Compounds, lexicalization patterns and parts-of-speech: English and Bulgarian compound verbs in comparison and contrast

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Compound verbs stay outside the main focus of compounding studies and their canonical properties remain obscured by the widely shared premises that compounds and compounding are in a necessary and sufficient cause-effect relationship and that both the classification of compounds and the nature of the intracompound relations hinge on the lexical categoriality specification of compound components. It is argued in the paper that when we discard the two premises it appears that compound verbs are genuine compounds whose typological study can be enhanced by adopting a constructionist stand on their creation and character, which reveals informative similarities and differences in lexicalization patterns in typologically distinct languages. The last claim is illustrated by a contrastive analysis of compound verbs in English and Bulgarian.

Keywords: *compounds, lexicalization, parts-of-speech, English, Bulgarian*

1. Introduction

Much ink has been spilled on compounds and compounding. But the impressive literature is biased towards the study of the notorious noun + noun (NN) compounds considered to be the canonical instance of compounds and the canonical output of compounding. Other types of compounds rarely attract the enviable attention NN compounds enjoy. The situation is not much different in typological studies of compounds and in attempts to uncover the universal properties (if there are any) of such lexemes. In this context the current paper aims to contribute towards the fulfilment of Guevara and Scalise's desideratum (2009: 125), stating that "[f]uture work on the typology and on the theory of compounding will necessarily have to shift the tendency shown until now by concentrating on the analysis of the many remaining compound-types." To this end the main focus of the paper is on compound verbs and is organized in the following way: part one is dedicated to a short discussion of the status and nature of compound verbs in the light of what has been defined as the canonical in compounds and compounding; part two is focused on the nature of the "input categories" and the role of part-of-speech classes in analyzing compound verbs; part three presents an alternative approach to compound verbs based on the central premises of construction morphology; part four discusses the polysemous concept of lexicalization and its relevance for the study of compound verbs and what it reveals about the outstanding similarities and differences in two distantly genetically related and typologically distinct languages – English and Bulgarian; in the last part some concluding remarks are made.

1. Nature and status of compound verbs

1.1. *What is a compound verb?*

Compound verbs do not make a favourite topic in the mainstream literature (be it word-formationist, compounding proper, cognitive linguistics, construction grammar, typology and universals, etc.). This can hardly be attributed to the scarcity of such compounds in languages. The incidence of compounds with the output category V in "Germanic languages is 17.01 %, and in Slavonic - 11.63 %" in the Morbo/Comp sample (Guevara and Scalise 2009: 116). Furthermore, this neglect could not stem from any peculiar or deviant features which set these compounds apart from other compounds, as will hopefully be shown.

As is frequently the case, linguists coming from different schools and working with different languages do not see eye to eye as to even what constitutes a compound verb, let alone agree on the properties of such lexical items cross-linguistically. In order to avoid any confusion as to what kind of lexical object is discussed here a proper definition and clarification of where I stand on the relevant issues is in order. Verbal compounds in the context of word-formation discussions have been defined as root serialization objects, i.e. "sequences of verb roots which result in the creation of a single verb with shared arguments" (Aikhenvald 2007: 32). Such definitions have lead to conclusions considering the correlation between verbal compounds and head-marking typology of languages. It is claimed that while nominal compounds can freely occur in all types of languages, verbal compounds "are widespread in head-marking languages and in languages which are of neither head- nor dependent-marking type […] and only rarely found in nonhead-marking languages. English *stir-fry* is among the few verbal compounds in this language" (Aikhenvald 2007: 32).

But compound verbs are not "few" in English. Dictionary data, comments by specialists in the field and corpus searches reveal that compound verbs have been steadily on the rise in English for the past fifty years (Ackema and Neeleman 2004; Bauer 1983; Erdmann 2000; Nagano 2007; etc.). Erdmann (2009: 47) reports the following about the lexicographic attestation of compound verbs: The American Heritage Dictionary of the English Language (4th edition) lists 687 compound verbs; Merriam-Webster's Collegiate Dictionary (11th edition) – 681; Collins English Dictionary (5th edition) – 488 and the Concise Oxford Dictionary (10th edition) – 580. Haspelmath (2002: 169) claims that well over 100 neologisms of back-formed compound verbs entered the English language in first half of the 20th century alone. Nagano (2007: 36) contributes further to the diachronic rise of compound verbs by registering 257 compound verbs of the back-formed type in English during the 20th c. The data are not astounding but "the few" also does not pay justice to the incidence of compound verbs in English.[1]

Despite lexicographic and corpus evidence (especially COCA) and the recognition of neologisms of the *slow-bake* and *thumb-strum* type by Bauer and Renouf (2001: 110) as compound verbs, the status of such lexemes in languages like English remains controversial (see Adams 2001; Lieber 2004, etc.). In the midst of debating compound verbs (challenging their existence predominantly), they have nonetheless been defined as comprising two basic types –

coordinate verb + verb (VV) structures and noun incorporation types - noun + verb (NV), where the non-referential noun is expected to play an argument role of the verb.

In the general reference grammar literature at the same time various types of compound verbs are legitimized in English. In the Oxford Modern English Grammar, Aarts (2011: 34) offers the following classification of compound verbs into types:

Compound verb types	Examples
verb + verb	blow-dry, dare say, drink-drive, freeze-dry, make do, stir-fry
noun + noun	handcuff, stonewall
noun + verb	babysit, brainwash, carbon date, colour code, hand-wash, proofread
adjective + noun	bad-mouth, blindfold, deep-fry, fast-track, short-change
adjective + verb	cold-call, dry-clean, whitewash
preposition + noun/verb	upstage, background, overbook, overrun, underestimate

It appears that compound verbs in English constitute a well-developed lexical class and require the attention of word-formationists, typologists and the linguistic community at large. Admittedly, compound verbs are not crucial for establishing general language typology, but a discussion of compound verbs can contribute to the rising interest towards the typology of derivational morphology (for a definition of the broad term derivational morphology and the typological approach to its study see Štekauer, Valera and Körtvélyessy 2012).

