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A cognitive analysis of the Bulgarian prepositions and verbal prefixes *NAD* and *POD*

This paper analyzes the Bulgarian prepositions and verbal prefixes *NAD* and *POD* from a cognitive linguistic perspective. Their prototypical senses are presented as a trajector (TR) situated above or below a landmark (LM), an idealized cognitive model that is neutral with respect to vertical alignment and contact between the TR and LM. The networks of *NAD* and *POD* each exhibit a common semantic core stemming from the central spatial sense of each term, close connections between prefixes and prepositions, consistent spatial-metaphorical meaning shifts, and structural similarities between *NAD* and *POD* that are often opposites (which can be represented as reversed mirror images) of each other. Analyzing spatial terms such as *NAD* and *POD* in this way has explanatory power and the potential to help learners and teachers of Bulgarian see the connection between verticality and metaphor, make sense of the polysemy of these spatial terms, and learn or explain them more easily.

Key words: Bulgarian; prepositions; verbal prefixes; *NAD*; *POD*; verticality; cognitive; metaphor; L2 learning and teaching.

1. Introduction¹

1.1. Goal

This paper analyzes the Bulgarian prepositions and verbal prefixes *NAD* ‘higher than, above, over’ and *POD*² ‘lower than, below, under’³ from a cognitive lin-

¹ I would like to thank Ljiljana Šarić, Marija Brala, and Seonaigh MacPherson for their insightful suggestions and comments on this paper.



guistic perspective. I map their prototypical senses along the vertical axis and present them as a trajector (TR) situated above or below a landmark (LM) in Langacker's sense. Following a well-established cognitive linguistics tradition, I assume that these central senses are extended to temporal and metaphorical meanings by association of abstract ideas with spatial locations, often based on experience and/or meaning extension involving metaphors. Unlike traditional sources, which present each term's meanings as random collections of senses, this paper presents them as networks of interrelated senses linked by similarities, transformations, and metaphors. I show that *NAD* and *POD* are members of a compositional set that divides up the vertical dimension⁴ and I derive their abstract meanings from the spatial ones in similar ways, an approach that has a number of implications for second language learning and teaching.

1.2. *Traditional treatments of NAD and POD*

Standard Bulgarian references (dictionaries and grammar books) usually present the meanings of prefixes and prepositions as unrelated. Presenting lists of meanings is, of course, what dictionaries do, and grammar books by definition present only general surveys; nonetheless, both types of sources place too much emphasis on lexical differences and fail to establish key connections among separate meanings. In addition, dictionaries and grammatical treatments do not entirely align with each other.

The *Bulgarian Dictionary* (vol. 10, 2000: 139–140), henceforth BD, for example, presents the eight meanings of the preposition *nad* as expressing relations between two (or more) entities (see Table 1). Following the cognitive linguistics model, it is possible and desirable to group meanings (1)–(3) in BD on the basis of spatial verticality and height, to treat meaning (4) as an extension of the same idea to non-spatial relations, and to group together meanings (5)–(7)⁵ because they all share the idea of superiority. Then the most abstract meaning, (8), can

² In this paper, *NAD* represents both the preposition *nad* and the verbal prefix *nad-*, and *POD* represents both the preposition *pod* and the verbal prefix *pod-*.

³ These are the three highest-frequency glosses for *NAD* and *POD*. Depending on the context, other translations are possible.

⁴ This set also includes *otdolu* (*pod*) 'right beneath', *izpod* 'under', *na* 'on, at', *vǎrxu* 'on, on the surface', *na vǎrxu na* 'on top of (mountains, pyramids)', and *otgore* (*nad*) 'on top of (general)', which will not be discussed here due to space limitations.

⁵ And perhaps covering, especially in the case of (7).



be explained on the basis of the physical experience of a TR leaning over a LM to oversee, protect, judge the LM, and so on, and its correlation with the TR's greater height and abstract superiority or power.

The *Academy Grammar* (vol. 2: 2, 1998: 276), henceforth AG, identifies two basic meanings of the preposition *nad*, (1) higher than and (2) relations between entities, each with several submeanings: (1a) close to the top; (1b) near or beyond a boundary (for quantity, size, dimension, or degree); (1c) metaphorically higher or exceeding something; (1d) the best/most; (2a) control, supervision; and (2b) action (e.g., watching over, making fun of) directed at someone/something. This source correctly identifies that submeanings (1a) to (1d) are related to the same superordinate structure; specifically, *higher than* (spatial or abstract). However, the definition of meaning (2) is rather vague and applies equally well to all prepositions and their submeanings. In addition, AG fails to show that both submeanings of (2) have to do with control or influence and are related to the central *higher than* notion. Rå Hauge (1999: 163) seems to be most explicit about the links between some of the senses of *nad*. He notes that "location over something or movement to a place over something" also has a figurative sense.

Table 1 summarizes the meanings of the preposition *nad* provided by several reference books on Bulgarian. The numbers in the table correspond to the order in which a source lists a given meaning; a letter next to a number (e.g., 1a) indicates a submeaning. The same number appearing twice in a given source means that this source groups these meanings together, and a blank indicates that the source does not include a given meaning.

Table 1. Meanings of the preposition *nad* in reference books on Bulgarian.

Meanings of the preposition <i>nad</i>	BD (vol. 10) 2000	AG (vol. 2: 2) 1998	Georgiev's <i>Morphology</i> 1999	Alexander's <i>Intensive Bulgarian</i> 2000	Rå Hauge's <i>Grammar</i> 1999
higher/taller than	1 and 2	1	1		1
on top of	3			1	
more than	4	1b			2
better/above	5	1c			1
the best/most	6	1d			
superior	7	2a; 2b			3
relative to	8	2	2		3
near the top		1a			



A similar picture arises for the prefix *nad-*. According to BD (vol. 10, 2000: 140–141), it attaches to verbs that mean: (1) higher/taller than; on top of; (2) more than (necessary, normal, or required); (3) better/faster; the best/most; and (4) relative to. BD puts together the meanings ‘*higher than* and *on top of*, which is an attempt to capture the similarity between them: in both cases an entity is situated higher than another entity. Although it gradually progresses from meaning (1) to (3), in which readers may infer a connection (*higher than* > *more than the norm* > *better than someone else*), it fails to suggest a link between meanings (1) and (4), in which the former is in fact the physical basis of the latter.

AG (vol. 2: 2, 1998: 16–17) divides prefixed verbs with *nad-* into three categories: (1) expressing results of actions and being performed over/above the area where the object⁶ is; (2) designating that the subject has achieved better results than another subject in performing an action; and (3) indicating that an action is resumed achieving additional results. It is surprising that AG sees *additional-results* rather than *on-top-of* as the salient characteristic of (3), and that it separately classifies *nadpiša* ‘write on top of, inscribe’ and *nadstroja* ‘build on top of’, both of which indicate *on-top-of* and imply contact.

Ivanova’s work on lexical aspect⁷ (1974) is the first serious attempt to organize the meanings of each verbal prefix and show which meanings can be expressed by more than one prefix. In her analysis, the prefix *nad-* has the following meanings: (1) performing an action over the object’s area achieving results as represented by a small group of verbs such as *nadvesvam* (*se*) ‘lean over’, thereby exhibiting the strongest connection to the preposition *nad*; (2) achieving better results than another subject in a simultaneous/joint action; for example, *nadbjagvam* ‘outrun’; a more productive meaning with two variants: (2a) a “mutual” sense, in which two subjects in an equal position compete with each other; for example, *nadvikvam se* ‘outshout each other’, and (2b) another sense in which a subject performs the action more than necessary; for example, *nadcenjavam* ‘overestimate’; (3) resuming an action achieving additional results; for example, *nadstrojavam* ‘build on top of’; and (4) performing an action for a limited period of time; for example, *nadzärtam* ‘peek’ (Ivanova 1974: 111–113). I argue (2005) that, although Ivanova often groups together verbs expressing different meanings, or does not always assign the most salient meaning to a

⁶ Ivanova (1974) and other earlier works use the term *object* in the sense of LM.

⁷ Lexical aspect refers to inherent properties of verbs such as durativity and instantaneousness, telicity (natural endpoints; e.g., *build a house*) and atelicity (no endpoints; e.g., *run*; see, e.g., Vendler 1967).



verb, her analysis correctly captures the central meaning of *nad-* (1), and the close connection between, say, *better* (2) and *excess* (2b). However, she fails to identify other crucial connections; for example, that the meaning of delimitative verbs (4) arise from a basic verticality arrangement in which the TR is located higher than the LM (1).

Table 2 shows that standard Bulgarian sources (more or less) agree on *higher-than* being the basic meaning of *nad-*; however, each source provides a different number of meanings (between two and four), and in a different order. Thus, the second most salient meaning of *nad-* is *excess* (according to BD, Ivanova, and Scatton), or *better-than* (according to AG, Ivanova, and Scatton), or *relative-to* (according to Georgiev), depending on the source. For the most part, they present the meanings of *nad-* as a random collection of senses, something this paper strongly disagrees with.

Table 2. Meanings of the verbal prefix *nad-* in reference books on Bulgarian.

Meanings of the verbal prefix <i>nad-</i>	BD (vol. 10) 2000	AG (vol. 2: 2) 1998 ⁸	Georgiev's <i>Morphology</i> 1999	Ivanova's <i>Lexical Aspect</i> 1974	Alexander's <i>Intensive Bulgarian</i> 2000	Scatton's <i>Grammar</i> 1984
higher than	1	1	1	1	2	1
on top of	1	1			2	1
excess	2			2b		2
better than	3	2		2	1	2
relative to	4		2			
additional result		3		3		
higher than (mutual)				2a		
delimitative				4		

A quick look at the meanings of *POD* reveals similar results. BD identifies twelve meanings of the preposition *pod* (vol. 12, 2004: 795–797; see Table 3). Again, this and similar lists create the impression of a random collection of meanings, and fail to establish connections among them. Meanings (1) and (2) should be combined into one spatial meaning, *lower than*, and (6)–(7) and (10) should be presented together as its metaphorical extensions based on metaphors such as LESS IS DOWN in (3) and LACK OF CONTROL IS DOWN in (9) (Lakoff and

⁸ Incidentally, AG's sections on prefixation and lexical aspect (vol. 2: 2, 1998) were written by Ivanova, which explains the overlap in their presentation of the meanings of *NAD* and *POD*.



