

## SOME ENGLISH AND BULGARIAN ADJECTIVE-NOUN CONSTRUCTIONS BASED ON CONCEPTUALISED PERCEPTUAL EXPERIENCE

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This paper examines the mechanisms involved in the semantics of some A + N constructions in English and Bulgarian, with a focus on image schemas as mental representations of different kinds of perceptual experience. Examples from different areas of specialised language have been analysed within the framework of cognitive linguistics. The comparative study has led to the identification of English-Bulgarian pairs of constructions which instantiate similar schemas. The results can be used to aid translation work in the LSP fields investigated.

**Key words:** A + N constructions, frame, concept, attribute, perceptual experience, image schema

### **Introduction**

For more than thirty years cognitive semantic research has demonstrated that traditional building-block ideas of semantic compositionality fail to account for the complex relations between the components of multi-word expressions. Even an apparently straightforward combination between a noun and its modifying adjective (henceforth [A+N]) would require a wide range of cognitive mechanisms, such as mental spaces, frames, active zones, metaphor, metonymy, and image schemas, for an explanation of the semantic relation underlying it (Sweetser 1999: 130–141).

Both components of an [A+N] combination provide access to concepts structured by frames. These frames include the roles and relations constituting the background of any semantic or conceptual category (Fillmore 1985). The core of a frame is composed of a number of co-existing attributes. The most likely attributes for concepts related to physical entities are their colour, weight, and shape, whereas for those related to events they would be the location, time and purpose. The values of these attributes are also concepts which provide further information,

thus making the attributes more specific (Barsalou 1992: 30–39). The emergence of an [A+N] combination can be seen as the result of the highlighting of a particular attribute in a specific context whereby the value of that attribute is expressed as the modifying adjective, and the noun encodes the main concept. It is important to establish the extent to which the frame of the concept encoded by the adjective maps onto the frame of the concept externalised by the noun. The greater the overlap between the two conceptual structures, the higher the degree of compositionality exhibited by the whole combination. This overlap may ensue from the conventionalised sense of the phrase or from the context (Sweetser 1999: 138, 141). However, it frequently results from the metaphoric or metonymic structuring of the frames which enables the mapping of concepts related to concrete, physical entities onto more abstract ones.

Since the emergent meaning of [A+N] combinations is often different from the meaning of their individual parts, a number of authors treat them as compounds (e.g. Adams 1973: 57–61, Plag 2003: 142–143, Fabb 1998: 67, 71). The view adopted here is that the most convenient approach to their analysis is within the framework of construction grammar (e.g. Goldberg 1995, Booij 2011). A number of linguists have noted the existence of abstract schemas which can generalise groups of expressions on the basis of a systematic form-meaning correspondence (e.g. Booij 2011, Bagasheva 2012). [A+N] constructions can also be regarded as instantiations of more specific or more abstract schemas.

### **Basic domains and image schemas**

The adjectives in a large number of [A+N] constructions are related to physical perceptions. Y. Popova has published a detailed study of the ways in which data received through the senses (mainly touch and taste) contribute to the conceptualisation of certain qualities (Popova 2005). In her view, touch is as important as vision for the conceptualisation of most spatial properties; furthermore, for some of them it is even dominant (*ibid.*).

The properties perceived through touch refer to the perceptions of pain, pressure, temperature, and texture, which in turn give rise to the so-called basic domains, or domains that are not understood in terms of other domains since they derive from pre-conceptual, e.g. sensory-perceptual, experience (Evans, Green 2006: 232). Vision (often in combination with touch and motion) is involved in the formation of at least two other basic domains: colour and space (*ibid.*: 233–235).

Image schemas, which also have a sensory-perceptual basis, bring embodied experience onto the cognitive level. According to M. Johnson

(1987), an image schema is „a recurring dynamic pattern of our perceptual interactions and motor programs that gives coherence and structure to our experience“ (Johnson 1987: xiv). Image schemas can provide the basis for metaphoric mapping, for categorisation, and for many aspects of grammar. Abstract image-schematic concepts underlie much more specific lexical concepts encoded and externalised by specific lexical forms (Evans, Green 2006: 180).