The understanding of verbal compounds promoted here has no immediate correlations with different types of languages and is not used as a criterion for defining type of language. To avoid any confusion and to emphasize that any claims made here relate to verbal compounds as lexical items and word-formation objects, a compound verb is defined as a lexical item which, irrespective of its origin story, is characterized by morphotactic analyzability into (at least) two components, very weak compositionality, functions as a single predicate, can be used in all finite forms characteristic of a language with different degrees of acceptability in individual cases and encodes a unified concept. Typical examples from English and Bulgarian are *sidetrack*, *headhunt*, *underscore*, *главозамайвам (се)* [glavozamayvam se, 'head daze', *get a swell head*], самонаказвам се [samonakazvam se, 'self punish', *punish oneself*], *кръводарявам*, [kravodaryavam, 'blood donate', *donate blood*], etc. While the last criteria apply uniformly to all compound verbs without exceptions, morphotactic analyzability and compositionality are better thought of as scales along which separate compound verbs occupy different positions. Besides scoring different values along the scales, most compound verbs are generally characterized by mismatch between morphotactic analyzability and semantic compositionality, which further complicates their study and typological research.

1.2. *The status of compound verbs in studies of universals and typological research*

In order to facilitate future typological and universological research on compounds and compounding Guevara and Scalise (2009: 102) set out to "extrapolate universal tendencies in compounding as far as the following list of characteristic features are concerned: (a) output categories, (b) input categories, (c) the relation between the constituents, (d) headedness, (e)

combination of categories". Booij (2009: 83) adds to these criteria the Lexical Integrity Hypothesis, encompassing both non-interruptability and non-accessibility of word-internal structure as a formal universal that can be exploited in word-formation typology. The author admits that "it is hard to find uncontested substantive morphological universals of an absolute nature, certainly not in the domain of word formation" (Booij 2009: 83).

None of the criteria are without their own controversies, yet they seem to be frequently used for local typological, i.e. classificatory purposes in studies of compounds. All available classificatory systems for compounds (for a review of diverse classificatory systems and a novel proposal see Scalise and Bisseto 2009; Bagasheva 2012) seem to hinge on the lexical (part-of-speech) specification of the input categories, on the nature of the relation between the compound constituents, the hyponymic semantic relation between resultant compound and rightmost constituent, the verbal part-of-speech identification of the rightmost constituent (in the root vs. synthetic distinction), etc. Most problematic among the above criteria are the one concerning the relation between the constituents and the nature of the input categories, both of which are discussed in the following part.

If for the sake of argument we accept these criteria as theory-neutral specifications of possibly universal criteria to apply in the study of compounds, compound verbs raise a few questions which for clarity will be illustrated with concrete examples of English compound verbs:

1) What are the input categories to *brownbag*?
2) What is the relation between its constituents and how does it differ from the one in *butt call, cold call* and *boyfriend-drop*?
3) What is the head in *blackball,* if we can identify one at all?
4) Is discussing input categories informative and what categories are meant?

Assuming (for the time being on the grounds of pure faith) that *brownbag* is a genuine compound verb in English (and in terms of usage it is according to COCA), we would have to recognize at face value an atypical modification pattern – an adjective (Adj) within a verbal whole. Alternatively, if we apply Lieber's (1981) semantic interpretation rule for denominal verbs we would have to posit *brown bag* as a compound noun as an argument of the converted compound verb. Does this whole-structure - argument relation mark *brown bag* as a significantly different type of compound verb from *cold call* (according to OED there is such a compound noun but it is derived from the compound verb), which belongs to the same family as *butt call* but while the latter conforms to the configuring semantic interpretation of *brown bag*, the former doesn't because there is no associated parent compound noun. On this argument account *brown bag* and *butt call* differ from *cold call* and all three are set apart from *boyfriend drop* which invites an internal (intra-compound) argument interpretation (object incorporation). In traditional interpretative frameworks *brown bag* and *butt call* are conversion objects, *cold call* is a back-formation object (even though it is back-formed from a verbal –ing form) and *boyfriend-drop* is a compounding object proper. Even intuitively, however, these are all compound objects as they posses all the properties of compoundhood discussed below and are not as distinct as their derivational histories make them appear.

Sticking to semantic interpretative models associated with specified derivational processes invites one to group together *cold call* and *boyfriend-drop* as in both noun incorporation as the prototypical means for deriving lexical compounds (Aikhenvald 2007; Mithun 1984; Sapir 1911, etc.) presupposes internal argument relations, i.e. the first constituent is assumed to be an internal argument of the verbal or deverbal second constituent (Guevara and Scalise 2004). *Brown bag* stands apart as involving not internal but external argument relations, i.e. the argument relation is claimed to obtain between the source parent compound noun and the resultant verb. Besides to this criss-crossing of grouping compound verbs, the application of mechanisms for semantic analysis/interpretation of the lexical meaning of compound verbs based on word-formation process leads to wrong predictions about the resultant meaning of specific compound verbs. The decision about which element is to be posited as independent semantically and as prescribing the semantic contribution of the other hinges on considerations of headedness.

The problem of headedness (for a review of the persistent problems surrounding the concept of headedness in compounds see Scalise and Fábregas 2010) is extremely acute in the study of compound verbs because their diverse origin stories naturally presuppose controversial headedness interpretations. Besides, the hyponymy relation between the extensions of compound whole and head constituent is the exception rather than the rule in the realm of compound verbs. Scalise and Fábregas (2010) contend that there are three sets of features that percolate from the head, defined as a unit that "has more weight or is more important than the others" (Scalise and Fábregas 2010: 109), to the compound as a whole. The three sets are categorial, morphological and semantic. In prototypical compounds the three sets of percolating features are encoded in a single constituent – the head. Often, however, it is possible for the three sets to be unevenly distributed among compound constituents, which makes the identification of the head extremely difficult. A way of circumventing the difficulty, suggested by Scalise and Fábregas (2010) is the recognition of the possibility for the existence of three different types of head in a single compound – a categorial, a morphological, and a semantic one. They might coincide within a compound but they may also be associated with separate constituents.