Johnson 1980). In addition, meanings (4) and (2) could be linked on the basis of similarity between boundary and surface, (11) could be viewed as the temporal extension of (4), and a connection must be made between (8) and (9) based on the LACK OF CONTROL metaphor, and between (3) and (12) based on LESS IS WORSE.

AG (vol. 2, 1998: 283–285) does a better job identifying only one spatial meaning for *pod*: 1) lower than; for example, *pod zvezdite* ‘under the stars’, and two related submeanings: (1a) close to the lower part of a place; for example, *pod vārxa* ‘under the (mountain) top’, and (1b) close to or lower than a boundary; for example, *pod sto dolara* ‘under \$100.’ Thus, it attempts to group meanings together and suggests a link between *lower-than* in space (1) and non-spatial *less-than* (some amount; 1b). AG also lists several newer meanings: (2a) characteristic feature, main point; for example, *pod toja razsejan vānšen vid* ‘under this seemingly absent-minded exterior’; (2b) action type; for example, *pod naem* ‘renting, for rent’; (2c) circumstances, conditions, reasons; for example, *pod lāčite na svobodata* ‘under the rays of freedom’; (2d) control, influence, protection; for example, *pod zakrila* ‘under protection’; and (2e) control subordination; for example, *pod nadzor* ‘under supervision.’ However, like BD, it fails to find the connection among these senses. It should group (2a–2c) together as metaphorical *under* or *covering*, and (2d–2e) under the CONTROL metaphor.

Table 3. Meanings of the preposition *pod* in reference books on Bulgarian.

Meanings of the preposition <i>pod</i>	BD (vol. 12) 2004	AG (vol. 2: 2) 1998	Georgiev’s <i>Morphology</i> 1999	Alexander’s <i>Intensive Bulgarian</i> 2000	Rå Hauge’s <i>Grammar</i> 1999
lower than	1	1	1		1
under the surface	2	1	1	1	1
smaller than	3	1b			
close to	4	1a			
action type; e.g., accompaniment	5				2
under a mask ...	6	2a	1		1
known as /called	7	2a			3
subordination	8	2d; 2e			4
circumstances	9	2c			
conditions	10	2c			
worse than (dialect)	11				
before (dialect)	12				



Rå Hauge (1999: 169) and Georgiev (1999: 102) put together spatial and figurative *under*, but do not emphasize the connection enough. Rå Hauge classifies *pod zvucite na* ‘under the sounds of’ and *pod* + [term] ‘by [definition]’ as separate meanings, and does not link them to metaphorical *under*, whereas Georgiev provides only one metaphorical example, *pod nosa na* ‘under someone’s nose.’ Table 3 summarizes the meanings of *pod* in standard Bulgarian references.

Table 4. Meanings of the verbal prefix *pod-* in reference books on Bulgarian.

Meanings of the verbal prefix <i>pod-</i>	BD (vol. 12) 2004	AG (vol. 2: 2) 1998	Georgiev’s <i>Morphology</i> 1999	Ivanova’s <i>Lexical Aspect</i> 1974	Alexander’s <i>Intensive Bulgarian</i> 2000	Scatton’s <i>Grammar</i> 1983
near the bottom, under	1	1	1	1	1	1
down(wards)	2	1		1		
inchoative	3	3		4	1	
result	4	4		5		
attenuative	5	2	1	3		2
causative	6	6		6		
slow/gradual	7		1			
close to	8					
change of state	9 and 10	5		5		
add a spice	11			3		
place lower in a hierarchy	12					
hide, mislead, lie	13			2		3

BD presents thirteen meanings of verbs prefixed with *pod-* (see Table 4). By contrast, AG presents only six meanings (Table 4). By putting *under* and *covering* together, AG implies a connection, but further explanation is needed. The remainder of the list, however, lacks coherence, and fails to explain why *podplaša* ‘scare away (a little)’ and *podvarja* ‘boil a little’ are in category (3), rather than (2) with *podpeka* ‘bake a little’, or why *podsmixna se* ‘smile vaguely’ expresses an *attenuative* (2) rather than a *covering* (1) sense.

Georgiev (1999: 301) suggests one unified meaning: ‘activity coming from below, or inside, or one that is hardly noticeable.’ Alexander (2000: 237) identifies a spatial meaning, *activity under*, and an inchoative one, *get going*. Scatton (1983: 294) lists three meanings: *activity under*, *limited motion/action*, and *hidden, reprehensive action*. Ivanova (1974: 114) explicitly states the connection



between the central spatial meaning, *activity under*, and *metaphorical hidden action*. She puts together *attenuative* verbs with *pod-* and those meaning ‘add a spice to a dish’, which is a step in the right direction, but she also lists verbs such as *podpomagam* ‘help out’ as *attenuative*, *podsilvam* ‘add support’ as *change-of-state* and *podpiram* ‘support’ as *activity under*, whereas I believe that all of them illustrate another meaning, *support*. It is also unclear why she categorizes verbs such as *podvarjavam* ‘boil a little’ as *resultative* rather than *attenuative* along with *podgrjavam* ‘warm up a little’ and *podpičam* ‘bake a little.’ Finally, *podklaždam*, *podkokorosvam*, and *podstrekavam*, all meaning ‘instigate’, seem to better fit the *hidden-action* category rather than the *causative* category, where they are listed.

Table 4 summarizes the meanings of *pod-* in major reference books. As with *nad-*, these sources seem to (more or less) agree on the central meaning, but present a different number of secondary meanings and in different order, which presumably reflects their salience. All of the sources examined exhibit a major drawback: their lists are rather haphazard and lack connections among the various senses of *NAD* and *POD*, and the information they present is inconsistent across sources.

2. Cognitive analysis of *NAD* and *POD*

2.1. *The cognitive framework*

Given the highly polysemous nature of most spatial prepositions (Cuyckens 1993: 32) and the prefixes derived from them, and the difficulty of finding a single set of critical features to define their meaning, cognitive semantics offers an effective approach to analyzing Bulgarian prepositions and verbal prefixes. The cognitive approach to word meaning in general, and polysemy in particular, differs from traditional or classical approaches in at least three major areas (Cuyckens 1993: 28–29, 1995: 183–184):

(1) Unlike classical lexical semantics, cognitive semantics suggests that all conceptual information associated with a lexical item is part of, or is understood against, the background of broader cognitive structures, and that word meaning reflects how people interact with, perceive, or conceptualize the world.



(2) Instead of sets of necessary and sufficient features, the cognitive approach uses family resemblance structures in which members of a category in the extension of a lexical item are linked because they share different sets of attributes with each other; that is, they are similar to each other in different respects or along different dimensions, like the members of a family. As a consequence, cognitive semantics allows fuzzy boundaries (rather than the clear-cut and well-defined concepts in the traditional view).

(3) Whereas classical analyses assign equal value to the features comprising a concept, in the cognitive view some feature information may be more salient and prototypical than other information, and some concept instances may be more salient, prototypical, or representative than others.

I assume that Bulgarian prefixed verbs are like English phrasal verbs in that “the verb contributes the source domain (literally, metonymically, or metaphorically) and the particle [in the case of Bulgarian, the prefix] is the expression of a cognitive image schema (CONTAINMENT, VERTICALITY, etc.), instantiated either literally or metaphorically” (Morgan 1997: 329). The main focus of this and the following sections is on the prefixes and prepositions and the image schemas they invoke. Using image schemas that are linked by similarities (i.e., shared properties), transformations, and metaphors (in the sense of Brugman 1981; Lakoff 1987), I propose that *NAD* and *POD* are radial concepts that receive a schematic presentation with one central schema of primary importance in the system of links and a number of secondary image schemas.

There is already a well-established tradition of applying the cognitive method to studies of Slavic prefixes and prepositions (e.g., Janda 1988; Turewicz 1994; Kochańska 1996; Shull 2003), including *NAD* (e.g. Šarić 2001; Tchizmarova 2005; Brala 2008; Mitkovska & Bužarovska, this issue). This paper follows the general principles of “establishing a core meaning” and a number of secondary meanings for each spatial term, and finding “the systematic, principled ways” in which they are related (Brala 2008). Unlike Šarić (2001) and Mitkovska and Bužarovska (this issue), who primarily focus on superposition expressed by *NAD*, Brala (2008) and this paper look at both superposition and subposition in the verticality domain, aiming to establish the common patterns (or parallelism) in the formation of the semantic networks of *NAD* and *POD*.



I follow Cuyckens (1995) in acknowledging that it is often difficult to decide on what constitutes a separate (secondary) sense. Consider his examples with *over* below:

(1) *The bird flew over the hill.*

(2) *The army marched over the hill.* (Cuyckens 1995: 185)

According to Cuyckens, in both (1) and (2) a TR occupies a path from a point or region at one side of an LM to a point or region at the other side of the LM, while crossing the LM, but they differ in lack (1) or presence (2) of contact. Cuyckens states that there are no clear criteria that can help one decide whether they represent two different senses of *over* or different contextual realizations of a more general reading with no specification for contact between the TR and LM. For these reasons, there may be alternative treatments of certain readings of *NAD* and *POD* that I have categorized as distinct secondary senses below.

2.2. *Spatial*⁹ meanings of *NAD*

This section and section 2.4. present a shorter revised version of my analysis of *NAD* in Tchizmarova (2005) as it relates to the discussion of *POD*. The central schema of *nad* captures the central (prototypical) sense of the preposition *nad*, roughly equivalent to ‘higher than, above’ as in *stoja/visja nad njakogo/nešto* (literally, ‘stand over’) ‘be (situated) over/above someone/something’, and is schematically presented as a trajector (TR) situated above a landmark (LM), as in Figure 1. In essence, this is a VERTICALITY¹⁰ schema, a static schema that requires no path. I call this Schema 1, the *higher than* schema.

⁹ Spatial events involve motion, object manipulation, perception, psychological state, and bodily process, and are understood literally and non-figuratively; for example, *see the book, go through the tunnel*, as opposed to non-literally, figuratively, metaphorically, or metonymically; for example, *see the truth, go through an ordeal* (Dirven 2002a: 8, 2002b: 93).

