ibid.) reveals a total of 1,575 instances and 47 verbs (cf. 11,162 instances and 88 different verbs in the COCA in the present study). It should be added in this context that the BNC, consisting of 100 million words, does not seem to be large enough for the study of a pattern which is not particularly frequent with certain adjectives, as shown in Table 2 below, even in a corpus, such as COCA, which is four times as large.

The corpus analysis of this pattern using the COCA reveals the frequency of the pattern as a whole in the corpus, which is 25,625 (60,2 per million words), as shown in Table 1. Looking at the frequencies of the semantic groups identified in this study, we can see that the Open/shut group is the most frequent one (i.e. 15,428 instances), followed by the Detachment, Substance removal and Mental/Physical change of state groups (3,746, 2,156 and 2,016 instances respectively), the Change of shape/texture group (992 instances) and the Make Full/Solid group (746 instances). The least frequent categories are the Layer removal group and the Change of colour group (438 instances and 104 respectively). With regard to the adjectives in the pattern in the corpus examined, as can be seen in Table 2, *open* (11,162 instances), *shut* (3,722 instances), *free* (2,186 instances), *loose* (1,491), *dry* (1,155 instances) and *clean* (975 instances) are the most frequent ones. Interestingly, the Quirk et al (1985: 1198) Grammar, in its brief reference to this structure, although not based on information yielded by a corpus, mentions that 'Among resulting attributes, the adjectives *open*, *loose*, *free*, and *clean* are particularly common'. However, it fails to refer to *dry*, and especially *shut* which is particularly frequent.

Open/shut group	15,428
Detachment group	3,746
Substance removal group	2,156
Mental/physical change of state group	2,016
Change of shape/texture group	992
Make full/solid group	746
Layer removal group	438
Change of colour group	104
TOTAL	25,625 (60,2 per million words)

Table 1: The frequencies of the V (n) Adj R. meaning groups in the COCA

Open	11,162	Full	367
Shut	3,722	Unconscious	269
Free	2,186	Solid	256
Loose	1,491	Flat	254
Dry	1,155	Naked	174
Clean	994	Smooth	167
Thin	562	Sick	161
Awake	553	Silly	139
Closed	544	Senseless	102

Table 2: The most frequent adjectives in the pattern V (n) Adj in the COCA

3.3. Collocational profile of the identified groups

This section will look into the frequency and collocational characteristics of each of the semantic groups identified in this study. The most productive group is the **open/shut** group. With reference to *open*, the verbs in the pattern tend to be mostly ergative and intransitive e.g.,

- (1) I had surgery- they **cracked** me **open** like a lobster/ The door **cracked open**, and an intern's head appeared)/His eyes **sprang open** in panic.

As shown in Table 3, the verbs tend to denote forceful movement (e.g. *break, force, yank, pull, rip, tear* and *throw*), smoother movement (e.g. *drop, fall, slide, inch*), movement accompanied by sound emission (e.g. *buzz, bang, creak, slam, and squeak*) and less frequently the instrument used in a literal or metaphorical sense (e.g. *prise, pry, wedge* and *wrench*).

The most frequent collocates of *open*, are *door* (with 55 different verbs, e.g. *blow, creak, clank, force, fly, inch, wrench*), *eyes* (with 17 verbs, e.g. *flick, prop, pry, nudge, peek*) and *mouth* (with 9 verbs, e.g. *drop, prise, pry* and *snap*). As might be expected, the majority of the nouns in this pattern are used in a literal sense and a smaller number of them metaphorically (e.g. *clamp one's lips shut*). *Open*, in this pattern, is pre-modified by *wide* when co-occurring with the following verbs: *swing* (15), *throw* (11), *crack, fling, burst* and *split* (10), *break* (9), *swing, pop* and *blow* (5), *fly* and *shoot* (3); *push* and *pull* (2). Notably in a number of instances having a metaphorical sense the verb co-occurs with intensifying adjectives (e.g. *wide*) e.g.,

- (2) The end of apartheid had **thrown wide open** the public debate/ History is about to **crack wide open**/ That very important doctor-patient relation is now **blown wide open**.

<i>Open</i>		<i>Shut</i>		<i>Closed</i>	
Swing	1205	Slam	981	Pull	83
Push	828	Snap	347	Slide	75
Crack	777	Squeeze	330	Slam	66
Pull	561	Swing	166	Snap	63
Rip	536	Pull	161	Swing	41
Throw	525	Clamp	132	Flip	23
Slide	482	Slide	123	Squeeze	21
Pop	429	Click	106	Flutter	20
Fling	427	Bang	94	Fall	14
Flip	426	Force	76	Ease	13
Pry	420	Swell/seal	65	Click	12
Break	414	Lock	60	Stitch	11
Fly	354	Nail/sew	59	Zip/pinch	10
Burst	327	Tape	50	Draw	10
Tear	303	Sew	52	Sew/clamp	8
Snap	232	Slap	47	Drift	5
Yank	218	Pinch	46	Droop	5
Drop	202	Clang	45	Bang	4
Fall	201	Kick	42	Seal	4
Cut	193	Zip	30	Fold	3
Kick	184	Clap	29	Jam	3
Flip	180	Chain	27	Cycle	3
Blow	139	Clench/weld	25	Scrunch	3

