



# Frame semantics, metaphtonymy and compound verbs in English

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## Abstract

*As composites, compound verbs (CVs) in English raise interesting questions concerning the correlation between lexical items and frames in terms of profiling and construal. The semantic configuring of the constituency of CVs presents a specific case of special profiling of frames. It is argued here that CVs in English display three distinct patterns of frame modification: i) by constituent foregrounding (e.g. deep-fry, tumble-dry, spoon-feed, etc.); ii) by spatial scenario embedding (e.g. outnumber, underscore, overindulge, etc.); and iii) by engendering an emergent blended frame (e.g. ring-fence, pussyfoot, fast-talk, etc.). The patterns are associated with metaphtonymy operating in two distinct ways: i) and ii) are metonymy-based (e.g. outperform, job-hunt) while in iii) blending actualizing a metaphoric complex is the primary mechanism (e.g. gate-crash). This property of the conceptual constituency of CVs puts them in a special position vis a vis the profiling of event schemas in "conceptual cores" (Radden and Dirven 2007). Since "[p]rofilng amounts to nothing more than the relative prominence of substructures within a conceptualization, and is inherently a matter of degree" (Langacker 1990, p. 208), compound verbs seem to occupy a fuzzy area between relational concepts and "conceptual cores".*

**Key words:** compound verbs, metonymy, frames, value foregrounding, frame integration

## 1. Introduction

Compound verbs (henceforth CVs) have been traditionally discussed (Adams 2001; Erdmann 2009; Lieber 2009; Lieber and Štekauer 2009; Marchand 1969; Plag 2003; Scalise and Vogel 2010; Štekauer and Lieber 2005) mainly in terms of their parasitic nature. CVs are generally considered non-genuine, secondary structures derived from non-verbal compounds. Marchand (1969, p. 96) distinguished between true and pseudo-CVs on the basis of his understanding of nominal compounds as actualizing a determinant–determinatum pattern and accepted only verbs preceded by a particle, such as *overindulge* and *outsource*, as genuine CVs, while he recognized verbs like *mastermind*, *house-sit*, *white-wash* as pseudo-compounds, since their second components (*-mind*, *-sit* and *-wash*) do not function as the determinatum of the compound whole (Marchand 1969, p. 101) – an opinion still widely shared.

Recently the enhancement of usage-based theories of language acquisition (Bybee 2010; Tomasello 2003) and the recognition of the power of analogical creations in word-formation (Koch 2005; Rainer 2005; among others) reveal that such a restrictive approach doesn't pay justice to the nature and conceptual properties of CVs. English CVs constitute a genuine lexical class with uniform construction properties despite the heterogeneity that characterizes them in terms of word-formation properties and the diversity of their lexico-semantic features. Applying frame semantics analysis to the lexico-semantic features and word-formation patterns of CVs leads to grouping them in two large classes distinguished on the basis of the operations of metonymy and metaphor in intra-compound profiling. To achieve its goals the paper is organized as follows: in part two the methodological implications of applying frame semantic analysis are spelled out; part three focuses on the nature and properties of English CVs; in part four, the operations of metaphonymy in the conceptual integration of two recognized classes of CVs are analyzed; part five discusses the utility and analytical profitability of the approach and in part six some conclusions are drawn.

## **2. Frame semantics and CVs**

The current discussion belongs to the field of cognitive lexical semantics and focuses on larger conceptual structures: frame semantics and metaphor/metonymy research (Cuyckens et al. 2007, p. 57). The application of frame semantic carries with it the commitment of endorsing U-semantics<sup>1</sup> (Fillmore 1985), which maintains that in understanding language and creating messages, users rely on coherent schematizations of experience and routinized processes for component integration/analysis.

In the case of CVs<sup>2</sup>, the central unit of coherent schematization is the frame and the routinized processes in both the creation and interpretation of CVs involve the exploitation of metonymy and metaphor in frame manipulations<sup>3</sup>. Meaning processing in frame manipulation is enhanced by the associative links that exist between the morphotactic components of a CV. These links are based on metonymy in subclassification<sup>4</sup> CVs and on blending involving metaphor in superclassification CVs. Whether a fully entrenched or a novel CV is involved, as Libben (2006, p. 6) maintains, the processes of morphological decomposition and/or integration are never shut down. The lack of any psycholinguistic experimentation focusing specifically on the processing and/or production of CVs<sup>5</sup> leaves leeway for conjecturing that "the maximization of opportunity" principle (Libben 2006) organizes the mental representation of CVs as well, but without the concomitant relations of conceptual integration or priming effects established for compound nouns (Costello 2002<sup>6</sup>; Gagné and Spalding 2009; Libben 2006; Libben, Gibson, Yoon, and Dominiek 2003).