Applying the right-hand head rule (Williams 1981) or the headedness preference in Germanic languages leads to determining the rightmost member of a compound verb as the head, i.e. *ball* is uncritically identified as the head of the compound verb. While this is uncontestedly so as far as the categorial head of the compound is concerned, the recognition of the semantic and the morphological ones is not so straightforward. The semantic heads of compounds according to Scalise and Fábregas (2010: 110) "determine, with their meaning, the kind of objects that the compound denotes." In the case of verbs the denoted object is the name of an activity (including actions, states, processes, etc.) and while this postulate reveals the semantic determinacy relations between *feed* and the series of compound verbs in which it participates as a rightmost constituent – *winter-feed, hand-feed, breast-feed, bottle-feed, force-feed*, etc, it could hardly be applied in the case of *ball* and *blackball*, *spitball*, etc.

One would be quick to object that the specified semantic relations are supposed to obtain in genuine compounding, while both examples with *ball* result from conversion and other types of semantic relations are assumed to hold between source and result in conversion. But three facts immediately disarm the objection – the difficulty of establishing directionality of conversion (for the nature and problems of conversion see Štekauer 1996 and Balteiro 2007) and

the uncertainty of specific origin stories (on wrong word histories of compound verbs see Erdmann 2000), the existence and role of word families and the role of analogy in word-formation.

As Booij (2009: 94) contends there is ample psycholinguistic evidence to support the claim for the existence of word-formation families, interpreted as series of words with a shared constituent. Besides "accessibility of word-internal structure" (ibid.), the concept of word family accounts for semantic commonalities shared within the family and explains how schematization is achieved in the transition from exemplar-based analogy to construction schema entrenchment (see Hüning 2009 on semantic fragmentation based on word families and their further development into 'semantic niches').

Considering the compound verbs containing *black* as a morphotactic component *black ball, blackguard, black bean, blacklead, blackjack, blackleg, black list, blackmail, black mark, black market, black wash,* etc. one cannot help but notice the meaning contribution of the morphotactic component *black* with its admittedly extended semantics of negativity, deplorable dealings, and exclusionist implications. It could be stipulated that coupled with the powerful role of analogy in language (Blevins and Blevins 2009; Itkonen 2005) and more specifically of approximation in word formation (Booij 2010; see Rainer 2005 for a definition and detailed discussion of approximation) and compound creation (Krott 2009), the accrual of ever novel members to a word family strongly contributes towards interpreting the shared morphotactic component as the semantic core within the compound verbs. This will of course clash with the recognition of the verbal component as the categorial center of the compounds. However, as argued below, such a clash is not only inevitable but necessary and leads to a parametrized understanding of the concept of head in compounds (Scalise and Fábregas 2010).

The issue of headedness naturally dovetails with the question of the nature of the input to a compound verb. The most wide-spread and generally accepted answer to the last question is lexical categories or part-of-speech classes. Admittedly, the answer is never given straightforwardly and debates are still going on concerning the root/stem/lexical status of the components constituting a compound verb (Adams 2001; Bauer 2001, 2006; Plag 2003, etc.). However the classifications and analyses of compounds (predominantly nominal and adjectival compounds) reveal that lexical categoriality is crucial for discussing compounds (to the exception of Distributed Morphology accounts where roots are a priori categoryless), no matter what kind of unit this categoriality is associated with. I argue that lexical categoriality is irrelevant in the discussion of compounds as the categorial head is contributed by the construction as a whole and cannot be associated with any of the morphotactic constituents. The constructionist understanding of compound verbs elaborating on this and related problems is presented in part three.

1.3. *Compound verbs as canonical compounds*

Despite certain grievances, lexical categoriality seems to be an undisputed property of compound constituents in the establishment of the canonical in compounds and compounding. Browsing through the table in Guevara and Scalise's (2009) paper, defining the canonical in compounds and discussing typological research on compounds, makes two things obvious:

1) an aprioristic division of lexical items into part of speech classes has been adopted without any discussion of the status and nature of these classes cross-linguistically;

2) the attested combinations are so numerous and diverse that they stop being informative (a 110 attested combinations in the MorboComp database so far).

Before discussing the problems the first observation raises, a more comprehensive and possibly controversial question is in order: How is the word-formation process of compounding related to output lexical items recognized as compounds? or Are canonical compounds uniformly the output of compounding? The latter seems to be the tacit assumption, though it is not expressly or specifically articulated. A counter assumption might be detected in the question Lieber and Štekauer (2009: 2) put forward "whether compounds exist as a distinct species of word formation". Compounding processes and compounds are assumed to be uniquely causally related. Thus Guevara and Scalise (2009: 108) claim,

> The *canonical* instance in *compounding* can be thought of as a multiword expression that realises the intersection of (at least) the following set of converging criteria:
> (4) a. syntactic atomicity (no anaphoric relations between an internal constituent of a compound and an external element);
> b. lexical integrity;
> c. lexical nature of constituents (lexemes, i.e. words, stems or roots), members of one of the major lexical categories;
> d. the whole is a member of one of the major lexical categories.
> Thus, the *canonical* in *compounding* seems to match quite closely the most productive *compound-types* of well-studied languages, such as Germanic, Romance or Chinese (emphasis added).

It transpires that there is an obligatory and sufficient relationship between compounding as a word-formation process and compounds (the output wholes) as members of the major lexical categories. Two objections can be raised against this definition of the canonical in the face of compound verbs in English and Bulgarian. There is no obligatory cause-effect relationship between compounding and compounds. As usage tokens compound verbs are compounds no matter how they have been created. In both English and Bulgarian uniform output wholes (compound verbs) result from distinct word-formation processes – composition (compounding proper) - *gift-wrap, bellyache*, *ръкомахам*; noun incorporation - *headhunt, гласоподавам* [glasopodavam, 'voice-O-give', *vote*]; back-formation – *водоснабдявам* [vodosnabdyavam, 'water-O-supply', *supply with water*], *pool-drive*, *babysit*; and conversion (in English) – *brownbag, bear kiss,* etc. Marchand's (1969) implications that the crucial difference between direct formation (composition), on the one hand, and back-formation and conversion, on the other, is in the semantic interpretation of the whole, with only direct formation presumed to necessarily refer to the *internal* structure of the compound for its semantic interpretation sound unfounded in view of the powerful role of exemplar-based analogy (see Rainer 2005) in the creation of ever novel compound verbs (as attested by word spy, urban dictionary and various scholars - Bauer 1983; Nagano 2007; Plag 2003; Wald and Besserman 2002; etc.). Moreover backformation involves synthetic or verb-nexus compounds as sources and it is claimed that in

such compounds there is an important internal relation to be discerned mainly in terms of an argument role (see Guevara and Scalise 2004).

