

Ljiljana Šarić (ed.)

# Space in South Slavic

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Ljiljana Šarić (ed.)

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## INTRODUCTION

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This special issue of *Oslo Studies in Language* presents four peer-reviewed and revised articles that were presented in the thematic session *Space in South Slavic* at the 2012 Slavic Cognitive Linguistics Conference in Zagreb (27–29 September). The thematic session and this special issue are part of research activities of an international research group gathered around the project *Spatial Constructions in South Slavic* located at the University of Oslo. Within this project, we have been exploring spatial expressions in the South Slavic languages since 2010.<sup>1</sup> The founding of the project relates to the initial joint wish of a few people to contribute to a relatively poorly studied field: the meaning of spatial units (e.g., prefixes, prepositions, motion verbs, and adverbs)<sup>2</sup> in South Slavic (Bosnian/Croatian/Serbian, Bulgarian, Macedonian, and Slovenian). An equally important impulse for the project, and hence this special issue, is our belief that studying the shared Slavic characteristics of South Slavic in spatial language, unique features of South Slavic, and features that these languages share with non-Slavic languages contributes important insights to universals in spatial language.

The theoretical approach of the project *Spatial Constructions in South Slavic* is cognitive linguistics, and this approach is also shared by most of the contributions to this special issue. This framework has proved theoretically convincing for analyzing spatial language (Langacker 1987, 1991a,b); (Janda 1993); (Dąbrowska 1997); (Tyler & Evans 2003), particularly motion verbs, prepositions, prefixes, and cases. Its important aspect is its adaptability to teaching contexts: among others, (Tyler 2012) for English and (Janda & Clancy 2002, 2006) for Slavic have demonstrated that the cognitive linguistics framework can be successfully applied in teaching. In this context it is important that approaches within cognitive linguistics present the meanings of spatial units as structured networks and trace relations between those meanings that at first glance do not seem to be related. In these structured meaning networks, central meanings usually relate to a certain spatial relation (e.g., “movement from” or “movement towards”) and everyday spatial experience. The central meanings of spatial units directly or indirectly influence a number of other ones. Apart from determining the central meaning of a spatial unit, the main questions that the contributions in this issue discuss are:

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[1] Some of the project’s results were recently published in a special issue of the journal *Jezikoslovlje* (13(1), 2012) titled *A Cognitive Linguistic View of South Slavic Prepositions and Prefixes*.

[2] For an overview of the state of the art, see (Šarić 2012).

- What is the nature of the spatial and non-spatial meanings of spatial units?
- What are the conditions for meaning extensions of spatial meanings?
- Are there regularities that play a role in the transformation of spatial meanings into non-spatial domains? To what extent are meaning transformations predictable?
- What is the relation of spatial motion to abstract motion (e.g., in the domain of emotions)?
- Although they exhibit striking similarities in coding of spatial relations, South Slavic languages also show challenging differences: how can these differences be accounted for?

All of the South Slavic languages are represented in the four contributions. Two contributions deal with South Slavic prefixes (one of which takes a comparative perspective), one deals with a preposition, and one deals with manner of motion and morphology. The articles are organized alphabetically according to the South Slavic language(s) that are the object of the analyses.

Ljiljana Šarić (Norway) and Ivelina Tchizmarova (Canada) focus on similarities and differences in coding the spatial relation “away from” in Bosnian/Croatian/Serbian (BCS) and Bulgarian. The authors develop a semantic network of verbs prefixed with *od-/ot-* in BCS and Bulgarian, showing that the overall meaning network is shared in the languages examined. The main issue that the article discusses is the relation of spatial and non-spatial (metaphorical/abstract) sub-meanings, and an account of how the spatial meanings of several groups of *od-/ot-* verbs influence their abstract or metaphorical counterparts. The authors argue that most non-spatial meanings of *od-/ot-* verbs are derived by applying the idea of movement through space to metaphorical or figurative movement. Although BCS and Bulgarian share the overall semantic network of *od-/ot-* verbs, the analysis of some *od-/ot-* verbs revealed some systematic differences; for example, *od-* is often used in BCS versus *iz-* and *raz-* in Bulgarian (e.g., *odsvirati/izsvirja* ‘play through’), and BCS and Bulgarian often use verbs with the same stems to express similar (but not necessarily identical) meanings. In some cases, the meaning of prefixed verbs in BCS and Bulgarian can also significantly differ (e.g., BCS *odstajati* ‘stay through’ versus Bulgarian *otstoja* ‘stand (for one’s principles)’).

Liljana Mitkovska and Eleni Bužarovska (Macedonia) explore the semantics of the Macedonian preposition *vrz* and its Bulgarian counterpart *vārhu* from a cognitive perspective. Their analysis is based on examples attested in various written sources. Among the main claims of the authors is that *vrz* and *vārhu* represent a special case of coding the functional meaning of affectedness of the landmark. The article seeks to explain the polysemy of *vrz/vārhu* by tracing and explaining

the semantic links between its spatial and non-spatial meanings. The authors also identify the semantic components that *vrz/vārhu* shares with other related spatial prepositions expressing superposition, such as *na* ‘on’, *po* ‘across, over’, *preku/prez* ‘over’, and *nad* ‘over, above’. Traditional descriptions do not pay attention to the meaning of affectedness, which often blurs the difference in the use of *vrz/vārhu* versus other prepositions expressing superposition. The authors show what *vrz/vārhu* shares with other semantically similar prepositions of superposition and offer an explanation for why they differ. The analysis of examples from various registers reveals some differences between Macedonian and Bulgarian: even though the semantic component of affectedness is also characteristic of Bulgarian *vārhu*, the Bulgarian examples suggest that *vārhu* does not strictly adhere to affectedness, which implies a wider distribution of *vārhu* in both physical and abstract domains.

Dejan Stosic (France) focuses on evaluative and pluractional morphology for expressing manner (e.g., Serbian *leteti* ‘fly’ > *letuckati* ‘flutter’), mainly accounting for Serbian data, but also including a comparative perspective. Particular attention is given to the motion domain; that is, to the role of morphology in the linguistic expression of manner in this domain. Verbal evaluative and pluractional morphology seems to be an essential option for encoding manner in some languages. The author argues that taking into consideration this morphological means is crucial for a comprehensive analysis of the expression of manner. He provides an extensive account of numerous evaluative verbs in Serbian, showing that they play an important role in expressing a great number of manner meanings. This analysis shows that motion verbs in Serbian do not readily use evaluative morphology: the base verbs to which the greatest number of evaluative morphemes can be attached are *leteti* ‘fly’ and *skakati* ‘jump’. Italian and French data also show a low compatibility of motion verbs and evaluative morphemes. Interestingly, the verbs that can combine with evaluative morphemes involve manner in their lexical meaning, but never path. This analysis opens a number of issues for further research; for instance, whether the more extended use of verbal evaluative morphology can make manner of motion more salient in a language, and why motion verbs do not seem to be frequent bases for verbal evaluatives.

Agnieszka Będkowska-Kopczyk (Poland) analyzes Slovenian verbs of emotional experience prefixed by *raz-* ‘in different directions, apart’ and their constructions. Her main question is how the type of physical motion that this prefix relates to influences language coding of emotions. She shows how Slovenian *raz-* differently extends the notion of movement in different groups of verbs relating to emotions: in some verbs, the notion of movement on a dispersed path is extended to denote an emotional change. In some other verbs, the concrete physical spread and expansion that *raz-* denotes in spatial contexts extends to denote a metaphorical spread and expansion of an emotional state linked to the emergence of emotions.

In verbs denoting a physical change caused by an emotion, this prefix expresses metaphorical separation of the experiencer participant's body. The author also discusses the interrelation of *raz-* with the meanings of the imperfective verbs it combines with, and how the prefix reinforces the meaning of intensive processes. In addition, she discusses how the spatially based meaning of *raz-* correlates with inchoative, resultative, and intensive senses. The author also discusses metaphors and metonymies that play a role in the conceptualization of events of emotional change.

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#### REFERENCES

- Dąbrowska, E. 1997. *Cognitive Semantics and the Polish Dative*. Berlin: Mouton de Gruyter.
- Janda, L. A. 1993. *A Geography of Case Semantics: The Czech Dative and the Russian Instrumental*. Berlin: Mouton de Gruyter.
- Janda, L. A. & S. J. Clancy. 2002. *The Case Book for Russian*. Bloomington: Slavica Publishers.
- Janda, L. A. & S. J. Clancy. 2006. *The Case Book for Czech*. Bloomington: Slavica Publishers.
- Langacker, R. W. 1987. *Foundations of Cognitive Grammar. Theoretical Prerequisites*, vol. 1. Stanford: Stanford University Press.
- Langacker, R. W. 1991a. *Concept, Image and Symbol: The Cognitive Basis of Grammar*. Berlin: Mouton de Gruyter.
- Langacker, R. W. 1991b. *Foundations of Cognitive Grammar. Descriptive Application*, vol. 2. Stanford: Stanford University Press.
- Šarić, L. 2012. Introduction: A Cognitive Linguistic View of South Slavic Prepositions and Prefixes. *Jezikoslovlje* 13(1). 5–17.

Tyler, A. 2012. *Cognitive Linguistics and Second Language Learning: Theoretical Basics and Experimental Evidence*. New York: Routledge.

Tyler, A. & V. Evans. 2003. *The Semantics of English Prepositions: Spatial Scenes, Embodied Meaning and Cognition*. Cambridge: Cambridge University Press.

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# SPACE AND METAPHOR IN VERBS PREFIXED WITH OD-/OT- ‘FROM’ IN BOSNIAN/CROATIAN/SERBIAN AND BULGARIAN

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## ABSTRACT

This article analyzes Bosnian/Croatian/Serbian (BCS) and Bulgarian (Blg.) verbs prefixed with *od-/ot-* ‘(away) from’ from a cognitive linguistics perspective, focusing on spatial meaning extensions into non-spatial domains, as well as similarities and differences between the languages in question. The prototypical sense of these verbs involves a path and can be presented as a trajector (TR) moving away from a landmark (LM), often a LM-boundary. This *from* schema is illustrated by BCS/Blg. *otići/otida* ‘go (away)’ and *odalečiti se/otdaleča se* ‘go/move away’. Most non-spatial meanings of *od-/ot-* verbs are derived by applying the idea of movement through space or a spatial path to a metaphorical or figurative movement/path—for example, BCS/Blg. *odustati od/otkaža se ot* ‘refuse, give up’ and *odskakati od* (impf.)<sup>1</sup>/*otliča se ot* ‘stand out, be different from’—in which the verbs often co-occur with the prepositions *od/ot*. Our analysis shows that the various meanings of verbs with *od-/ot-* are not random collections of senses, but form semantic networks with systematic and partially predictable associations of abstract ideas and spatial locations.

## [1] INTRODUCTION

This article<sup>2</sup> analyzes verbs prefixed with *od<sup>3</sup>/ot-* ‘(away) from’ in Bosnian/Croatian/Serbian (BCS) and Bulgarian (Blg.) from a cognitive linguistics perspective, focusing on spatial meaning extensions into non-spatial domains. We decided to concentrate on BCS and Blg. prefix semantics because there are no comparisons

[1] This verb is quoted in its impf. form because the pf. form has a different meaning.

[2] This analysis is part of a broader study in progress comparing *od/ot-* and *do-* verbs in BCS and Bulgarian. A preliminary report on part of this study was presented at the Slavic Cognitive Linguistics Conference at the University of Zagreb, Croatia in September 2012. We would like to express our sincere gratitude to the conference participants and the two anonymous reviewers of this article for their insightful comments and suggestions.

[3] Some BCS verbs occur with *ot-*, *o-*, and *oda-* (allomorphs of *od-*). *Od-* is sometimes spelled *ot-* before certain voiceless consonants and vowels (e.g., *otplivati*, ‘swim away’, *otići* ‘go away’), *o-* with base verbs beginning with *d* and *t* (e.g., *odalečiti se* ‘go away’), and sometimes *oda-* with verbs beginning with two consonants (e.g., *odagnati* ‘drive away’).

related to this topic so far. Comparisons of individual Slavic languages are interesting because very similar languages do not necessarily follow the same prefixation model. *Od-/ot-* is a very productive verbal prefix in both BCS and Blg. The prefixation pattern and its semantic implications seem very similar at first glance; however, as our analysis shows, there are also some challenging differences.

This analysis follows the theoretical premises of cognitive linguistics (e.g., (Janda 1986); (Tabakowska 2003); (Przybylska 2006); (Klikovac 2006); (Tchizmarova 2005, 2006); (Belaj 2008); (Šarić 2008)) and approaches spatial particles as networks of interrelated meanings. Within this framework, category members share different sets of attributes with each other, fuzzy boundaries among concepts are allowed, and more and less prototypical senses to which other senses directly or less directly relate are identified (see, e.g., (Langacker 1987); (Tyler & Evans 2003)). Image schemas are also used and they usually depict two basic entities: a trajector (TR) and a landmark (LM), respectively defined by Langacker (1987) as the figure within a relational profile and another salient entity in a relational predication, prototypically providing a point of reference for locating the TR. An image schema is “a cognitive representation comprising a generalization over perceived similarities among instances of usage” (Barlow & Kemmer 2000, viii). Image schemas lack specificity and content, which makes them highly flexible preconceptual and primitive patterns used for reasoning ((Johnson 1987, 30).<sup>4</sup> In this analysis, we use the path image schema to depict movement away from a source (see Figure 1 on page 10).

We particularly focus on relations between apparently unrelated meanings of prefixed verbs, paying special attention to how spatial meanings relate to non-spatial meanings, and to metaphorical transformations and abstractions that are responsible for some abstract/metaphorical meanings of prefixed verbs. We concentrate on movement in space and how it transforms from concrete domains into abstract/metaphorical ones. We first look at the semantic profile of the prefix *od-/ot-* in verbs expressing spatial motion, and then at the profile of verbs with abstract/metaphorical meanings (significantly, in most cases, the same verb has a concrete and a metaphorical meaning). We identify and explain the relations between several meanings of *od-/ot-* (Sections [2]–[4]), concentrating on similarities and differences between BCS and Blg. We examine how the semantic profile of the prefixes in motion contexts influences their semantics in non-spatial contexts. We approach the semantics of *od/ot-* with an emphasis on meaning change and extensions through metaphor and metonymy, which can explain the links between apparently unrelated meanings. Section [5] presents a semantic network of verbs prefixed with *od-/ot-* and provides some conclusions and suggestions for further research.

[4] (Johnson 1987, 126) lists the following among the most important image schemas: CONTAINER, PATH, CENTER-PERIPHERY, NEAR-FAR, PART-WHOLE, CONTACT, and SURFACE.

The material that we base our observations on is mainly verbs listed in dictionaries. For BCS, (Anić 1998) and (Bujas 2001) were used. These sources probably do not list all existing BCS *od-*verbs (e.g., all the verbs that can be found in older sources); however, these dictionaries contain the most commonly and frequently used verbs, and so the inventory is suitable for a semantic description of modern language usage.<sup>5</sup> For Blg., GSBKE (*Grammar of Contemporary Standard Bulgarian*, also known as the *Academy Grammar*; (Andrejčin 1998)) and RBE (*Bulgarian Dictionary*; (Armjanov 2002))<sup>6</sup> were the primary sources, supplemented by examples provided by four native speakers of Bulgarian. Useful information for both languages was also found in Stojanov (2011)'s Croatian-Bulgarian dictionary. Because this article aims at a general overview of the meaning of the verbs prefixed with *od/ot-* in BCS and Blg, we consider the sources used to be sufficient for the aim of this analysis. A more detailed analysis of a number of issues related to specific subtypes and individual *od-/ot-* verbs that are only outlined in this analysis must be based on corpus studies and is beyond the scope of this article.

On the basis of our material, we have identified three main groups of verbs: the first group is verbs expressing motion in space away from a source, typically denoting self-caused motion (see Section [2]). The second group is verbs indicating spontaneous and caused separation (see Section [3]). In these two groups, concrete and metaphorical subgroups are identified. Verbs denoting cancellation of a previous action are treated as a special case of abstract separation. The third group (see Section [4]) implies abstract motion realized as completion, emphasizing either the initial point of a process or its duration. Verbs in which the spatial meaning is transformed into an action that is a response to some other preceding action represent a special case of completion.

[2] THE FROM SCHEMA OF OD-/ OT-

The prototypical senses of verbs prefixed with *od-/ot-* involve a path and can be presented as a trajector (TR) moving away from a landmark (LM), often a LM-boundary.

[5] From Anić (1998) and Bujas (2001), 320 *od-* verbs were extracted. Including other sources would admittedly increase the number of prefixed verbs. However, we believe that the verbs considered in this study cover the major semantic types.

[6] We found 415 verbs with *ot-* in (Armjanov 2002), counting all imperfective and perfective forms of a verb (e.g., *otkačam* (impf.), *otkačvam* (impf.) and *otkača* (pf.) 'detach') as one entry, verbs with and without a reflexive particle (e.g., *otkača* and *otkača se*) as one entry, but homonyms (e.g., *otkača*<sup>1</sup> 'detach' and *otkača*<sup>2</sup> 'become/go insane') as separate entries.

[2.1] *Motion in space away from a source; verbs of self-caused motion*

The central meaning of *od-/ot-* involves a TR moving away from a LM as in BCS/Blg. *otići<sup>7</sup>/otida* ‘go (away)’. We call this the *from* schema and present it schematically in Figure 1.