### Sources

The mini corpus of [A+N] constructions used for the purposes of this analysis has been excerpted from written sources (textbooks and dictionaries) in three different areas of specialised language: hospitality, environment and ecology, and food science.

### [A+N] constructions with adjectives in antonymic pairs

The adjectives encoding concepts related to basic domains frequently form antonymic pairs but this does not always lead to the formation of antonymic [A+N] constructions. The analysis has shown that various processes and mechanisms are involved in their semantics.

### Dry ↔ wet

Along with their embodiment in the sensory-perceptual experience derived from touch, the frames of both adjectives include a common element, i.e. (presence/absence) of the ((Liquid)) attribute: *wet/dry land*, *wet/dry soil*, *wet/dry river*, *wet/dry climate*. The adjectives in some phrases provide metonymic access to the ((Liquid)) attribute as in *wet/dry weight* (the weight of substances containing liquid or not) and *wet/dry deposition* (the deposition of substances containing water or not). In the emergent semantics of a large number of [A+N] constructions, however, it is not the ((Liquid)) attribute that is foregrounded, but rather the relational element (+ / **presence of x**) or (- / **absence of x**), where **x** is an attribute/attributes in the frame of the concept externalised by the noun: *wet charter/ dry charter* (hiring an aircraft with or without a crew), *wet/dry lease* (synonyms of *wet/dry charter*), *wet/dry rent* (equipment can be supplied with or without operators), *wet/dry lab* (involving the performance of experiments or not). A Bulgarian equivalent resulting from this opposition can be seen in the new formations *мокър лизинг* and *сух лизинг* (in ministerial regulations). Sometimes, the relational element (**presence/absence**) of an attribute fails to produce an antonymic pair, as in *dry meat* (without gravy or garnish), *dry toast* (without butter), *dry*

*expansion/cyx xod* (without liquid), *dry facts* (without adornment) and *wet chemistry* (involving the use of liquid reagents).

A significant group is composed of [A+N] constructions where the adjectives afford access to the presence or absence of the ((Alcohol)) attribute, e.g. *wet country/state/town* (where alcohol is sold) vs *dry country/state/town* (where alcohol is not sold). The same relation is observed in the Bulgarian *сух режим*. Unexpectedly, the adjective in *dry martini / сухо мартини* highlights the predominance of alcohol rather than its absence.

With the exception of the constructions which provide direct access to the (presence/absence) of the ((Liquid)) attribute, the concepts encoded by the nouns discussed above are metaphorically structured as physical entities. All the *wet/dry* [A+N] constructions can be considered as instantiations of the very general schema [(+/- x)<sub>A</sub>, (x,y,z...) <sub>N</sub>], where x, y, z are attributes from the frame of the concept encoded by the noun.

An interesting example is *wet fish* (fish which has not undergone any kind of processing), where the adjective provides metonymic access to another concept, (ACTION), with its attribute ((Processing)). It instantiates a variety of the above schema, i.e. [(- x)<sub>A</sub>, (x,y,z...) <sub>N</sub>], where x is the ((Processing)) attribute.

### Hard ↔ soft

The concepts encoded by this antonymic pair of adjectives are again related to sensory-perceptual experience caused by touch. The salient attribute in the noun frame is ((Contact)), and in the adjective frame it is either ((Effect of)) or ((Resistance to)). Thus, the semantic relation underlying a *hard/soft* construction often involves an interaction between the frame of the concept externalised through the noun and the frame of the (ACTION) concept with some of its main attributes, i.e. ((Agent))/((Instrument))<sup>1</sup> and ((Object)). In a large group of these [A+N] constructions, the common element in the adjective frames, which highlights the ((Contact)) attribute in the frame of the noun concept, is the effect of the contact in binary opposition (negative effect/- or positive effect/+): *hard/soft tourism* (tourism which has either negative or little effect on the sociocultural and/or environmental factors in the respective regions), *hard/soft drug*, *твърд/мек наркотик* (having a highly or mildly addictive effect), and *hard/soft liquor*, *твърд/мек алкохол* (having a strongly or mildly intoxicating effect). Hence, the constructions in this