¹⁰ The terms VERTICALITY, CONTAINMENT, and HORIZONTALITY refer to any/all of their values: UP and DOWN, IN and OUT, and FRONT and BACK, respectively.

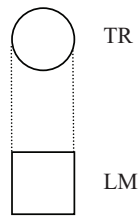


Figure 1. The central image schema of *nad; stoja nad* ‘stand above’ (front view), Schema 1, the *higher than* schema.

The following examples illustrate the central schema:

(3) *Edното tavansko pomeštenie e izcjalo nad našija apartament.*

‘One of the attic rooms is entirely over our apartment’

(4) ... *grafata “ot kogo e” nad e-maila*

‘the “from” field over the e-mail message’

(5) *Nad tjax se izdiga specifičen sinkav dim.*

‘Over them [the mountains] there is a specific bluish smoke.’

(CEMB 2004)¹¹

In (3), the TR (attic room) is not only at a higher level than the LM (apartment) but also, as *izcjalo* ‘entirely’ indicates, the TR is directly up from the LM, and their boundaries align exactly, as shown in Figure 1. By contrast, in (4), the dimensions of the e-mail message’s “from” field, which is usually directly up from the contents of the message, may be smaller than these of the message. Example (5) shows a variety of Schema 1, in which an extended TR (the smoke) is located higher than an extended LM (the mountains).

One needs to keep in mind that schemas normally lack non-essential detail, and cannot, in principle, be drawn correctly (Lakoff 1987; Lindstromberg 1998). For example, a schematic representation has to depict either contact or lack of it

¹¹ Examples (3)–(5) are from my 150,000-word Corpus of E-Mail Messages in Bulgarian (CEMB) 2004. It contains 1,593 informal e-mails (close to colloquial Bulgarian) by 41 family, friends, and acquaintances that are native Bulgarian speakers (27 female, 14 male), 22 of whom are from eastern Bulgaria (15 female, 7 male), 19 from western Bulgaria (12 female, 7 male); 35 have a graduate degree (23 female, 12 male), 3 (female) undergraduate, and 3 a high school degree (1 female, 2 male).



despite the fact that a given sense may be neutral to contact (Lakoff 1987: 419–420). Thus, Schema 1 of *nad* (Figure 1) shows only one position of the TR relative to the LM: the TR is depicted as having no contact with and being directly over the LM (the dotted lines show how the TR aligns with the LM vertically). I argue that this position of the TR, being on the same vertical axis as the LM, is the prototypical one. However, *nad* profiles several other positions of the TR with respect to the LM; that is, the TR could be to the left or right of the LM, and the distance between them can vary. Some of these common variants of Schema 1 are shown in Figure 2 (Schema 1.1).

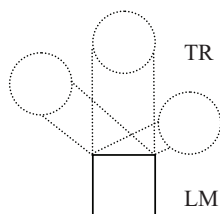


Figure 2. Schema 1.1 of *nad* (front view), common variants of the central schema.

Schema 1.1 of *NAD* is unlike the other schemas because it shows several positions of the TR simultaneously to remind us that image schemas are idealized and approximate representations. Because these positions are exemplified by other *NAD* schemas (i.e., Schema 1.1 is a merger of other schemas), it does not constitute an independent member of the semantic network of *NAD*.

Importantly, Schema 1.1 suggests why the central schema is neutral with respect to vertical alignment and distance between the TR and LM. Examples (6)–(8) involving geographic and topographic concepts show that *nad* implies a TR situated higher than an LM, regardless of whether the TR is directly above the LM or somewhat to the left or right of it (as indicated by the dotted circles and lines in Figure 2).

- (6) ... *mojto selo nad Blagoevgrad*
'my village above Blagoevgrad'
- (7) *Vsjaka sutrin izlizax nad stadionata.*
'Every morning I would go out over the stadium'



- (8) *Ima edin xǎlm nad samija Vǎršec.*
‘There is a hill right above Vǎršec.’ (CSB¹² 2001)

The village in (6) is not located vertically above the town of Blagoevgrad, it is about 10 miles east but is higher up in the mountains. In the same way, the place where the speaker goes out for a walk in (7) is not directly above the stadium; rather, the segment of the path in focus starts next to the stadium (LM) and goes away from the stadium and up in the mountain. Despite the use of *samija* (literally, ‘itself’) in conjunction with *nad* in (3), translated here as ‘right (above)’, the hill is not on the same vertical axis as the town of Vǎršec either; it is located next to the town, outside the town boundaries, but its top is at a higher elevation.¹³

It has been suggested to me that the relative freedom of positioning in the vertical axis results from the necessary approximation and use of larger scale in topography (Brala, personal communication). Closer-distance relations rarely exhibit such freedom. An exception is presented in (9), in which the TR (the mayor) sticks out above the LM (everyone present), and vertical alignment is lacking. Sentence (10) can have several interpretations: the painting (TR) can be directly above the fireplace (LM) as in Figure 1, somewhat to the left or to the right of the fireplace but still higher than the fireplace as in Figure 2, and, according to my informants, even on top of the fireplace (LM).¹⁴ *NAD* also allows the TR to be anywhere from really close to the LM, as in (4) and (10), to as far up as one can imagine, as in (11).

- (9) *Kmetǎt stǎrčeše nad glavite na prisǎstvaštite.*

¹² Examples (6)–(8) are from my 55,000-word Corpus of Spoken Bulgarian (CSB) 2001, which contains 105 conversations and oral narratives at informal dinner-table gatherings in Bulgaria. Of the 78 participants (40 female, 38 male), age 21 to 81, 34 have college degrees; 40 have lived for a substantial number of years in both eastern and western Bulgaria.

¹³ Tyler and Evans identify a similar meaning of *above*, called *topographical distance* (e.g., *The nearest bridge is about half a mile above the falls*; 2003: 121).

¹⁴ Five native Bulgarian-speaking informants stated that, depending on the context, *nad* in (10) can imply contact (similar to *na* ‘on’ and *vǎrxu* ‘on top of’). However, none of them interpreted (i) that way.

- (i) *Činiite sa nad masata.*

‘The plates are over the table’ (contrived example)

For them, the TR (plates) in (i) is higher than and not in contact with the LM (table); if contact had to be expressed, they would use *na* or *vǎrxu*, not *nad*.



‘The mayor stuck out above (the heads of) everyone present’
(BD, vol. 10, 2000: 139)

(10) *Kartinata stoi*¹⁵ *nad kaminata*.
‘The painting is over the fireplace.’

(11) ... *zvezdite nad nas*
‘the stars above us’ (conversations 2001)

Therefore, the central image schematic presentation of *NAD*, Schema 1 or the *higher than* schema, shows a TR higher than an LM and is neutral with respect to the alignment along the same vertical axis and distance between the TR and LM.

Examples (12)–(13) with the verbal prefix *nad-* are dynamic instances of Schema 1 involving a path, based on the idealized cognitive model in Schema 1, in which the TR performing an action (of *leaning* or *writing*) is situated in an area that is above the area where the LM (*knigite* and *kartina*, respectively) is located. They are presented as one meaning in Ivanova (1974).

(12) *nadvesvam se*¹⁶ *nad knigite*
‘lean over the books’

(13) *nadpisvam kartina*
‘write on top of/inscribe a painting’ (typical examples, author)

I assume that the central schema of the preposition *nad*, the *higher than* schema, is the foundation for the meanings of the prefix *nad-* in both instances. *Nadvesvam (nad)* ‘lean over (non-reflexive)’ and *nadvesvam se (nad)* ‘lean over (reflexive)’, often co-occurring with the preposition *nad*, require that at least some parts of the TR be in no contact with the LM (see Figure 3),¹⁷ and allow certain latitude as to the alignment of the TR and LM along a vertical axis. I call

¹⁵ The verb *stoj*a is polysemous; among other things, it can mean ‘stand’ and ‘hang/be’ (as in ‘be located some place’), a fact that facilitates the *top* and *higher than* readings of *nad*.

¹⁶ Unlike standard Bulgarian references, I cite prefixed verbs in their imperfective form to emphasize that prefixation is not synonymous with perfectivization, and the main function of prefixes is to change the lexical meaning of verbs.

¹⁷ Possibly because the TR is usually larger than the LM when covering is implied (Brala, personal communication).



the schema exemplified by (12), Schema 2, the *over* schema of *NAD* (reflecting the *over* sense in both the preposition and the prefix).

The curved arc trajectory and profiled upward arc in Figure 3 show part of the TR,¹⁸ usually the head and eyes of the person leaning over someone/something at peak position, and implies an abstract completion of the arc, often by visual projection downward (Dewell 1994: 359–360),¹⁹ or subjective (i.e., fictive) motion.²⁰ Figure 3 applies to a human TR (e.g., a parent) leaning over a human LM (e.g., a child). The arc shows the path of the parent (TR), the upward solid arrow indicates the bending of the parent’s body, and the circle at the peak of the arc corresponds to the head of the parent, who completes the path by gazing down at the child (LM; indicated by the dashed downward arrow). Note that the TR (e.g., the parent’s head as the leading part of the TR) does not have to be on the same vertical axis with the LM, the child, but may occur in one of the configurations presented in Figure 2.

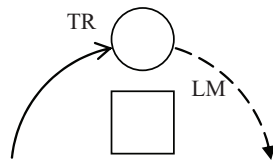


Figure 3. *nadvesvam se* ‘lean over’ (side view), Schema 2 of *NAD*, the *over* schema.

Examples (14)–(15) show some common varieties of the *over* schema as it applies to the preposition *nad*. Both have to do with covering.

¹⁸ Dewell (1994) calls such TRs “extending.”

¹⁹ The metaphorical extensions in English include *watch over*, *oversee*, *influence over*, *hours over a hot stove*, *cry over*, and expressions that involve dual TRs juxtaposed *over* a common object of interest such as *spend hours over cards*, *talk over lunch*, and *fight over a toy* (Dewell 1994).

²⁰ Sentences such as (i) and (ii) do not express a real motion of the subject NP, but involve some sort of implicit motion subjectively evoked in the mind of a conceptualizer that mentally traces the path described in these sentences, with an image of a moving entity often projected onto such tracing (Matsumoto 1996: 359–360, based on Langacker 1986, 1987, 1990, 1992 and Talmy 1983, 1989).