Acknowledging that compound verbs have diverse sources doesn't compromise or undermine the canonical status of these verbs as compound lexical items. To establish the canonical status of compound verbs a simple procedure can be carried out: check the properties of compound verbs in English and Bulgarian against the features assumed to characterize compounds or compoundhood, not compounding (Donalies 2004: 76, cited after Lieber and Štekauer 2009: 6-7). Trying out the properties of compound verbs against the 10 criteria of compoundhood (ibid.), we come up with the following: compound verbs (at least in English and Bulgarian) are

- morphotactically complex (e.g. *гласоподавам* [glasopodavam, 'voice-O-give'; "vote"]; *brainwash*) and with varying degrees of semantic elaborateness (e.g. *deep-fry* vs. *piggyback* - to attach or ally to as or as if a part of the same thing: *to piggyback human rights agreements with foreign aid*; to advertise (two or more products) in the same commercial);
- formed without word-formation affixes and in this respect display more prominent compound behaviour than synthetic nominal or adjectival compounds (e.g. *прахосмуча* [prahosmucha, 'dust-O-suck', "vacuum-clean"]; *doorstep* vs. *кръвосмеш<u>ение</u>* [kravosmeshenie, 'blood-O-mixing', *incest*]*, доброжела<u>телен</u>* [dobrozhelatelen, 'good-wishing', *well-meant*], *bus driv<u>er</u>, good-look<u>ing</u>*);
- spelled together if we assume that hyphenation falls within the scope of "together" (e.g. *благопожелавам* [blagopozhelavam, 'sweet-wish', "wish well"]; *handbag*);
- frequently associated with the inclusion of linking elements in Bulgarian (e.g. *кръводарявам* [kravodaryavam, 'blood-O-donate', *give/donate blood*]); though never in English.
- right-headed as far as categorial headedness is concerned - in both English and Bulgarian for inflectional purposes compound verbs are right-headed and inflections are marked compound-externally (e.g. *бракосъчетава<u>м</u>* [brakosachetavam, 'marriage-match/bind', *marry*]*, бракосъчетава<u>х</u>, бракосъчетва<u>ли</u>*, etc.; *has been showcas<u>ed</u>, showcase<u>s</u>, are showcas<u>ing</u>*, etc.).
- syntactically inseparable – no adjectival or adverbial modification can intervene at any place in the compound (e.g. **extremely-deep-fry, *stir-energetically-fry, *дясноръкопологам* [dyasnorakomaham, 'right-hand-wave', *wave with one's right hand*]*, *ръкосилномахам* [rakosilnomaham, 'hand-strongly-wave' *wave one's hands vigorously*]). Compound verbs stand ground in view of the Lexical Integrity Hypothesis (Di Scullio and Williams 1987, Lieber and Scalise 2006 inter alia).
- syntactico-semantic islands, i.e. they are identified as "anaphoric islands" as defined by Postal (1969) - compound-internal anaphor is ruled out in both languages (e.g. **She babysat for the Johnsons last night and he cried all night*, where *he* is supposed to refer back to the Johnsons' baby-son. **Миро се главоблъска цяла сутрин, но тя не го заболя*, where *тя* is supposed to refer back to Miro's head. [Miro se glavoblaska tsyala

sutrin, no tya ne go zabolya, 'Miro himself banged-head all morning, but she didn't start to hurt', *Miro worried his head all morning but it didn't start to hurt*])

- conceptual units or concepts - *whitelist* (v) to place a name, e-mail address, web site address, or program on a list of items that are deemed spam- or virus-free; *главоболя се* (гл.) [glavobolya se, 'head ache oneself', *worry*] - безпокоя се, притеснявам се

The wisdom to be gained from the above is that compound verbs are canonical compounds, even though they do not necessarily come into being as a result of a compounding process. For this reason compound verb creation will be used as a blanket term for all processes that yield the same result – compound verbs.

2. Parts-of-speech and compound verbs

Without taking a definite stand on the issue of the existence of an independent word-formation module and/or the interfacing between word-formation and semantics, morphology, syntax, and pragmatics, I just want to emphasise that "lexical formation is first and foremost semantically based and concept driven" (Bolozky 1999: 7). The creation of compound verbs conforms to the requirement that the meaning of a word constitutes "a *constructive process*, in which integration [...] involves differential access to the conceptual knowledge which lexical entities potentially afford access to" (Evans 2006: 496; emphasis added). Meaning is not a property of linguistic entities as such; rather it is a function of the use of linguistic entities whereby a word provides access to large-scale knowledge networks. Meaning is a dynamic, phenomenologically grounded cognitive process, not an entity ontologically inherent in a symbolic form. Nonetheless, for analytical simplicity and clarity of description it is customary to describe the knowledge structures with which interlocutors operate as properties of linguistic entities, and the following makes no exception in this respect.

Whichever of the numerous definitions of compounds we adopt, the morphotactic bi-constituency of compound verbs can hardly be disputed. The question of the nature of the inputs on the other hand remains a contentious issue. Instead of choosing between stems, roots or categorically differentiated members of lexical classes, we could hypothesise that the inputs to a compound verb are acategorial "traces" (Libben 2012a,b) coerced into a verbal interpretation by a dedicated construction idiom.