<sup>1</sup> We assume that the difference between the two attributes is based on the presence or absence of the (((Animate))) value of this attribute.

group can be generalised by the schema [(+/- effect of x)<sub>A</sub>, (x, y, z...) <sub>N</sub>], where **x** is the ((Contact)) attribute in the frames of the two concepts encoded by the adjective and the noun in the construction. This schema is also applicable to *hard/soft water*, *твърда/мека вода*, where the adjective provides metonymic access to the ((Content)) attribute in the noun frame through the action of the CONTAINMENT image schema.

For another group of constructions, the common schema is [(+/- resistance to Y)<sub>A</sub>, (X)<sub>N</sub>] where Y is a concept external to the construction, e.g. (PRESSURE) as in *hard/soft material*, *твърд/мек материал*, (BIODEGRADATION) as in *hard/soft detergent*. This schema also covers constructions such as *hard/soft wheat*, *твърда/мека пшеница*, where the adjective activates concepts associated with the noun concept, e.g. (FLOUR), (BAKING), etc.

In some of these [A+N] combinations, e.g. *hard/soft tourism*, the nouns encode concepts structured by metaphor as physical objects that can come into contact and exert or experience a positive or negative effect. No such examples were found in the Bulgarian sources.

### **Hot ↔ cold (cool)**

The adjectives *hot* and *cold* (cool) are also grounded in touch-related properties but are connected to the TEMPERATURE basic domain. In some of the investigated constructions, e.g. *hot/cold buffet*, *hot/cool box*, *hot/cold kitchen*, *топла/студена кухня*, they combine with nouns expressing specific material objects but the property is connected with concepts different from the ones encoded by the nouns, and these concepts are activated metonymically, with the participation of the CONTAINMENT image schema. The type of metonymy involved in the semantics of these constructions is +CONTAINER FOR CONTAINED+. The constructions can be generalised by the following schema: [(property)<sub>A</sub>, (container for contained)<sub>N</sub>]. This schema is also instantiated by constructions such as *hot tub* and *hot cupboard* which are not in antonymic pairs. Though with a different property, the same schema is applicable to the Bulgarian construction *мокър бюфет*.

### **Other [A + N] constructions**

#### **Round, flat, sharp**

Both *round* and *flat* are associated with spatial attributes typical of physical objects. Therefore the concepts expressed by the nouns in combinations such as *round taste*, *окръглен вкус*, *flat taste*, *flat flavour*, *round trip*, and *flat rate*, are metaphorically structured as material objects

with a specific shape thereby allowing the mapping of the frames of the respective adjectives onto their own frames. In *round taste*, the adjective affords access to the (((Complete))) value of the ((Shape)) attribute in the frame of the noun concept. The adjective *flat* in *flat taste* and *flat flavour* foregrounds the relational element (**-prominence of x**), where **x** is any attribute in the frame of the concept encoded by the noun. The same relational element, with an opposite sign, is highlighted by the touch-related adjective *sharp* in *sharp taste* and *sharp flavour*.

The combination of the two components in constructions such as *round trip* and *flat rate* makes the action of the complex image schema PATH visible and highlights a dynamic aspect of the frames structuring the encoded concepts. In the semantics of *round trip*, the image schema participates with its three main elements, i.e. SOURCE, PATH, and GOAL, whereas in *flat rate* the only active element is PATH, foregrounding the attribute ((Progress in time)).

Except for the equivalent of *round taste*, the constructions in this group do not have any Bulgarian counterparts.

### [A + N] constructions with colour adjectives

As pointed out by Lakoff and Johnson, „colors arise from the interactions of our bodies, our brains, the reflective properties of objects, and electromagnetic radiation“ (Lakoff, Johnson 1999: 24). Colours are never objective, nor are they entirely subjective. They not only help in the recognition of objects but also play a cultural, aesthetic and emotional role in our lives (ibid.: 25).