Prop	130	Wire	24	Irise	3
Creak	125	Screw/click	22	Yank	2
Force	110	Flip	21	Spring	2
Slice	99	Ease/nail	20	Thump	2
Bang	91	Creak	19	Creak	2
Click	80	Hiss	18	Flicker	2
Flutter	77	Bolt	17	Squinch	2
Spring	68	Drift/fold	16	Suture	2
Crash	54	Glue	14	Wedge	1
Smash	43	Flutter/Squint	12	Swoosh	1
Hiss	42	Jam	11	Lick	1
Flick/squeak	36	Wedge	10	Latch	1
Slam/shove	35	Squinch/staple	9	Rumble	1
Crick/wrench	34	Yank/board	9	Force	1
Slash	49	Rust	8	<i>Total</i>	<i>544</i>
Blink	31	Thud/clank/squeak	7		
Whip	27	Droop/thump	7		
Yawn	25	Whip/scrunch	7		
Slit/nudge	22	Padlock/latch	6		
Flap	17	Snick/smack	6		
Heave	18	Fasten/whoosh	5		
Tug	16	Boom/solder	4		
Splay	14	Freeze/fuse	4		
Ease	12	Twist/clack	3		
Buzz/jam	11	Wheeze/suture	3		
Cycle	10	Ram/cement	3		
Clang/zip/flicker/hinge	9	Sag/glide/heave/puff	3		
Sag/steam	8	Crinkle/ clasp/clip	3		
Shake	6	Crust/stitch/purse	2		
Inch/squeal/thrust	7	Force/cinch/button	2		
Snatch/jimmy/thumb	7	Gum/crank	2		
Wedge/whisk/whoosh	7	Grumble/clatter/penny	1		
Dilate/flop/lever/clank	7	Whisk/fling/crunch	1		
Shoulder	6	Thud/smack	1		
Prise/wrestle	4	<i>Total</i>	<i>3,722</i>		
Clack/knife/wheeze/	3				
Winch/punch/swish	3				
Thump/fix	2				
<i>Total</i>	<i>11,162</i>				
<u><i>TOTAL</i></u>					<u><i>15,428</i></u>

Table 3: The Open/Shut group

Shut in this pattern (see Table 3) is similarly preceded by verbs denoting forceful movement (e.g. *heave, jerk, kick, press, pinch, pull* and *squeeze*), smooth movement (e.g. *droop, fold, roll, sew, swell* and *weld*), verbs of movement+ sound emission (e.g. *buzz, bang, click, creak, hiss, squeak, swish* and *whip*), and denominal verbs denoting instrument which include a wider range than those with *open* (e.g. *chain, clamp, cement, screw, seal, solder, suture, tape, and wire*). The premodifiers of *shut* include *tightly, tight*, and *firmly*. *Tightly* is used to premodify *shut* when it co-occurs with *nail, clench, screw, swell, squeeze, press* and *clamp* (one instance each), and *tight* when it co-occurs with *squeeze* (6), *clamp* (2), *clutch, screw, draw, slam* and *seal* (1). Finally there are two instances of *firmly* used as a pre-modifier of *shut* with the verbs *push* and *pull*. The most frequent collocates of *shut* in this pattern are door (with 51 different verbs, e.g. *bolt, click, click, lever, snap, wedge*), eyes (with 19 different verbs, e.g. *droop, drift, freeze, glue, stick, seal*) and mouth (10 instances, e.g. *clamp, cement, jam, pinch* and *wire*).

Closed, which is much less frequent than *shut* in this pattern, also co-occurs with the same categories of verbs as *open* and *shut*. More specifically with verbs denoting forceful movement (e.g. *flip, pinch, press, pull, spring, squeeze* and *yank*), smoother movement (e.g. *drift, fold, ease, lick, puff, slide* and *weld*), movement+sound emission (*bang, click, creak,*

hiss, slam, snap and thump), as well as with denominal, instrument verbs (e.g. *bolt, clamp, seal, stitch, suture* and *wedge*). As in the case of *shut*, the most frequent nouns *closed* collocates with are *door* (19 verbs e.g. *bang, bolt, lever, pull, slide, swing* and *thump*), *eyes* (10 verbs, e.g. *droop, flinch, flutter, stitch* and *scrunch*) and *mouth* (4 verbs i.e. *clamp, pinch, snap* and *stitch*).