FIGURE 1: The prototypical meaning of *od-/ot-*, the *from* schema

*Concrete motion*

The majority of motion verbs in both BCS and Blg. can be prefixed with *od-/ot-* to express the meaning ‘away from a source’; for example, *odletjeti/otletja* ‘fly away’, *odskočiti/otskoča* ‘jump off’, and *otputovati/otpätuvam<sup>8</sup>* ‘leave, depart’. These verbs imply concrete, usually self-caused, motion by humans and other entities, which may be intentional or unintentional. In addition to very frequent generalized motion verbs (e.g., *otići/otida* ‘go (away)’), this group also includes infrequent verbs denoting extremely specific manners of motion (of animate and inanimate entities). This group also includes verbs of motion involving a vehicle (that use *od-* to imply displacement), verbs of body-internal motion, and so on. A number of these verbs (e.g., BCS/Blg. *odalečiti se/otdaleča se* ‘go/move away’) often co-occur with the cognate prepositions *od-/ot<sup>9</sup>* in the same constructions, reinforcing the core meaning of movement away from the LM. Some verbs can also occur with or without the reflexive particle *se*, as shown in Table 1 on page 12. In the former case, these verbs are used as self-motion verbs and mean “X moves away from a source,” whereas the latter scenario, “X moves Y away from a source” in caused-motion constructions, implies two participants: the mover and the moved entity, plus a LM. For instance, BCS *odvući se* ‘drag oneself away’ and Blg. *otdaleča se* ‘move

[7] In this analysis, BCS verbs are normally given in their perfective infinitive form. Imperfective forms are used (and marked *impf.*) in some cases in which their meaning significantly differs from the perfective ones or when perfective forms do not exist. When added to imperfective base verbs, *od-* in BCS, in addition to contributing a new meaning component, always perfectivizes them. For consistency, the Blg. verbs are also given in their perfective forms, and imperfective forms are added when necessary.

[8] The perfective and imperfective forms of this verb and several others in Table 1 on page 12 coincide.

[9] Slavic prefixes and prepositions are considered to both derive from a single group of function morphemes.

away' imply self-motion, whereas BCS *odvući* 'drag something away' and Blg. *otdaleča* imply caused motion.

As Table 1 on the following page shows, most verbs in this group have the same stem in both Blg. and BCS (e.g., *odletjeti/otletja* 'fly away'). However, some verbs such as BCS/Blg. *odjahati/otpätuvam* 'ride away' have different stems. There is *jazdja (kon)* 'ride (a horse)' in Blg., but, unlike BCS and Russian, *jazdja* cannot combine with *ot-* to denote the movement of a person or vehicle away from a source. Despite the occasional different stems in BCS and Blg., verbs with *od-/ot-* express the same meaning in the languages we compare.

Whereas motion with verbs at the beginning of the table apply to motion by humans, animals, solid objects capable of motion, and certain bodies of water (e.g., tidal waves), verbs such as BCS/Blg. *odjeknuti/otekna* 'echo' and a few others at the bottom of Table 1 on the next page share a common meaning: spreading away from a source. These verbs can be understood as a transitional category, but they still express a concrete motion involving a specific type of non-human trajectors (e.g., light, sound, smell, energy). *Od-/ot-* highlights the motion and source component in these verbs.

There are some differences between BCS and Blg. related to the combinability of certain motion verbs with *od-/ot-* (see Table 1 on the following page). In BCS, it seems that almost all self-motion verbs describing the manners in which animate entities can move (including some less frequently used verbs denoting very unusual manners of motion) can be prefixed with *od-* to express 'move away from a source' (e.g., impf. *lutati* 'stray', pf. *odlutati* 'stray away'). BCS *lutati* and Blg. *lutam se* are cognates regarding their stems, but the Blg. verb does not combine with *ot-* (or another prefix) to indicate movement away. Blg. uses either other prefixes with these semantically equivalent verbs (e.g., *zalutam se* for BCS *odlutati*) or a phrasal expression (*otdaleča se nexajno* and *otdaleča se s päplene / na värvolica* for BCS *odlutati* and *odvrvjeti*, respectively). For BCS *odjahati* 'ride away', in addition to *otpätuvam*, Blg. can use *träгна (zamina, otida si) na kon (jazdejki)* 'ride away'.

Interestingly, a productive pattern in BCS is prefixation by *od-* of sound-emission verbs. When prefixed with *od-*, verbs describing the sounds of animate and inanimate objects become motion verbs (e.g., impf. *tapkati* 'patter', *zujati* 'buzz', pf. *otapkati; odzujati* 'patter away; buzz away'). The motion expressed by the prefixed verbs is characterized by the concomitant emission of the sound. This pattern seems not to be productive in Blg. In addition, some BCS and Blg. verbs with the same meaning may combine with different prefixes; for example, BCS *odisati* 'emit, give out (a smell)' and its corresponding Blg. verbs *izdam/izläča (miris, aromat)* combine with different prefixes, *od-* and *iz-*, respectively. More importantly, both BCS and Blg. have verbs with the meaning 'go away, wander off', and they both use the prefix *od-/ot-* (e.g., *odlutati/otdaleča se*).

TABLE 1: Verbs of concrete motion prefixed with *od-/ot-* in BCS and Blg.

CONCRETE MOTION (SELF-CAUSED)		
BCS	BLG.	ENGLISH GLOSS
<i>otići</i>	<i>otida</i> <sup>1</sup>	'go (away)'
<i>odalečiti se</i>	<i>otdaleča se</i>	'go/move away'
<i>odjahati</i>	<i>otpätuvam (na kon, jazdejki)</i>	'ride away'
<i>odjedriti</i>	<i>otplavam</i> <sup>2</sup>	'sail away'
<i>otplivati</i>	<i>otpluvam</i>	'swim away'
<i>odletjeti</i>	<i>otletja</i>	'fly away'
<i>odlunjati</i>	<i>otdaleča se (nexajno)</i>	'wander off'
<i>odlutati</i>	<i>otdaleča se (nexajno)</i>	'stray away'
<i>odmaknuti (se)</i>	<i>otdräpna se</i>	'move away'
<i>odskočiti</i>	<i>otskoča</i>	'jump off'
<i>odvući (se)</i>	<i>otdaleča se (vlačejki se)</i>	'drag oneself away'
<i>odvrjeti</i>	<i>otdaleča se (s päplene/na värvolica)</i>	'swarm off'
<i>odzujati</i>	<i>otdaleča se (s bramčene, žužene), otletja (s bramčene, žužene)</i>	'buzz away'
<i>otići</i>	<i>otmina</i> <sup>3</sup>	'pass, go away'
-	<i>otteglja se</i>	'move away (e.g., a tide), retreat' <sup>4</sup>
-	<i>otzvuča</i>	'subside, disappear' <sup>5</sup>
<i>odisati (impf.)</i>	-	'emit, give out'
<i>odjeknuti</i>	<i>otekna</i>	'echo'
<i>odraziti se</i>	<i>otrazja</i>	'reflect; bounce [in BCS]'
<i>odzvanjati (impf.)</i>	<i>otekna</i>	'reverberate, echo, resound'

Motion of humans, animals, solid objects capable of moving, and certain bodies of water

Spreading away from a source (for light, sound, smell)

<sup>1</sup> The central meaning of *otida* is movement away from the speaker, whereas *otida si* may mean 'leave, go home'.

<sup>2</sup> Occasionally, Blg. *otpluvam* is used with this meaning (e.g., *korabät otpluva* instead of *otplava* 'the ship sailed away').

<sup>3</sup> The same stem can be found in BCS *minuti* 'disappear' (a near-synonym of *proći* 'go away, disappear'). *Minuti* does not combine with *od-*, but it combines with *pre-* and *u-* (*preminuti* 'die', *uminuti* 'disappear, go away'). Good BCS equivalents for the spatial meaning of *otmina* would also be verbs prefixed with *pro-* and *pre-* (*proći* and *prestati*), as well as *završiti se*.

<sup>4</sup> BCS uses *povući se* (about a tide); *otići s položaja, dati ostavku* 'retreat'.

<sup>5</sup> BCS could use *otići* as a near-equivalent; however, better equivalents would be the verbs *gubiti se* and *nestajati* 'disappear, subside'.

TABLE 2: Verbs of abstract motion prefixed with *od-/ot-* in BCS and Blg.

ABSTRACT MOTION		
BCS	BLG.	ENGLISH GLOSS
<i>odalečiti se</i>	<i>otdaleča se</i>	'grow apart'
<i>odskakati</i> (impf.)	<i>otliča se</i>	'stand out/apart, be different from'
<i>otići</i> (s radnog mjesta)	<i>otteglja (se)</i>	'resign, withdraw' <sup>1</sup>
<i>otići</i> (na onaj svijet)	<i>otida</i> (na onja svjat)	'die'
<i>odletjeti</i>	<i>otletja</i>	'go away, disappear'
<i>otići</i>	<i>otmina</i>	'go away, come to an end'
<i>odzvoniti</i>	<i>otzvuča</i>	'come to an end, die'

<sup>1</sup> For example, for Blg. *otteglja (se) ot rabota, post* 'resign from a job/position, withdraw', BCS would also use *povući se*.

### Abstract motion

Most non-spatial meanings of prefixed verbs are derived by applying the idea of movement through space, or a spatial path to a metaphorical or figurative movement/path; for instance, BCS/Blg. *odalečiti se/otdaleča se* 'go/move away' can be reinterpreted as a metaphorical movement away and these verbs can be used to mean 'grow apart'. The most general and frequent verb among the self-motion verbs, BCS/Blg. *otići/otida (si)* 'leave, go home', can be extended into metaphorical domains, such as in *otići na onaj svijet / otida na onja svjat* (or *otida si*) 'die'.<sup>10</sup> Blg. *otzvuča* 'subside, disappear' is used in the concrete domain for the decay of sound. It can also mean 'go away' (e.g., for bad news and pain). Blg. *otmina* can mean 'come to an end' (e.g., *krizata otminava* (impf.) 'the crisis is coming to an end' or *krizata njama da otmine nikogo* 'the crisis won't spare (literally, pass) anyone').<sup>11</sup> BCS/Blg. *odletjeti/otletja* 'fly away' can be used for time periods (e.g., *ljeto je odletjelo / ljatoto otletja* 'the summer flew by') or for abstract notions (e.g., hope, such as in Blg. *poslednata mi nadežda otletja* 'my last hope vanished'). BCS/Blg. *odzvoniti* (pf.) / *otzvuča* is used in metaphorical contexts in the meaning 'come to an end, die out' (e.g., for practices, habits, people, and objects in BCS, and for rumors or news in Blg.). Table 2 presents these and some other verbs with *od-/ot-* expressing abstract motion.

Although the BCS perfective verb *odskočiti* 'jump off' shares the concrete meaning with its Blg. cognate *otskoča*, the BCS imperfective verb *odskakati* has developed the metaphorically extended meaning 'stand out/apart, be different from'. Blg. *otskoča* does not share this metaphorical extension: the corresponding mean-

[10] BCS uses *otići* in the idiom *otići na kvasinu* 'become insane'; literally, 'turn to vinegar'; Blg. and BCS also use another *ot-/od-* verb in this context, *otkača/otkačiti se* 'go crazy' (literally, 'detach').

[11] BCS uses another ablative prefix with the same stem, *u-*. In these contexts, BCS would use verbs prefixed with *pro-* (*kriza prolazi* 'the crisis is coming to an end'), and with *za-* and *mimo-* (*zaobići, mimoići: kriza neće zaobići/mimoići nikoga*) 'the crisis won't spare (literally, pass) anyone'.

ing would be expressed with a different Blg. verb (i.e., *otliča se ot* ‘stand apart, be different from’<sup>12</sup>), showing once again that the languages compared usually share the prefix *od-/ot-* to express similar meanings even with different verb stems.

The concrete and abstract motion verbs are usually the same units used in concrete and abstract contexts. The coexistence of the concrete and abstract meaning in one single verb suggests that concrete and abstract/metaphorical (motion) are inseparable categories. The context and the presence of an abstract landmark disambiguates whether the meaning is concrete or abstract.

Some verbs expressing very specific/unusual manners of (agentive) motion are almost exclusively related to concrete motion in space (e.g., BCS *oteturati* ‘go away staggering, totter away’, *otšepati* ‘limp away’) and can hardly be used in metaphorical motion contexts.

### [3] SEPARATION

#### [3.1] Concrete separation

The verbs in this section all have to do with separation. These verbs denote that an entity separates from a source. This meaning arises naturally from the central one: physical movement away from a source is associated with separation or detachment of a TR from a LM. This meaning obtains the same representation as the prototypical one: motion in space away from a source, represented in Figure 1 on page 10. We distinguish two subtypes of prefixed verbs with *od-/ot-* that denote this meaning in two event types:

- (i) Spontaneous separation events: X moves away / spontaneously separates from a source;
- (ii) Caused separation events: X moves Y away from a source (X causes Y to move away).

The separation scenarios involve either spontaneous separation, as in Scenario 1, or caused separation involving causal agents, as in Scenario 2. The difference is expressed by verbs without and with the reflexive *se*, and has to do with causation and intentional versus non-intentional action. For example, in BCS/Blg. *odljuštiti (se)/otljuštja (se)* ‘peel off’, the reflexive particle *se* denotes self-caused, usually non-intentional, processes (spontaneous separation), whereas the same verb without *se* indicates intentional action by a causal agent, or ‘X causes Y to peel off’; that is, intentional separation. Scenario 2 implies three elements; two participants—a mover (X), and an object moved or separated (Y)—and a source (a LM) that the moved object is separated from.

[12] The BCS verbs with the same stem and meaning are *razlikovati se* ‘be different’ and *odlikovati se* ‘stand out’.

In Scenario 2, X causes Y to move away from a source. *Od-/ot-* verbs in this scenario imply events of taking away, sending, carrying, driving, and throwing away, as well as verbs of pulling and pushing apart (e.g., BCS/Blg. *odvesti/otveda* ‘take away’). This is a very productive meaning in both languages. Table 3 on page 18 contains verbs of separation, among which a few subgroups can be identified. These subgroups depend on the semantics of the base verbs; that is, the event types they express:

- Separation events implying a TR pushing (itself or something else) away from a LM such as BCS/Blg. *odgurati (se)/otblāsna (se)* ‘push away’; constructions expressing this meaning often co-occur with the preposition *od/ot*;

- Events implying detachment of a TR from a LM; for example, BCS/Blg. *odijeliti (se)/otdelja (se)* ‘detach, separate’; constructions expressing this meaning also often co-occur with the preposition *od/ot*;

- Events implying that the TR is taking something away from the LM that belonged to or was an integral part of the LM; for instance, BCS/Blg. *odnijeti/otnema* ‘take away’; constructions with similar verbs also often include the preposition *od/ot*;

- Separation events implying separation in the material integrity of an object (with cutting and breaking events as typical<sup>13</sup>); for instance, BCS/Blg. *odrezati/otreža* ‘cut’. Separation is brought about by a tool. In this scenario, a connection of the separated object and its source is often implied; the moved object was often (an inherent) part of the source object, or the moved object and source object were in close physical contact touching each other; for instance, with verbs meaning ‘cut/chop/slice off’; constructions with similar verbs typically include direct objects, and often adverbials with the preposition *od/ot*;

- Opening events, including events of taking a top off (e.g., BCS/Blg. *odčepiti/otpuša* ‘unclog’) with or without a tool; constructions with similar verbs typically include direct objects;

- Separation as undoing/cancellation a previous joining event (e.g., BCS/Blg. *odviti/otvija* ‘unwind’ with or without a tool; constructions with similar verbs typically include direct objects).

Separation can involve material destruction (e.g., with breaking events), but does not always do so (e.g., with opening and pushing-apart events). It can also imply using tools.

Separation verbs imply state change, which is the “framing event” (Talmy 1991) in constructions with these verbs.<sup>14</sup> As the examples in Table 3 on page 18

[13] On cutting and breaking events from a cross-linguistic perspective, see (Majid et al. 2007).

[14] According to Talmy (1991), prefixes and particles in “satellite-framed” languages characteristically encode state change, whereas the base verbs express “supporting events” (e.g., the manner of the state change). According to Majid et al. (2007), the base verbs inherently denote the state change, and the satellites reinforce or further specify the state change.

show, BCS and Blg. also often use the same verbal stems in this group. When different stems are used, prefixation with *od/ot-* is nevertheless the common pattern for deriving separation verbs. In some cases, BCS and Blg. do not have an equivalent in *od-/ot-*, but use another prefix (e.g., ablative *u-* in BCS *ukrasti* vs. *ot-* in Blg. *otkradna* ‘steal’).

Within this group, regular antonymous relations between the prefix pairs *od-/ot-* and *do-* or *za-* can be observed (e.g., BCS/Blg. *odvesti/otveda* ‘take away’ vs. *dovesti/doveda* ‘bring’; *odlijepiti/otlepja* ‘unglue, peel off’ vs. *zalijepiti/zalepja* (or *zalepna*) ‘glue’). The typical prefix indicating attachment in both languages is *za-* (e.g., BCS/Blg. *otvoriti/otvorja* ‘open’ vs. *zatvoriti/zatvorja* ‘close’).