- (i) *The highway goes from Los Angeles to New York.*
- (ii) *The bike is parked across the street.*



(14) *Streljaka se edin drug nad glavite ni.*
'They shot at each other over our heads'

(15) *Nad nas se sipeše prekrasen puxkav snjag.*
'Beautiful fluffy snow was falling over us' (CEMB 2004)

In (14), there are multiple paths that go from left to right and from right to left on a higher plane than where the LM is located; that is, the multiplex TR (bullets) fly over the LM (our heads) situated in the middle of crossfire, creating the effect of covering. In (15), the path of the snow (TR) follows a downward direction from up in the sky to the people down on the ground (LM); the segment of the path in focus is above the people's heads. Again, the TR (multiple snowflakes) seems to cover the LM (us).

Unlike the expressions illustrating the *over* schema, *nadpisvam* in (13) requires that the TR be both in contact²¹ with the LM (Schema 3, Figure 4) and directly over the LM; that is, at least one part of the TR must be over the area between the edges of the LM, and so *nad-* in *nadpisvam* is roughly equivalent to *otgore na/värxu* 'on top of'. I call this the *top* schema of *NAD*, Schema 3.²² The image in Figure 4 is more straightforward than the one in Figure 3: one moves, say, a pen (and the gaze; TR) from left to right (indicated by the solid arrow) along the surface of, say, a painting (LM) inscribing it.²³

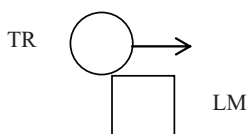


Figure 4. *nadpisvam* 'write on top of' (side view), Schema 3 of *NAD*, the *top* schema.

²¹ Cognitive linguistic work on other Slavic languages (Brala 2008; Mitkovska & Bužarovska, this issue) also suggests that contact and attachment are key semantic concepts in the verticality domain.

²² The lower number of Schemas 1–3 corresponds to greater salience (e.g., Schema 2 is more salient than Schema 3 because Schema 2 gives rise to other schemas). However, I have assigned numbers to schemas in the order they are discussed, which was largely determined by the perceived connections among them. Thus, despite being more salient, the *more* schema (Schema 7) is assigned a higher number than, say, the *superiority* schema (Schema 4) because it is analyzed later in connection with the *excess* schema.

²³ The up and down movement of a pen inscribing individual letters is not shown on the drawing.



Other examples of the *top* schema include verbs such as *nadživam* ‘sew on top of’, *nadplitam* ‘knit on top of’, *nadstrojavam* ‘build on top of’, and so on. I follow Kreitzer (1997: 308–310), who claims that static schemas (e.g., *The painting is over the fireplace*) are often integrated with dynamic schemas (e.g., *I put the painting over the fireplace*), and, vice versa, that dynamic schemas (e.g., *The cat jumped over the fence*) often apply to static configurations (e.g., *The power line runs over the field*), in which the static extended TR (the power line) is conceptualized as moving, and is therefore applicable to the dynamic schema of *over*. In the same way, I have treated examples with the preposition *nad* that involve contact between the TR and LM, and whose meaning is roughly ‘on top of’, as examples of the *top* schema, despite their static meaning in (16)–(17):

- (16) ... *idva momče ot KIS-13 da zakove kabela nad bordjurčetata.*
‘a young man from [the cable company] KIS-13 came to nail down the cable over the trim’,²⁴
- (17) *A nad zemjata ... kakva krasota!*
‘And above the ground ... what a beauty’ (CEMB 2004)

Sentence (16) involves what Lakoff (1987) calls an extended one-dimensional TR, which in this case is situated over an extended LM. Unlike the English example of a power line running over a field, however, (16) implies contact between the TR and LM. In fact, the TR (cable) is being attached to the top surface of the LM (the bottom trim on the wall). Sentence (17) is from a story about a cave tour, in which the speaker compares the magic of the underworld with the beauty of the world above it. Again, the TR (everything above the ground), or at least some parts of it, are in contact with and on top of the LM (the ground).

In my analysis, the meanings of (13) and (16) are not treated as different just because the TR (cable) and the LM (trim) in (16) are extended, whereas the TR (inscription) and the LM (painting) in (13) are (usually) not. Because the basic relation between the TR and LM is the same in both cases (the TR is on or is moving along the surface of the LM), they represent the same image schema, the *top* schema. In contrast, the configuration in (12) involves an arc-shaped path and no contact between (at least some parts of) the TR and the LM, and so it is a separate image schema in my analysis, the *over* schema, which often exhibits a covering sense.

²⁴ In Bulgaria phone, TV, internet, and other cords and cables are normally attached to or near the floor, (e.g., just over the trim on the walls adjoining the floor).



Although Schemas 2 and 3 of *NAD* are linked to Schema 1 via instance links, they are linked to each other via a similarity link. They both share Schema 1 (the *higher than* sense) and, in the dynamic instances, movement along a path, but differ in the contact and vertical alignment requirements and the shape of the path. Another difference between them is that the *top* schema is often associated with iterativity implied by the nature of verbs such as *piša* ‘write’ and the mental image of prototypical writing, which follows a path from one end of the line to the other, and then a similar path along the next line, and so on.

2.3. Spatial meanings of *POD*

The prototypical sense of the preposition *pod*, inherited by the prefix, is shown in examples (18)–(20):

(18) *stoja pod terasata*
‘stand under the balcony’

(19) *skrivam se pod masata*
‘hide under the table’

(20) *apartamenta pod nas*
‘the apartment below us’ (typical examples, author)

It can be presented by a TR situated below a LM. I call it the *lower than* schema, or Schema 1 (Figure 5).

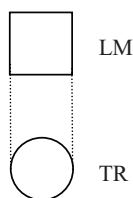


Figure 5. Central image schema of *pod*, *stoja pod* ‘stand below’ (front view), Schema 1, the *lower than* schema.

This idealized cognitive model is neutral with respect to vertical alignment and contact. The TR and LM in (20), for example, may be aligned with each other on the vertical axis (Figure 5), or the TR (the apartment) may be lower



than and slightly to the left or right of the LM (us/our place) as shown in Figure 6, or even on the opposite side of the building. Note that Figure 6 represents a reversed mirror image of that in Figure 2, an observation that captures the parallelism between *NAD* and *POD*. Like Schema 1.1 of *NAD*, Schema 1.1 of *POD* is a merger of other schemas and not a separate secondary schema in the *POD* network.

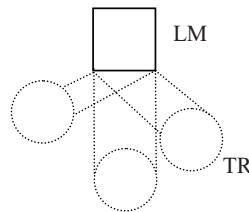


Figure 6. Schema 1.1 of *POD* (front view), Common variants of the central schema.

Just like *NAD*, *POD* is used with topographical concepts and may involve sideways displacement. In (21), for instance, the TR (lake) is lower than the LM (hotel), but is off to one side.

- (21) *Otdolu pod xotela se namira edno ezero.*
‘Below the hotel, there is a lake’ (CSB 2001)

Examples such as (18)–(19) usually do not imply contact, but allow contact, especially when the TR (person) is relatively tall and the LM (balcony in (18) or table in (19)) is relatively low. Sentence (22) brings up an interesting point.

- (22) *Kaktusāt stoi pod prozoreca.*
‘The cactus is under the window’ (CSB 2001)

Unlike in (18), in which the LM is a balcony, the LM in (22), a window, requires some sort of cognitive approximation, or an almost Gestalt completion of the image schema (Brala, personal communication). The window is in the wall axis, and the TR is located in front of (or, depending on the frame of reference, behind) the wall, and so technically there is no alignment in the vertical axis, but a comparison of relative height may be involved (similar to (9) with *nad* above).

Sentences such as (23) imply contact, and often suggest adjacency rather than vertical alignment of the TR and LM.



- (23) *podpiram (se) (na stenata)*
'lean (on/against the wall)' (typical example, author)

The scene in (23) is represented in Figure 7.



Figure 7. *podpiram (se) (na stenata)* 'lean (on/against the wall)' (side view).

The preposition *na* 'on, at' in (23) evokes the notion of adjacency, and the experience of relationships of support helps one construe a scene in which a usually larger, taller, and/or stronger LM supports a smaller, shorter, and/or weaker TR. The interpretation is also dependent on context and the knowledge of walls as vertically erected structures. If the LM in (23) is the handle of a chair, for example, the TR (e.g., a person's elbow) will appear to be on top of rather than under the LM (if viewed from above or sideways). Because the adjacency interpretation is largely context-dependent, and is not an inherent feature of *POD*, I have not assigned it schema status in the network of *POD*. On the other hand, the support interpretation is consistent with the meaning "activity in the lower part of something, activity done from below," identified by standard Bulgarian references and subsumed by the central meaning in my analysis. It is also related to the *under* schema (this section) and metaphorical extensions of *POD* (section 2.5.).

Unlike (18)–(20), sentence (24), in which the preposition and prefix co-occur, implies both alignment and contact between the TR and LM.

- (24) *podlagam salfetka pod čašata*
'put a napkin under the glass' (conversation 2001)

The interpretation of contact comes from one's knowledge of napkins and glasses (on tables), and is not a necessary feature of *POD*. If the LM is a candle, for example, the TR may be on the floor, whereas the LM can be attached to the wall, and there will be no contact (I owe this observation to Brala). The TR is located or is moved under the LM, and is in contact with it (as in (23)), or is in some way connected by the LM (e.g., the dripping wax connects the candle to the napkin, or snowflakes and raindrops connect the sky with the earth, etc.). I call this schema of *POD* the *under* schema. It is presented in Figure 8.

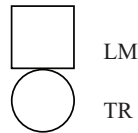


Figure 8. *podlagam pod* ‘place something under’ (front view),
Schema 2 of *POD*, the *under* schema.

This image schema is closely related to the support interpretation of (23); see Figure 7. In fact, if one changes the orientation of Figure 8 from a front view to a side one, one will construe adjacency rather than subposition. Support usually comes from below; hence Figure 8 with its vertical orientation captures well all instances of support.

If one further changes the vantage point, and looks at that image schema from above, as shown in Figure 9, one can see why being under for the TR is often associated with being covered by the LM, especially if the LM is larger than the TR. The connections between the *under* schema and the support and covering interpretations are particularly relevant for the metaphorical extensions of *POD*.