Asking what the input categories to a compound verb are while searching for universal tendencies is simply an erroneous methodological and theoretical move for at least the following reasons:

1) the still reigning controversy over the principles of identifying different parts of speech or lexical categories and their cross-linguistic applicability and/or validity (Rijkhoff 2002; Laudanna 2002; Vogel and Comrie 2000; etc.);

2) almost anything goes in a compound in English*:* ***body****guard,* ***shopping*** *list,* ***crafts****man,* ***athlete's*** *foot,* ***I-couldn't-care-less*** *attitude*; while in Bulgarian it is mainly roots (to use the standard terminology) or forms which are not independently used ***вод****-о-снабдявам,* ***слав****-о-****словя.*** If we refer back to the table of compound verb types in Modern English we will see that this permissibility characterizes compound verbs in English as well, besides compound nouns

and adjectives. This reveals that nature of the components is not commensurable cross-linguistically;

3) intrafamily cross-classifications stem from the lexical categorization of the input – *deep-fry* (subordinate endocentric) vs. *stir-fry* (coordinate endocentric);

4) the indeterminacy of components – *fast-talk*: *fast* Adj or Adv; *sleepwalk*: *sleep* N or V? (for the indeterminacy and for the lack of criteria for settling the controversy see Wald and Besserman 2002);

5) the difficulty of accounting for the morphotactic constituents of analogically created compound verbs - *sweet-talk*: Adj + N and conversion of the whole compound noun or the combination of Adj + V in analogically following an established conversion exemplar.

In ongoing debates concerning the cross-and intra-linguistic realities of parts of speech distinctions and the principles and criteria for their recognition there is "growing evidence to suggest that the verb-noun distinction is scalar rather than discrete" (Rijkhoff 2002: 115). Having in mind that this is the most universal distinction, the recognition of all remaining lexical categories is further undermined. More importantly, Vogel (2000: 263) claims that Modern English has undergone a "degrammaticalization shift from a 'specialized' noun-verb language (with a grammaticalized part-of-speech system) towards a 'flexible' type-token language (without a grammaticalized part-of-speech system)." For the more conservative, Vogel suggests that English might be thought of as having two parallel part-of-speech systems: "Thus, there are now two overlapping systems: a specialized noun-verb-adjective-adverb-system and a flexible noun/verb/adjective-adverb-system" (ibid. 277). The claim promoted here is that the flexible system is utilized in compounding.

Specialised	V	N	Adj	Adv
Flexible	V/N/Adj			Adv

(Vogel 2000: 277).

The permissibility of compounds as regards their morphotactic components is a direct consequence of the de-grammaticalised flexible part-of-speech system in Modern English (Vogel 2000). No claims are made here as to the lack of an elaborate part-of-speech system in English as a whole. The claims are qualified in two marked ways: i) it is the construction that determines the part-of-speech identification of a lexical item (at any substantive level – word, phrase, clause, etc.); ii) in compound creation in English it is the flexible part-of-speech system that is employed. In Bulgarian a more rigid system of part-of-speech distinctions with concomitant formal differentiation of parts of speech by means of inflectional, function-indicating, and derivational morphology still holds. It has a powerful grip on compound creation. First it restricts the types of compounds that exist in the language (no root compounds, no phrasal compounds, to the exception of calqued ones, a popular strategy in journalese in Modern Bulgarian), it regulates the non-productivity of compound verbs and limits their typology, etc.

Besides the overall indeterminacy of lexical categories in general, "concerns about NV are most intimately related to concerns about VV in the very frequent apparent ambiguity of category of the first constituent of the compound" (Wald and Besserman 2002: 417). Whether we perceive *crash* in crash land as a N (resulting in classifying the compound verb as a

subordinate one) or as a V (resulting in classifying the compound verb as coordinate) doesn't change the overall semantic interpretation of the whole – LAND IN A SUDDEN AND DANGEROUS WAY BECAUSE THERE ARE PROBLEMS WITH THE PLANE. *Land with a crash* or *crash and land* / *land and crash* both lead to the same semantic interpretation of the whole. Both are involved in the configuring of the latter's semantics no matter whether the compound verb results from direct composition or from back-formation. Wald and Besserman assume the existence of "a formal and semantic economy in the internal structure of a compound verb" which is limited to "what is necessary to semantic interpretation of that compound verb, and suppressing what is unnecessary in that context" (Wald and Besserman 2002: 423). Without expressly using the requisite terminology, here the two authors actually resort to a constructionist interpretation of the process of semantic configuring of a compound verb, to which I gladly subscribe.

A similar question is typically raised in relation to seemingly deviant combinations of the Adj+ V type, as for example in *slow-dance*. Admittedly we could say that we have Adj + N in *small-talk*, which as an established lexical item (a compound noun) is converted to a compound verb. However, the creation of *fast-talk*, *smooth-talk* and *sweet-talk* is most probably based on analogy and does not necessarily involve the conversion of Adj + N nominal compounds to compound verbs. In the usage-based theory of language adopted here the power of analogy responsible for expanding the constructicon is in its full swing in compound creation. In other words using individual exemplars and anaologically extending the pattern for other creations is a natural language user's typical behaviour. How can then we account for this recurrent pattern in which we have (if we stick to the lexical ctagoriality dictum) Adj + V, which runs counter to the standard patterns of modification? What is more, hearers do not resort to tracing origin stories in encountering a usage token and reasoning that this was probably an Adj + N combination converted as a whole to a verbal lexeme. Faced with a novel compound verb (which all compound verbs at a certain point of time are for an individual speaker), on the principle of "maximization of opportunity" (Libben 2006, 2012a), a speaker avails themselves of contextual cues, possible familiar patterns and the constructicon inheritance in order to interpret a compound verb. Thus families are established based on the commonality of a recognizable morphotactic component.