Verbs that involve cancellation of a previous action (see Table 3 on page 18) illustrate a variation of the *separation* schema, usually implying detachment or opening. In our view, verbs denoting cancellation are semantically no different from the other separation verbs, and they align well with them both semantically and structurally. The cancellation subgroup illustrates separation of entities that have been put together. In this group, we have noticed that BCS uses *od-* in some cases in which Blg. uses a different prefix, *raz-* (e.g., BCS *odmrznuti* vs. Blg. *razmrazja* ‘thaw, defrost’; BCS *odmotati* vs. Blg. *razvija/razmotaja* ‘unwrap, unwind’, although *otmotaja* is also possible). In some cases, both languages exhibit variation of *od-* and *raz-* in near-synonyms; for example, *odvezati/razvezati* in BCS; *otvārža/razvārža* ‘untie’ in Blg. *Odšiti/otšija* ‘unstitch’ in BCS/Blg have near-synonyms in *rašiti/razšija*. Whereas both *otšija rā kav* (impf.) ‘unstitch a sleeve’ (i.e., by detaching the sleeve from the garment) and *razšija rā kav* (impf.) ‘unstitch a sleeve’ (i.e., by undoing every stitch made on the sleeve) are acceptable in Blg., *razšija roklja* (impf.) ‘unstitch a dress’ is acceptable with *raz-*, but not with *ot-* (*\*otšija roklja* (impf.) ‘unstitch the dress’, which would imply that the dress was stitched onto something).

Moreover, *otvija* and *razvija* ‘unscrew, unwind’ are near-synonyms in Blg. in most contexts. They differ in acceptability in only a few instances such as *razvija kālbo* ‘unwind a ball (e.g., of yarn)’, but not *\*otvija kālbo*. This example can be compared to *otvija/razvija bolt/gajka* ‘unscrew/unwind a screw/nut’,<sup>15</sup> in which both verbs are possible. It may be noted that in the case of the ball of yarn, when unwound, the TR acquires its original thread-like shape and loses the ball-like shape, whereas in the case of the screw the TR is hard and non-bending, and does not undergo such a transformation. In BCS, *odviti* and *razviti* are also synonyms in some contexts, implying ‘unfold, unroll’. However, *razviti* has another meaning, ‘spread’ (e.g., *razviti krila* ‘spread wings’), which is not conveyed by *odviti*. On the other hand, *odviti*, but not *razviti*, is used in the meaning ‘unscrew’. *Raz-* generally implies ‘spreading’ of a broad surface, or an object’s spreading over a broad

[15] Notice also that the opposite of Blg. *razvija kālbo* ‘unwind a ball (e.g., of yarn)’ is *navija* ‘wind up’, not *\*zavija*, whereas the opposite of *razvija/otvija gajka* ‘unscrew/unwind a nut’ is either *zavija* or *navija*.

surface; it indicates the radial shape of a trajector's path. In both BCS and Blg., *raz-* generally implies more intensive spreading, or that a larger area is affected by spreading than *od-/ot-* does.

In addition to opening, BCS/Blg. *odškrinuti/otkrexna*, illustrates an (attenuative) meaning 'do X slightly'. Other similar examples include BCS/Blg. *otpiti/otpija* 'drink a little/part of', BCS *odvaditi* 'take out part of sth.', BCS/Blg. *otsuti, od-liti/otsipja* 'pour a little'. In all of these verbs, however, there is the idea of separation of one object from another one.

In most cases, BCS and Blg. use the same stem prefixed with *od-/ot-*. In other cases, different stems are used (BCS *odgurati (se) odbaciti (se), odbiti (se)* 'push away' vs. Blg. *otblāsna (se)*), but nonetheless the prefix *od-/ot-* is used in the same meaning of separation in both languages. Occasionally, different prefixes are used. For example, in addition to the verb with *ot-*, *otpādja* 'drive off/away', the Blg. equivalents of both BCS verbs *odagnati* and *otjerati* 'drive away, chase off, kick out',<sup>16</sup> *izgonja* and *progonja* use the prefixes *iz-* and *pro-* to emphasize the idea of going out of (or through and then out of) a container boundary. As these examples show, the two languages make use of slightly different construals: this implies that the same idea can often be conceptualized and encoded in more than one way—for example, as a movement away from a source or as going out of a container boundary—and related languages may end up choosing different means (in our case, different prefixes) to express that idea, or a given language may allow a certain overlap in the semantic networks of structures (here, prefixes) expressing the same idea.

### [3.2] *Abstract separation*

Just as the central sense of concrete motion (moving away from a source) is transferred to abstract motion (see Section [2]), the idea of separation of tangible entities in physical space is extended to abstract notions or metaphorical separation; for example, BCS/Blg. *odnijeti/otnema (novac/pari)* 'take away (money)' is extended to taking away abstract entities such as faith in *odnijeti/otnema (vjeru/vjara)* 'take away (faith)'. Again, the idea of movement through space is applied to metaphorical or figurative movement. Many separation verbs are frequently used in both concrete and metaphorical meanings; separation can be physical or metaphorical. The landmarks with which the verbs combine in their constructions reveal whether the verbs' meaning is concrete or metaphorical (compare BCS *odvući koga kamo* 'drag someone away' vs. *odvući komu pažnju* 'distract someone's attention'). Some separation verbs have an exclusively abstract/metaphorical meaning; for

[16] BCS *odagnati, otjerati* 'drive away, chase off, kick out' and Blg. *otpādja* are also used for abstract separation; for example, *odagnati/otjerati loše misli/otpādja loši misli* 'drive off/away bad thoughts'.

TABLE 3: Verbs of concrete separation prefixed with *od-/ot-* in BCS and Blg.

CONCRETE SEPARATION			
BCS	BLG.	ENGLISH GLOSS	
<i>odmaknuti (se)</i>	<i>otdrāpna (se)</i>	'move away'	Moving and pushing away
<i>odgurati (se), odbiti, odbaciti</i>	<i>otblāsna (se)</i>	'push away'	
<i>odijeliti (se)</i>	<i>otdelja (se)</i>	'detach, separate'	Detachment
<i>odljuštiti (se)</i>	<i>otljuštja (se)</i>	'peel off'	
<i>otkinuti (se)</i>	<i>otkāsna (se)</i>	'pick (e.g., a flower) <sup>1</sup>	
<i>odvesti</i>	<i>otveda</i>	'take away'	Taking away
<i>otuđiti<sup>2</sup></i>	<i>otkradna<sup>3</sup></i>	'steal'	
<i>odnijeti</i>	<i>otnema</i>	'take away'	
<i>odvući</i>	<i>otvleka</i>	'kidnap'	
<i>otuđiti</i>	<i>otmākna</i>	'steal, snatch, take away' <sup>4</sup>	
<i>odcijepiti (se)</i>	<i>otcepja (se)</i>	'chop off, cut out (e.g., an area); separate'	Cutting and breaking
<i>odrezati</i>	<i>otreža</i>	'cut'	
<i>otpiliti</i>	<i>otseka (klon), otreža</i>	'cut (e.g., with a saw)'	
<i>odlomiti</i>	<i>otčupja</i>	'break/knock/chip/split off'	
<i>odčepiti</i>	<i>otpuša</i>	'unclog'	Opening
<i>otvoriti</i>	<i>otvorja</i>	'open'	
<i>odškrinuti</i>	<i>otkrexna<sup>5</sup></i>	'open slightly'	
<i>odlijepiti</i>	<i>otlepja</i>	'unglue, peel off'	Cancellation of a previous action
<i>otkačiti</i>	<i>otkača</i>	'take off, detach'	
<i>odšiti</i>	<i>otšija</i>	'unstitch'	
<i>odviti, odšarafiti</i>	<i>otvija</i>	'unscrew'	

<sup>1</sup> In contexts with flowers (and fruits), BCS would typically use *ubрати* 'pick'.

<sup>2</sup> According to HJP (Hrvatski jezični portal, <http://hjp.novi-liber.hr/>), this verb is prefixed with *od-* (here realized as *o-*) and relates to the adjectival base *tuđ* 'foreign'.

<sup>3</sup> BCS uses another ablative prefix, *u-* (*ukrasti* 'steal') with this stem.

<sup>4</sup> BCS also uses verbs with *u-* (*ukrasti* 'steal', *ugrabiti* 'snatch', *uzeti* 'take') to express these meanings.

<sup>5</sup> *Otkrexna (se)* and *otvorja (se)* also have a metaphorical meaning in Blg. 'make/become open-minded'. BCS *otvoriti (se)* (literally, 'open') shares this metaphorical meaning, but *odškrinuti* 'open slightly' does not show this meaning extension. Blg *otkrexna* (slang) means 1. 'inform somebody about something'; for example, *Otkrexnah go kakvo se sluči včera*. 'I informed him what happened yesterday.', and 2. 'teach somebody something'; for example, *Toj me otkrexna na pušeneto*. 'He taught me to smoke.' We are grateful to one of the reviewers for pointing this out to us.

example, *odnaroditi se*<sup>17</sup> 'lose ethnic identity' in BCS and *otreka se* 'renounce' in Blg.

Some of the verbs of abstract separation are listed in Table 4 on the following page. A number of them were also listed in Table 3 with their concrete meanings. For example, BCS/Blg. *odvući/otvleka* occur both in concrete contexts meaning 'kidnap' (BCS also: 'drag away') and in constructions with abstract meaning such as BCS/Blg. *odvući pažnju/otvleka vnanimanie* 'distract (one's attention)'. As shown in Table 4, again, we distinguish several subtypes of abstract separation:

- Temporal movement away; for example, BCS/Blg. *odgoditi/otloža* 'postpone';
- Taking away; for example, BCS/Blg. *odnijeti nadu/otnema nadežda* 'take away hope', Blg. *otkradna ideja* 'steal an idea';
- Pushing away; for example, BCS/Blg. *otпустiti/otstranja (ot rabota/post)* 'fire (from a job, position)';
- Giving up or rejecting; for example, BCS/Blg. *odustati (od)/otkaža se ot* 'refuse, give up'; BCS/Blg. *odbaciti* and *odbiti/otxvārļa* 'reject (an idea, a proposal)';
- Separating or differentiating; for example, BCS/Blg. *odskakati (od)/otliča se ot* 'stand out, be different from';
- Losing or weakening; for example, Blg. *otslabna* 'lose weight';<sup>18</sup>
- Getting distracted; for example, Blg. *otplesna se* 'get distracted/carried away';
- Cancellation (state change); for example, BCS/Blg. *odviknuti se/otvikna* 'lose a habit'.

We now look at some of these sub-categories in greater detail. Movement away from source/separation in space transfers to movement away from a temporal point/separation in time (e.g., BCS/Blg. *odgoditi ispit/otloža izpit* 'postpone an exam') via the metaphors TIME IS A MOVING OBJECT OR TIME IS STATIONARY AND WE MOVE THROUGH IT (Lakoff & Johnson 1980, 42-43); (Lakoff et al. 1989, 76).<sup>19</sup> BCS *odmaknuti* 'pass' (e.g., *vrijeme je odmaklo* 'time passed') and Blg. *otletja* 'fly' (e.g., *vremeto otletja* 'time flew') are used in constructions with time as a TR.

Blg. *otdrāpna se* 'move away', in addition to its concrete meaning, can be used in abstract contexts meaning 'retreat, stay away from, live in isolation'.

BCS *odmamiti* and *odvabiti*<sup>20</sup> 'draw away' are used in both concrete and abstract contexts. The base verb *vabiti* implies calling and using sounds to (typically) cause an animal to move towards an agent. In its abstract meaning, *odvabiti* implies convincing humans to abandon a certain concrete or metaphorical position. The same meaning could be expressed by Blg. *otpādja*, although this verb is used mostly about shoeing away animals.

[17] From *narod*; the derivation pattern is circumfixation.

[18] BCS uses the prefix *o-* with the verb *oslabiti* 'lose weight or strength'.

[19] These metaphors are realized, for example, in expressions *The time has come to change our approach; We are still approaching the future of data protection.*

[20] Blg. would use a verb with the prefix *pri-* or *pod-*, or a phrase (e.g., *primamja, podmamja, otveda s podmamvane*) to express this meaning.

TABLE 4: Verbs of abstract separation prefixed with *od-/ot-* in BCS and Blg.

ABSTRACT SEPARATION			
BCS	BLG.	ENGLISH GLOSS	
<i>odgoditi</i>	<i>otloža</i>	'postpone'	Temporal movement away
<i>odnijeti</i>	<i>otnema</i>	'take away'	Taking away
-	<i>otkradna</i>	'steal'	
<i>oduzeti</i>	<i>otnema</i>	'take away'	
<i>odgurati, odbiti, odbaciti</i>	<i>otblāsna</i>	'push someone away'	Pushing away
<i>odbiti (od sise)</i> <sup>1</sup>	<i>otbija</i>	'wean'	
<i>odmamiti</i> <sup>2</sup>	-	'draw away'	
<i>otpustiti</i>	<i>otstranja</i>	'fire (from a job)'	
<i>odbiti</i>	<i>otkaža</i>	'refuse'	
<i>odustati</i>	<i>otkaža se</i>	'give up, surrender'	Giving up/rejecting
<i>odbaciti, odbiti</i>	<i>otxvārlja</i>	'reject'	
<i>otrgnuti se</i>	<i>otkāsna se</i>	'get away from'	
<i>odsjeći</i>	<i>otseka</i>	'tell bluntly, categorically'	
<i>odvući</i>	<i>otvleka</i>	'distract'	
-	<i>otplesna se</i>	'get distracted/carried away' <sup>3</sup>	
<i>odudarati/odskakati (impf.)</i>	<i>otliča se</i>	'stand out, be different'	
-	<i>otslabna</i>	'lose weight, weaken' <sup>4</sup>	Losing/weakening
<i>otpustiti</i>	<i>otpusna</i>	'loosen, weaken'	
<i>odmetnuti se</i>	<i>otmetna se</i>	'become an outlaw; back out of, renounce'	Cancellation/change of state
<i>odnaroditi se</i>	<i>otreka se (ot narod)</i> <sup>5</sup>	'lose ethnic identity'	
<i>odvrgnuti se</i> <sup>6</sup>	<i>otkaža se, otreka se</i>	'abandon, renounce'	
<i>odreći (se)</i>	<i>otreka (se)</i>	[non-reflexive] 'reject, deny'; [reflexive] 'withdraw, renounce'	
<i>otkazati</i> <sup>7</sup>	<i>otmenja</i>	'annul'	
<i>odučiti</i>	<i>otuča</i>	'unlearn'	
<i>odljutiti se</i>	-	'calm down'	
<i>odmoći</i>	-	'do nothing to help, hinder'	
<i>odmoriti se</i>	<i>otmorja (se), otdāxna si</i>	'rest'	
<i>odmrsiti</i>	-	'unravel'	
<i>odviknuti se</i>	<i>otvikna</i>	'lose a habit'	
-	<i>otreža</i>	'say "no"; refuse (bluntly)'	

<sup>1</sup> The meaning of the Blg. verb is more specialized ('wean a baby'). There is also an idiomatic expression *otbija nomera* 'pretend to do something well'. BCS *odbiti* has several meanings: *odbiti ponudu* 'reject (a proposal)'; *odbiti (od plaće)* 'deduct'; knock off, *odbiti (od sise)*: 'wean' (an entire construction is needed for this meaning to be realized).

<sup>2</sup> In some BCS verbs, a regular antonymic relation between *od-* and *do-* can be observed; for instance, *odmamiti* 'draw away' versus *domamiti* 'lure'. For these meanings, Blg. uses the prefix *pri-*, *primamja* 'lure', and *iz-*, *izmamja*

'cheat, lie'. A dialectal Blg. near-equivalent of the BCS *odmamiti* could be the verb with the same stem, *otmamja* 'distract somebody's attention' (we owe this comment to a reviewer).

<sup>3</sup> BCS uses verbs with other spatial prefixes (*za-*, *s-*) to express a similar meaning (*zalutati*, *skrenuti*, *zanijeti se u mislima*) 'get distracted'.

<sup>4</sup> A similar BCS verb, *oslabiti*, contains the prefix *o(b)-* (see HJP, <http://hjp.srce.hr/index.php?show=search>).

<sup>5</sup> Or *otrodja se* 'alienate from relatives/kin/origin/ethnicity' (as suggested to us by a reviewer).

<sup>6</sup> For example, BCS *odvrgnuti se od vjere* 'renounce faith'.

<sup>7</sup> We owe this suggestion to a reviewer. BCS also uses *poništiti*, and *anulirati* 'annul' in some contexts; for example, *poništiti narudžbu* 'cancel an order'.

Verbs of cutting also acquire abstract meanings. Both BCS and Blg. *odcijepiti se/otcepja se ot* 'chop off, cut out; separate' can be used for metaphorical separation; for example, in political contexts implying 'go one's own way, choose another option, leave a party/group'. In addition, Blg. *otcepja* has developed another abstract meaning, 'to take a short-cut, usually when running away from something unpleasant' (Armjanov 2002, 1166). It can be used with a dative enclitic personal pronoun in the 3rd person singular to mean 'to fall into a deep sleep'; for example, *otcepix mu edin san* 'I had a good, sound sleep' (Armjanov 2002, 1166). There is a synonymous verb in Blg., *otkãrtja* which is used in the same way: *otkãrtix mu edin san*. In all cases, the idea of separation is moving away from a (normal) state (i.e., staying with the members of your group, or being awake) into a new state.