The frame semantic approach naturally dovetails with a constructionist understanding (Croft 2001; Goldberg 2006; Trousdale 2008) of the morphotactic constituency of CVs embedded in a usage-based theory of language acquisition, which adequately captures the notion of "ecological motivation" (Taylor 2004) that is ubiquitous in language. The

methodological choice underscores the preference for focusing the analysis of metaphor and metonymy predominantly in grammar<sup>7</sup>.

The nature of frame manipulation and frame-interaction processes is determined by the relations between meaning, frames and CVs. If the lexical system does not incorporate meanings but connections to meanings as Lamb (1998) contends, then what and where are meanings? I assume that meaning is “a *constructive process*, in which integration of lexical units involves differential access to the conceptual knowledge which lexical entities potentially afford access to” (Evans 2006, p. 496; emphasis added). Meaning is not a property of linguistic entities as such but a function of the use of linguistic entities whereby a word provides access to large-scale encyclopaedic knowledge networks. Meaning is a dynamic, phenomenologically grounded cognitive process, not an ontological characteristic of symbolic forms<sup>8</sup>.

As Evans (2007, p. 11) insists, lexical concepts are “semantic units conventionally associated with linguistic forms” and are an essential part of a user’s mental grammar. They are relativized with respect to conceptual knowledge structures. Central among these knowledge structures are frames since, as Barsalou and Hale (1993, p. 131), contend “[h]uman knowledge appears to be frames all the way down”. ‘Frame’ is the most widely accepted operationalization of extralinguistic factors that have direct bearing on linguistic units at the conceptual level. Fillmore (2006, p. 378) defines the correlation between frames, construal mechanisms and lexical items as a mutually implicating one in which frame is “the structured way in which the scene is presented or remembered, we can say that the frame structures the word-meanings, and that the word ‘evokes’ the frame”.

*Frame semantics* and *frame* are used here in a couple of related but distinct senses. The former encompasses the strategies, mechanisms and components with which a comprehending mind operates on units of immediate understanding. As an operational term for individuating and organizing highly schematized conceptual content, the latter names a gestalt anchored into an actional core. As a method of analysis, frame semantics necessarily involves the study of the unidirectional backgrounding relations between concepts and the lexical items evoking and evoked by them. A *frame* is a “system of concepts related in such a way that to understand any one of them you have to understand the whole structure in which it fits; when one of the things in such a structure is introduced into a text, or into a conversation, all of the others are automatically made available” (Fillmore 2006, p. 373). It hence helps us interpret certain perspectivized portions of a scene. The symbolically encoded manipulation of such portions constitutes the onomasiological basis for metonymy-driven word-formation (Koch 2005, p. 153), as the one we see in CV creation.

### **3. Nature and properties of CVs in English**

CVs occupy a special place in the lexicon because they are linguistic cues that explicitly manipulate frames and are responsible for patterns of conceptual modification and integration. The general language-independent motivational drive behind CVs is an

onomasiological need instigated by the situational salience of a conceptual complex worthy of a name. Their linguistic motivation springs from the formal and conceptual associations that CVs have with identifiable and analyzable (Langacker 2008) components, which are usually co-activated with the representation of the whole, even if the nature of the relation between the components is not always immediately available (Libben 2006).

CVs in English are consistently categorially and morphologically right-headed<sup>9</sup>, but display wide variability in terms of semantic endo/exocentricity. The classical modifier/head relationship doesn't naturally apply to all CVs in English – e.g. *red-shirt*, *deep-six*, *benchmark*, *cold finger*, etc. As special construal mechanisms, CVs combine relational and situational properties. They capture the transformation of situational salience into ontological salience<sup>10</sup> and as special type of conceptualizations occupy an intermediate position between simple relational symbolic units and conceptual core descriptions (Radden and Dirven 2007). CVs are used in diverse semantic domains from purely physical activities like *island-hop*, *spin-dry*, *smoke-dry* to abstract domains like emotional states and decision-making, as well as interpersonal relations *hag-ride*, *cherry-pick*, *short-change*, *spoon-feed*, *browbeat*, etc., so their extralinguistic motivation is not restricted in any significant way.