As Hüning (2009: 183) claims "word-formation processes often show semantic fragmentation: in the course of time they develop 'semantic niches', i.e. groups of words (subsets of a morphological category) kept together by formal and semantic criteria and extendable via analogy." This intrafamily semantic uniformity is often disrupted by sticking to classifications based on lexical categoriality judgements, which is the case with all existing models of compound classifications. Even if we adopt the much improved two-tiered classificatory system of compounds with a single classificatory criterion applied at each level offered by Scalise and Bisseto (2009), the result is intrafamily classificatory dissociations. In classifying verb compounds the subordinate/coordinate distinction (capturing the R element or the grammatical relationship between the constituents) hinges on the recognition of the lexical class of the constituents. Thus *spin-dry* appears as coordinate, *rough-dry* as subordinate and *smoke-dry* is ambiguous between the two categories due to the impossibility of establishing the verbal or nominal nature of the first constituent (for these classifications see Lieber 2009). At the same time it is claimed that "the range of acceptable interpretations is most often dictated by paradigmatic relations holding between members of the same compound family, rather than by

combinatorial principles of syntactic composition" (Scalise and Vogel 2010: 3). A good classification should try to account for properties of the entities it classifies preserving their biuniqueness (pairing of meaning and form) and accommodate their semantic characteristics, related to the peculiarities of the compound family, which is easily achievable in a constructionist framework.

3. The constructionist stance

The constructicon concept naturally presupposes a constructionist stance. The adoption of a constructionist stance for the analysis of compound verbs is based on the premise that the recognition of different construction schemas that can function as templates for further analogical creations avoids the heterogeneity of origin problem. As Booij (2010: 93) claims "analogy and abstract schemas are opposite endpoints on a scale of schematicity" in which entrenchment and analogical potential play a crucial role. Krott (2009: 218) also concedes that "a novel word that appears to be formed using a rule is assumed to be formed in analogy to many exemplars." When used as analogical templates exemplar compound verbs appear synchronically as a construction which coerces the interpretation of the newly recruited constituents as forming a verbal complex. The concept of coercion refers to the "*mismatch* between the semantic properties of a selector (be it a construction, a word class, a temporal or aspectual marker) and the inherent semantic properties of a selected element, the latter being not expected in that particular context" (Lauwers and Willems 2011: 1219). Thus the problems of infelicitous lexical categorial combinations (discussed above) naturally dissolve in the coercive role played by the compound verb construction. Furthermore, such an interpretation alleviates the mistreatment compound verbs have suffered due to the lack of a clear distinction drawn between the properties of being a lexical unit and being the output of a morphological operation/process (for a principled and fully operationalized distinction between the two see Gaeta and Ricca 2009).

So, if we discard the lexical categoriality consideration and accept the components (Langacker 2008) of compound verbs as acategorial linguistic "traces" which are jointly coerced into a verbal naming unit by the contribution of a dedicated constructional idiom, we would be able to propose a more appropriate classificatory scheme for compound verbs and achieve analytical unification in studying their semantics. Applying the constructionist approach (Croft 2001; Goldberg 2006; Michaelis 2004, n.d.; Trousdale 2008; etc.) to the analysis of compound verbs can reduce the presupposed heterogeneity of compound verbs stemming from properties they purportedly acquire from the specific word-formation processes involved in their creation. "A construction defines the distinctive properties of a mode of combination that is part of the grammar of a language" (Michaelis n.d. 20). Recognizing the macro-construction of compound verbs [X Y]v yields analytical fruits in the following respects: 1) classification which does justice to both the morphotactic and semantic properties of compound verbs; 2) unified semantic analysis which reveals domains and patterns of lexicalization and 3) an informative level of granularity for contrastive analysis.

The constructionist approach allows us to classify compound verbs in the following manner:

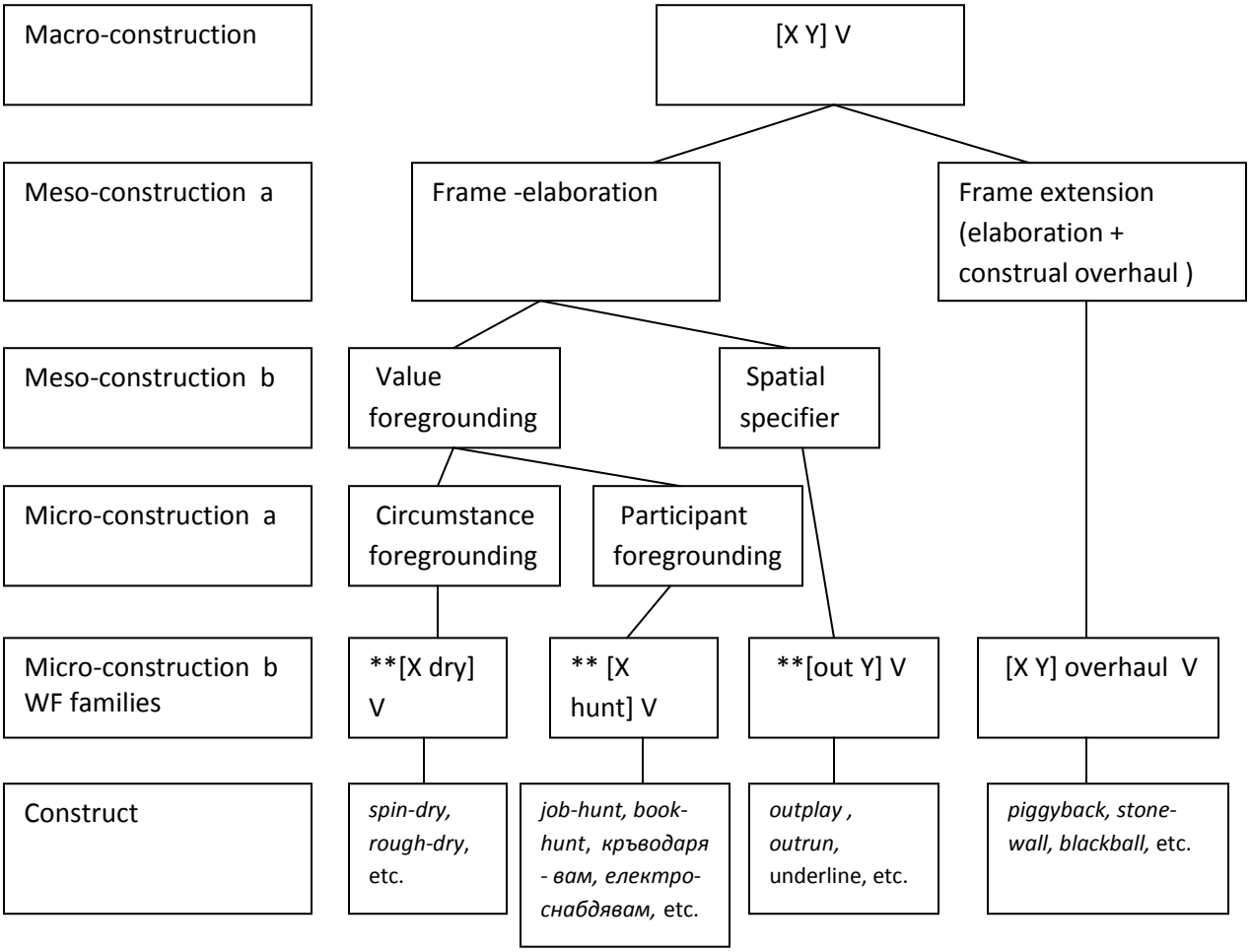

Figure 1 *The compound verb constructicon in English and Bulgarian*
*This is the only type of compound verb construction actualized in Bulgarian.
**The frame-elaboration meso-construction is associated with expanding families, while the frame-extension one is not prone to attract creations organized into families. The latter's constructs are characterized by heightened semantic idiosyncrasy.

4. Lexicalization and compound verbs in English and Bulgarian

An overall constructionist approach allows us also to use the construction as *tertium comparationis* in contrastive studies, which in the case of compound verbs in English in Bulgarian reveals that though in both languages the compound verb construction exists, it is highly productive in English and almost fully frozen and lexicalized in Bulgarian. The corpus of

compound verbs I have been compiling as part of ongoing research contains 482 compound verbs in English and only 70 in Bulgarian, most of which stylistically marked. Compound verbs in Bulgarian are fully lexicalized (in the sense of having lost motivation and having developed idiosyncratic meanings). This sense of lexicalization$_1$ stems from Brinton & Traugott's (2005: 96) definition:

> Lexicalization is the change whereby in certain linguistic contexts speakers use a syntactic construction or word formation as a new contentful form with formal and semantic properties that are not completely derivable or predictable from the constituents of the construction or the word formation pattern. Over time there may be further loss of internal constituency and the item may become more lexical.

The only thing to be added is that this also implies that morphological processes of creating compound verbs in Bulgarian have fallen into disuse and the output constructions are characterized as lexicalised in Bauer & Huddleston's (2002: 1629) understanding of the polysemous term lexicalization$_0$.

The next conspicuous contrast to be noted is the restricted number of domains which are encoded by compound verbs in Bulgarian, while in English all kinds of domains are encoded bysuch lexemes. This dimension of contrast relates to lexicalization$_2$ as understood by Kuteva (2012) in terms of what kinds of concepts tend to be encoded lexically in languages and which yield themselves to grammaticalization. It is not a trivial fact that in English compound verbs are used in diverse semantic domains (from purely physical activities like *gift-wrap*, *island-hop*, *spoon-feed* to abstract domains like emotional states, decision-making *hag-ride, cherry-pick, short-change* and social judgment *blackball, blacklist*, etc.), while in Bulgarian the two domains in which compound verbs abound are related with self-directed activities (e.g. *самозалъгвам се* [samozalagvam se, 'to self-lie', *commit self-deception*], *самоизтъквам се* [samoiztykvam se, 'self-praise', *praise oneself*], *самозабравям се* [samozbaravyam se, 'self-forget', *be presumptuous*]) and a lexical domain in which compound verbs seem to hinge on the potency of the first compound constituent *evil* and *good/sweet* (*зловиди ми се* [zlovidi mi se, 'evil-see', *envy*] *злословя* [zloslovya, 'evil-speak', *bad-mouth*] *злодействам* [zlodejstvam, 'evil-do', *do evil*]) or *благодаря* [blagodarya, 'sweet-donate', thank], *благопожелавам* [blagopozhelavam, 'sweet-wish', *wish well*]*, благославям* [blagoslavyam, 'sweet-glorify', *bless*]*, благоустройвам* [blagoustroyvam, 'sweet-organize', *urbanize*], etc. It is probably due to the salience of the two domains (the first one through the egocentricity principle and the second through the anthropocentricity principle – the good/bad dichotomy characterizing human existence) that the greatest number of compound verbs have been retained and are still used. The first of the patterns is still highly productive with the possibility for any transitive verb to be used.

More interesting and probably more informative is what is systematically lexicalized in compound verbs. The meaning of the polysemous term lexicalization$_3$ is now further qualified in a la Talmy approach to semantics in which what is analyzed is what semantic primitives are incorporated in the lexical packaging of conceptual content, for example path, manner, cause, motion, ground, etc. (as in *The boat floated into the cave* – manner lexicalised in the verb, path in the satellite). In that sense of lexicalization$_3$ English speakers tend to encode manner of motion in their verbs (Talmy 1985, 2000, Slobin 1996), while the rich Bulgarian prefixal system both reflects and determines speakers' preferences for encoding path or ground. PATH is naturally encoded by lexical items with spatial meanings, i.e. prepositions, which are most likely to

develop into bound morphemes in the natural spiral of grammaticalization (Heine et al. 1991; Lehman 2002). This has probably led to a rich prefixal system in Bulgarian, while the MANNER preference in English has lead to a productive constructional pattern of compound verbs which easily accommodate the MANNER component into a single symbolic unit. This naturally leads to a marked asymmetry between the two languages – the affixally derived verbal lexicon in English is rather poor in terms of productive patterns (*-ize, -ify, -en* being the only verbalizing suffixes and *en-* and *be-* among the rare prefixes), while in Bulgarian the affixally derived verbal lexicon is richer than the compound one. To complement Talmy's lexicalization patterns in the analysis of compound verbs we can slightly shift the focus from semantic primitives and adopt frame analysis (Fillmore 1985, 2006), as a frame is the conceptual linguistic interface which correlates naturally with a construction as the meaning-form interface.