Blg. *otrježa* 'cut' extends into a metaphorical domain conveying the meaning 'say "no" to someone/something'. BCS *odrezati*, *odsjeći*, and *odbrusiti*<sup>21</sup> mean 'tell (anything) bluntly'. Incidentally, another Blg. verb of cutting, *otseka*, is used to mean 'tell bluntly/categorically'.<sup>22</sup> In addition, BCS *odrezati* and *odsjeći* are metaphorically extended in contexts such as *noge su mi se odrezale/odsjekle* 'my knees turned to jelly',<sup>23</sup> in which a negative event or emotion such as fear affects a person or parts of the person's body, just like cutting something off would affect an object in a spatial scenario.

Verbs of detachment such as Blg. *otkãsna se* 'pick (e.g., a flower)' also have an abstract meaning in addition to their concrete one: 'split off from (e.g., a group), stop following (e.g., news), stay away from, live in isolation'; for instance, *otkãsna se (ot problemite)* 'get away from problems'. This verb can also be used with the dative clitic in Blg., *otkusna mi se ot surtzeto* 'I gave (someone) something reluctantly'.

[21] The BCS base *brusiti* means 'grind off'.

[22] We are simply providing here what we believe are good translations of these verbs in English. However, we do not claim that such pseudo-verbs of saying incorporate the meanings of their possible complements (such as negation or bluntness) into themselves. The important point is that these verbs represent a case of a metaphorical extension of "movement away" (i.e., cutting), where the entity being cut is an abstract one (the conversation) and is usually cut out entirely, without leaving open the possibility to resume it.

[23] In Blg., a similar meaning is expressed with *podkosihã mi se krakata* '([literally] my feet were cut off) I lost the ground under my feet'; for example, due to fear or excitement (e.g., when one is in love).

Without *se*, this verb typically applies to concrete contexts such as *otkāsna* (*cvete*) ‘pick (a flower)’. BCS *otrgnuti* (*se*) has a similar meaning. In addition to its concrete meaning, ‘pluck; tear/wrench/pull/rip off’, it is also used in abstract contexts (e.g., *ne može se otrgnuti od te ideje* ‘([literally] (s)he cannot tear herself/himself from that idea) (s)he can’t get that idea out of her/his head’).

Some verbs in the last part of Table 4 indicate cancellation or annulment. Abstract separation in general, and annulment as one of its subtypes, are both changes of state. We consider cancellation of a previous state – which necessarily implies state change – to be abstract separation. Abstract separation is thus a movement from a previous state A (or a source state A) into another state B, as illustrated by BCS/Blg. *odviknuti se / otvikna* ‘lose a habit’. BCS seems to be more productive with *od-* verbs indicating annulment. For example, Blg. does not have an equivalent with the prefix *ot-* to BCS *odljutiti se* ‘calm down’ (although Blg. has *ljutja se* and *razljutja se* ‘become angry’), and it uses the prefix *u-* (as does BCS in *uspokojiti*) or a prefix combination *po-u-*, (*po*)*uspokoja se* ‘calm down’.

*Od-/ot-* verbs in this group often have antonyms in verbs prefixed with, *na-*, *do-*, and *s-* (e.g., BCS/Blg. *odučiti/otuča* ‘unlearn’ vs. *naučiti/nauča* ‘learn’; BCS/Blg. *odviknuti (se)/otvikna* vs. *naviknuti (se)/svikna* ‘get used to’). Among verbs indicating annulment, there is also a regular antonymic relation between *od-* and *za-*; for example, BCS *odmrsiti* ‘unravel’ versus *zamrsiti* ‘tangle’, and Blg. *otreka* ‘renounce’ versus *zareka* ‘vow’.

Table 4 on page 20 also shows that some verbs with similar meanings have different stems in BCS and Blg. (e.g., BCS *odnaroditi se* and Blg. *otreka se* (*ot rod, rodina* ‘lose ethnic identity’)).

#### [4] COMPLETION OF AN ACTION

##### [4.1] *Completion of an action from the beginning to the end is emphasized*

The completion of a path in motion verbs is often reanalyzed as a completion of an action via the conventional metaphor AN ACTIVITY IS A JOURNEY, i.e., LONG-TERM PURPOSEFUL ACTIVITY IS A JOURNEY, see, e.g., (Lakoff et al. 1991, 36).<sup>24</sup> Instead of emphasizing concrete spatial sources (which inevitably imply paths), *od-/ot-* verbs in this group emphasize the initial sequences of processes and actions conceptualized as sources.

The verbs in this section (see the examples in Table 5 on page 24) highlight the completion of an action from its beginning to its final stage or to the end. Given that *od-/ot-* usually emphasizes the initial point of a process, it may seem odd that this prefix indicates completion. However, this meaning can be seen as an instance of metonymy: the source stands for the entire path.

[24] Observable in expressions; for example, *A wind power project on Sable Island off Nova Scotia is over budget and remains at a standstill; Infrastructure work is going ahead as planned.*

The verbs in this section can also be understood as relating to a more general meaning of 'disassociation from an activity' that could be habitual or located at a given time, and conceived as a departure of the speaker from the activity or the activity from the speaker (and thus not connected with the physical needs or emotions associated with the activity).<sup>25</sup>

Some examples in Table 5 on the next page reveal a few interesting systematic differences between BCS and Blg. The first is related to Blg. examples such as *otigrāja si* 'have enough of playing; play till one's heart is content' that represent a regular pattern. Unlike BCS and Blg. verbs in *na-[verb]se* structures meaning simply 'have enough of'; for example, BCS/Blg. *naigrati se/naigrāja se* 'have enough of playing', Blg. *ot-[verb]si* structures carry additional implications. The standpoint of the speaker in the latter case is not neutral, and such Blg. verbs with *ot-* imply 'have enough of something, especially after you haven't been able to get it for a long time, and to have so much of it that you don't want/crave it any more' (e.g., *otspja si, otvzema si, otjam si na* mean respectively 'sleep/have/eat so much that you don't want it any more'). This specialized meaning in Blg. may be viewed as an abstract separation or change of state from an (abnormal) state of not having enough of something to a new state (of having enough of it, having it to full satisfaction, often having too much) – an explanation that does not contradict, but instead complements, the idea of completion. BCS lacks this 'have enough of' pattern with *od-* verbs.

Another systematic difference relates to the relation of *od-/ot-* and *iz-*. It seems that BCS is more productive in using *od-* in the meaning of completion, allowing many verbs of the *odškolovali* 'put through school' type. A regular matching pattern in Blg. includes *iz-* (e.g., for BCS *odškolovali*, Blg. would use *izuča (se)* 'get educated'). For BCS *odslušati* 'hear out', Blg. would use *izslušam* 'hear out', again with the prefix *iz-*. Also for *odsvirati* 'play through', Blg. uses *iz-*: *izsvirja* 'play out, play the entire piece'.<sup>26</sup> The relation of *od-* and *iz-* in BCS and Blg. illustrated by, for instance, *odsvirati/izsvirja* is interesting: the central spatial meanings of both prefixes, *iz-* and *od/ot-*, originally relates to leaving (spatial) sources, and so these prefixes share part of their semantic space. Obviously, there is a partial overlap of the meanings of the source prefixes *iz-* and *od-/ot-*. This is consistent with the cognitive model, which allows fuzzy boundaries and overlapping concepts.

An interesting semantic opposition relates the BCS/Blg. verbs *odrasti/otrasna* and *dorasti/dorasna*: the meaning of the *od-/ot-* verbs is 'grow up', whereas the *do-* verbs imply 'become equal to, become able to cope, become big enough to do something'. One may note that the BCS/Blg. verb with *od-/ot-* is an activity, whereas the verb with *do-* is an accomplishment.

[25] We are grateful to one of the reviewers for pointing this out to us.

[26] The Blg. construction *da si otsvirja* exists, but it means 'play so much that you do not feel the need to play any more'.

TABLE 5: Verbs of completion prefixed with *od-/ot-* in BCS and Blg.

COMPLETION OF AN ACTION FROM BEGINNING TO END		
BCS	BLG.	ENGLISH GLOSS
<i>odbrojiti</i>	<i>otbroja</i>	'count off'
<i>o(d)čitati</i>	<i>otčeta</i>	'read off; consider, take into account' <sup>1</sup>
<i>odrasti</i>	<i>otrasna</i>	'grow up'
<i>odgledati</i> <sup>2</sup>	-	'see all of'
<i>odgojiti</i>	<i>otgledam</i>	'bring up'
<i>odnjegovati</i>	<i>otgleža</i>	'cultivate' <sup>3</sup>
<i>odglumiti</i>	?	'act out'
<i>odigrati</i>	<i>otigraja (si)</i> <sup>4</sup>	'play through/finish a game' <sup>5</sup>
<i>odraditi</i>	<i>otrabotja</i> <sup>6</sup>	'work off; makeup for work'
<i>odrecitirati</i> <sup>7</sup>	-	'have done reciting'
<i>odslušati</i>	-	'hear out'
<i>odsvirati</i>	<i>otsvirja</i>	'play through; kick out a player (sports) <sup>8</sup>
<i>odšutjeti</i>	-	'refrain from replying'
<i>odškolovati</i>	-	'put through school'
-	<i>otmetna</i> <sup>9</sup>	'take attendance, check items on a list'
-	<i>otremontiram</i>	'renovate, fix'

<sup>1</sup> The BCS *o(d)čitati* does not mean 'consider, take into account'. In BCS, with some base verbs both *od-* and *do-* express a similar meaning (e.g., *odčitati* and *dočitati*). Interestingly, in Blg. *otčeta* also means 'take into account, consider; use somebody's own judgement; read off (device)', whereas *dočeta* means 'finish reading'.

<sup>2</sup> The Blg. near-equivalent is with *o-*, *ogledam* 'look from all sides, look at everything'.

<sup>3</sup> Both rearing (children) and cultivating (plants) can be rendered by *otgledam* in Blg.

<sup>4</sup> The Blg. *otigraja (si)* means 'play to one's heart's content', and *otigraja* is occasionally used to mean 'dance to an end'. Interestingly, however, when *otigraja* is used in the third person singular form and is combined with the dative enclitic personal pronoun (e.g., *da mi se otigrae*), the verb means exactly the opposite: 'not to feel like dancing/playing any more' (e.g., *Kato čuh lošata novina, mi se otigra.*) 'On hearing the bad news, I suddenly didn't feel like dancing/playing any more' (we owe this insightful comment to a reviewer).

<sup>5</sup> The Blg. verb with the same stem and *ot-*, *otigraja* as a sports term means 'catch a flying ball and pass it precisely to a teammate'.

<sup>6</sup> BCS verb also implies 'finish all work'. Blg. *otrabotja* is used to express 'work late or during a weekend to compensate for previous time off'.

<sup>7</sup> The Blg. equivalents of *odrecitirati* and *odslušati* are prefixed with *iz-*: *izrecitiram* 'recite', *izslušam* 'hear out'.

<sup>8</sup> In Blg. sports slang, *otsvirja* means 'drive away/out', 'expel (from)', 'kick out' (reviewer comment).

<sup>9</sup> BCS does not have an *od-* equivalent and would use *zabilježiti, označiti* for 'check items on a list'.

TABLE 6: Verbs of emphasized duration prefixed with *od-/ot-* in BCS and Blg.

COMPLETION: EMPHASIZED DURATION		
BCS	BLG.	ENGLISH GLOSS
<i>odležati</i>	<i>otleža</i>	'spend a long time'
<i>odrobijati</i>	-	'do time in a penitentiary'
<i>odsjediti</i>	-	'sit through'
<i>odstajati</i>	-	'stand through'
<i>odslužiti</i>	<i>otsluža</i>	'do service'
<i>odsjesti</i>	<i>otsedna</i>	'stay'
<i>odsustvovati</i> (impf.)	<i>otsāstvam</i>	'be away'

[4.2] *Duration of an action is emphasized*

All verbs in this section (see the examples in Table 6) share an emphasis on the entirety of the time period needed for the completion of an action (a variant and implication of completion). Some verbs emphasize long duration. This meaning is possible because the prefix *od-/ot-* emphasizes a (spatial) source, the initial point of an action. This emphasis interacts with the meaning of the base verb, and an implication of a long duration may arise. Long duration is somehow a predictable sense in the combination of the semantics of *od/ot-* and that of certain base verbs. This sense arises, for instance, with posture verbs such as BCS/Blg. *ležati/leža* 'lie down' which refer to states and have no natural termination point (thus, the sense 'reach the point X' is excluded). However, *odsjesti/otsedna* 'stay' can be used even for a short, one-night stay, and *odsustvovati* (impf.)/*otsāstvam* 'be away' can refer to a short, crucial moment. There is a spatio-temporal metonymic relation between the archaic meaning of Blg. *otsedna* 'dismount (from a horse or similar)' (Armjanov 2002, 1146) and the meaning 'lodge'; one usually lodges when (and where) one dismounts.<sup>27</sup>

*Odležati/otleža* 'spend a long time' and *odslužiti/otsluža* 'do service' both take direct objects, often phrases referring to a prison term and a term of duty, respectively (e.g., BCS/Blg. *odležati tri godine/otleža trigodishna prisāda* 'do three years (a three-year sentence) in prison'; *otslužiti vojni rok/otsluža voenna služba* 'complete one's military service') and could thus be viewed as expressing that the subject moves away from their usual location for a given period in the time continuum.

Although both languages emphasize (long) duration by adding *od/ot-* to certain verbs (e.g., verbs of posture, verbs whose base form implies 'spend time'), such as with BCS/Blg. *odležati/otleža*, 'spend a long time in bed/prison/cellaring', BCS seems to be more productive as shown by examples such as *odrobijati 10 godina* 'do/serve ten years in a penitentiary', *moralī smo odsjediti još jedno dosadno preda-*

[27] We are grateful to one of the reviewers for this suggestion.

*vanje* ‘we had to sit through another boring lecture’, *odstajati cijeli koncert* ‘stand all through the concert’.<sup>28</sup> Blg. uses other prefixes and/or verbs to express the same meaning; for example, *iz-* in *izleža* ‘spend time (in prison)’, *izlušam lekcija* ‘listen to a lecture’.

In a single verb, the meaning of *od-/ot-* is ‘be absent/away’: BCS/Blg. *odsustvovati/otsāstvam* ‘be away’. The link between this verb and other verbs is an emphasis on duration; although the duration of absence with *odsustvovati/otsāstvam* can be short and related to a limited, crucial moment only, the emphasis is on an entirety of the period of absence.

#### [4.3] Action in response (Reactive action)

A group of verbs with *od/ot-* (often communication verbs) expressing metaphorical rather than physical movement imply an action in response to some other action (see the examples in Table 7 on the next page); for instance, BCS/Blg. *odgovoriti/otgovorja* ‘reply’, and *otplatiti/otplatja* ‘pay back’. With these verbs, the completion of a path is conceptualized as the completion of an action, hence we have grouped them with the other completion verbs. In addition, there is an additional implication of a previous action that requires response. When the response is provided, as expressed by the verb with *od-/ot-*, the action can be considered completed.

These examples clearly show that meaning is construed not only by the verbal prefixes, but also by the verbal stem (and other contextual factors). Only by having a former action in mind can *od-/ot-* be seen as a “response” to something: the meaning of BCS/Blg. *odgovoriti/otgovorja* ‘reply’ is dependent on *pitati/pitam* ‘ask’.

This group of verbs also shows similarities with the subgroup referring to motion from a source state into another and the “cancellation/annulment” subgroup; for example, BCS/Blg. *odučiti/otuča* ‘unlearn’ (see Section [3.2], abstract separation). *Od-/ot-* verbs in the cancellation group semantically relate either to verbs prefixed with other prefixes or to some base verbs that refer to an earlier/preceding process or action. These verbs refer to a metaphorical motion or separation from a source. The source in the action-in-response group refers to both the former action (BCS/Blg. *pitati/pitam* ‘ask’ in relation to *odgovoriti/otgovorja* ‘respond’) and to the speaker. The trajector (the subject of the verb) is a metaphorical source from which the response departs.

The most common sense of BCS *otplatiti* is ‘pay the last installment, pay off, repay a loan’. This meaning is expressed by Blg. *izplatja (zaem, ipoteka)*. It is possible

[28] In BCS, all three imperfective posture verbs (*sjediti* ‘sit’, *ležati* ‘lie’, *stajati* ‘stand’) take *od-* to refer to the completion of a long-lasting process of sitting, lying, and standing (*odsjediti* ‘sit through’, *odležati* ‘spend some time in bed/prison’, *odstajati* ‘stand through’). Blg. seems to lack an *ot-* equivalent for BCS *odsjediti* ‘sit through’ (this idea can be expressed with the phrase *sedja prez cjaloto vreme*); *otstoja* does exist, but it means ‘to defend an idea or place and not let anyone attack it.’

TABLE 7: Verbs expressing action in response with *od-/ot-* in BCS and Blg.