In traditional word-formationist terms<sup>11</sup> English CVs can be grouped into three classes with specifiable properties:

- 1) Incorporating verbs – *gift-wrap*, *spoon-feed*, *rough-dry*, *husband-hunt*, *boyfriend-drop*, *name-ambush*, *mass-produce*, etc.
- 2) Compounding proper verbs – *kick-start*, *stir-fry*, *sleep-walk*, *sleep-talk*, *underestimate*, *overprice*, *down-play*, etc.
- 3) Converted verbs – *moonlight*, *piggyback*, *brownbag*, *redshirt*, *bear hug*, etc.

In all three classes backformation is implicated to enter into a relationship of intersective gradience (Aarts 2007) with the other two word-formation processes. Assuming that each word-formation process is associated with a specific mechanism of semantic composition (Clark and Clark 1979; Guevara and Scalise 2004; Lieber 1981, 2004; Štekauer 2005), we would expect semantic properties of the resultant CVs to conform to the meaning computation mechanisms associated with the processes that give rise to them. On closer analysis, it transpires that there is considerable uniformity across the three derivational classes, based on the nature of the conceptual integration involved in their derivation and the conceptual mechanisms which back-up the integration, irrespective of the assumed word-formation process proper.

CVs do not result from event conflation or the integration of two or more events, even those whose components are both considered verbal – e.g. *sleep-walk*, *sleep-talk*, *stir-fry*, etc. In such verbs the mechanism of value-foregrounding operates and the first component functions as a specified value for a non-core element of the frame of the second component. CVs are mechanisms for manipulating frame explication, i.e. they contain inferential instructions which set a particular focal perspective and manipulate the thickening of the profile of an event's frame. They lexicalize the running

commentary (Barsalou et al. 1993) of specialized frames for events in generic situations (subclassification verbs). They are focal adjusters which, by relying on general cognitive mechanisms for the manipulation of conceptual content, give rise to complex concepts. They start off as telegraphic or compact running commentaries and end up as lexical concepts for newly individuated events.

#### **4. The role of metaphonymy in CVs**

As symbolic labels of “mental categories referring to actions and states” (Onysko and Michel 2010, p. 2), CVs offer a special kind of construal and implicate the operations of three recognizable mechanisms for conceptual manipulation grounded in frame modification: i) background and profile are compounded; ii) the verbal frame is reinterpreted via embedding in an image-schematic mould and iii) an established complex frame is metaphonymically reinterpreted. The symbolic uniformity of CVs as a class is detected in the construction idiom which subserves their creation and constrains their interpretation - [X Y] V. The idiom’s basic function is to coerce a relational inferential interpretative strategy on the components which happen to be recruited for participation in the compound schema. The nature of the symbolic uniformity thus procured can be circumscribed in a simple definition: A CV is a symbolic complex which, irrespective of its derivational history, functions as a lexical concept that has a relational meaning at its core and can be used in all finite forms, with varying degrees of acceptability in individual cases. The relational core at the heart of CVs underlies the cognitive-functional utility of CVs to provide compact names with heightened descriptive power.

The mechanism of deriving the symbolic complexes is based on the systematic manipulation of intraframe configuration or frame interactions. Goldberg’s (2010) definition spells out the internal constituency of verbal frames, which is the basis for the modifications and interactions operating in CV constructions (p.40):

- a. A word sense’s semantic frame (what the word ‘means’ or ‘evokes’) = profile + background frame
- b. A word sense’s profile: what the word designates, asserts
- c. A word sense’s background frame: what the word takes for granted, presupposes.

This definition of how meaning is distributed in the profile and the background of a lexical item’s sense allows one to trace down how internal frame constituency is manipulated. Each sense of a lexical item is associated with a separate lexical concept which, under local contextual influences, can be further modified.