Figure 9. *podlagam pod* ‘place something under’ (bird’s eye view),
Schema 2 of *POD*, the *under* schema.

2.4. Metaphorical meanings of *NAD*

The central, *higher than*, schema of *NAD* receives a common metaphorical extension, in which abstract rather than physical entities are mapped along the vertical axis, and one entity is singled out as standing higher than (all) the other entities within a pragmatically relevant set of entities. Examples (25)–(26) illustrate this meaning:

(25) *Beše se izdignal nad vsički po boža darba.*
‘His divine gift had placed him above everyone else’

(26) *Dobroto vinagi vāztāržestvuva nad zloto*



‘Good always triumphs over evil’ (AG, vol. 2: 2, 1998)

Conceptually, ranking and prioritizing is understood as assigning different levels of height to the entities in question, with the TR being positioned higher than the LM or LMs. This mapping involves the metaphors GOOD IS UP and CONTROL (POWER) IS UP (Lakoff & Johnson 1980: 15–16), and their more specific interpretations BETTER/STRONGER IS HIGHER. I call this meaning and its corresponding image schema the *superiority* schema (Schema 4) of *nad*.

A typical metaphorical use of the preposition *nad* related to the *over* schema (Schema 2) illustrates another meaning of *stoja nad* ‘urge’:

(27) *Interesno će nikoj ne e stojal nad glavata mu da uči i vinagi e bil otličnik.*

‘It’s interesting that no one has urged him (literally, stood over his head) to study, and he’s always been a straight-A student’ (CSB 2001)

In (27), the experience of a parent leaning over a child to help out with homework and make sure the child does study (or a similar scene) is extended and generalized as the typical way of making someone to do something, and the expression *stoja nad glavata* (*na njakogo*; literally, ‘stand over one’s head’) has acquired the meaning ‘urge (someone to do something)’. This has naturally been reflected in the metaphorical use of the corresponding prefix *nad-* as shown in (28):

(28) *V ukazanijata piše da ne se ostavja bez “roditelski” nadzor.*²⁵

‘It’s written in the instructions not to let them [cats] play without “parental” supervision’ (CEMB 2004)

The derivation of the verbal noun *nadzor* ‘supervision, overseeing’ and its corresponding verb *nadziravam* ‘supervise, oversee’ from the prefix *nad-* ‘over’ and the verbal root *zir* ‘behold, see’ reveals that the meaning of ‘exercise control’ has the same experiential basis: a person, usually in a position of power (e.g., a parent, a superior, etc.) leaning over someone else usually less powerful (e.g., a child, a subordinate, etc.).

²⁵ Examples (28) and (30) contain verbal nouns, and (29) a verbal adjective. I assume they represent the same relations as their corresponding prefixed verbs: *nadziravam* ‘supervise, oversee’, *nadvisvam* ‘be imminent’, and *nadpjavam* ‘sing better than.’



The same image schema, Schema 2, is at the core of a number of verbs and verbal expressions with *NAD* that take on different meanings from the *oversee* sense discussed above. *Rabotja nad* ‘work on’, *bdja nad* ‘watch over’, *smiljavam se nad* ‘have mercy on’, *treperja nad* (literally, ‘tremble/shake over’) ‘keep as the apple of one’s eye’, *nadsmivam se na/nad* ‘make fun of’, and so on are different metaphorical realizations of the *over* schema, whereby a TR is situated higher than an LM, either in physical space or in the perceptions of the speaker and hearer. The TR completes an arc-like path from the peak of the arc (i.e., the location of the relevant part of the TR) downwards to the level of the LM by visual motion, words, gestures or actions indicated by the respective verbs.

For example, the physical basis for *rabotja nad* is a person (TR) working at a desk or a table leaning over the project (LM) he or she is working on. At the basis of *bdja nad* and *treperja nad* are familiar scenes of someone (TR) looking after or taking care of another person or thing (LM) with the TR typically envisioned as leaning over the LM as if to protect and shield (i.e., cover) the LM from potentially dangerous outside forces. The scene behind *nadsmivam se* suggests a person (TR) that believes that he or she has some kind of a superiority²⁶ (a metaphorically higher position) over another person or thing (LM; in a metaphorically lower position) such that it gives the TR the right to ridicule or have a haughty attitude towards the LM. With *smiljavam se nad*, on the other hand, the metaphorically higher position of the TR enables the TR to take pity on and act kind towards an otherwise lower-positioned LM.

A similar image schema operates in the metaphorical use of the verb *nadvisvam* ‘be imminent’, as in (29):

- (29) *Tuk s nadvisnalata vojna i bezpomoštnata iekonomika položenieto dosta se e sgovnjasio.*
‘With the looming war and helpless economy, the situation here really sucks’ (CEMB 2004)

²⁶ When a sense implies superiority, it may be more accurate to link it to the central schema of *NAD*, which shows the separation and lack of contact between the TR and LM more clearly. Similarly, English *above* excludes contact and suggests ‘superiority’, ‘priority’, even ‘exaltedness’, whereas *over* prototypically involves contact and is normally associated with ‘control over’ an LM (Lindstromberg 1998:120–121).



With verbs such as *nadvismam* ‘be imminent’ (for danger, war, etc.), “the action is performed over the object’s area” (Ivanova 1974: 112). They are linked to Schema 2 of *NAD* by two metaphors: (i) CHANGE IS MOTION (Lakoff et al. 1989: 2), attributing the ability to move or stand over an LM to external forces, thus dangers are visualized as hanging over people’s heads, and (ii) CONTROL IS UP (Lakoff & Johnson 1980: 15), according to which the controller (danger) is perceived as being on top of or higher than the controlled (people). Thus, the scene in which a TR (e.g., a parent) is leaning (and possibly exercising control) over an LM (e.g., a child; Schema 2) serves as the experiential basis for the conceptualization of approaching, usually threatening, external forces. This meaning is construed on the basis of systematic, transparent, and predictable personification of natural forces (i.e., endowing them with human qualities), and so it receives the same representation as Schema 2 plus two metaphors.

Examples (30)–(31) illustrate a new schema generated from Schema 2:

(30) *Cezar ... revnuva ot edno ulično kote, s koeto si organizirat konkurs po nadpjavane.*

‘Caesar ... is jealous of a street cat with whom they are organizing a singing competition’

(31) *Gonzo nadskoči Trenčev i s glava vkara pobednija gol.*

‘Gonzo jumped higher than Trenčev and with his head scored the winning goal’ (CEMB 2004)

Verbs such as *nadbjagvam* ‘outrun’, *nadminavam* (e.g., *očakvanija*) ‘surpass, exceed (e.g., expectations)’, *naddeljavam* ‘prevail, outweigh’, and the examples in (30)–(31) share the meaning of achieving better results than another subject performing (possibly simultaneously) the same action (Ivanova 1974: 112). Here, the spatial meaning UP and/or ABOVE and “upward movement in the direction of the space above the object” (where “object” corresponds to LM) is transferred metaphorically to achievements in performing various actions (Maslov 1982: 118). This interpretation involves the metaphors STATES ARE LOCATIONS and GOOD (BETTER) IS UP, endpoint focus, and construal of a scene in which the achievement of a TR is assessed with respect to the performance of an LM (Lindstromberg 1998: 120). I call this schema of the prefix *nad-* the *achievement* schema, Schema 5. It illustrates a highly productive pattern (Ivanova 1974): *nad-* is added to a relatively large number of verbs with various meanings to create the same additional meaning, ‘do better or more’.



Note that in English the prefix corresponding to achievement often is *out-*, rather than *over-*, as in *outrun*, *outdo*, *outgrow*, *outweigh*, and so on, suggesting that English speakers conventionally associate achieving average, expected, or lower (than someone else's or than expected) results in an activity with being within the constraints of a CONTAINER, and achieving better results with going outside or breaking the container boundaries. Bulgarian (Slavic) speakers, on the other hand, envision this relation primarily as a relative difference in height.²⁷

The metaphor STATES ARE LOCATIONS (Lakoff et al. 1989) makes it possible to conceptualize states as locations. The TR performing the actions of running, jumping, and so on traces a path at the end of which the TR reaches a state by which one can assess how well the action has been performed; that is, endpoint focus (Lakoff's term 1987: 423) allows assessment of the action (relative to the same action performed by someone else) on the basis of its resulting state.

The second metaphor, GOOD IS UP, refers to the location of the TR relative to the LM on the vertical axis. According to Lakoff and Johnson (1980: 15–16), the physical basis for the metaphor GOOD IS UP is that happiness, health, life, power, and control—the things that principally characterize what is good for a person—are all up. More specifically, the physical basis for HEALTH AND LIFE ARE UP, SICKNESS AND DEATH ARE DOWN is the fact that serious illnesses force people to lie down physically and, when people are dead, they are physically down.

To take another example, the metaphor HAVING CONTROL OR FORCE IS UP, BEING SUBJECT TO CONTROL OR FORCE IS DOWN is structured in terms of the correlation of physical size with physical strength and the victor in a fight being typically on top (Lakoff & Johnson 1980). As Dewell states about *over*, the recurring image of a taller victor standing *over* a weaker opponent becomes established to the point that *over* can describe abstract superiority without implying actual spatial superiority (1994: 379).

The *superiority* schema of the preposition *nad* is exemplified by (32):

(32) *Dǎlgăt kǎm otečestvoto stoi nad vsičko.*

²⁷ Several verbs with *pre-* such as *prevarvam* 'outstrip' also express achievement, but I argue in Tchizmarova 2005 and 2006 that their image schema involves both CONTAINMENT and VERTICALITY.



‘The duty to the homeland stands above everything else’ (AG, vol. 2: 2, 1998)

It shows that ranking and prioritizing are conceptualized as a relative difference in height via the metaphor BETTER IS HIGHER. The difference between the *superiority* and the *achievement* schemas is that the former illustrates static relations between entities, whereas the latter illustrates dynamic ones. This is reflected in their origin: the *superiority* schema is an extension of the *higher than* schema, whereas the *achievement* schema is an extension of the *over* schema. Because the *superiority* schema and the *achievement* schema originate from two different schemas, I have not treated them as a single schema that has static and dynamic instances (e.g., like the *top* schema), but as two separate schemas.