ACTION IN RESPONSE		
BCS	BLG.	ENGLISH GLOSS
<i>odazvati se</i>	<i>otzova se</i>	‘respond to’
<i>odgovoriti</i>	<i>otgovorja</i>	‘reply’
<i>odvrattiti</i>	<i>otvārna</i>	‘retort, reply’
<i>odzdraviti</i>	<i>otvārna na pozdrav</i>	‘return a greeting, nod, wave back’
<i>odgovoriti, odazvati se</i>	<i>otklikna</i>	‘respond (e.g., to a call for help)’
<i>otplatiti</i>	<i>otplatja se</i>	‘pay back, return a favor’ <sup>1</sup>
<i>odmazditi</i>	<i>otmāštja (si)</i>	‘retaliate, take revenge’

<sup>1</sup> The BCS verb would normally not be used in the meaning ‘return a favor’ (*vratiti* and *uzvratiti (uslugu)* would be usual in this meaning).

in general for this BCS verb to mean ‘pay back’, but other more specific meaning components are foregrounded. BCS *odmazditi*, ‘retaliate, take a reprisal’ is not as frequent. The only related word is the noun *odmazda* ‘retaliation’ and, if *od-* is detached, the result is a nonexistent word (*\*mazditi*). However, if one detaches *ot-* from the Blg. perfective verb *otmāštja*, the result is a usual imperfective verb, *māštja* ‘revenge’.

#### [5] OVERVIEW OF THE MEANINGS OF OD-/OT-

The discussion in the previous sections has shown that the *od/ot-* verbs in BCS and Blg. are quite a homogenous semantic group. Both BCS and Blg. overall share the semantic network of the prefix *od/ot-*. In many examples, these languages use the same verbal stems prefixed with *od/ot-*, whereas in some other cases the stems of the base verbs may differ, but the verbs’ meaning is equivalent and these verbs use *od/ot-* in both BCS and Blg. The underlying spatial schema of verbs with *od/ot-* in both BCS and Blg. relate to “move away from” (or the *from* schema): the concept of concrete or metaphorical motion away from a LM is inherent in all the *od/ot-* verbs. We present the links between the various senses of *od/ot-* in Figure 2 on the following page.

In Figure 2 on the next page, the shape in bold line, MOTION AWAY, is the prototype in the semantic network. Other shapes represent submeanings (that partially overlap). The solid lines connect the prototype and submeanings, as well as individual submeanings, indicating direct meaning relations. The dashed line indicates a less direct meaning relation. In addition to seven submeanings corresponding to the semantic subgroups explicitly mentioned in the (sub)titles of Sections [2]–[4], Figure 2 on the following page includes an eighth submeaning: cancellation, discussed in the context of abstract separation (see Section [3.2]).

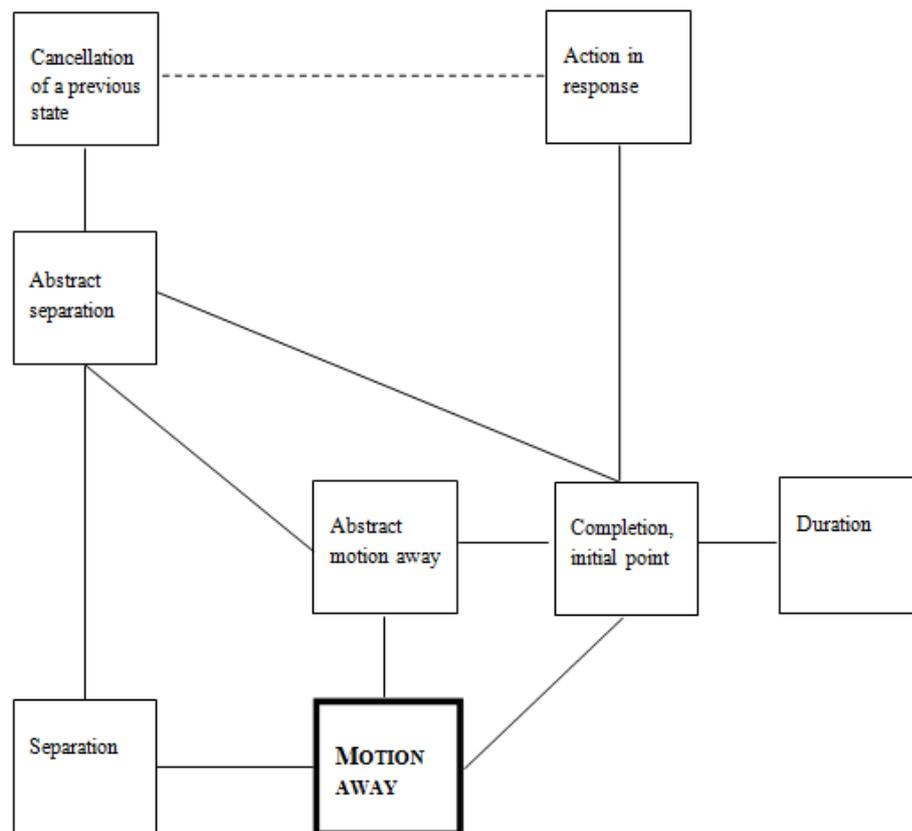


FIGURE 2: Links between the various senses of *od-/ot-* in BCS and Blg.

The first group of *od-/ot-* verbs discussed in Section [2] belongs to the central *from* schema, which is the prototype of the *od-/ot-* category that all the *od-/ot-* verbs relate to directly or indirectly. This group denotes motion in space away from a source and encompasses numerous verbs in both BCS and Blg. In addition to concrete verbs, there is a metaphorical subgroup of verbs within this group. Our examples have shown that concrete and abstract meanings most frequently coexist in one single lexical unit, suggesting that concrete and abstract or metaphorical (motion) are inseparable categories.

The separation meaning (Section [3]) arises naturally from the central meaning: physical movement away from a source is associated with separation or detachment of a TR from a LM. Among the separation verbs we identified, there are several subgroups that depend on the semantics of the base verbs; that is, the event types they express (e.g., verbs of moving and pushing away, cutting, breaking, etc.). Separation can be physical or metaphorical, implying that many separation verbs are used in both concrete and metaphorical meanings. The landmarks in constructions with separation verbs reveal the concrete versus metaphorical nature of the verbs' meanings.

The meaning cancellation (or annulment) of a previous state expressed by a number of separation verbs can be seen as a special case of abstract separation: movement from a previous state A (or a source state A) into another state B (a goal state B).

A separate group of verbs denote completion. The completion of a path with motion verbs (see Section [4]) is metaphorically mapped onto completion of an action via the conventional metaphor AN ACTIVITY IS A JOURNEY. The completion meaning can be seen as a metonymic transfer: the beginning of the path stands for the entire path. The meaning of completion is linked to metaphorical movement of a TR away from the LM and also to metaphorical separation. In verbs that emphasize the (long) duration of an event, (long) duration can be seen as a variant and implication of completion. Long duration is a predictable sense arising in the combination of the semantics of *od-* and that of certain base verbs. This sense arises, for instance, with posture verbs that lack a natural terminus, as a result of the interaction of these verbs' meaning and the emphasis on the source or beginning of the action implied by *od-/ot-*. The following abstract formula may account for this sense:

- (1) Start + Process = Long duration

Here, "start" refers to the beginning of a process, "process" refers to the process expressed by posture verbs, and "long duration" refers to the resulting meaning.

The last group of *od-/ot-* verbs discussed in Section [4.3] indicates "action in response", where the completion of a path is perceived as the completion of an action that occurs in response to a previous action. The action indicated by verb

with *od-/ot-* is complete when the required response is provided. This metaphorical subgroup is the reverse of the “cancellation of a previous state” group of verb, where the action indicated by the *od-/ot-* verb annuls an already completed action rather than initiating a new one.

At first glance, there seems to be no connection between meanings such as “movement away” (the prototypical meaning), and “action in response” (a secondary meaning). However, it can be argued that the two meanings are related. Some verbs discussed in Section [2] also indicate “action in response” in the realm of concrete motion; for example, BCS/Blg. *odskočiti/otskoča* ‘jump off’ is a physical response/reaction to something, and *odsijevati/otrazjavam* ‘reflect’ is also a response to light. Consequently, the “action in response” subgroup of verbs (at first glance purely “metaphorical” in relation to concrete motion) can be viewed as metaphorically extended from the first group of verbs with a clear spatial profile. This supports the idea of systematic relations among different senses of *od-/ot-* verbs.

Although BCS and Blg. share the overall semantic network of *od-/ot-* verbs, our analysis of some details revealed some systematic differences, such as:

(a) One language is lacking an equivalent prefixed with *od-/ot-* (but has a semantically similar equivalent prefixed with another prefix). For instance, *od-* is often used in BCS versus *iz-* in Blg.: *odslušati/izslušam* ‘hear out’; *odsvirati/izsvirja* ‘play through’. Other prefix variations observed are Blg. *ot-* versus BCS *u-* (e.g., *ukrasti/otkradna* ‘steal’) and *od-* versus *raz-*, (e.g., BCS *odmrznuti se* vs. Blg. *razmrazja* ‘defrost’).

(b) Both languages use verbs with the same stems to express similar (but not necessarily identical) meanings; the meaning networks of prefixed verbs may differ to some extent; for example, the metaphorical extensions of *od-/ot-* verbs differ, as with BCS *odskakati* ‘stand out/apart, be different from’ (impf.) versus Blg. *otskoča* ‘jump off’.

(c) A single verb prefixed with *od/ot-* in one language may have several equivalents in the other language, as with Blg. *otblāsna* versus BCS *odgurati, odbiti, odbaciti* ‘push away’.

(d) Although the same stem often exists in both languages, the meaning of prefixed verbs in BCS and Blg. may significantly differ (in their concrete and/or metaphorical usages); for example, BCS *odstajati* ‘stay through’ and Blg. *otstoja* ‘stand (for one’s principles)’.

(e) Different stems in the two languages have the same or similar meanings, and *od-/ot-* attaches to different base verbs to convey the same meaning, as in *odjaviti se / otpiša se* ‘sign off (from a list)’.

When examining subgroups of *od/ot-* verbs, it seems important to see the prefix and the base verb as a unity, and not to neglect the semantic contribution of the base verbs to prefix-verb combinations. This is necessary in order to avoid at-

tributing semantic parameters of the base verbs to the prefix in isolation. Some semantic features of a prefix and verb combination are a unique blend whose characteristics cannot be attributed to any of the elements of the combination when these elements are considered in isolation (e.g., BCS/Blg. *od-/ot-* verbs expressing motion and the concomitant emission of the sound).

It is also important to consider the other elements regularly co-occurring in constructions with prefixed units, such as the reflexive particle and adverbs, and how they contribute to a specific meaning (e.g., in the case of Blg. constructions with *ot-* meaning 'have enough of').

In a comparison of BCS and Blg. verbs prefixed with *od-/ot-*, we have noticed some issues that need further research: for instance, an interesting relation of verbs prefixed with *od-/ot-* and *raz-*. In some cases, *od-/ot-* and *raz-* seem to be used near-synonymously. This variation occurs within the individual languages, as in (2) and between BCS and Blg., as in (3).

- (2) BCS *odvezati/razvezati*; Blg. *otvărža/razvărža* 'untie'.  
 (3) BCS *odmrznuti* versus Blg. *razmrazja* 'thaw out, defrost'.

Different forms seem to imply differences in construal: *raz-* seems to indicate separation emphasizing the radial shape of the trajector's path, 'in all directions', whereas *od/ot-* indicates separation, but not the radial shape of the trajector's path.

Moreover, we have noticed that in some cases Blg. uses the prefix *iz-* in equivalents of BCS verbs prefixed with *od-*. The semantic relation of antonym pairs with *od-/do-* and *iz-/za-* in spatial and metaphorical contexts of moving away in BCS and Blg. is also an interesting topic for further research. To arrive at conclusions about these and some other issues that this analysis was merely able to mention, a corpus including a sufficient number of texts in both BCS and Blg. would need to be used. Our assumption is that syntactic patterns are inseparable from semantics, and so prepositions and adverbs that prefixed verbs combine with must be part of future studies.

#### REFERENCES

- Andrejčin, L. 1998. *Gramatika na sãvremennija bãlgarski knižoven ezik. Morfologija [= GSBKE]*, vol. 2. Sofia: Abagar.
- Anić, V. 1998. *Rječnik hrvatskoga jezika*. Zagreb: Novi Liber.
- Armjanov, G. 2002. O. In I. Kasabov (ed.), *Rečnik na bãlgarskija ezik [= RBE]*, vol. 11, Sofia: Bãlgarska akademija na naukite, Akademično izdatelstvo Prof. Marin Drinov.

- Barlow, M. & S. Kemmer. 2000. Introduction. In M. Barlow & S. Kemmer (eds.), *Usage-Based Models of Language*, Stanford: Center for the Study of Language and Information Press.
- Belaj, B. 2008. *Jezik, prostor i konceptualizacija: Shematična značenja hrvatskih glagolskih prefiksa*. Osijek: Sveučilište Josipa Jurja Strossmayera, Filozofski fakultet.
- Bujas, Ž. 2001. *Veliki hrvatsko-engleski rječnik*. Zagreb: Nakladni zavod Globus.
- Janda, L. A. 1986. *A Semantic Analysis of the Russian Verbal Prefixes za-, pere-, do-, and ot-*. Munich: Verlag Otto Sagner.
- Johnson, M. 1987. *The Body in the Mind: The Bodily Basis of Meaning, Imagination, and Reason*. Chicago: University of Chicago Press.
- Klikovac, D. 2006. *Semantika predloga: Studija iz kognitivne lingvistike*. Belgrade: Filološki fakultet.
- Lakoff, G., J. Esperson & A. Goldberg. 1989. Master Metaphor List. First Edition. <ftp://cogsci.berkeley.edu/pub/cogling/Metaphor>.
- Lakoff, G., J. Esperson & A. Schwartz. 1991. Master Metaphor List. Second Edition. <ftp://cogsci.berkeley.edu/pub/cogling/Metaphor>.
- Lakoff, G. & M. Johnson. 1980. *Metaphors We Live By*. Chicago: University of Chicago Press.
- Langacker, R. W. 1987. *Foundations of Cognitive Grammar. Theoretical Prerequisites*, vol. 1. Stanford: Stanford University Press.
- Majid, A., M. Bowerman, Van Staden, M. & J. S. Boster. 2007. The Semantic Categories of Cutting and Breaking Events: A Crosslinguistic Perspective. *Cognitive Linguistics* 18(2). 133–152.
- Przybylska, R. 2006. *Schematy wyobrażeniowe a semantyka polskich prefiksów czasownikowych do-, od-, prze-, roz-, u-*. Kraków: Universitas.
- Šarić, L. 2008. *Spatial Concepts in Slavic. A Cognitive Linguistic Study of Prepositions and Cases*. Wiesbaden: Harrassowitz.
- Stojanov, H. 2011. *Hrvatsko-bugarski rječnik*. Varna: Softis.
- Tabakowska, E. 2003. Space and Time in Polish: The Preposition *za* and the Verbal Prefix *za*. In H. Cuyckens, T. Berg, R. Dirven & K. U Panther (eds.), *Motivation in Language*, 153–177. Amsterdam: Benjamins.

- Talmy, L. 1991. Path to Realization: A Typology of Event Conflation. In C Johnson, L. A. Sutton & R. Shields (eds.), *Proceedings of the Seventeenth Annual Meeting of the Berkeley Linguistics Society: General Session and Parasession on The Grammar of Event Structure*, 480–519. Berkley: Berkley Linguistics Society, University of California.
- Tchizmarova, I. 2005. *Verbal Prefixes in Bulgarian and Their Correspondences in American English: A Cognitive Linguistic Analysis*. Muncie, IN: Ball State University dissertation.
- Tchizmarova, I. 2006. A Cognitive Linguistic Analysis of the Bulgarian Verbal Prefix *pre-* 'across, through, over'. *Glossos* 7. 1–49.
- Tyler, A. & V. Evans. 2003. *The Semantics of English Prepositions: Spatial Scenes, Embodied Meaning and Cognition*. Cambridge: Cambridge University Press.

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# FROM PHYSICAL TO ABSTRACT AFFECTEDNESS: THE PREPOSITIONS VRZ AND VĀRHU IN BALKAN SLAVIC

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## ABSTRACT

This article investigates the semantics of the Macedonian preposition *vrz* and its Bulgarian counterpart *vārhu* from a cognitive perspective. These prepositions represent a rare case of coding the functional meaning of landmark (LM) affectedness, which we understand as a characteristic of a force-dynamic pattern. The article has two related goals: to explain the polysemy of *vrz/vārhu* by discovering the semantic links between its spatial and non-spatial senses and to filter out the semantic components that *vrz/vārhu* shares with other related spatial prepositions, such as *na* ‘on’, *po* ‘across, over’, *preku/prez* ‘over’, and *nad* ‘over, above’. The dictionary definitions of both prepositions do not include the affectedness meaning, a fact that obscures the difference in use between *vrz/vārhu* and the prepositions mentioned above. The authors, on the other hand, show how the spatial domain of *vrz/vārhu* is shared by other semantically similar prepositions of superposition and offer an explanation as to why they differ.

An analysis of *vrz/vārhu* based on the authors’ collection of examples helps determine the role of the semantic component of “affectedness” responsible for the special position of this preposition among the prepositions that express superposition. This component is often found with verbs denoting downward movement, such as *fall*, *put*, *pour*, *hit*, and *throw upon*, which underscore the affectedness of the LM in conveying the meaning of superposition. This prototype effect is preserved in all spatial extensions, although considerably weakened in the covering sense (*Stavete kilim vrz svetol pod*. ‘Put a rug over a light floor’). It is also pronounced in the non-spatial extensions of *vrz/vārhu* with predicates such as *vlijae vrz* ‘influence’, *se fokusira vrz* ‘focus on’, *prezema kontrola vrz* ‘take control of’ and other similar cases of conceptual transfer from physical to mental/emotional affectedness.