The Detachment group is the second most frequent group. The adjectives *adrift, loose* and *free* encoding the result of an action express separation and release of one entity from another or from a place, often implying that the previous situation was a rather unpleasant one, e.g. (3) The fish **shook loose**. This is indicated by the frequent addition of /from+N to the pattern, e.g. (4) She **shook loose of** his grasp and left him behind). As shown in Table 4, *loose* is preceded by a total of 39 verbs, mostly verbs of movement (e.g. *break, shake, wiggle* and *pull*), less frequently by verbs denoting also sound (e.g. *rattle* and *jiggle*) and verbs originally denoting an instrument (e.g. *pry* and *wrench*). *Free* co-occurs with 22 verbs in the corpus examined which are of the same type as those occurring with *loose*. They are ergative (e.g. *break*), transitive (e.g. *drag*) and intransitive (e.g. *work*). The entities involved are people, animals, clothes and other objects. *Adrift*, in its resultative sense, co-occurs with the verbs *cut, cast* and *blow* (36, 31 and 2 instances respectively). Interestingly the pattern is used metaphorically occasionally with *loose* and *free* and frequently with *adrift* e.g.,

- (5) The cold slap of the tile **jarred loose** a memory too horrible for her to comprehend; A storm **broke loose** in her head; Find a really comfortable place to lay down and **cut loose**; the body of the actor must be **wrenched free of** its conventional postures; But they did **wriggle free** of personal responsibility; Billy **pulled loose** a bark fiber and raced back down the mountain to the wizard's door; Physics is the lever that **pries loose** the secrets of the universe, and students need to see the power of basic; that the military sector is a leech on the rest of the economy, and that it must be **plucked loose** in order to halt the decline in U.S. productivity; She is elsewhere (or nowhere), **cut adrift** by her illness, living in a private world (or hell); Without her link, Carrie felt **cast adrift**, separated from the rest of humanity.

<i>Free</i>		<i>Loose</i>		<i>Adrift</i>	
Break	652	Break	419	Cut	36
Cut	446	Pull	158	Cast	31
Shake	213	Shake	99	Blow	2
Pull	137	Wrench	74	<i>Total</i>	<i>69</i>
Tear	111	Yank	73		
Pry	99	Knock	57		
Knock	68	Tear	66		
Slip	46	Jerk	57		
Work	43	Wriggle	55		
Swing	36	Cut	50		
Rip	33	Slip	46		
Jar	31	Rip	38		
Struggle	28	Jar/kick	29		
Wrench/fall	23	Spring	25		
Kick/pop	22	Pop/work	24		
Spring/yank	20	Pry	22		
Bust/jerk	11	Bust/fall	19		
Tug	9	Tug	15		
Blow/wiggle	6	Kick/squirm/blow	12		
Swing/wriggle/drift	5	Rattle	10		
Twist	5	Wrest/shrug/swing	7		
Spin/jostle	4	Pluck/jostle	4		
Jolt/whip	3	Spin/twist	3		
Flop/blast/rip/	3	Billow/wiggle	3		
Burst/snap/pluck	3	Blast/ jiggle	2		

Wrestle	3	Struggle/spring	1
Strip/wrest/slip	2	<i>Total</i>	<i>1,491</i>
Crack/jiggle/clamp	2		
Hack/rattle/lever	1		
<i>Total</i>	<i>2,186</i>		
<u><i>TOTAL</i></u>			<u><i>3,746</i></u>

Table 4: The Detachment group

The Substance removal group encodes the result of an action through the adjectives *dry*, *clean* and *shiny*. In the case of *dry*, as shown in Table 5, the verbs indicating the process and manner leading to the specific result are mainly verbs of contact, involving gentle (e.g. *pat* and *lick*) or forceful movement (*wring* and *shake*), verbs indicating the instrument used (e.g. *mop* and *pump*), and less frequently, physical state (e.g. *boil* and *freeze*). Most of the verbs are transitive (e.g. *steam*) and very few intransitive (e.g. *bleed*). The entities involved are parts of the body and objects containing a liquid. In the case of *clean*, there are 18 different verbs in the corpus (while 32 with *dry*), mostly transitive, which are also verbs of contact involving more or less forceful movement (e.g. *wipe/rub*, and *scrub/ scrape* respectively), and a few denominal verbs (e.g. *brush* and *polish*). The objects of the verbs tend to be surfaces (e.g. *face*, *plate*) and the substance removed is indicated by *of N*. With both adjectives the pattern is used often metaphorically, mainly with the verbs *milk*, *bleed*, *wring* and *suck* with *dry* indicating maximum degree and exaggeration, and the verbs *wipe*, *wash* and *sweep* with *clean*, especially in financial and literary contexts e.g.

- (6) people who only **sucked** the system **dry**; Hell, if they can **suck** the sea **dry** of fish, why don't we?; After they have **bled** the plan **dry**, there is often little or no money to pay off the participants' claims; he says there's a risk the companies will be **bled dry** from the litigation; she **milked** Levitz so **dry** he sold himself to a worm like Spoleto; **Slate is wiped clean**, as if the dispute never happened; **wipe** the bank account **clean**; Skies seem **washed clean** of summer's hazy humidity; I wanted to feel my soul and my thoughts **washed clean** of anger.