Nadcenjavam ‘overestimate’, *nadplaštam* ‘overpay’, *naddavam* (*na teglo*) ‘gain weight’ (in contexts in which gaining weight is undesirable), *nadvišavam* ‘exceed’, and so on illustrate a closely-related sense: the excess sense of *nad-*. In Ivanova’s classification, they share the meaning “do more than needed of something” (1974: 113). Their image schema (I call it the *excess* schema of *nad-*), Schema 6, is based on Schema 5 with the added stipulation that the LM is more “abstract and intangible” (Lindstromberg 1998: 21), and can be implied rather than stated explicitly. As with the *achievement* schema, the LM serves as a reference point relative to which the action of the TR is assessed. In the *excess* schema, however, the height of the LM is taken as representative of an assumed norm for the performance of an action, which is exceeded by the TR; thus there is excess and waste (of effort, energy, etc.). This sense of *nad-* aligns nicely with the excess sense of *over* (as analyzed in Lakoff 1987; see above). Note that the difference between *outdo* and *overdo* in English can be captured by what is called the *achievement* schema and *excess* schema, respectively.

Similar to the other UP metaphors, MORE IS UP, LESS IS DOWN has arisen from the experiential correlation between vertical elevation and quantity; when there is an addition to the original amount of a physical entity, the height or level of that entity often rises (Lakoff & Johnson 1980: 15–16). Examples (33)–(35) belong to what I call the *more* schema of the preposition *nad*, Schema 7.

(33) *Njakoi albumčeta imat nad 21 snimki ...*
‘Some albums have more than twenty-one photos ...’ (CEMB 2004)

(34) *Nad šejset godini sa.*



‘They are over sixty years old’ (CSB 2001)

(35) *Beše nad 3 meseca v Belgija.*

‘He was in Belgium for over three months’ (CSB 2001)

The MORE IS UP metaphor explains the use of *nad* in (33) and other examples related to quantity, in which the meaning *higher than* of the central schema has been entirely lost. Otherwise, as Tyler and Evans (2003: 97) note, one would obtain the semantically anomalous reading that some albums are physically higher than the twenty-one photos mentioned in the sentence. The implicature of greater quantity, or more, is reanalyzed as distinct from the conceptualization of the original greater-height configuration that gave rise to it. Once a distinct sense such as this becomes established, it is available to mediate relations between non-physical TRs and LMs, which have to do with age systems as in (34), duration as in (35), weight, speed, distance, and so on.

The expression in (36) illustrates a variety of the *more* schema.

(36) *majstor nad majstorite*

(literally, ‘craftsman above the craftsmen’) ‘the best craftsman of all’
(BD, vol. 10, 2000)

I believe the sense *most/best* is also related to *higher than* and has the same physical basis as that of the *more* sense of *nad*: vertical elevation and the idea of stacking up, in which a given entity (TR) ends up being on top of the stack or higher than all other entities in a pragmatically relevant set. Thus, the sense *most/best* is a metaphorical extension of the *higher than* sense. Note that *nad* shares this meaning with the superlative form *naj* ‘the most’; for example, *naj-dobrijat* ‘the best’, *naj-xubavijat* ‘the most beautiful’, which suggests that there is a relation between *nad* and *naj*, and shows that there is meaning overlap among the different categories.

Completion is often cited as the main meaning of verbal prefixes in Slavic in general, and Bulgarian in particular. However, I assume along with Maslov (1982: 117) that: (a) prefixes always carry or retain their lexical meaning; (b) boundedness most likely developed on the basis of the lexical meaning of prefixes; and (c) perfectivity developed as a secondary byproduct on the basis of boundedness and resultativeness. Therefore, in my analyses of Bulgarian spatial terms, completion either is not a separate schema, or is a secondary image



schema linked to the central one by virtue of the focus on the end of the path and motivated by the conventional metaphors AN ACTIVITY IS A JOURNEY and AN ACTIVITY (OR EVENT/STATE) IS A CONTAINER. I did not include completion in my previous analysis of *NAD* for two main reasons. First, all implications of completion associated with verbs with *nad-* come in conjunction with focus on the end of the path and/or the resultant state. Second, in all verbs claimed to express completion, I found a salient *higher than* or another salient meaning inherited from the central schema or one of the other secondary schemas (for more detailed arguments, see Tchizmarova 2005, 2006). However, I revisit completion briefly below in relation to the inception meaning of *POD* because I believe it facilitates the comparison of the two networks.

2.5. Metaphorical meanings of *POD*

Just like *NAD*, the central schema of *POD* receives a common metaphorical extension, in which abstract rather than physical entities are mapped along the vertical axis. With *POD*, however, one entity is singled out as being lower than (all) other entities within a pragmatically relevant set. The following pairs of literal and metaphorical examples illustrate this dependency for both the preposition and prefix *POD*:

- (37) a. *meso pod para*
(literally, ‘meat under steam’) ‘steamed meat’ (CEMB 2004)
- b. *pod para sâm*
‘I am under pressure’ (CEMB 2004)
- (38) a. *xvaštam pod rãka*
‘hold (someone/something) under one’s arm’ (CSB 2001)
- b. *pod rãka li ti e ...*
‘do you have ... handy’ (CEMB 2004)
- (39) a. *podxvana elxata*
‘grabbed the Christmas tree from its end’ (conversation 2011)
- b. *podxvana zadačite*
‘started working on the assignments’ (CEMB 2004)



(40) a. *podčertavam duma*
‘underline a word’ (CSB 2001)

b. *bärzam da podčertaja*
(literally, ‘I’m in a hurry) to underscore/emphasize’ (CEMB 2004)

All (b) examples are metaphorical extensions of the central schema of *POD* or the *under* schema illustrated in the (a) examples. Recall also from the earlier discussion that the *under* schema is closely related to support and covering (Figures 7 and 8). Similar to the *over* schema of *NAD*, which gives rise to the *control* schema, the *under* schema gives rise to a meaning in which bad forces, threats, and evildoers are perceived as being hidden, secretive, underground, or controlling from below via the metaphor BAD IS DOWN. I call this the *undermine* schema of *POD*, Schema 3. Examples illustrating it range from idioms with the preposition *pod* in (41) to prefixed verbs in (42):

(41) *pod secret* (literally, ‘under a secret’) secretly’
pod davlenie ‘under pressure/influence’
pod vlijanie ‘under influence’
pod control ‘under control’

(42) *podrivam* ‘boycott, tarnish’
podstrekavam ‘instigate’
podronvam ‘undermine (one’s authority)’
podveždam ‘mislead’
podtiskam ‘repress’ (CEMB 2004)

A number of other meanings have arisen by association of abstract ideas with spatial locations. Recall that *podpiram (se)* in (23) is a variant of the central schema, which suggests contact and support and either adjacency of the TR and LM (Figure 7) or vertical alignment (Figure 8), and thus it is also closely related to the *under* schema. It usually entails a relatively smaller/weaker TR supported by a relatively larger/stronger LM. This conceptualization is at the core of a number of metaphorical extensions which also involve the metaphor LACK OF CONTROL IS DOWN / CONTROL IS UP. I call this schema *metaphorical support*, or simply the *support* schema, Schema 4 of *POD*, illustrated in (43):

(43) *pod opeka* ‘under protection’
podpomagam ‘help out’



<i>podkrepjam</i>	‘support’	
<i>podsilvam</i>	‘strengthen’	
<i>poddāržam</i>	‘support, maintain’	(CEMB 2004)

The first example contains the preposition *pod*, whereas the other examples are with prefixed verbs that can involve various LMs. The LM of *poddāržam*, for instance, can range from a decision or idea to a foreign language the TR has learned. Standard references on Bulgarian call many of the verbs in (43) *attenuative*, and often group them together with the verbs in (44):

- (44) *podpitvam* ‘ask indirectly/discreetly, make a few inquiries’
podmjatam ‘hint, imply’
podlāgvam ‘lie’
podveždam ‘mislead’

In my analysis, these are two distinct groups. Like the verbs exemplifying the *undermine* schema in (41)–(42), the verbs in (44) have mostly negative connotations based on the systematic association of DOWN with BAD, LESS IMPORTANT, POWERLESS, and so on, and so these verbs can be grouped together. The verbs in (41)–(42) and (44) also share the concept of covering, and so they both illustrate the *undermine* schema, Schema 3. However, both groups differ from the verbs exemplifying the *support* schema in (43), which have positive or neutral connotations. Moreover, although a close connection was established between spatial *under* and spatial *support*, the verbs in the *podpomagam* group (43) are metaphorical extensions of the central, *lower than*, schema, specifically of its variant that entails support. By contrast, verbs in the *podpitvam* group (44) are metaphorical extensions of the *under* schema, more specifically of its variant that entails covering/hiding. What verbs such as *podpomagam* (43) and verbs such as *podpitvam* (42) have in common is the conceptualization of support and indirectness/covertness/discreetness as being down and/or under the LM (or its surface); that is, they are linked indirectly via their connection to the central schema.

Other verbs such as *podstrigvam* (*kosa*) ‘trim (hair)’ and *podkastrjam* (*treva*) ‘cut (grass)’ are also called *attenuative* in standard references. However, the trimming of hair fits in with the prototypical orientation of the LM in *pod*-scenes as being down, and the activity taking place in the lower part of the



LM.²⁸ It shares the concept of *less/fewer/smaller* with the preposition *pod* in expressions such as *pod 20 godini* ‘under 20 years’, which I call the *less* schema, Schema 5 of *POD*. The *less* schema is consistent with the DOWN IS BAD, LESS, INSUFFICIENT metaphor, and mirrors *NAD*’s *more* schema.

Just as the *more* schema of *NAD* is opposite to the *less* schema of *POD*, the *excess* schema of *NAD* (e.g., *nadcenjavam* ‘overestimate’), in which the TR exceeds some norm resulting in excess and waste (of effort, energy, etc.), forms a pair of opposites with the *shortage* schema, or Schema 6, illustrated by *podcenjavam* ‘underestimate’. Here, the TR does not reach the norm set by the LM, resulting in shortage or insufficiency (of effort, attention, etc.) in line with the metaphor LESS IS DOWN.