Even though the semantic component of affectedness is also characteristic of the Bulgarian preposition *vārhu*, the analysis of the Bulgarian examples shows that *vārhu*, in comparison to *vrz*, does not adhere to this criterion so strictly. This results in a wider distribution of *vārhu* in both physical and abstract domains.

## [1] INTRODUCTION

This article investigates the semantics of the Macedonian preposition *vrz* and its Bulgarian counterpart *vārhu* from a cognitive perspective. These prepositions represent a rare case of coding the functional meaning of affectedness of the reference object (i.e., landmark, LM)<sup>1</sup> and thus illustrate the role of a force-dynamic pattern in their semantic structure. Our point here is to show that the functional meaning of affectedness is dominant in the semantics of *vrz/vārhu*, especially in Macedonian. We agree with an anonymous reviewer’s observation that the functional meaning of affectedness is part of the semantics of almost all prepositions of superposition, but it is our belief that it is often in the background. We wanted to point out that in this preposition affectedness is foregrounded and part of its semantic profile. Therefore, this meaning appears to be decisive in delimiting this preposition (particularly *vrz*) from other rival prepositions of superposition. However, it is not equally present in all uses, an issue discussed in Section [2].

The concept of “affectedness” has been used in research on transitivity and argument structure, especially in determining patienthood “usually construed as a persistent change in or impingement of an event participant” (Beavers 2011, 335). Similarly, in discussing the semantic macroroles, Van Valin (2002, 8) maintains that “[a]ffectedness concerns whether a participant is affected in some way in a state of affairs” and points out that affectedness is a gradable property; that is, “it may range from very great, as with the situations denoted by verbs like *crush*, *kill*, and *smash*, to quite little, as with the states of affairs depicted by verbs like *see* and *like*.”<sup>2</sup> Drawing on this definition, we use the term “affectedness” for a relation between two objects, but argue that it can also be encoded in the preposition.<sup>3</sup> We understand “affectedness” as a characteristic of a force-dynamic pattern (Talmy 2000, 413) in which the object (agonist) moves downward due to gravitational force and the LM (antagonist) “holds” it or “stands” in its way; for example, *padna vrz* ‘fall upon’, *hvārlja se vārhu* ‘throw oneself on’. The LM becomes affected because it receives force from the object’s directed motion during its change of location.<sup>4</sup> Although this semantic property is related to dynamic verbs of change, we argue that the prepositions *vrz/vārhu*, in signaling the endpoint of force transmission, may also convey affectedness. We believe that this preposi-

[1] The term *reference object* is used in Cognitive Grammar to indicate the less salient element in a figure-ground organization, interchangeably with the term *ground*, e.g., (Talmy 2000, 184). The term *landmark* is also used for this concept, following Langacker (see (Talmy 2000, 253, fn.4); (Langacker 2008, 70)). In this article we mainly adopt the terms *landmark* (LM) for ground and *trajector* (TR) for figure.

[2] Beavers (2011, 24) also argues in favor of degrees of affectedness encoded in verbs (i.e., predicates), proposing an affectedness hierarchy on a semantic basis.

[3] The term *affectedness* is also often used in relation to ditransitive constructions involving a dative case (Beavers 2011) and external possession (Janda 1993); (Dąbrowska 1997); (Mitkovska 2007), where the physical and psychological effects on the affected participant merge.

[4] Beavers (2011) notes “As the label ‘force recipient’ conveys, these participants receive force transmission, which creates the appropriate conditions for change to occur, even if it does not.”

tion has acquired this feature due to its frequent occurrence in this force-dynamic model and, consequently, it may imply affectedness even with an ellipsed or “non-forceful” verb.<sup>5</sup>

This pattern is especially productive in the abstract domain, where the affectedness feature is instrumental in the conceptualization of situations of control or influence.

The translational equivalents of *vrz/vārh* in other Slavic languages are recruited from the domain of superposition and lack this functional meaning. This preposition is based on the Old Slavic noun ВЪРХЪ (Proto-Slavic \**VERXŦ*) ‘top’. In standard Bulgarian it takes the locative form *vārh*. In Macedonian the final *x* was lost and the deictic particle *z* was added (Skok 1973, 624–625). A similar form, *vrāz*, is in use in colloquial Bulgarian, and *vrz* in Serbian dialects in Kosovo (Skok 1973, 624–625). Other prepositions based on the same lexeme are also present in Bulgarian (e.g., *svārh*, *navārh*) but they have limited distribution and are not considered here. In Serbian and Croatian the prepositions *navrh* ‘on top of’ and *uvrh* ‘at the top of, above’ are in use, but they have no affectedness component.

Adopting a cognitive approach, we base our analysis on the assumption that prepositions represent polysemous units comprising a network of related meanings. We accept the view that the primary senses of prepositions are spatial in nature and they are based in human embodied experience (Johnson 1987). Apart from spatial meanings, prepositions also have functional meanings that can be understood as meaningful consequences of a spatial scene.<sup>6</sup> The topology of an object (acting as figure; i.e., trajector, TR) in relation to another object (acting as ground; i.e., LM) may create conditions for interaction and mutual influence between them. The functional aspect of a spatial relation gives rise to correlated non-spatial inferences that may develop into abstract meanings. By analyzing the preposition *vrz/vārh*, we would like to shed light on the semantic contribution of the functional element of affectedness to the meaning of this spatial term. How does affectedness relate to the topological element of superposition in the conceptual structure of these prepositions? Does this interrelation depend on context?

[5] *Vrz* implies the LM’s affectedness even if the verb is not forceful (e.g., *sedna* ‘sit down’); this can be illustrated with a contrasting pair of similar situations

- (i) (a) *sedna na stolicata* ‘s/he sat on the chair’  
 (b) ??*sedna vrz stolicata* ‘s/he sat upon the chair’

where (b) is rather unusual because the chair is not affected. In a situation in which there is a book on the chair that may be damaged if somebody sits on it, (d) is not only acceptable but even preferable:

- (i) (c) *sedna na knjigata (na stolicata)*  
 (d) *sedna vrz knjigata na stolicata*.

[6] For more discussion on the functional meaning of prepositions see, for instance, (Navarro i Ferrando 2001, 61), (Tyler & Evans 2003, 26–27), (Šarić 2008, 18), (Coventry 1998, 256), and (Coventry 2003, 261).

We draw on [Coventry & Garrod's \(2004\)](#) view that geometric and functional components interact to different degrees in different discourse contexts. They argue that, in the case of the spatial term *in*, a functional component of location control interacts with a geometric component of enclosure. These components “support” each other to different degrees when one of them is “weak” ([Coventry & Garrod 2004](#), 53). We assume that there is a similar correlation between affectedness and superposition in the prototypical meanings of *vrz/vārhu*.

Discourse factors should also be taken into consideration in the interpretation of *vrz/vārhu*. Although we are aware that contextual variability influences the interpretation of the prepositions analyzed, we assume that a common topological structure—an abstract schema—unites all the meanings in different contexts ([Taylor 2002](#), 519–520). However, the functional component in the semantics of the preposition *vrz/vārhu* seems to be decisive in delimitating them from other superpositional prepositions that share a similar topological meaning. Coventry's position (2003, 266–267) that prepositions may be differently affected by pragmatic and semantic information and that in some contexts functional relations dominate<sup>7</sup> is supported by the behavior of the prepositions *vrz* and *vārhu*. Various contextual factors either highlight or background a particular geometric or functional feature in their semantic structure. This in turn causes widening or narrowing of their semantic scope, which results in different contextual applicability of these prepositions.

This article discusses the polysemy of the preposition *vrz* in Macedonian and compares it with the Bulgarian preposition *vārhu* in order to establish the functional zone of these similar prepositions. Although the two languages use the same preposition as translational equivalents, the distribution and frequency of uses do not overlap because “the boundaries between the contrasting categories often differ” ([Šarić 2008](#), 229). In addition, we isolate the semantic components that *vrz/vārhu* shares with similar prepositions of superposition—*na* ‘on’, *po* ‘across, over’, *preku/prez* ‘over’, and *nad* ‘above/over’—and determine the features that distinguish *vrz/vārhu* from them.

The Macedonian dictionaries list several senses of *vrz*, which can be divided into spatial and non-spatial. The first meaning listed usually describes the spatial relation involving position or movement of an object on top of or along/over the surface of something ([Koneski 2003](#), 309–310), or an object on or over/along the upper surface of something ([Murgoski 2005](#), 96). Such definitions indicate the semantic affinity of *vrz* with the prepositions *na*, *po*, and *nad*. The second sense listed is non-spatial, vaguely defined as “object of the activity” ([Koneski 2003](#), 309–310)

[7] [Coventry \(2003, 267\)](#) states that “it is possible to create a context in which functional relations dominate. Therefore, contrary to the commonly held view that there is a single system underlying spatial language and spatial representation that is geometric in nature, the evidence points to the need for the instantiation of multiple systems of representation that are integrated ‘in line.’”

or an activity producing some effect (Murgoski 2005, 96). There is also mention of the sense “piling up objects of equal type” and the set phrase *vrz osnova na* ‘on the basis of’. Similar explanations are given for the Bulgarian counterpart. According to Bulgarian dictionaries (Andrejčin et al. 1963, 99) and electronic dictionaries,<sup>8</sup> the spatial meanings of *vārhu* correspond to those of *vrz*: superposition and movement to the “object of activity.” However, in both meanings, no distinction is made between physical and abstract senses, although the examples presented clearly illustrate the difference.

Our analysis is based on more than 350 examples collected from authentic sources, electronic as well as printed (both Macedonian and Bulgarian).<sup>9</sup> In contrast to traditional lexicographic descriptions of the meanings of *vrz/vārhu*, the cognitive approach allows us not only to determine the spatial senses, but also to recognize the functional ones. In Section [2] we describe how they arise from the spatial relation of *vrz/vārhu* and further develop into abstract senses, thus forming a network of related senses. The proposed network shows the regularity of semantic change, whereas the comparison of *vrz/vārhu* with similar prepositions in each use helps establish the functional scope of the prepositions analyzed. In Section [3] the relation between the rival prepositions coding superposition is summarized and Section [4] offers some concluding remarks.

## [2] SPATIAL SENSES OF VRZ/VĀRHU AND ITS RELATED NON-SPATIAL SENSES

### [2.1] Vertical static spatial meaning: prominence

In the vertical static spatial meaning, *vrz/vārhu* indicates that a static object is positioned on the upper surface of the LM. Although this meaning is infrequent, especially in *vrz*, the lexical semantics of ‘top’ seems to be the source for the other two senses. We presume that in the creation of a LM’s prototypical meaning of affectedness the shape of the LM plays an important role: it is convex with a protruding upper part (1). However, with the extension of its use onto other LMs, the protruding requirement becomes neutralized. In such uses, *vrz* is very similar to *na* or *nad* and hence often mutually interchangeable. Yet they all differ with respect to their functional meaning: unlike *na*, *vrz* implies that the TR dominates the scene (1) and/or affects the LM in some way (2). The affectedness component is rather low, especially in Bulgarian *vārhu* (3), which is more frequently used in this meaning than Macedonian *vrz*. Thus, the reason why many Bulgarian exam-

[8] <http://rechnik.info>; <http://www.t-rechnik.info/search.php?search>

[9] Because there is no comprehensive electronic corpus of Macedonian, we collected examples from various sources. The sources include internet blogs and forums, electronic versions of newspapers, magazines, books, and printed sources. The printed sources consist of Macedonian and Bulgarian short stories: Dragi Mihajlovski, *Peperutkarot* (Skopje: Kaprikornus, 2010); Rumena Bužarovska, *Osmica* (Skopje: Blesok, 2010); Dimităr Tolev, *Razkazi, povesti* (Sofia: Narodna kultura, 1967); Kristina Dimitrova, *Ljubov i smrt pod krivite kruši* (Sofia: Obsidijan, 2004). The examples used in the article were translated by the authors. Macedonian examples are marked with (M) and Bulgarian with (B).

ples with *vārhu* cannot be translated with *vrz* is the absence of affectedness in a given situation. For instance, the translation equivalents of the movie title *Bird on a Wire* are *Ptica vārhu žica* in Bulgarian and *Ptica na žica* in Macedonian. The alternative variant with *vrz* would imply that the bird's pressure on the wire causes a certain sagging.

- (1) a. Štípskite vernici ne sakaat antena **vrz** kambanarijata. (M)  
'The faithful in Štip don't want an antenna **on top of** the bell tower.'  
b. Vašiot ured ne mora da stoi **vrz** televizor. (M)  
'Your gadget doesn't have to be **on** the TV set.'
- (2) Luĝeto pominuvaat, se zagleduvaat vo čudnata gletka, a drvoto ušte stoi **vrz** avtomobilot.  
'People pass by, stare at this strange scene, but the tree is still **on top of** the car.'
- (3) Žiteli na Sozopol skočiha sreštu stroeža na moderen hotel **vārhu** skalite. (B)  
'The residents of Sozopol protested against the construction of a modern hotel **on** the cliff top.'

[2.2] *Physical support: pressure*

The meaning of physical support hinges on the features of contact and dimensionality. This relation profiles a voluminous TR positioned on a LM as a supporting ground, basically similar to the relation expressed by the preposition *na*. However, unlike *na*, the preposition *vrz/vārhu* suggests that LM supports the TR despite the latter's considerable weight. In fact, the difference between these two prepositions is not topological, but affective: the preposition *na* states only the position, while *vrz/vārhu* adds an expressive dimension to the relation. In the following examples, *vrz/vārhu* can be replaced by *na* without any change in meaning, but *vrz/vārhu* emphasizes the TR's size and/or pressure.

- (4) Kupolata se potpira **vrz/na** četiri stolba. (M)  
'The dome rests **on** four columns.'
- (5) Toj e bleden, no spokojen, podpira se s dвете si rāce **vārhu** sabljata. (B)  
'He is pale, but calm, leans with both hands **on** his saber.'

[2.3] *Abstract meaning: psychological/mental support, base*

The abstract meaning of support in Macedonian *vrz* is a product of metaphorical transfer from the relation of physical support into the domain of human relations or reasoning. Thus, *vrz* denotes some kind of reinforcement that comes from the reference base (6). Associative relations can also be established between physical entities, as well as people (7).

- (6) Državata se potpira vrz silna populistička propaganda. (M)  
‘The country relies on strong populist propaganda.’
- (7) Podatocite vrz koi se zasnova procenata za rizikot (M)  
‘Data **on** which the estimation of risk relies’

Bulgarian *vārhu* seems to be much less frequent in this meaning, although we encounter examples with the verb *opira se* ‘is based’ (8).

- (8) Opirat se vārhu indianski duhovni tradicii na Kasteneda, Redfijld i dr. (B)  
‘They rely **on** the Indian spiritual traditions of Castaneda, Redfield, etc.’

The preposition *na* is equally possible in expressing such abstract relations (9) both in Macedonian and Bulgarian, and it seems to be more frequently used because of its neutral tone. Due to its expressivity, the preposition *vrz/vārhu* may serve stylistic purposes.

- (9) Estonija ke se potpira na/vrz NATO za da se zaštiti od neprijatelot. (M)  
‘Estonia will rely **on** NATO to protect itself from an enemy.’

More detailed investigation into the syntactic and semantic conditions for occurrence of the two prepositions might shed some light on the divergent tendencies in their behavior. Apart from the expressive nature of *vrz* already mentioned, the polyfunctionality of *na* may also be a relevant factor for the choice of *vrz*.

The preposition *na* cannot replace *vrz* in the set phrase *vrz osnova na* ‘on the basis of’ based on the metaphor of support. This complex preposition is quite common in administrative registers: *vrz osnova na člen 75* ‘on the basis of Article 75’, *vrz osnova na izjavata na* ‘on the basis of the statement of’. Bulgarian uses the preposition *vāz* in the same construction *vāz osnova na* ‘on the basis of’, which is commonly used in administrative styles (Pašov 2002, 247).

[2.4] *Force-dynamic meaning: motion resulting in affectedness (physical impact)*

The vertical dynamic spatial sense of *vrz/vārhu* seems to be the most frequent in both languages. The preposition evokes an image of an object (TR) coming down on another object (LM) with speed and force, ending up located with its full lower surface on the upper surface of the LM (10) and (11). The role of force is crucial for this configuration, as well as for a number of other conceptualizations.<sup>10</sup> This force-dynamic pattern gives rise to a functional meaning of affectedness, which arises in combination with verbs of forceful physical motion. It is precisely because of the frequent occurrence of *vrz/vārhu* with such verbs that the meaning of

[10] Johnson (1987, 42) notes that: “Because force is everywhere, we tend to take it for granted and to overlook the nature of its operation. We easily forget that our bodies are clusters of forces and that every event of which we are part consists, minimally, of forces in interaction.”

“affectedness” becomes associated with this preposition.<sup>11</sup> The use of the preposition *vrz/vārhu* automatically presupposes that the TR somehow affects the LM by its action.