<i>Clean</i>		<i>Dry</i>		<i>Shiny</i>	
Wipe	450	Pat	612	Wear	4
Sweep	150	Suck	114	Scrub	1
Scrub	114	Wipe	94	Lick	1
Wash	98	Squeeze	83	Glaze	1
Lick	76	Bleed	53	<i>Total</i>	<i>7</i>
Brush	21	Blot	41		
Scour/rinse	20	Blow	32		
Shave	18	Wring	23		
Scrape	15	Rub	18		
Suck	5	Towel	16		
Bleach/gnaw	3	Spin	15		
Polish	1	Drink/pump	10		
<i>Total</i>	<i>994</i>	Shake	8		
		Boil/drain	6		
		Milk	4		
		Scrape	2		
		Bake/freeze	1		
		Mop/steam/cake	1		
		Crack/rot/scrub	1		
		<i>Total</i>	<i>1,155</i>		
<u><i>TOTAL</i></u>					<u><i>2,156</i></u>

Table 5: The Substance Removal group

The fourth group, i.e. the Layer removal group, involves activity which leads to the removal of a layer from a surface such as skin or plant, when used literally, and includes the adjectives *bare*, *naked*, *raw* and *threadbare*, e.g. (7) an area at the end was **worn** completely **bare** by the five dogs/ One night she **rubbed** her skin **raw** trying to scrub off the tattoo/ At last I tore my eyes from it for a moment and saw that the hail curtain had **worn threadbare**. As shown in Table 6, in the corpus examined, the number of verbs with which the three adjectives co-occur are rather limited. *Bare* co-occurs mainly with *strip* and mostly with non-human entities as objects, e.g. (8) By the beginning of the eighteenth century they had *stripped* Ireland *bare* of her forests and less frequently with *scrape*, *scratch*, *wear*, *wash*, *rub*, *wash*, *polish* and *shear*, while *naked* collocates only with *strip* and the N slot is filled most frequently with human entities whose clothes are removed. *Raw* collocates with *rub* and *scrape* and less frequently with *scrub*, *strip* and *chap*, while *threadbare* mainly with *wear* and rarely with *beat* and *stretch*. The pattern is used often metaphorically as shown in the following examples:

(9) On the way home he **rubbed** his emotions **raw** by telling himself Rachel had betrayed his heart had been **rubbed raw** in the time it had taken leukemia to claim her young husband's life; Nerves **rubbed raw**, he scanned each passenger who boarded; The delay **scraped** his nerves **raw**; I felt like that I had just been **stripped raw** of every emotion I could even think of; Their credibility and confidence has been **stripped bare** after three successive Premier League defeats; within a few years; But in McPherson's case, the rationalization would get **stretched threadbare**.

<i>Bare</i>		<i>Naked</i>		<i>Raw</i>		<i>Threadbare</i>	
Strip	138	Strip	174	Rub	63	Wear	5
Scrape	10			Scrape	32	Beat	1
Scratch	3			Scrub	4	Stretch	1
Rub/wash	2			Strip	3		
Polish/shear	1			Chap	1		
<i>Total</i>	154		174		103		6
<i>TOTAL</i>							438

Table 6: The Layer Removal group

The fifth group, the Change of shape/texture group, involves activity which leads to the change of shape or texture of a surface, such as metal, skin and hair and includes the adjectives *flat*, *thin*, *smooth* and *crooked*. *Thin*, the most frequent adjective in this group, occurs in this pattern less often in a literal sense and more frequently in a metaphorical sense with the verbs *wear* (with nouns such as *patience*, *humour*, *stamina*, *excuses*, *relationship*, *joke*) and the verb *stretch* (226 instances) and nouns such as *talent*, *resources*, *budget*, *ranks* and *forces*. It should be noted, however, that the instances with *spread* and *cut* were not counted in as they were considered to express manner rather than result.

Flat, as we can see in Table 7, collocates mainly with verbs of forceful movement (i.e. *press*, *knock*, *trample*, *smooth*, *squeeze*, *crush*, *scrape*, *smash*, *pound* and *mash*) and verbs of movement denoting an instrument or material (i.e. *clip*, *comb*, *plaster*, *hammer*, *iron* and *pin*), and rarely with verbs denoting movement+sound (i.e. *swish*). *Smooth* collocates mainly with *wear* and less frequently with *rub*, *scour*, *scrape* and the denominal verbs *sand*, *bulldoze*, *powder*, *sandpaper*, *brush*, *rake*, and *polish*. Metaphorical use of *smooth* in this pattern is rare in the corpus e. g. (10) Unfortunately, the song had been **worn smooth** by too many singers before. *Crooked*, as shown in Table 7, is quite infrequent in this pattern. Examples of metaphorical use of this resultative group include the following:

- (11) Itinerant special education teachers often find themselves **stretched** too **thin** across schools with too many responsibilities/ Are there concerns about resources being **stretched** too **thin**?/ Silence **stretched** so **thin** it had to snap); The theories are beginning to **wear thin**; Gibbs's relationship with Beathard began to **wear thin** in the final years of Beathard's tenure; the patience of the first-time tourists started to **wear thin**./ The floor was bare rock, **rubbed** nearly **smooth** by the passage of many feet/ Its cover is **worn smooth** from handling.