The meanings of *POD* discussed above form a network of interrelated senses with the prototypical meaning, *lower than*, in the center, and a number of secondary schemas arising from it or from each other. Thus, *under* is a variant of the central schema, which may imply contact or some connection between the TR and LM. In this schema, the TR is under the LM, often covering the LM fully, which receives a metaphorical extension in the *undermine* schema and is exemplified by a number of verbs meaning ‘lie, mislead’, and so on. The central schema also gives rise to the *support* schema by association with DOWN and via the metaphor LACK OF CONTROL IS DOWN / CONTROL IS UP, hence the TR is supporting a weaker LM, or one perceived as positioned lower than the TR. The *less* schema also arises from the central one by association of *under* with boundary and via the metaphor LESS IS DOWN. The *less* schema, in turn, gives rise to the *shortage* schema, in which the TR is under a boundary or norm, resulting in insufficiency or shortage.

Finally, standard Bulgarian sources often list inception (e.g., *podgonvam* ‘start to chase’) and result (e.g., *podgotvjam* ‘prepare’) as meanings of *pod-*. Like the completion interpretation of *nad-*, the result interpretation of *pod-* arises when the end of a path is in focus, whereas the inception interpretation of *pod-* arises when the beginning of the path is in focus, in both cases in conjunction with the metaphors AN ACTIVITY IS A JOURNEY and AN ACTIVITY (OR

²⁸ It is also possible that this meaning is related to the upright orientation of a person in which the head with the hair roots is up, and the hair ends (being cut) are down. Despite the fact that grass trimming applies to what is perceived as its upper part, just like hair, it affects the end of the grass that grows up last (and is opposite the roots), and so this sense of *pod-* may have been applied to *podkastrjam* by association.



EVENT/STATE) IS A CONTAINER. It seems logical to connect the beginning of an activity with starting from scratch, and conceptualizing it as zero, DOWN, or less (hence, the inception interpretation of *pod-*), and to connect the end of an activity with results, achievement, up, or more (hence, the completion interpretation of *nad-*). The odd one out here is *resultative pod-*, which requires further investigation and more space.

3. Overview of *NAD* and *POD*

It is first necessary to address a critical issue: how does one decide on a central or prototypical meaning of a polysemous word/lexeme? Tyler and Evans (2003: 45–50) point out that a number of previous studies simply posit a primary sense based on intuition and assumptions, without presenting a rationale for their choice. Therefore, it is not surprising that different scholars have presented equally plausible yet conflicting views of the primary sense of the same word; for example, Brugman (1981) and Lakoff (1987) posit *above and across* as the primary sense for *over* as in *The plane flew over the city*, whereas Kreitzer (1997: 308–309) posits as its primary sense a sense close to *above* as in *The painting is over the fireplace* or *I put the painting over the fireplace* (however, unlike *above*, this sense of *over* implies proximity of the TR to the LM). Critically evaluating the cognitive-psychological notion of prototypicality, Tyler and Evans indicate that it may not apply to relations and processes in the same way as to the lexical categorization of objects. They conclude that “given the current state of theoretical development, any analysis of a polysemy network, including what constitutes a primary sense, is relatively arbitrary, reflecting each analyst’s own preferences or imagination” (2003: 47).

Nevertheless, following Langacker (1987: 376), they argue that it is possible and desirable to determine the primary sense of a word in a principled way, using linguistic and empirical evidence. They suggest the following set of five linguistic criteria (which, ideally, should be coupled with empirical tests as well; 2003: 47–50):

(1) Earliest attested meaning; for example, the earliest attested meaning of spatial particles such as *over* has to do with a spatial configuration holding between the TR and LM, as opposed to a non-spatial meaning as in *The movie is over* (= complete); historically, *over* is related to Sanskrit *upari* ‘higher’ and the Old Teutonic comparative *ufa* ‘above.’



(2) Predominance in the semantic network: a unique spatial configuration should be involved in the majority of the distinct senses in the network; for example, out of 15 senses they identify for *over*, eight directly involve a TR being located higher than an LM.

(3) Use in composite forms; for example, *overcoat* and *look over*.

(4) Relations to other spatial particles: certain clusters of particles appear to form compositional sets that divide up various spatial dimensions; for example, English *above*, *over*, *under*, and *below* form such a compositional set that divides up the vertical dimension into four related subspaces, in which *above* and *over* refer to what is labeled as UP, the difference between them being that *over* profiles proximal relations (the TR is potentially within reach of the LM), whereas *above* profiles distal relations.

(5) Grammatical predictions: a number of senses should be directly derivable from the primary sense (and the other senses should be traceable to a sense that was derived from the primary one).

Using these criteria, I have posited *higher than* as the central sense of *nad*, understood as a TR being/performing an activity higher than a LM, and *lower than* as the central sense of *pod*, understood as a TR being/performing an activity lower than a LM. Although a historical dictionary of Bulgarian, tracing the evolution of words, like the Oxford English Dictionary (OED), is still lacking (Vätov 1998: 359), the traditional references surveyed in the beginning of this paper, as well as research on spatial terms in other Slavic languages (e.g., by Šarić 2001), overwhelmingly suggest that the earliest attested meaning of the preposition *nad*, inherited by the prefix *nad-*, is *higher than*, and that of the preposition *pod* and prefix *pod-* is *lower than* (criterion one). More than 50% of the schemas I identify for *NAD* and *POD* directly involve a TR being located higher or lower than an LM (criterion two). The third criterion is not applicable to the Bulgarian prefix *nad-* and *pod-* in the way it applies to *over* in *overcoat*. Suffice it to say that *NAD* and *POD* occur as prepositions (e.g., *nad nas* ‘above us’, *pod nas* ‘under us’), verbal prefixes (e.g., *nadvesvam se* ‘lean over’, *podlagam* ‘place under’), nominal prefixes (e.g., *nadzor* ‘supervision’, *podkrepa* ‘support’), and adjectival prefixes (e.g., *nadpartien* ‘above-partisan’, *podkupen* ‘inclined to accept bribes’). *NAD* and *POD* are part of a set that divides up the vertical dimension into UP and DOWN (criterion four). The fifth criterion, grammatical predictions in terms of derivation of senses from the primary one, is par-



ticularly important. As seen in Section 2, the *higher than* schema of *NAD* gives rise to all other spatial schemas and to two abstract (metaphorical) schemas, whereas a couple of other metaphorical schemas are derived from a sense that is linked directly to the central schema (see Figure 10). Similarly, the *lower than* schema of *POD* gives rise to most other schemas (see Figure 11).

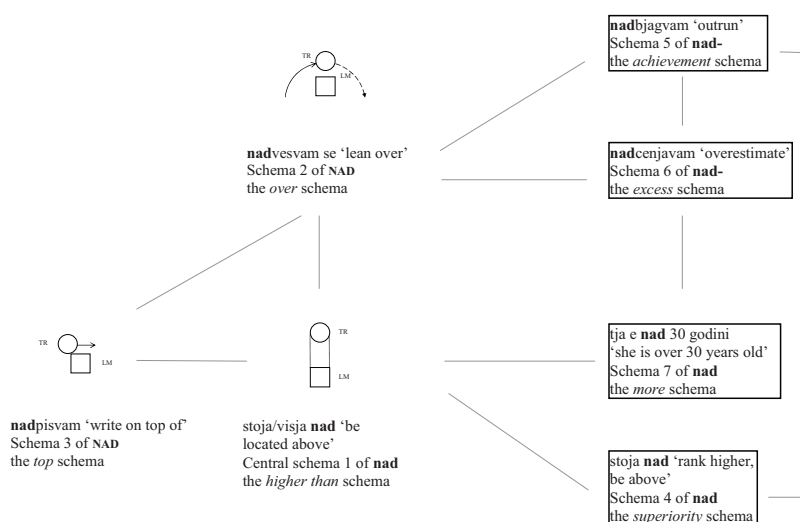


Figure 10. Links among the *NAD* schemas.

The links among the *NAD* schemas discussed above are presented in Figure 10. It shows that *NAD* exhibits a radial, family resemblance or structure in which there is a prototypical central schema, the *higher than* schema, and a number of secondary schemas. It also shows that a given secondary schema may not bear a direct link to the central one, but could be related to it via its link to other secondary schemas; for example, the *achievement* schema is related to the central schema indirectly, via the *over* schema.

The links among the meanings of *POD* are presented in Figure 11. The cognitive analysis I propose for *NAD* and *POD* (like Mitkovska's and Bužarovska's treatment of *NAD* in this issue) differs in a number of ways from existing traditional treatments. First, it shows that the meanings of *NAD* and *POD* are not arbitrary; they are natural and motivated by their spatial schemas and the metaphors in the conceptual system. Second, it establishes the links among the various



senses of *NAD* and *POD*. Viewed this way, polysemy makes more sense both in terms of the origin of the different senses and in terms of their learnability (either by native speakers or by nonnative speakers). Each prefixed verb can be thought of as “a specialized ‘assembly’ of independently existing parts” (Lakoff 1987: 438). Therefore, when the native speaker knows and the L2 learner learns a prefixed verb, they in fact know or learn “which of the independently existing components of the meaning [of the prefix and the verb] are actually utilized ... the only arbitrariness involved is the knowledge that such an assembly exists” (Lakoff 1987: 438). Third, the cognitive analysis of *NAD* and *POD* reveals the experiential basis behind much of word meaning, and the role of basic notions (image schemas) such as VERTICALITY in its conceptualization.