- (10) Nepoznati napačiči včera frlile molotov koktel **vrz** turskiot konzulat. (M)  
‘Unknown assailants threw a Molotov cocktail **at** the Turkish consulate yesterday.’
- (11) Kola padna **vārhu** kášta pālna s deca. (B)  
‘The car fell **on** a house full of children.’

The affectedness effect is often reinforced by some context elements that emphasize the weight of the TR (12) or explicitly state its consequences on the TR (13). These elements are, however, only additional contextual support and do not determine the meaning of the preposition. Thus, in (12), if the phrase *težok dožd* ‘heavy rain’ is replaced by *siten dožd* ‘light rain’, the affectedness meaning will not be eliminated.<sup>12</sup>

- (12) Težok dožd pača **vrz** moeto telo. (M)  
‘Heavy rain falls **on** my body.’
- (13) Težok kufer pača **vrz** glavata na dedoto a patnicite konstatiraat deka e mrtov. (M)  
‘A heavy suitcase falls **on** the old man’s head and the passengers determine that he is dead.’

The TR may be a liquid or other type of material that affects the LM with its physical or chemical properties: in (14) coffee damages the communications system, and in (15) light dispels darkness.

- (14) Pilotot go isturil svoeto kafe **vrz** opremeta za komunikacija na avionot. (M)  
‘The pilot spilled his coffee **over** the communications system on the dashboard of the aircraft.’
- (15) Svetlinata se izsipva **vārhu** platnoto za da progoni mraka v očite. (B)  
‘The light falls **on** the canvas in order to dispel darkness.’

This functional meaning of affectedness sets *vrz/vārhu* apart from the comparable spatial preposition *na* ‘on’, which also codes physical contact, but profiles support rather than pressure. In our collected examples, *vrz/vārhu* predominantly collocates with verbs that code forceful downward movement (*pača* ‘fall’, *isturi* ‘pour’, *frla* ‘throw’, *udira* ‘hit’) as in (16), but there are also verbs with no special force

[11] This conclusion dovetails with an anonymous reviewer’s observation.

[12] We thank an anonymous reviewer for bringing up this point.

implication (*stavi* ‘put’, *se roni* ‘crumble’). In (17a) the passersby are affected even though the verb itself does not imply force; in (17b) it is the preposition *vrz* that produces such an effect, not the neutral verb *stavi* ‘put’. This suggests that the preposition itself can create the affectedness scenario.

- (16) Zaradi silnija vjatar v stolicata dārvo padna **vārhu** mlad muž dokato toj izlizal ot . . . (B)  
 ‘Due to strong wind in the capital, a tree fell **on** a young man when he was coming out . . .’
- (17) a. Fasadite se lupat ... i se ronat **vrz** glavite na minuvačite. (M)  
 ‘The façades of the houses crack and fall **on** the heads of the passersby.’  
 b. Ne ja stavaj kutijata **vrz** masata. Āe ja oštetiš. (M)  
 ‘Don’t put the box **on** the table. You’ll damage it.’

This implication of affectedness is preserved even in static conceptualization, where the weight of the TR is perceived as exerting some considerable effect on the LM (18).

- (18) Tumorot pritiska **vrz** nervite. (M)  
 ‘The tumor presses **on** the nerves.’

[2.5] *Abstract meaning: affectedness through physical impact*

The “impact” meaning that codes “placing TR on top of the LM and in the process considerably affecting it” is directly related to the meaning of physical and psychological affectedness of the LM. In such relations, the contact feature is not central, but only marginally implied. The TR makes an intended impact on the LM by some forceful movement (*puka* ‘shoot’) or forceful activity (*se izživuva* ‘molest’), as in (19). The effects on the TR may be highlighted even if the action is not physically forceful (20).

- (19) Obvinetiot se tovari deka seksualno se izživuval **vrz** deteto. (M)  
 ‘The accused is charged with sexually molesting the child.’
- (20) Ne kupuvam stoki testvani **vārhu** životni. (B)  
 ‘I don’t buy goods tested **on** animals.’

The affectedness meaning of *vrz/vārhu* is often expressed in collocations with nominalizations (*napad* ‘attack’, *atentat* ‘assassination’, *vandalizam* ‘vandalism’, *nasilstvo* ‘violence’) or periphrastic predicates in which the activity is coded by an abstract noun or nominalization in a construction with a light verb “V N *vrz/vārhu* N” (*vrši napad* ‘attack’, *vrši operacija* ‘operate on’, *vrši intervencija* ‘intervene’, *primenuva nasilstvo* ‘apply violence’).

(21) Londonskata policija primeni nasilstvo **vrz** demonstranti (M)  
‘London police applied force **against** protesters.’

(22) Teroristite izvāršvat genocid **vārhu** deca v Holms (B)  
‘Terrorists are carrying out genocide **on** children in Holms.’

Following the same pattern, *vrz/vārhu* builds constructions with *nomina agentis* such as *napaġaċ* ‘attacker’, *vladetel* ‘ruler’, and so on. These nominals absorb the first argument of the nominalized predication, rendering the type of activity through the semantics of the agent. Thus in (23) the verbal nominalizations that appear as TRs in the relation expressed by the preposition in fact represent a metonymy for the activity: *napaġaċot A vrz B* ‘the attacker A upon B’ < ‘A attacks B’. In Bulgarian the preposition *nad* is preferred to *vārhu* in similar contexts, as in (24).

(23) Napaġaċot **vrz** komplekstot na ON e uapsen. (M)  
‘The attacker **on** the UN headquarters has been arrested.’

(24) Razkriha napadatel **nad** ženi. (B)  
‘The attacker **on** women has been found.’

[2.6] *Abstract affectedness and influence/control*

Expressions coding physical affectedness (e.g., *udri vrz*, *pritiska vrz*, *napaġa vrz*) in both languages can be extended to relations with abstract LMs, thus giving rise to abstract affectedness (25) and (26).

(25) Poskapiot benzin pritiska **vrz** cenite na transportnite usluzi. (M)  
‘Expensive gasoline puts pressure **on** the price of transportation.’

(26) Vsiċkrite igri ... s cenite na brašnoto, reflektiraha lošo **vārhu** hljaba. (B)  
‘The manipulations of flour prices have had a negative impact **on** bread.’

If the LM is personal or metonymically points to people, as in examples (27) and (28), the relation coded by the preposition *vrz/vārhu* is liable to further abstraction. The impact of the TR is viewed as producing psychological effects on the LM (29).

(27) Korumpiranite sindikati težat **vrz** grbot na rabotnicite. (M)  
‘Corrupt trade unions weigh **on** the backs of the workers.’

(28) Dolgovite pritiskaat **vrz** firmite. (M)  
‘Debts put pressure **on** firms.’

(29) Spisokāt na žertvite koito težat **vārhu** sāvestta na carja, ne svāršava tuk. (B)  
‘The list of victims weighing **on** the czar’s conscience does not end here.’

The functional meaning of affectedness expressed by *vrz/vārhu* extends into the abstract domain to meanings of the TR's exertion of influence and/or control on the LM, where the physical contact component is irrelevant, cf. examples (30) and (31). In such relations, an abstract or physical TR affects the LM with some inherent property or by directing energy towards the LM.

- (30) Beliot leb štetno deluva **vrz** zdravjeto na luġeto. (M)  
'White bread has negative effects **on** people's health.'
- (31) Depresijata na majkata vlijae **vārhu** mozāka na deteto. (B)  
'A mother's depressive state has an effect **on** her child's brain.'

The same verbs, periphrastic predicates and nominals that appear in physical relations contexts (*paġa* 'fall', *frla* 'throw', *istura* 'spill') combine with *vrz* to code *abstract relations*. To convey psychological effects of control exertion, *vrz* co-occurs in various constructions: 1) with abstract nouns (*danok* 'tax', *embargo* 'embargo', *veto* 'veto', *pravo* 'right', *sopstvenost* 'ownership'); 2) with resultative or event nominals, (*vlijanie* 'influence', *vnimanie* 'attention', *koncentriranje* 'concentration', *fokusiranje* 'focusing', *pogled* 'glance/view', *dejstvo* 'effect', *udar* 'attack', *pritisok* 'pressure'), and 3) in periphrastic predicates (*vrši pritisok vrz naselenieto* 'puts pressure on citizens', *vrši kontrola vrz proizvodstvoto* 'conducts control over the production', *vrši vlijanie vrz glasačite* 'exerts influence over voters', *frli pogled vrz knjigata* 'cast a glance at the book'), which is a more common pattern than with a single verb.<sup>13</sup>

When the same meaning is not rendered by a periphrastic predicate but by a single verb, three types of complementation patterns are possible: a) some verbs require direct objects (*vrši kontrola vrz proizvodstvoto* > *go kontrolira proizvodstvoto* 'maintains control over the production' > 'controls the production'), b) some require prepositional objects (*vrši vlijanie vrz glasačite* > *vlijae vrz glasačite* 'exerts influence over voters' > 'influences voters'), and c) some verbs allow both (*go pritisoka naselenieto/pritiska vrz naselenieto* 'puts pressure on the citizens/pressure the citizens'), the difference being in the degree of the LM's affectedness. However, in a number of cases in both languages the periphrastic predicate cannot be replaced by a single verb: *frla senka/damka* 'casts a shadow', *prezema kontrola* 'takes control', *ima efekti* 'has effects', *ima/dava pravo* 'has/gives the right', etc.), exemplified in (32) and (33).

- (32) NATO ja prezede kontrolata **vrz** voenata akcija protiv Libija. (M)  
'NATO has assumed control **over** the military operation in Libya.'

[13] The same types of constructions occur in Bulgarian with *vārhu*: *hvārlja petno vārhu cjalata bolnica* 'cast a shadow over the whole hospital', *ima efekti vārhu čoveškija organizam* 'has effects on human body'.

- (33) Edin otdelen incident ne može da hvärli sjanka **värhu** tradicionno dobrito otnošeniya. (B)  
 ‘A single incident cannot cast a shadow **over** traditionally good relations.’

Regular co-occurrence of certain light verbs with *vrz/värhu* has resulted in their idiomatization. A typical example is the verb *paġa* ‘fall’ in examples (34) and (35).

- (34) Odogovornosta paġa **vrz** organizatorot na demonstraciite. (M)  
 ‘The responsibility falls **on** the organizer of the demonstrations.’
- (35) Iskame **värhu** našeto ime kato partija da ne pada petänce. (B)  
 ‘We, as a party, demand that no blemish should be cast **upon** our name.’

[2.7] *Abstract meaning: attention focusing and activity absorption*

The semantic component *odozgora* ‘on top of’ represents a base for the rise of the functional meaning of mental focusing. With certain predicates, *vrz/värhu* denotes that a human TR directs attention towards an LM engaged in some mental activity. Usually *vrz/värhu* combines with the verb *raboti* ‘work’, cf. examples (36) and (37), but other verbs are also encountered (e.g., *se zamisli vrz problemot* ‘reflected on the problem’, *se fokusira vrz ekonomijata* ‘to focus on the economy’).

- (36) Rabotam **vrz** najnoviot poetski rakopis. (M)  
 ‘I am working **on** my latest poetry manuscript.’
- (37) Rabotja **värhu** nova kniga. (B)  
 ‘I am working **on** a new book.’

The agent’s focus on the object is also expressed with the prepositions *na* and *nad*. The former is more common in both languages, whereas the latter is characteristic for Bulgarian, but less frequent in Macedonian.<sup>14</sup> Even though there are contexts in which all three prepositions are interchangeable, each one has a specific, often contextual, nuance that is difficult to capture. The reason for their specialized application may lie in the conventionalization of collocational combinations.

*Topic/theme (in Bulgarian only)*

Additionally, the Bulgarian preposition *värhu* occurs in the abstract meaning of “aboutness” or “topic/theme” (38), whereas its Macedonian counterpart *vrz* has not developed such a use. Macedonian employs the preposition *za* ‘for, about’ to express this relation. Such uses involve predicates of speech and cognition, in

[14] Cf. (Mitkovska & Bužarovska 2012, 130–131) on the use of the preposition *nad* in South Slavic languages and Tyler and Evans’s analysis of *over* (Tyler & Evans 2001).

whih the preposition marks the topic of conversation or thought and could be paraphrased as ‘relating to, with reference to, with regard to’.

- (38) Tekstāt spodelja razmisli **vārhu** neobičajnata situacija. (B)  
 ‘The text conveys thoughts **about** the unusual situation.’

[2.8] *Competition between the preposition vrz/vārhu and na*

In the meaning of physical affectedness, the preposition *vrz/vārhu* competes with *na* ‘on’. Because both imply that the TR comes to or is positioned in contact with the LM (which usually supports the TR on the upper surface), they are interchangeable in many contexts (39). However, the main feature of *on* is control: the LM controls the location of the TR in the horizontal or vertical axis of the LM (Beavers 2002), whereas *vrz/vārhu* highlights the effect of the attachment of the TR with the LM.<sup>15</sup> The examples analyzed suggest that the implication of affectedness is inherent in *vrz* whereas *na* is neutral in this respect. This explains why in some contexts the use of *na* is either not preferred or marginal (40).

- (39) Nepoznati napaġaċi vĉera frlile molotov koktel **vrz/na** turskiot konzulat. (M)  
 ‘Unknown assailants yesterday threw a Molotov cocktail **at** the Turkish consulate.’
- (40) Most star 150 godini padna **vrz/?na** voz Ńto pominuval pod nego i ubi 33 patnici. (M)  
 ‘A 150-year-old bridge collapsed **on** a train passing under it and killed 33 passengers.’

The preposition *vrz/vārhu* is mainly used with predicates (or their nominalizations), signaling that the second participant is strongly affected by the activity; namely, it emphasizes the patienthood of the second participant, whereas *na* invites no such inference. This difference is equally maintained in abstract relations, although not as regularly because the choice depends more heavily on the speaker/writer’s construal of the relation (compare examples (30)–(31) with examples (41)–(42)). In such cases, the two prepositions are used for stylistic variation.

- (41) Slabeenjeto moĹe Ńtetno da deluva **vrz** zdravjeto. (M)  
 ‘Slimming down can be harmful **to** one’s health.’
- (42) Esenta naistina vlijae **na** nastroenieto. (B)  
 ‘Autumn really can affect one’s mood.’

[15] According to Brala (2005), the domain of SUPERPOSITION lexicalized in Croatian by *nad*, *iznad*, *preko*, and *na* is split into two subordinate levels: +/- ATTACHMENT (*na* vs. *nad*, *iznad*, *preko*).

Another reason for choosing *vrz* over *na* is to avoid the ambiguity that the multi-functional preposition *na* could create. Because *na* is used for both agentive and patientive participants of a nominalized predication, it may be unclear whether the object of the preposition refers to the initiator or the undergoer, whereas *vrz* clearly points to the patient. Thus, the expression *pritisok na vladata* ‘pressure of/on the government’ may be interpreted as ‘pressure of the government’ or ‘pressure on the government’ but the use of *vrz* in *pritisok vrz vladata* clarifies that the government is the affected entity.

Furthermore, the preposition *na* is used for marking both possession and indirect object (experiencer or recipient), causing ambiguity in certain contexts. By using *vrz*, the speaker/writer clearly points at the experiencer (43). In addition, *vrz*, in contrast to *na*, possesses certain expressivity and thus is more common in headlines as a stylistic attention-capturing device, whereas the body text contains *na*, as in the following example.<sup>16</sup>

- (43) Doždöt i gradot napravija šteti **vrz** posevite. (headline)  
 Spored informaciite od farmerite gradot napravi šteti **na** žitnite i gradinarski kulturi. (M)  
 ‘Rain and hail cause damage **to** crops.  
 According to information from farmers, the hailstorm caused damage **to** crops in fields and gardens.’

In Bulgarian, the obsolete preposition *vrăz* is found instead of *vărhu* in stylistically marked contexts.<sup>17</sup> In newspaper headlines (44) and literary prose (45), it conveys a greater degree of expressivity.

- (44) Džip parkira **vrăz** stăpalata na Etnografskija muzej. (B)  
 ‘The jeep parked **at** the entry to the Ethnographic Museum.’
- (45) Snegăt turi smălčana pokrivka **vrăz** vsičko. (B)  
 ‘The snow spread a silent cover **over** everything.’

[2.9] *Horizontal spatial meaning: spreading over a surface, covering*

The third spatial meaning of *vrz/vărhu* presupposes contact of the TR with a broader surface of the LM, usually the entire upper surface, which gives rise to the functional meaning of partial or full covering; examples (46) and (47). In (46), the print covers part of the shirt; it also indicates that the TR and LM are not necessarily positioned on the vertical axis. Actually, here the location of the TR on the horizontal axis is controlled by a planar LM.

[16] This is perhaps one of the reasons why we encounter *vrz* in poetry more often than in other genres.

[17] We would like to thank Ivelina Tchizmarova for this observation and for providing exhaustive interpretation of the examples with *vrăz*.

- (46) Pečatenje **vrz** maici i tekstil. (M)  
‘Printing **on** T-shirts and fabric.’
- (47) Razlivam voda **vārhu** masata. (B)  
‘I spill water **over** the table.’

Given that the TR is not concentrated on a limited spot of the LM, it is not viewed as producing a considerable impact. Therefore the affectedness component is negligible or totally absent. It seems that the presence of the feature of dimensionality (or rather planarity) of the “controller” LM (Brala 2005) suspends the affectedness effect of the TR’s superpositional attachment onto the LM. The degree of affectedness also depends on the physical makeup of the object; for example, liquids versus solid objects, as in (47).