In many of the [A+N] combinations that include adjectives related to colours, the adjectives provide a value of the ((Colour)) attribute in the frames of the noun concepts, which are usually non-relational concepts, or **things** in the sense of cognitive grammar (e.g. Radden, Dirven 2007): *red rain* (also called *blood rain*, a form of red precipitation), *yellowcake* (a type of uranium concentrate powder), etc. In a large number of these constructions however, the value-attribute-concept connection is not so straightforward. The analysis has shown that the most prominent adjectives in the examined areas are green and black.

### Green

In constructions such as *green onion*, *green peas*, and *green beans*, in spite of the apparently direct link between the ((Colour)) attribute in the noun concept frame and its value externalised through the adjective, the latter simultaneously highlights two attributes: ((Colour)) and ((Use)), with its

value (((As food))), since the colour value is only relevant to the time, or stage, of the vegetable use as food. These three constructions in this section have their equivalents in Bulgarian: *зелен лук*, *зелен грах*, *зелен фасул*.

In *green butter*, the adjective activates both the ((Colour)) and the ((Composition)) attribute in the frame of the (BUTTER) concept and provides access to the (((Vegetable/Plant))) value of the second attribute with the help of the CONTAINMENT image schema.

The occurrence of *green* in a considerable number of other [A+N] combinations is indicative of the salience of the (PLANT) concept in the areas of food science and ecology. In *green holiday*, *green tourism*, *green parties*, *green refrigerator*, *green technology*, *green products*, *green consumer*, *green policies*, the concept expressed through the adjective is not a value of an attribute in the frame of the noun concept in the construction; rather, it activates a metonymic chain by providing access first to a different concept, i.e. (PLANT), and then to a more general one, i.e. (ENVIRONMENT). As a result, the emergent semantics of the above constructions features the relational element (**friendly to the environment**). The group of similar constructions is expanding in Bulgarian (e.g. *зелена партия*, *зелена енергия*, *зелена политика*, *зелена полиция*, etc.), perhaps under the influence of language contact.

Metonymy also participates in the semantics of another construction, *green climate* (mild or temperate climate), where the adjective again highlights the (PLANT) concept.

The semantics of some examples taken from the language of food technology involves the interaction of metonymy with another cognitive mechanism, i.e. metaphor: *green bone*, *green blood*, *green ham*, *green bacon*, *green meat*. The concepts expressed through the nouns are metaphorically structured as objects of plant origin, and by activating the ((Colour)) attribute, the adjective metonymically highlights another attribute – ((Fresh)) / ((Unprocessed)).

### **Black**

As seen in *black economy*, *black market*, and *black water*, the adjectives provide a negative value for certain attributes in the frames of the noun concepts, e.g. (((Illegal))) / (((Undeclared))), or (((Unsuitable for reuse))). The negative emotional and psychological perception of the black colour is related to low or lacking illuminance, which affects one of the most basic perceptions of man, i.e. vision, causing psychological discomfort and a feeling of uncertainty and fear (Krasteva 2010: 129). In *black list*, the adjective activates a series of concepts: it affords metonymic

access to the ((Items)) attribute of the (LIST) concept with the help of the CONTAINMENT image schema. At the same time, it expresses a negative value, (((Forbidden))), of an attribute in the frame of the (ITEMS) concept.

### Conclusion

The analysis of some English and Bulgarian [A+N] constructions in the areas of tourism, food science and ecology has shown that their combinatorial semantics can be successfully explained through the basic mechanisms, structures and processes described in cognitive linguistics such as frame interaction, image schemas, metaphor and metonymy. The comparison between English and Bulgarian demonstrates that these mechanisms and processes are language-, hence culture-specific.

In view of their low degree of compositionality and specific emergent semantics, the [A+N] combinations can be treated as constructions. When the frames of their two components interact in similar ways in a group of constructions, this interaction can be illustrated by more or less abstract schemas.

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