<i>Flat</i>		<i>Smooth</i>		<i>Thin</i>	
Press	74	Wear	72	Wear	318
Knock	52	Sand	43	Stretch	226
Smash	21	Polish	16	Press	9
Mash	19	Rake	13	Pound	8
Squash	14	Rub	12	Flatten	1
Pound/smooth	11	Brush	4	<i>Total</i>	<i>562</i>
Comb	8	Scrape/shave	3		
Stretch	8	Sandpaper	2	<i>Crooked</i>	
Plaster	6	Iron/scour	2	Knock	1
Hammer	4	Comb/bulldoze	1	<i>Total</i>	<i>1</i>
Iron/roll	5	<i>Total</i>	<i>174</i>		
Fling/jam/scrape	3				
Shear/grind	2				
Rake/trample/slick	1				
<i>Total</i>	<i>254</i>				
<u><i>TOTAL</i></u>					<u><i>992</i></u>

Table 7: The Change of Shape/Texture group

The sixth group, the 'Make full/solid' group, involves the adjectives *full*, *solid*, *stiff* and *hard*, which encode the result of an activity that leads to an extreme state or endpoint. *Full*, as shown in Table 8, occurs most frequently with *stuff* (83 instances), and *pump* (80 instances) mostly in a metaphorical sense and with negative prosody (e.g. **pumped full** of painkillers/carcinogenic/chemicals), and *pack* and *cram* (69 and 67 instances respectively), and less frequently with *soak*, *jam* and *stock*.

Instances of metaphorical use of the pattern include the following:

- (12) the birds are **pumped full** of antibiotics; Everything he recognized had been made over-glitzed up, polished, **pumped full** of sophistication, completely ruined./she gushed instantly, her voice **crammed full** of false surprise; I was so happy to be free after **cramming** my brain **full** of invertebrates and Russian verbs; She was standing there **crammed full** of enthusiasm and energy like a bomb on a short fuse (BNC); Check out our summer reading guide **stocked full** of suggestions; My memory is as good as it ever was, and it's **stocked full** of recollections about the poor people of West Virginia; His stories were enticing and **packed full** of detail; Corporate publications **jammed full** of terms like "challenging

Solid, as shown in table 8, occurs mainly with *freeze* (187 instances), *book* (56 instances, and less frequently with *pack*, *cram* and *fuse* e.g.,

- (13) oceans would eventually **freeze solid** from the bottom up/ Gaston and his horse were **frozen almost solid**/ Hotels are **booked solid** in the area)

Stiff, on the other hand, occurs in a metaphorical sense with *scare* and *bore*, while with *freeze* mostly in a literal sense, e.g. (14) Pam's hands were **frozen stiff**, and infrequently with *whip*, *swell*, *stir*, and *starch*, e.g. (15) The grass there now was **starched stiff** with frost. *Hard*, finally, collocates only with *freeze*, most often with a literal sense, with the N slot filled by *earth*, *snow*, *food*, *ground* and *water pipes*.

	<i>Full</i>		<i>Solid</i>		<i>Stiff</i>		<i>Hard</i>
Stuff	83	Freeze	187	Scare	51	Freeze	6
Pump	80	Book	56	Freeze	41		
Pack	69	Pack	10	Bore	19		
Cram	67	Cram	2	Starch	3		
Fill	34	Fuse	1	Stretch	2		
Jam	16			Swell	1		
Stock	13						
Soak	5						
<i>Total</i>	<i>367</i>		<i>256</i>		<i>117</i>		<i>6</i>
<i>TOTAL</i>							<i>746</i>

Table 8: The Make Full/solid group

The Mental/physical change of state group includes two sub-groups: a) the group that occurs mainly with reflexive pronouns and verbs which are not normally transitive such as *laugh* and *cry* and b) the group which occurs less frequently with reflexive pronouns. In both groups (with the exception of the pattern with *awake*) there is most often an action involved which leads to extreme changes relevant to health and behaviour. The first sub-group includes the adjectives *hoarse*, *sick*, *silly* and *stupid*. *Sick*, as shown in Table 9, occurs most frequently with *worry* (132 instances), in the pattern N V-ed Adj (e.g. *he was worried sick*) and less frequently in the pattern V (n) Adj, the N slot being filled with a reflexive pronoun (e.g. *worry oneself sick*). Less frequently it collocates with *laugh* (10 instances), *cry*, *drink* and *eat* (6 instances). *Hoarse* occurs with a reflexive pronoun and, as might be expected, only with verbs related to the production of sound, the most frequent of which is the verb *shout*. With *silly* and *stupid* the pattern is used most often metaphorically with a reflexive pronoun to denote excessive use of something leading to a behaviour which is negatively evaluated, the former being particularly productive, as shown in Table 9 e.g., (16) He **drinks himself silly**, and claims that only a woman can tame the beast in a man.