A lexical concept is “a unit of semantic structure, a bundle of different types of highly schematic content” (Evans 2009, p. 11), a dynamic *ad hoc* piece of conceptual content that operates by referencing richer conceptual frames, which according to Koch (2005) are non-accidental networks of contiguities. By manipulating these contiguities on the principle of conceptual metonymy and adjusting focal granularity, we create CVs. “[M]etonymy implies a contiguity-based figure/ground effect between elements of a

conceptual frame or between the frame as a whole and one of its elements (or vice versa)" (Koch 2005, p. 154). On the basis of the pattern of interaction between profile and background frame and the modification of frames implicated in the constitution of CVs we can identify two overarching classes of CVs in English:

A) a subclassification class in which metonymic relations of contiguity prompt and constrain frame reinterpretation and

B) a superclassification class in which metaphonymic (Goossens 2003) processes instigate the creation of a new frame.

#### 4.1. Value-Foregrounding CVs

Radden and Kövesces (1999, pp. 18–19) contend that metonymy is not a simple procedure of referential substitution but an interrelation of entities that results in a complex meaning, which is revealed in their preferred notation "X PLUS Y" instead of the standard "X FOR Y". Such metonymic relations operate in the two distinct subclasses of class A. In the first subclass, dubbed here Value-Foregrounding CVs (VFCVs), the basic process of conceptual integration is the emancipation of a second focal point in the profiling of the event. This is achieved by foregrounding a specified value for a frame element and triggering a portion of the potential background frame into what the word designates or its profile. Thus in the frame of DRY "An Agent causes a Dryee to become dry" (Framenet), with the following frame elements (FE) divided into core and non-core ones: Sentient Agent, Cause, Dryee, Degree, Duration, Instrument, Manner, Means, Place, Purpose, Subregion, Time and Temperature. In the case of *dry*, it is typically the non-core elements Instrument, Manner and Means that are recruited as second focal prompt in the profiling of the CV and are onomatologically realized in the motivated symbolic complex. This process of internal emancipation is based on intraframe contiguity relations that lead to the establishment of a second focal point in the name: *spin-dry; tumble-dry, drip-dry, rough-dry, smoke-dry, freeze-dry*. The Dryee in the last two lexical items is different but the metonymy-driven focal emancipation is the same. Moreover, the principle of intraframe coherence among frame elements guarantees the unique identification of the Dryee. Even if we delete the Dryee encoded as the internal argument of the whole CV, its generic foodstuff semantics can easily be recovered, e.g.:

Larry Butler of Boggy Creek Farm, Austin, Texas, began **smoke-drying** (tomatoes) in 1994 to turn a crop damaged by wind and rain into a new value-added product. (COCA)

The ease of recoverability is tied up with narrow range of possible values for that frame element. For this reason the focal adjustment in the whole word-formation family of CVs involves a Manner, Means or Instrument foregrounding as non-predictable element. The same preference for non-core frame element promotion is observed with the *fry* and *feed* frames, in which there is greater variability of value interpretations for Instrument, Means and Manner, rather than for core participants – *breast-feed, bottle-feed, spoon-feed, force-feed, hand-feed, stall-feed, winterfeed, grass-feed* (with the

circumstantial Time and Location also included) or *deep-fry*, *French-fry*, *deep fat fry*, *stir-fry*, etc.

In other cases core frame elements get their value specified and foregrounded as part of the profile of the new word. Such is the case with the *hunt* family – *fox-hunt*, *head-hunt*, *job-hunt*, *house-hunt*, *husband-hunt*, *book-hunt*, etc. In all the verbs, the Sought entity as a core element is promoted as part of the profiling of the new verb, and this choice is salience driven. All the verbs name socially significant activities as a result of satisfying a genuine onomasiological need for creating a lexical concept for a salient type of activity. A core element which is unpredictable within a bearable range of possibilities in a frame is most likely to be recruited as part of the profile of a CV. It is unlikely for a non-core element to be recruited within the designated profile - *\*forest-hunt*, *\*field-hunt*, etc. There is a direct correlation between predictability rating and the likelihood of being foregrounded in a CV. Whenever the core elements are restricted and therefore predictable, it is one of the non-core elements that gets conceptually promoted – *fry* (only foodstuffs), *dry* (entities containing a certain amount of moisture), certain members of the *mail* (information, packages) family. When one of the core elements can get a considerable number of values, which would lead to significantly different conceptualizations of individuated events, it is most likely that this element will be recruited with specific values for various elaborations of the general frame. This predictability constraint is conceptually motivated by relevance or salience. As already mentioned above, the specific cognitive utility of CVs is to transform situational salience of a core or non-core frame element into ontological salience by onomatologically specifying a value for it and making it part of the profile of the lexical concept.