We can identify three recognizable mechanisms for conceptual manipulation grounded in frame modification:

a) background and profile are compounded – value-foregrounding meso-construction;

b) the verbal frame is reinterpreted via embedding in an image-schematic mould – spatial-specifier meso-construction; and

c) an established or newly created complex frame is metaphtonymycally (Goossens 2003) (re)interpreted – frame-extension meso-construction.

At meso-level in English the constructicon bifurcates into two distinct lower-level meso-constructions – value-foregrounding and value extension, only the first of which is actualized in Bulgarian. Only the frame elaboration pattern, further qualified with a marked preference for participant value-foregrounding is associated with the 70 compound verbs in Bulgarian. The other two lexicalization patterns of spatial specifier and frame extension are not attested in Bulgarian. Furthermore, the overall semantic configuration of the whole doesn't conform to the MANNER modification characteristic of the English meso-construction. Being fully lexicalized, compound verbs in Bulgarian do not easily offer a unified tack of semantic analysis. Two groups can be identified – semantically endocentric and semantically exocentric ones (for the definition of semantic exocentricity dependent on a parametrised understanding of the concept of head see Guevara and Scalise 2009; Scalice, Fábregas and Forza 2009; Scalise and Fábregas 2010, etc.). Even the semantically endocentric ones do not subscribe to the MANNER generalized semantics of the output. They usually name a participant-specific subtype of activity – *кръводарявам* [kravodaryavam, 'blood-O-donate', *donate blood*], *водоснабдявам* [vodosnabdyavam, 'water-supply', *supply with water*], *бракосъчетавам (се)* [brakosachetavam se, 'marriage-O-join oneself', *marry*], etc. Like the frame-extension compound verbs in English, the semantically exocentric ones in Bulgarian display unpredictable semantic configuring, which is not even backed up by conceptual overhauling.

Against the background of overlap in the underlying cognitive principles, the significant differences in the construction types of compound verbs in English and Bulgarian can be systematized in the following way:

i) In English the compound verbs constructicon is far more varied and deeply elaborated with numerous micro-constructions identified, while in Bulgarian a single meso-construction is actualized by a restricted set of fully lexicalized$_1$ micro-constructions.

ii) The value-foregrounding meso-construction in English splits into two micro-constructions but both conform to a metonymy driven and motivated weakly compositional pattern of semantic configuring with the overall interpretation of manner modification which is highly analogically potent, while in Bulgarian the constructs actualizing the participant-foregrounding micro-construction are fully lexicalized and are characterized by greater semantic idiosyncrasy;

iii) The highly salient [само V се] / [self V] micro-construction is active in both languages and the constructs instantiating it display the same intransitivity and AGENT/AFFECTED constraints. In Bulgarian this is the only fully productive pattern.

iv) Compound verbs in both languages share the property of naming a single event (no matter how complex the internal constituency of the event is), and not resulting from conflating two separate events into one.

v) Circumstance or participant values are most frequently lexicalized in English, which leads to a preferred MANNER semantic interpretation, while in Bulgarian there is a marked preference for participant lexicalization$_3$ and no preferred shared semantic can be detected.

It is clear that in terms of frequency of use in discourse (a token measure) and regularity of production of compound verbs English ranks dramatically higher than Bulgarian, which might be due to two factors: the degramaticalised part-of-speech system in English and the verb-noun grammaticlaized one in Bulgarian and the single source of compound verbs in Bulgarian (lexical noun incorporation) as opposed to the diverse sources which yield compound verbs in English. Although in both English and Bulgarian compound verbs are far less frequent (both in terms of tokens and types) than nominal and adjectival compounds, English is characterized by a significantly greater number of compound verbs with listeme status (not to mention neologisms) and a marked diversity in terms of the domains and types of events named by compound verbs in comparison to Bulgarian.

5. Concluding remarks

The typological study of compounds is still in its infancy and the study of compound verbs is trying to find its rightful place in the linguistic landscape. Compound verbs in English and Bulgarian are traditionally marginalized and overlooked on grounds of their heterogeneity in terms of origin (compound verbs cab created via composition, back-formation and conversion in English), which inevitably leads to expectations for diverse semantic constitution and divergent properties as lexical items stemming from the generally assumed cause-effect relationship between word-formation process and lexical properties (including semantic composition). Another often cited reason for looking down on compound verbs is their paucity in comparison to nominal and adjectival compounds in languages cross-linguistically, and more specifically in English and Bulgarian. It was illustrated in the parts above that compound verbs are not as deviant or marginal as they seem to be.

Admittedly the major contrasts to be found between English and Bulgarian in relation to compound lexical objects lie in the verbal lexicon. Creating compound verbs is characteristic of Modern English, while compound verbs in Bulgarian seem to be inherited from an earlier stage of the language. In terms of lexicalization patterns, in Bulgarian compound verbs there is a

marked preference for packaging Participants and Themes but Circumstances and Instruments are strongly disfavored. No such restrictions hold in the types of intra-frame relations inherent in the semantic configuring of compound verbs in English. English verbal compounds have freed themselves from the strong grip of syntax (as far as their constituency in terms combinatorial patterns is concerned), while in Bulgarian syntax has a heavier influence on word formation, the intermediary of which is the heavy inflectional morphology associated with the well-demarcated and rigid part of speech system.

The constructionist approach looks like a promising model for cross-linguistic analysis of compound verbs as it revealingly captures language-specific features of compound objects in the types of local construction schemas which serve as moulding schemata for analogical elaborations and also the number of such schemas. The constructionist approach allows for discarding the established classifications of compounds, which in all their diversity all hinge on lexical categoriality, and gives leeway for the role of coercion of the dedicated constructional idiom which compound verbs actualize. Studying compounds and compounding as not causally related might yield some interesting cross-linguistic results but such claims are in need of further substantial corroboration.

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Notes

[1]Precision would require that a distinction be made between the frequency of use and diversity of compound verb formations in different varieties of English. "The diverging frequency of compound verbs found in the two varieties of English (American and British English)" (Erdmann 2009: 46) is not negligible, even though full analysis of this has not yet been presented taking into consideration both type and token frequencies in comparable corpora of the two varieties. As intralingual variability is not at the focus of the argument developed here such distinctions are not commented on, even though the author is aware of the importance of such data.

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