The second sub-group denoting Mental/physical change of state, as shown in Table 10, includes the adjectives *awake*, *blind*, *dead*, *deaf*, *dumb*, *helpless*, *senseless* and *unconscious*, and the verbs in the pattern most often involve forceful movement and less frequently mental or behaviour processes. *Senseless* and *unconscious* collocate mainly with *beat* (53 and 227 instances respectively) and *knock* (39 and 227 instances respectively), a number of other verbs denoting violent movement, or behaviour processes such as drinking, and infrequently with denominal verbs such as *club*. *Senseless* co-occurring with *scare* and *bore*, and *unconscious* with *stun* are used in a metaphorical sense. *Awake*, which is particularly productive, like the two other adjectives in this group, collocates more frequently with verbs involving forceful movement (e.g. *shake*, *startle* and *jolt*), and less frequently with verbs denoting behaviour (e.g. *swim* and *yawn*) or other verbs and is used transitively, intransitively or with reflexive pronouns. *Dead* collocates most frequently with *shoot* (555 instances), while the least frequent adjectives in this pattern *deaf*, *dumb*, *blind* collocate with *strike*, as shown in Table 10.

The change of colour group, as mentioned above, in this study is restricted to the pattern indicating the change of an existing colour as a result of continuous action or process, rather than of simply adding colour to a surface. In the pattern with *white*, the adjective is preceded by verbs denoting the removal of the initial colour through strenuous or prolonged action, with *bleach* being by far the most frequent. The pattern with *black and white* occurs

mainly as a fixed expression with *beat*, as shown in Table 11, and less often with other verbs denoting exertion of physical force.

<i>Sick</i>		<i>Hoarse</i>		<i>Silly</i>		<i>Stupid</i>	
Worry (22+*self)	132	Shout (*self)	17	Scare (7+ *self)	37	Eat (*self)	4
Laugh (*self)	10	Scream (*self)	5	Knock (4+*self)	24	Drink (*self)	4
Cry (*self)	6	Yell (*self)	3	Bore (2+*self)	23	Knock (*self)	2
Drink (*self)	6	Bark (*self)	2	Laugh (*self)	16	<i>Total</i>	<i>10</i>
Eat (*self)	6	Cheer (*self)	2	Slap (3+*self)	15		
<i>Total</i>	<i>160</i>	Talk (*self)	1	Gorge (*self)	3		
	7	Screech (*self)	1	Smack	3		
		Holler (*self)	1	Eat/drink (*self)	2		
		Shriek(*self)	1	Pound (*self)	1		
		Sing (*self)	1	Ride (*self)	1		
		Babble (*self)	1	Blow (*self)	1		
		Pray (*self)	1	Stuff/steam/swe at (*self)	1		
		Crow (*self)	1	Fuck/screw/talk /play (*self)	1		
		<i>Total</i>	<i>37</i>	Spend/sport /whistle (*self)	1		
				Promote/giggle (*self)	1		
				<i>Total</i>	<i>140</i>		

TOTAL347

Table 9: The Mental/physical change of state group mainly with a reflexive pronoun

<i>Senseless</i>		<i>Unconscious</i>		<i>Awake</i>		<i>Helpless</i>	
Beat (1+*self)	53	Knock (3+*self)	227	Shake (25+*self)	161	Flutter	3
Knock	39	Beat	23	Startle (1+*self)	84	Strike	2
Scare	8	Choke	4	Jolt	80	Knock	1
Pound	5	Batter	3	Jerk/nudge (3/1 +*self)	32	Seize	1
Bore (1+*self)	4	Drink (*self)	3	Snap (1+*self)	29	Tease	1
Punch	1	Club	2	Blink	17	<i>Total</i>	<i>8</i>
Pummel	1	Kick	2	Jar (1 +*self)	14		
Club	1	Stun	2	Bolt/stir	12		
Drink (*self)	1	Strike	2	Prod	8		
<i>Total</i>	<i>113</i>	Bludgeon	1	Force (5+*self)	6		
		<i>Total</i>	<i>269</i>	Jump	5		
<i>Dead</i>				Scream (2+*self)	5		
Shoot (2+*self)	555			Drag/spring/kiss	4		
Strike	14			Snort/slap (1+*self)/-	4		
Knock	14			Struggle	3		
Kill	8			Yank/kick	3		
<i>Total</i>	<i>591</i>			Blast/jostle	2		
				Pinch/gasp (*self)/-	2		
<i>Deaf</i>				Snatch/tickle (*self)/-	2		
Strike	9			Coax/ yawn (*self)	1		
<i>Total</i>	<i>9</i>			Write/blink (*self)	1		
				Ruffle (*self)	1		
<i>Blind</i>				Hunch/swim (*self)	1		
Strike	24			Crow/buzz (*self)	1		
<i>Total</i>	<i>24</i>			Straighten (*self)	1		
				Shout/twitch (*self)	1		

<i>Dumb</i>		Rock/seize/tease	1
Strike	102	<i>Total</i>	553
<i>Total</i>	102		
<u><i>TOTAL</i></u>			<u>1,669</u>

Table 10: The change of Mental/physical state group with or without a reflexive pronoun