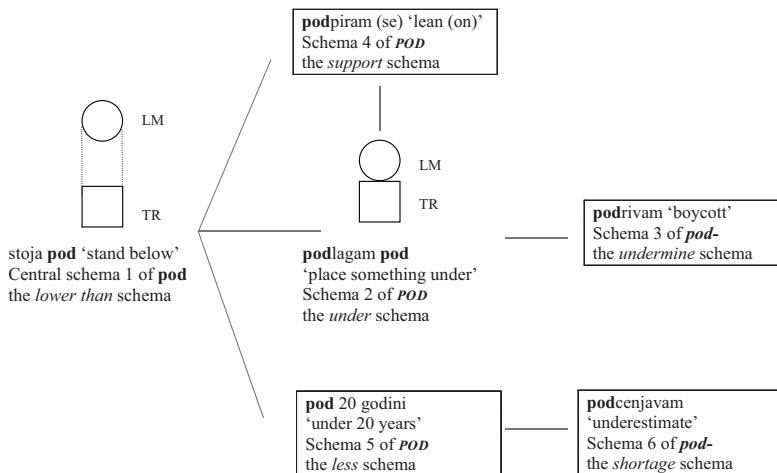


Figure 11. Links among the *POD* schemas

In addition, as discussed at the beginning of the paper, this analysis differs from the ones in traditional reference books in several specific areas. Here, I highlight a few examples and minimal pairs as they relate specifically to the mapping of the two spatial terms along the vertical axis.

a) In my analysis, *nadpisvam* 'write on top of, inscribe' and *nadvesvam (se)* 'lean over' exemplify two separate spatial image schemas of *NAD*, whereas they are lumped together by traditional sources (e.g., Ivanova (1974)). They differ in contact and vertical alignment requirements, and are instances of the *top* schema and *over* schema, respectively. On the other hand, *podpisvam* 'sign' exemplifies



the literal *under*, whereas expressions such as *pod kontrol* ‘under control’ exemplify the metaphorical *under* schema and, like *nadvesvam*, imply control.

b) *Nadziravam* ‘oversee, supervise’ and *nadsmivam se* ‘make fun of’, which are treated together by BD under the vague heading “to perform an action relative to something or someone,” and are grouped together with *nadpisvam* and *nadvesvam (se)* by Ivanova (1974), are linked to the *over* image schema, Schema 2, based on the physical experience of a powerful (or superior) TR leaning over a less powerful LM to supervise, control, or ridicule it. By contrast, *podsmivam se* refers to almost hidden laughter, and exemplifies the covering interpretation of *under*.

c) Verbs such as *nadšivam* ‘sew on top/sew better or more than’ in my analysis do not simply mean ‘resume sewing and sew some more’, as suggested by Ivanova (1974) and AG (vol. 2: 2, 1998); *nadšivam* has two meanings: (a) ‘sew on the edge of, lengthen by sewing’ which explicitly refers to VERTICALITY and positioning of a TR on top of the LM, and illustrates the *top* schema, Schema 3, and (b) ‘achieve better results in sewing’, an instance of the *achievement* image schema, Schema 5. The corresponding verb with *pod-*, *podšivam* ‘sew under, strengthen by sewing’ illustrates the *under* schema, and depending on the context, can have a *support* interpretation.

d) One can now see the connection between *Tja e nad 30 godini* ‘She is over 30 years old’ and *200 metra nad morskoto ravnište* ‘200 meters above sea level’, which traditional sources such as AG (vol. 2: 2, 1998) list as examples of the same sense without further explanation; the first example is an instance of the *more* schema (Schema 7; or it can be an instance of the *excess* schema, Schema 6, depending on the context), in which the age of 30 is the LM relative to which the TR’s age is assessed; the second example is a straightforward case of the central schema, Schema 1, in which the TR is situated higher than the LM. One can also see how its pair, *pod* in *pod 30 godini*, behaves as the exact opposite of the *more* schema and exemplifies the *less* schema.

e) Finally, two examples with the prefix *pod-* deserve special attention: *podnasjam cvetja* ‘give flowers’ and *podskačam* ‘jump’; it is possible that the first one refers to the hands holding the flowers being under the flowers; however, I believe that a more feasible interpretation has to do with the perceived inferior position of the person delivering the flowers (e.g., if expressing gratitude or thanking for a favor) with respect to the person receiving them, perceived as su-



perior, more deserving, and so on. The second verb does not fit neatly into my model because it seems to have a purely *attenuative* function. Compare *zaskačam* ‘start to jump’ (inchoative), *otskačam* ‘jump in an upward direction; go for a short time’ (away from source; short duration), *nadskačam* ‘outjump’ (higher than; achievement), and *preskačam* ‘jump over’ with *podskačam ot krak na krak* ‘jump from one foot to another’, *podskačam ot stola* ‘jump from the chair’, and *podskačam na edno mjesto* ‘jump in the same spot.’ The last three examples suggest upward rather than forward movement (vertical rather than horizontal), which aligns with the model, and may even be linked to the spot/chair being under the jumping person, but further analysis and consultations with informants will bring more clarity to the issue.

More importantly, this analysis departs from standard references on Bulgarian in which the meanings of *NAD* and *POD* are presented as a random collection of senses. It supports the cognitive view that, like other spatial terms, *NAD* and *POD* exhibit a family resemblance structure, whereby a given secondary meaning (and the respective schema used to represent it) may not bear a direct link to the central one, but could be related to it via its link to other secondary schemas; for example, the *undermine* schema of *POD* is related to the *lower than* schema indirectly, via the *under* schema, especially its covering variant. Furthermore (as noted elsewhere; e.g., Brala 2008), in the cognitive view, the individual meanings of spatial terms such as *NAD* and *POD* are firmly rooted in the human experience of interacting with the physical world, allow relatively simple image schematic presentations, and are related in principled, systematic ways.

Looking at *NAD* and *POD* together makes it possible to discover a number of common patterns between them (discussed throughout section 2). I present an overview of the most significant parallelisms in Table 5.

Table 5 shows that the central schemas of *NAD* and *POD* can be mapped along the vertical axis. They are neutral with respect to alignment and contact between the TR and LM, and can apply to both static and dynamic instances. The *over* schema and *top* schemas of *NAD* each share a property with the *under* schema of *POD*: the metaphor CONTROL IS UP, LACK OF CONTROL IS DOWN, and the implication of contact that often facilitates a covering interpretation, respectively. Nonetheless, the spatial schemas of *NAD* and *POD* do not entirely align. For instance, unlike *NAD*, *POD* has a support interpretation of the central schema, also related to the *under* schema. The major distinction between *NAD* and *POD*, however, is their core meaning: *NAD*, *higher than*, is the opposite of *POD*, *lower than*.



	<i>NAD</i>	<i>POD</i>	SHARED PROPERTIES
Spatial schemas	1. <i>higher than</i> schema	1. <i>lower than</i> schema	<ul style="list-style-type: none"> • verticality • ± alignment • ± contact • ± path
	2. <i>over</i> schema	2. <i>under</i> schema	• CONTROL IS UP, LACK OF CONTROL IS DOWN
	3. <i>top</i> schema		• contact ⇒ covering
Metaphorical schemas	4. <i>superiority</i> schema	4. <i>support</i> schema	• GOOD/STRONG IS UP, BAD/WEAK IS DOWN
	5. <i>achievement</i> schema	3. <i>undermine</i> schema	<ul style="list-style-type: none"> • GOOD IS UP, BAD IS DOWN; • STATES ARE LOCATIONS
	6. <i>excess</i> schema	6. <i>shortage</i> schema	<ul style="list-style-type: none"> • MORE IS UP, LESS IS DOWN • LM: reference point for assessment of the TR's action
	7. <i>more</i> schema	5. <i>less</i> schema	• MORE IS UP, LESS IS DOWN

Table 5. Comparison of the image schemas of *NAD* and *POD*.

The metaphorical meanings of *NAD* and *POD* exhibit a similar relationship (Figure 5). Schemas 4–7 of *NAD* and Schemas 3–6 of *POD* share a conceptualization based on the metaphor GOOD, MORE, and so on IS UP; BAD, LESS, and so on IS DOWN. Schema 5 of *NAD* and Schema 3 of *POD* are also based on the metaphor STATES ARE LOCATIONS. In addition, the *achievement* and *excess* schemas of *NAD* and the *shortage* schema of *POD* use the LM as the reference point for assessment of the TR's action. One may also note that the completion interpretation of *NAD* and the inception interpretation of *POD*, although not schemas, also share a common feature: they focus on a single segment of the TR's path (the endpoint or UP in the case of *NAD* and the beginning or DOWN in the case of *POD*). The most loosely related among the pairs of metaphorical schemas in Table 5 are the *achievement* schema of *NAD* and the *undermine* schema *POD*. Unlike the *achievement* schema, the *undermine* schema facilitates a covering and/or hiding interpretation. Again, the most notable distinction between the metaphorical meanings of *NAD* and *POD* is that they have opposite meanings. With the exception of the *metaphorical support* schema, which is neutral or has positive connotations, the metaphorical schemas of *POD*, just like the spatial ones, seem to be



the negative counterparts of *NAD* or, vice versa, the metaphorical schemas of *NAD* seem to be the positive counterparts of *POD*.

Presenting the meanings of spatial terms such as *NAD* and *POD* as networks of interrelated senses linked by similarities, transformations, and metaphors, and especially showing the commonalities between the spatial meanings of two or more related terms, and the symmetry in the way their abstract meanings are derived from their spatial ones, has explanatory power and potential for L2 learning. It can help learners and teachers of Bulgarian see the connection between verticality and metaphor, make sense of the polysemy of these spatial terms, and learn or explain them more easily.

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KOGNITIVNA ANALIZA BUGARSKIH PRIJEDLOGA I GLAGOLSKIH PREFIKSA *NAD* I *POD*

Ovaj rad analizira bugarske prijedloge i glagolske prefikse *NAD* i *POD* iz kognitivnolingvističke perspektive. Prototipna značenja tih jedinica određena su kao trajektor (TR) smješten iznad ili ispod landmarka (LM). Taj idealizirani kognitivni model neutralan je u odnosu na neke detalje vertikalnog odnosa i kontakt koji TR i LM ostvaruju ili ne ostvaruju. Jezgra značenjske mreže i za *NAD* i za *POD* povezana je s njihovim prostornim značenjem, bliskom značenjskom vezom prefiksa i prijedloga, konzistentnim prostorno-metaforičnim značenjskim pomacima te strukturalnim sličnostima *NAD* i *POD* koji su često suprotnost jedan drugome, te funkcioniraju kao izokrenuta slika u ogledalu jedan drugoga. Analiza prostornih čestica ovoga tipa ima pozitivan objasnidbeni učinak, te potencijal da bude od pomoći u kontekstima usvajanja jezika jer doprinosi uočavanju veza između vertikalne dimenzije i metafora, razumijevanju polisemijske prostornih čestica, te njihovu lakšem objašnjavanju i učenju.

Ključne riječi: bugarski; prijedlozi; glagolski prefiksi; *NAD*; *POD*; vertikalnost; kognitivni pristup; metafora; usvajanje drugog jezika.