The specific mechanism employed in both core and non-core element foregrounding is metonymy based on conceptual contiguity<sup>12</sup>. According to Koch (2005, p. 152) every concept is a calibration between a figure and a ground, the latter either another contiguous concept or a component of the frame. Under certain communicative conditions, the ground concept may become foregrounded by "pragmatic, conceptual or emotional factors" (ibid.). These may become integrated in the profile of the new lexical concept and start to designate the specific event. That is how metonymy operates in Value-Foregrounding CVs.

Despite the pronounced metonymical nature of such CVs, they are amenable to subsequent metaphorization but as already entrenched lexical concepts:

Using the 15-hour Australia time delay to **freeze-dry** the Olympics, NBC pads nearly every time-out with heavily produced profiles of competitors, in the process removing any pretense of real-time competition and suspense. (COCA).

The great philosopher had been **force-fed** Jeremy Bentham's cost-benefit morality - so much so that the boy-genius was dubbed "master" of political economy by age thirteen. (COCA).

This kind of metaphoric sense acquisition belongs to the realm of semantic change and is beyond the focus of an analysis of the role of frames and metaphonymy in word-formation.

## 4.2. Spatial Specifier CVs (SSCVs)

The second subgroup follows a different metonymy-driven mechanism. In these CVs the verbal frame is embedded in an image-schematic projection introduced by the first morphotactic component – a preposition, which is the symbolic entity most directly indexing an image schema, defined by Johnson (2005) as:

...the recurring patterns of our sensory-motor experience by means of which we can make sense of that experience and reason about it, and that can also be recruited to structure abstract concepts and to carry out inferences about abstract domains of thought (p. 19).

In the creation of such CVs, there is neither transgression of the initial frame, nor foregrounding of frame elements. Their semantic constitution involves the reinterpretation of the frame by the inferential potential of the image-schematic core provided by polysemous prepositions. The preposition functions as an inferential operator which guides the reinterpretation of the verbal frame and both invites and constrains it. In English, the prepositions which seem to have specialized for participation in CV creations are *out*, *over*, *with*, and *under*. This means that most active in the creation of CVs are the general image schemas VERTICALITY, CONTAINER, CONTACT (NEAR-FAR), MOVEMENT and their most typical conceptual projections.

The Figure function of the Spatial Specifier constituent is like a filter for interpreting the activity within the constraints of the two overarching image schemas CONTAINER and DIRECTED MOTION and the implicational complex of the location branch of the EVENT SCHEMA. For example, the frame of *out* introduces a CONTAINER and imposes a spatial reading. PATH accompanies this basic image-schema grounded metaphoric projection, since *out* necessarily implies LEAVING A SPACE/ REGION/CONTAINER. In *outnumber*, VERTICALITY is further evoked by the conflation of the verbal frame with the image-schematic projection. The verbal frame brings into the conceptual integrative process the operations of the image-schematic implication QUANTITY IS VERTICAL MOVEMENT. Important for the configuring of the overall lexical meaning is also the FAR-NEAR schema. Implicationally, the FAR-NEAR schema chained to direct movement leads to meaning associations with 'lack of control' and enhances the 'exceed', 'be more in quantity' meaning of *outnumber*. However, the VERTICALITY schema and the image-schematic projection QUANTITY IS VERTICAL ELEVATION in the configured conceptualization override the FAR-NEAR schema and associate POWER and CONTROL with VERTICAL ELEVATION. So the configuration involves QUANTITY IS VERTICAL ELEVATION conceived of as UPWARD MOVEMENT OF LEAVING A CONTAINER with the implication of control of the moving entity over the one remaining in the container. This creates the idea of surplus or predominance of the entity conceptualized as leaving the container. Thus, without any cross-domain mapping, the image-schema driven reinterpretation of the verbal frame leads to the construal of a modified frame with the meaning 'exceed in quantity'<sup>13</sup> as in the example:

So the curious may well have **outnumbered** the devout during mass. (COCA)

*Over* and *under* project the VERTICALITY image schema associated with the conceptualization of evaluation (GOOD IS UP) and quantity measurement (MORE IS UP). The protoscene of *over* from which all uses of the preposition are projected has been defined by Tyler and Evans (2004, pp. 264–265) as containing a functional element indicating that Trajector and Landmark “are within each other’s sphere of influence”. They further note that the inferential complex associated with the projected meanings of *over* are based on the assumption that participants in spatial scenes are believed to be subject to real world force-dynamics ( p. 265), while the prototypical inferential complex involves an A-B-C trajectory, which accounts for the emergence of three distinct meanings – TRANSFER, COMPLETION, and ON-THE-OTHER-SIDE (269). On the basis of general cognitive principles and invited inferencing chains, people may arrive at the following sense extensions (among others) for *over*:

1. completion (based on above-and-beyond spatial projection); 2. transfer of focus-of attention; 3. control; 4. preference; 5. repetition; 6. comparison; 7. surplus value.

In the configuring of CV sense extensions 3., 6. and 7. are most frequently used, as illustrated by the examples adduced to showcase the general mechanism:

Do something activelike playing Skee-Ball-on first dates and you won't **overindulge** in alcohol. (COCA)

You have actors that **overact** and you have actors that **underplay** and I think that Jackie **underplayed** her life in a very interesting way. (COCA)

The President is visiting this key battleground state to **underscore** the need for more clean energy jobs. (COCA)

He couldn't **outshout** or **out-argue** an opponent, nor disable an antagonist's microphone. (COCA)

Justice Departments, administrations, White Houses have, since the beginning of time, tried to **withhold** documents that Congress wants. (COCA)

One of the frames the symbolic unit *take* is associated with is the CONQUERING one. The CONQUERING frame describes a “[t]heme losing its autonomy and perhaps sustaining material damage as the result of a successful invasion on the behalf of a Conqueror” (FrameNet). When combined with the CONTROL extension from the polysemy network of *over*, it leads to the addition of the attribute FULL CONTROL TO THE POINT OF OUSTING, as can be seen in the example:

And I would have guessed that online news usage **overtook** newspapers some time ago. (COCA).

Although each verbal frame recruited in CV construction brings its own specific conceptual content, the mechanism of frame reinterpretation via image schema projections remains constant in SSCVs. The mechanism is based on the invited reinterpretation of verbal frames in the basic image schema projections of CONTACT, CONTAINER, NEAR-FAR and MOVEMENT and their concomitant sense extensions.

### 4.3. Superclassification CVs

The superclassification group of CVs (Frame Creating CVs – FCCVs), on the other hand, is characterized by greater idiosyncrasy in semantic configuring. The members of this group are characterized by reduced semantic analyzability, which is a matter of degree in individual cases (cf. *deepsix* vs. *graymail*). They are associated with the activation of a generic space shared with other lexical items (an implicated parent NN) and the subsequent focal specialization in the projection and compression in the blend, leading to the creation of a new lexical concept. Even though most of these verbs are associated with a root nominal compound, their semantics is not directly derivable from the salient links between elements of the given frame and the frame itself. These verbs establish lexical concepts that did not exist prior to their coming into being and are creative at least as far as Lamb's definition of creativity goes: "when we invent a new way of saying something that does not fit the standard syntax" (1998, p. 205).

Siding with Libben (2006), I assume that irrespective of the degree of lexicalization of a compound, the rate of analyzability remains comparatively high, i.e. both the lexicalized meaning of the composite whole and its components are activated at least until the compression stage in the blend, when alternative construal with/without metaphor kicks in. Such CVs are either based on metaphoric NNs or metaphor is involved in the final stages of running the blend. Admittedly, as Koch tells us "[i]n general, it is metonymies that are reduced to metaphors. All in all, metonymy appears to be a kind of *parente pama* of metaphor" (2005, p. 139). Yet the metonymic motivation in the semantic configuring of such verbs is superseded by metaphoric mapping executed via different types of blending processes. As Barcelona (2003) advocates, a continuum approach to metaphor and metonymy is more "realistic" and the teasing apart of their joint, consecutive or integrative interaction in the semantic configuring of CVs is justified only if one of the two is palpably predominant and aide the grouping of CVs in meaningful (sub)classes (p. 239).