	<i>White</i>		<i>Black and blue</i>	
Bleach	80	Beat	7	
Bleed	7	Bruise	1	
Drain	4	Batter/pinch	1	
Scrub	3			
<i>Total</i>	94		10	
<i>TOTAL</i>			104	

Table 11 The Change of colour group

4. General remarks and suggestions for language learning and teaching

The analysis of the instances of this 'unit of meaning', which is at the interface of lexis and grammar, attested in the corpus examined, shows its highly idiomatic nature as it allows certain combinations of verbs and adjectives and not others and each of these combinations often has a different collocational profile. In other words it demonstrates the 'phraseological tendency' of language expressed by the 'idiom principle' (Sinclair 1991). Some of the *V Adj* combinations involve semi-fixed collocations which may be quite productive, as in the case of *V+open/shut* (i.e. 87 and 96 different verbs respectively), which is an example of a 'pocket of productivity' in Goldberg and Jackendoff's (2004: 564) words. Others are restricted, in terms of collocation (e.g. *strip naked*), semantic set of verbs and type of acceptable object (e.g. Verb of sound + reflexive pronoun+hoarse), apparently due to pragmatic reasons. Finally others involve fixed phrases such as *wipe the slate clean* and *scared stiff*, while there are instances of more creative ones including metaphorical extensions of the pattern. This confirms Boas' (2003 and 2005) and Goldberg and Jackendoff's (2004) view about the idiosyncratic and partially productive nature of resultatives, based on ample evidence which specifies in which particular verb-adjective pairings this is the case.

What regard to language teaching, this study confirms the importance of teaching and learning a language not as isolated lexis and structures with empty slots, but in meaningful chunks. Teachers could become aware of the number of choices available in encoding this language function and in turn help advanced students notice it, comprehend it and express it in an acceptable way. They might highlight the differences of encoding result, or intensification (e.g. *freeze solid*) and manner (e.g. *the door flew open*) through this pattern, if possible, across more than two languages. They could indicate that whereas in English in this pattern the result is encoded through the adjective and the manner in which it is achieved through the verb, in a number of other languages such as Greek and French, the result may be expressed in the verb (see example 1 below), and the manner could be omitted, or might be expressed by means of a prepositional phrase specifying the instrument and by implication the manner (as in examples 1 and 2). Furthermore they could point out that the result in these languages could also be omitted as shown in example 2 and might be inferred using real world knowledge. In addition they might show with examples that in certain cases

both manner and result may be present in a clause but, unlike English, it is the duration rather than the result that is highlighted, as shown in example 3 below.

1. *Beat* the metal *flat*/ ***Isiono*** to metallo [*with or without an object e.g. me ena sfiri*] (I ***straighten*** the metal- with e.g. a hammer) / ***applatir*** le metal (flatten the metal, Collins English-French Robert Dictionary 2008).
2. *Wipe* the glass *clean* / skoupizo to potiri [*with or without an object e.g. me ena pani*] (I wipe the glass – e.g. ***with a piece of cloth***) / essuyer la verre (wipe the glass, Collins English-French Robert Dictionary 2008).
3. *Beat* someone *unconscious* / ktipo kapoion ***mehri*** anesthisias/***mehri*** na pesi anesthitos (I beat someone ***to the point of*** unconsciousness/***until*** he falls down unconscious); batter quelqu'un ***jusqu' a*** lui perdre connaissance (beat someone until s/he loses consciousness, Collins English-French Robert Dictionary 2008).

Students should therefore be sensitized to the differences between English resultatives and the corresponding ones in their mother tongue through practice in noticing and practising. Activities could be designed so that learners can render a number of them in their own mother tongue (or other languages for awareness raising purposes, as mentioned above), after having been exposed to concordances, if possible, yielded by bilingual corpora. Practice could also involve matching verbs and subjects/objects with particular adjectives from the list presented in this study or matching verbs and adjectives with the semantic categories mentioned above. In addition it would be useful to combine visuals with resultatives in two or more languages. It follows that the findings of this study could also prove useful for translators-in training as they would be able to see clearly the variability of the expression of this function across different languages, the possible verb-adjective combinations in authentic language use, as well as the wealth of possible verbs in particular co-texts. Thus their language awareness would be enhanced and their productive repertoire in this area at both literal and figurative level would be enriched. Teaching materials could make use of the semantic categories presented in this paper and include concordances of the most frequent resultatives followed by practice material. Finally pedagogic grammars could similarly include this resultative pattern with an indication of the frequencies of the different semantic categories and the particular adjectives involved. They could also present examples of typical manifestations of the pattern including the transitivity and word order variations.

5. Conclusion

This study shows the value of using patterns in language teaching, as Hunston and Francis (2000) point out, as well as the potential of corpora in language study and description. It has looked into a pattern encoding result which has hardly been dealt with in applied linguistics, using a 410 million words corpus (i.e. the COCA). More specifically it has presented the frequency of the pattern in the corpus (i.e. 60,2 per million words) and the semantic categories involved. It has also presented the possible verb-adjective combinations, revealing a wealth of verbs most of these adjectives can occur with, which enable the expression of manner in the achievement of result in a very detailed and often iconic way, as can be seen in the resultatives in the title of this paper. It is hoped that some of the findings such as those reported in Boas' study (2003), which entails other resultative patterns as well, and the present study, which examines in detail on the particular pattern, could find their way into descriptive, pedagogic grammars, EFL/ESP textbooks, dictionaries and possibly materials for training translators. It is also hoped that, as Gries (2008) points out in a similar context, other approaches to grammar will benefit from corpus informed work which provides frequencies and detailed language description, and corpus linguistics work will

benefit from the different perspectives offered by those approaches, as has been the case in this study.

Further research could look into the occurrence and frequencies of the pattern under study in particular genres and registers as well as in advanced learner and native speaker corpora and use the results in materials catering for advanced students. Furthermore, future research could investigate the occurrence, frequencies and collocations of other resultative patterns and other important patterns in large corpora and contribute thus to an improved description of this and other major functions of language, aiding thus the conscious learning of them.

References

- Boas, H. C. (2003). *A constructional approach to resultatives*. Stanford, CA: CSLI Publications.
- Boas, H. C. (2005). 'Determining the productivity of resultatives: A reply to Goldberg and Jackendoff'. *Language*, 81/2: 448-64.
- Collins English-French Robert Dictionary. (2008). Paris: Collins.
- Davies, M. (2004-) *BYU-BNC*. (Based on the British National Corpus from Oxford University Press). Available online at <http://corpus.byu.edu/bnc/>.
- Davies, M. (2008-). *The Corpus of Contemporary American English: 450 million words, 1990-present*. Available online at <http://corpus.byu.edu/coca/>.
- Davies, M. (2010). 'The corpus of contemporary American English as the first reliable monitor corpus of English'. *Literary and Linguistic Computing*, 25/2: 1-18.
- Fong, S., Fellbraun, C. & Lebeaux D. (2001). 'Ghosts, shadows and resultatives: The lexical representation of verbs'. *TAL*, 42/3: 755-784.
- Francis, G., Hunston, S. & Manning, E. (1996). *Collins COBUILD Grammar patterns I: Verbs*. London: Harper Collins. Also available at <http://arts-ccr-002.bham.ac.uk/ccr/patgram>.
- Francis, G., Hunston, S. & Manning, E. (1998). *Collins COBUILD Grammar patterns II: Nouns and adjectives*. London: Harper Collins.
- Goldberg, A. (1995). *Constructions: a construction grammar approach to argument structure*. Chicago: University of Chicago Press.
- Goldberg, A. & Jackendoff, R. (2004). 'The English resultative as a family of constructions'. *Language*, 80/3: 532-568.
- Gries, S. (2008). 'Phraseology and linguistic theory: a survey'. In S. Granger & F. Meunier (Eds.): *Phraseology: an interdisciplinary perspective*. Amsterdam: Benjamins.
- Horrocks, G. & Stavrou M. (2003). 'Actions and their results in Greek and English: the complementarity of morphologically encoded (viewpoint), aspect and syntactic resultative predication'. *Journal of Semantics*, 20/3: 297-327.
- Hunston, S., Francis, G. & Manning, E. (1997). 'Grammar and vocabulary: showing the connections'. *ELTJ*, 51/3: 208-216.
- Hunston, S. & G. Francis. (1998). 'Verbs observed: a corpus-driven pedagogic grammar'. *Applied Linguistics*, 19/1: 45-72.
- Hunston, S. & G. Francis. (2000). *Pattern grammar. a corpus-driven approach to the lexical grammar of English*. Amsterdam/Philadelphia: Benjamins.
- Iwata, S. (2006). 'Argument resultatives in a lexical constructional account: the case of resultatives with adjectival result phrases'. *Language Sciences*, 28/ 5: 449-496.
- Levin, B. (1993). *English verb classes and alternations*. Chicago: The University of Chicago Press.

- Quirk, R., Greenbaum, S., Leech & G. Svartvik. (1985). *A comprehensive grammar of the English language*. London: Longman.
- Simpson, J. (1983). 'Resultatives'. In B., Levin, M., Rappaport and A. Zaenan (eds.) *Papers in lexical-functional grammar*. Bloomington: Indiana University Linguistics Club.
- Sinclair, J. (1991). *Corpus, concordance, collocation*. Oxford: Oxford University Press.
- Wechsler, S. (2001). 'An analysis of English resultatives under the event-argument homomorphism model of telicity'. *Proceedings of the 3rd Workshop on Text Structure*. Austin: University of Texas, October 13-15, 2000.
- Wechsler, S. (2005). 'Weighing in on scales: A reply to Goldberg and Jackendoff'. *Language*, 81/2: 465-73.
-

Vassiliki Rizomilioti (rizomilv@otenet.gr) holds a B.A. in English Language and Literature from the University of Athens, an MA in Applied Linguistics from the University of Sydney and a PhD in Applied Linguistics from the University of Birmingham. She works as an EAP tutor at the University of Patras. Her research interests include academic writing, corpus analysis, genre and discourse analysis and ESP/EAP teacher training.