The meaning of superclassification CVs involves the parallel running of both metaphor and metonymy. Metonymy is weakly implicated in the alternative construal hypothesis put forward by Farrell (2001) concerning noun to verb conversions. This alternative construal hypothesis does not straightforwardly apply in cases of NN to CV conversions and there are cases in which an initial metaphoric mapping is subsequently metonymically reconstrued into a relational concept. Such is the case with *deep six*, which from a specific noun meaning 'burial at sea' has come to mean 'to throw overboard; to get rid of; abandon; discard; to reject, negate, or ruin'.

Superclassification CVs are double-scope integration frameworks which involve the *emergence of new grammar associated with the frames being blended*. "Double-scope blending" is the mechanism that provides what is referred to as "acquiring associated syntax" (Turner 2008, p. 12). We easily detect in all such cases the requisite cross-domain mappings defining conceptual metaphor. The process of understanding a sentence like *Glenn's mother summoned up her courage, then **cold-called** a woman identified in the Randy Thompson obituary as a sister* (COCA) requires the conceptual integration of the frames of human relations, of temperature and of communicating.

The conceptual metaphors CLOSENESS OF HUMAN CONTACT IS HEAT and DISTANCE OF HUMAN CONTACT IS COLDNESS are directly evoked in the meaning construction associated with the specific lexical concept. The whole *cold* is based on such metaphorical frame integrations. Once established the integration of the two frames functions as an exemplar for analogical creations. Thus *cold friend* is analogically created but applies to facebook friending, which changes the nature of the values in the human communication frame but not the already formed frame-blend. While *cold call* and *call friend* have a positive evaluative orientation, i.e. establishing human contact, *cold-shoulder* and *cold-finger* name the activity of avoiding human contact and expressing negative attitude. The blending of the frames illustrates selective projection from the inputs and idiosyncratic compression stage so that the emergent meaning is different. In all superclassification CVs, the meaning of newly created lexical concepts is less than weakly compositional and is characterized by emergent semantics and metaphoric widening of meaning.

### **5. Why another grouping?**

The identified three groups cannot be directly associated with word-formation process specific semantic contribution<sup>14</sup>, nor with family membership uniformity<sup>15</sup>. The claim is substantiated by the analysis of the family containing the *mail* verbal frame. The word-formation family exemplified by *e-mail*, *snail-mail*, *air-mail*, *knee-mail*, *blackmail*, and *graymail* illustrates how a) frame reinterpretation and b) creation of a novel frame crosscut family membership and word-formation process uniformity. The first four verbs conform to the conceptual manipulation pattern of VFCVs. A non-core frame element (the medium of transportation) is emancipated as a component of the word's profile and the schema is extended by incorporating various socially significant media that affect the nature of the information transfer. Thus the first four members of the word-formation family result from explicating intraframe contiguity. *Blackmail* and *graymail* stand apart from the rest of the family members by actualizing a new frame and by relying ultimately on metaphoric conceptual integration. The analogy between *blackmail* and *graymail* is based on the lexicalized semantics of the whole and the remotivated interpretation of the first component, with metaphor involved in the initial lexicalization process. Thus these two CVs belong to the superclassification class and do not rely on the value foregrounding mechanism. They exploit to the full the mechanism of double scope conceptual integration which accounts for the heightened degree of creativity associated with them.

### **6. Conclusions**

CVs in English are morphotactically transparent to different degrees and can be categorized into three groups VFCVs, SSCVs and FCCVs based on the nature of the frame modifications which account for their semantics. These are arranged along a scale of growing opaqueness or creativity. The most transparent ones are VFCVs, in which the second component is directly evoked by the frame, while the first component is conceptually derivative via value specification. Next come SSCVs, in which the prompted inferential embedding into an image schematic projection functions as the

profile determinant, while in the last FCCVs, even though available, the two morphotactic components are not directly integrated into the profile of a relational concept but capitalize on an already metaphonymically configured complex concept.

VFCVs are the only ones that reveal properties which can be captured by analyses offered for NN compounds<sup>16</sup>. To study in detail the specific frame manipulations that are involved in the creation/interpretation of CVs, we need to focus special attention to them and stop automatically applying the analytical procedures adopted for nominal compounds. The analysis of the specificity of conceptual integration in the semantic configuring in CVs is intended to elucidate the similarities and differences between the basic properties of nominal and verbal compounds that could further illuminate how different the conceptualization between “relations” and “conceptual cores” really is, as suggested by Radden and Dirven (2007).

## Notes

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<sup>1</sup> U-semantics is used to describe the semantics of understanding, which maintains that there are no grounds for the distinction between aspects of the interpretation process that belong to linguistics proper and whatever might belong to reasoning and speakers' belief systems (Fillmore 1985, p. 221).

<sup>2</sup> Compound verbs should be recognized as *composites*. “Two categories relevant for linguistic representations at all levels [...] must [...] be kept apart: First, those that result from an ‘additive’ (or: computational) combination of semantically and/or formally simplex items, yielding, [...], *compositions* of variable complexities in accordance with combinatorial rules; second, there are *composites*, which cannot readily be analyzed in terms of a ‘simple’ (additive) computation of their formal constituents and/or semantic components, but only as ‘wholes’ or Gestalts” (Lampert 2009, pp. 62–63, emphasis in the original).

<sup>3</sup> Frame manipulations covers both frame modification and the integration of frames.

<sup>4</sup> For a detailed description of the nature of the distinction between superclassification and subclassification CVs in English see Bagasheva (2012a,b) and McGregor (2002).

<sup>5</sup> To the best of my knowledge, there is no psycholinguistic experimentation focusing specifically on the processing and/or production of CVs.

<sup>6</sup> While Gagné and Spalding (2009) and Libben (2006) provide psycholinguistic evidence for the nature of processing of compound nouns during comprehension, Costello (2002) is concerned with compound production.

<sup>7</sup> This specification of the focus of the analysis on grammar rather than usage follows Steen's (2011) classification of metaphor studies. The usage data discussed are adduced as illustrations of the applicability of the analysis, initially based on naturally occurring usage patterns extracted from COCA, BNC, OED, urban dictionary and word spy. No claims are made concerning frequency of use or any other quantitative dimension. As the objective of the paper is to foreground the specificity of CVs and the need

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for focused, independent analytical approaches to their semantic constitution, the research is predominantly qualitative.

<sup>8</sup> Nonetheless, I adopt the tradition of describing the requisite (meta)linguistic knowledge interactants display in communication in terms of the properties of linguistic entities that such knowledge presupposes.

<sup>9</sup> Morphological right-headedness indicates that all inflectional marking goes compound-externally, no matter whether morphotactically it is possible to identify a verbal constituent.

<sup>10</sup> "The notion of salience may thus denote both a temporary activation state of mental concepts (cognitive salience) and an inherent and consequently more or less permanent property of entities in the real world (ontological salience)" (Schmid 2007, p. 120). CVs emancipate cognitive or situational salience into ontological salience by hypostatizing it.

<sup>11</sup> In the word-formationist literature the controversy over the nature of the relationship between noun incorporation and compounding remains embarrassingly unsettled. As the origin story of separate CVs is of no direct relevance for the arguments developed here, the issue is not discussed.

<sup>12</sup> It seems that the *single domain* and the *conceptual contiguity* views on the nature of metonymic relations are not irrevocably opposed (see Barcelona 2003, 2011; Croft 1993; Kövesces and Radden 1998; Peirsman and Geeraerts 2006; Radden and Kövesces 1999). The essence of metonymy is the chaining of conceptually contiguous elements which either belong to a single domain or to conceptually related domains.

<sup>13</sup> This analysis is based on the ideas of Cervel (2004), Evans and Green (2006), Lakoff and Johnson (1981, 1999), Tyler and Evans (2004).

<sup>14</sup> A few authors insist that the word-formation process employed in the derivation of a complex word specifies the meaning generation mechanism, i.e. in CVs there is the requirement for an internal argument relationship between the morphotactic components for converted verbs (Lieber 1981, 2004) and for back-formed ones (Guevara and Scalise 2006).

<sup>15</sup> Presumably the enlargement of word-formation families is based on analogical extensions elaborating local exemplars.

<sup>16</sup> One such analysis that can easily be applied is Onysko's (2010) study of nominal compounds based on a head-specifier relation.

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