Bulgarian *vārhu* is more often encountered in this meaning than *vrz* in Macedonian; the latter has a limited distribution, probably because it suggests verticality and hence the affectedness effect is more pronounced. Quite often in such contexts the Macedonian equivalent of *vārhu* is not *vrz*, but *na* or *po*, as in examples (48) and (49).

- (48) “Bālgarija **vārhu** kulturnata karta na sveta” e mnogo ljubopitna kniga.  
(= *na*) (B)  
‘Bulgaria **on** the Cultural Map of the World is a very curious book.’
- (49) Arabski tatuirovki **vārhu** telata na zvezdi. (= *po*) (B)  
‘Arabic tattoos **all over** the bodies of pop stars.’

In contexts in which both prepositions are possible in the two languages, *vārhu* prevails in Bulgarian, whereas *na* is more common in Macedonian, although *vrz* is also an option, cf. examples (50) and (51).

- (50) a. Nanesete smesata **vārhu** liceto i sled 20 minuti izmijte. (B)  
b. Nanesete ja smesata **na** liceto i držete ja 20 minuti. (M)  
‘Apply the mixture **to** your face and let it sit for 20 minutes.’
- (51) a. Evropejskata komisija odobri novi 14 predupreditelni nadpisa, koito šte mogat da bādat otpečatvani **vārhu** kutiite s cigari. (B)  
‘The European Commission has approved fourteen new graphic warnings that may be printed **on** cigarette packs.’  
b. Spored sudijata, grafičkite predupreduvanja za štetnosta od pušenjeto **vrz** kutiite so cigari i **vrz** reklamnite materijali gi prekršvaat osnovnite slobodi. (M)  
‘According to the judge, the graphic warnings concerning the hazards of smoking **on** cigarette packs and **on** advertising materials violate basic rights.’

TABLE 1: Google search results for *vārhu/vrz* and *na* in contexts of spreading over a surface

	<b>Bulgarian</b>	<b>Macedonian</b>
	(nadpisi) <i>vārhu</i> cigareni paketi – 13,900 hits	(natpisi) <i>vrz</i> kutii so cigari – 4 hits
	‘(labels) on cigarette packs’	
	(nadpisi) <i>na</i> cigareni paketi – 9 hits	(natpisi) <i>na</i> kutii so cigari – 10,200 hits
	‘(labels) on cigarette packs’	
Ratio	<i>vārhu</i> to <i>na</i> 99.94% to 0.06%	<i>vrz</i> to <i>na</i> 0.04% to 99.96%
	Nanesete smesata <i>vārhu</i> liceto – 45,700 hits	Nanesete ja smesata <i>vrz</i> liceto – 1 hit
	‘Apply the mixture [all] over your face.’	
	Nanesete smesata <i>na</i> liceto – 15,700 hits	Nanesete ja smesata <i>na</i> liceto – 1,790 hits
	‘Apply the mixture to/on your face.’	
Ratio	<i>vārhu</i> to <i>na</i> 74% to 26%	<i>vrz</i> to <i>na</i> 0.055% to 99.94%

Table 1 shows the results of a Google search of four direct strings with *vrz/vārhu* and *na*. Although the numbers present the raw score, the differences are indicative of the preferences in the two languages. The results lend support to our conclusion that *vārhu* is far more common in the “spreading” sense than *vrz*.

If the TR’s contact surface is equal or larger than the LM’s, the functional component of covering may be interpreted as “protection” or “hiding from view”, cf. examples (52) and (53), causing the creation of an implicature of layering. This use of both *vrz* and *vārhu* is common in culinary discourse to convey layering in a horizontal structure, illustrated in examples (54) and (55).

- (52) Toj nosi košula **vrz** bluzata. (M)  
‘He is wearing a shirt **over** his long-sleeve T-shirt.’
- (53) Toj be obljakāl palto **vārhu** pullovera. (B)  
‘He had put on a jacket **over** his pullover.’
- (54) Rezanki od kruškite se stavaat **vrz** sloj od karamela i se pokrivaat so sloj na meko testo. (M)  
‘Slices of pear are placed **on** the layer of caramel and are covered with a layer of soft pastry.’
- (55) V tava izsipete solta, sled koeto **vārhu** neja naredete pileškite butčeta. (B)  
‘Cover the pan with a layer of salt and place the chicken legs in a row **over** it.’

Placing the same type of TR one over another (56) produces a special effect that results in the conventionalization of the implicature of layering. This functional meaning makes the construction liable to idiomatization, such as *edin vārhu drug* in (57). In Bulgarian, the colloquial (obsolete) preposition *vrāz* is often used for expressivity in some idiomatic expressions; for instance *sedi krak vrāz krak* ‘sit with crossed legs’, which has the Macedonian equivalent *sedi noga vrz noga*.

- (56) Sloj **vrz** sloj pudra izgleda lošo. (M)  
 ‘Layer **upon** layer of powder looks bad.’
- (57) Te trupat matranci edin **vārhu** drug. (B)  
 ‘They pile up mattresses one **over** the other.’

The prepositions *preku/po*, *na*, and *nad* compete with *vrz* in this function, but they highlight different aspects of the superposition topology. The focus of *preku/po* falls on the extension of the TR over the entire surface of the LM, underscoring completeness to a higher degree than *vrz* (compare examples (58) and (59)), whereas the use of *na* is neutral regarding the scope of spread/coverage (60); *nad* implies vertical proximity (61).

- (58) Nanesuvajte go proizvodot ... **preku** celata površina. (M)  
 ‘Spread the product **over** the whole surface.’
- (59) Koga ќе se nanese **vrz** pluskavicata, pastata za zabi pobrzo ja suši. (M)  
 ‘When you smear toothpaste **over** a blister, the blister dries faster.’
- (60) Nanesete eukalptusovo maslo **na** krpče i izbrišete. (M)  
 ‘Spread eucalyptus oil **on** a piece of cloth and use for cleaning.’
- (61) **Nad** testoto stavete go filot, a **nad** nego šlag krem . . . (M)  
 ‘Spread custard over the pastry and put some whipping cream on top . . .’

Sometimes the difference between these prepositions is so negligible that they may be used interchangeably to avoid repetition (62). However, note that *vrz* is used for a smaller object that is on top but does not cover the entire surface of the LM.

- (62) Parčinja gorgonzola stavete **na** sekoe ispečeno lepče, a **vrz** nea stavete jatka orev. (M)  
 ‘Put some gorgonzola **on** each toasted slice of bread, and **over** it place half a walnut.’

[2.10] *Abstract meaning: recursiveness*

The meaning of recursive activity (*paleše cigara vrz cigara* ‘He lit cigarette after cigarette’; *pišuvaše pismo vrz pismo* ‘she wrote letter after letter’) is extended from

the sense of physical piling or layering of entities one over another. Repetition of the same activity creates an implicature of quantity that has relevance in some particular context (63). In Bulgarian we found the emotionally-marked preposition *vrāz* in this function (64).

- (63) Se trošat narodnite pari, se udara danok **vrz** danok, . . . (M)  
 ‘The people’s money is spent, tax **after** tax is imposed, . . .’
- (64) Ot tri godini pismo **vrāz** pismo mi piše, ela mi na gosti, badžanak. (B)  
 ‘For three years he’s been writing me letter **after** letter, come and visit me, brother.’

[2.11] *Summary: the network of spatial and abstract meanings of vrz and vārhu*

The semantic network of the prepositions *vrz/vārhu* is shown on Figure 1. As discussed above, three spatial meanings branch from the meaning ‘on top of’ representing the abstract image schema and each has given rise to one or more abstract meanings.

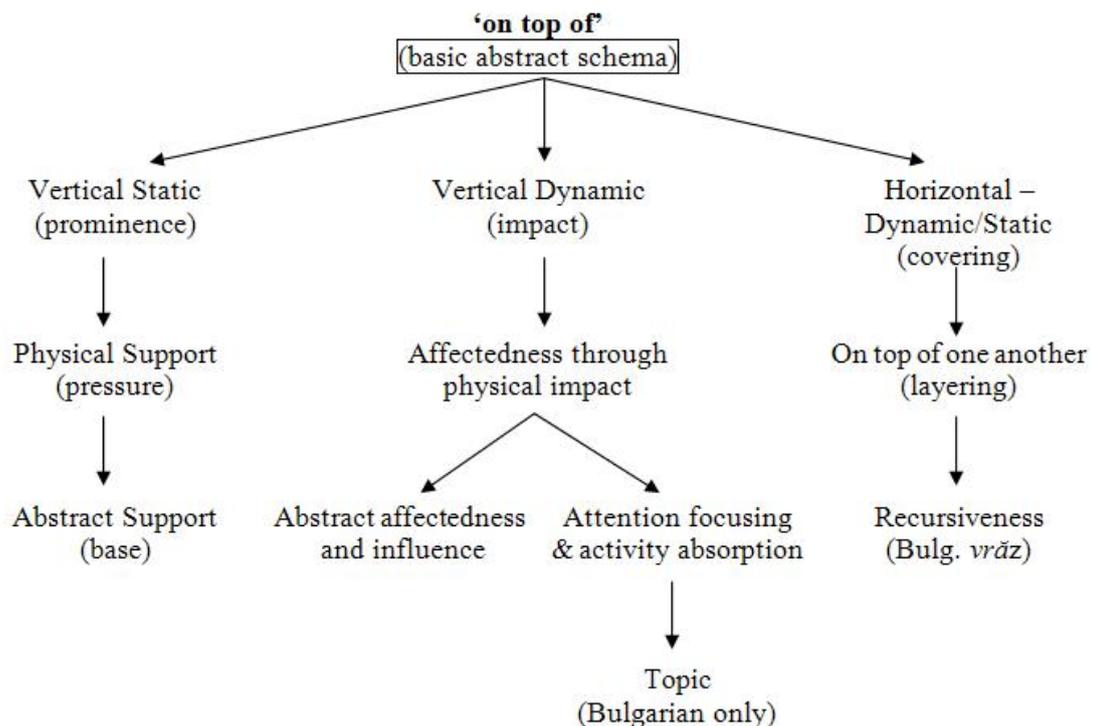


FIGURE 1: The conceptual network of *vrz* and *vārhu*

We distinguish between vertical and horizontal types of meaning on the basis of the nature of the contact. In the vertical meanings it is restricted to a relatively small portion of the LM, whereas in the horizontal ones it spreads radially and

may cover the entire surface. Both orientations are found in static and dynamic patterns. In the vertical orientation, the two patterns are cognitively distinct, which is reflected in the existence of two senses (prominence and impact). This hypothesis is supported by the fact that both senses serve as sources for separate extension pathways: pressure versus affectedness through physical impact. On the other hand, in the horizontal orientation the distinction between the static and dynamic meanings is neutralized in the covering sense with its two contextual variants.

The two varieties of the dynamic pattern may be characterized as a force-dynamic pattern and force-dynamically neutral pattern, the difference being in the orientation of movement: vertical or horizontal. In the force-dynamic pattern, the object comes in contact with the surface as a result of vertical impact<sup>18</sup> (downward movement). The dynamicity of this conceptualization may be neutralized by the different orientation of the impact. In a force-dynamically neutral pattern the object moves radially, in all directions along a planar surface, which is usually but not necessarily horizontal (*pločki vrz dzidot* ‘tiles over the wall’). In sum, the dynamic meanings analyzed share a similar topological configuration of superpositional attachment, the main difference being in the verticality or horizontality of the attachment relation. Verticality produces the meaning of “contact attachment”; that is, only in the place of impact, whereas horizontality conveys “spreading attachment” on all (or a fair amount of) the surface of the LM. As a consequence, the functional component of affectedness weakens at the expense of the covering component, also conveying certain affectedness itself.

The two vertical varieties (impact and prominence) may be conceptualized as two poles of a force-dynamic continuum with different degrees of affectedness. It is most prominent in the vertical dynamic conceptualization of the relation coded by *vrz/vārhu*, which is based on the presupposition of a preceding forceful or neutral movement. The degree of affectedness is lower in the static pattern, which is conceptually simpler because the profiled relation does not trigger the presupposition of movement; that is, the activity that has led to the contact is not in the focal zone of the conceptualization scene.<sup>19</sup> The preposition profiles the relation of the attached superposition, which contextually determines affectedness. However, the distinction between the two patterns is often blurred. In *Ne sedi vrz mojt krevet!* ‘Don’t sit on my bed!’ *vrz* implies some affectedness but the

[18] Compare Lindstromberg’s explanation of the English preposition *against*, which includes the element of force and suggests violent impact (Lindstromberg 1997, 177).

[19] Or in the zone of cognitive “ception.” This partly overlaps with what Langacker calls “focal prominence.” According to Langacker (2008, 365), focal prominence “resides in the directing of attention, made necessary by the difficulty of viewing a complex occurrence in a global and a wholly neutral fashion—we cannot attend to everything equally and simultaneously. As a limited resource, attention has to be allocated and for a given structure different allocations are possible.”

verb itself codes a static situation even though it is obviously a result of a dynamic activity.

Therefore, the three meanings are distinguished by their functional features: prominence, affectedness (impact), and covering, respectively. Each has given rise to a corresponding abstract meaning, with some final branches differing in Macedonian and Bulgarian.

#### *Comparison between vrz and vārhu*

The above overview shows that the Macedonian preposition *vrz* and its Bulgarian counterpart *vārhu* are close equivalents used for expressing similar spatial relations of attached superposition. It seems that they have followed similar paths of extension to abstract meanings. However, our analysis has shown that there is difference in usage. It seems that the Bulgarian *vārhu* is more widely used in the senses of “position on top of,” “spread on a surface,” and “support,” in which the affectedness component is weak. The implication of affectedness is more strongly felt in Macedonian *vrz*, which makes it more expressive and thus less common in contexts lacking affectedness. To draw more specific conclusions, though, a precise statistical analysis of the occurrences of these prepositions in the two languages is needed, but at this point such an analysis is unfeasible because there is no extensive electronic corpus of Macedonian.

We also noted some differences in the scope of abstract meanings:

- (i) Bulgarian *vārhu* is used in some abstract meanings in which Macedonian *vrz* is not applied: the meaning ‘about’, expressing topic, was mentioned above (*Sporim vārhu tozi problem* ‘argue over this problem’); second, it has a distributive meaning in expressing percentages (*20% DDS vārhu 1 lev* ‘20% VAT on 1 lev’), where Macedonian uses *na*; in mathematics it is used for expressing ratios (*deset vārhu petnaeset* ‘ten divided by fifteen’).
- (ii) In the abstract meaning of support (*se bazira/zasnova vrz*), Macedonian *vrz* is very common, whereas Bulgarian *vārhu* is restricted to one verb and *na* is more usual.

#### [3] VRZ AND VĀRHU IN RELATION TO SIMILAR PREPOSITIONS ON SUPERPOSITION

This analysis has revealed the relation of the preposition *vrz/vārhu* to some semantically close prepositions. Our starting premise is that spatial prepositions mark meaning distinctions in a stable conceptual domain and that their meanings are determined in relation to the other prepositions with which they share this domain (Tyler & Evans 2003, 108). Therefore, on the one hand the meaning of a preposition depends on the scope of similar spatial prepositions and, on the other, on specific functional implications evoked by prepositions that give each of them a characteristic nuance.

TABLE 2: Component features of the preposition *vrz* in relation to its similar prepositions

	VRZ	NA	PO, PREKU/PREZ	NAD
contact	+	+	+	+/-
pressure	+	+		
affectedness	+	+		
support	+	+		
spreading	+		+	
covering	+		+	+
layering	+		+	+
overhanging	+			+

Table 2 shows the specific features characteristic for the prepositions *vrz/vārhu*, *na*, *preku/prez*, *po*, and *nad* in the spatial domain expressing a position of a TR on the upper surface of a LM. It is obvious that not all functional components are shared by all prepositions, the contact component being the only common one. Apart from contact, the preposition *vrz/vārhu* shares with *na* the components of pressure, affectedness, and support; it is connected to *preku/prez*, *po* through spreading, covering, and layering, and to *nad* through covering, layering, and overhanging.

Such overlap of features indicates that the domains of these prepositions share a common semantic field, which explains their interchangeability in particular contexts. Figure 2 represents the functional domains of *vrz/vārhu* and the competing prepositions. In contexts in which a particular functional component is prominent, the use of *vrz/vārhu* is compatible with the preposition that has the same property. However, although these prepositions contain the same features in their semantic structure, each preposition displays a different hierarchy of these features. Usually, the dominant feature of a particular preposition distinguishes it from other semantically close prepositions. Thus the meaning of “attached superposition” of *vrz/vārhu* can also be coded by *na*, but the features of pressure, affectedness, and support do not have the same significance in both: whereas *vrz/vārhu* underscores pressure and affectedness, the dominant feature for *na* is support, cf. examples (39) and (40). In the meaning of “spread over some surface, covering,” *vrz/vārhu* shares a domain with *po* and *preku/prez*, but the central feature for the latter is “spreading,” whereas for the corresponding meaning of *vrz/vārhu* it is “covering”, cf. examples (54) and (55). The same function can be expressed by the preposition *nad*, but for this preposition “overhanging” (created by the topology of detached superposition) is the central feature (61).

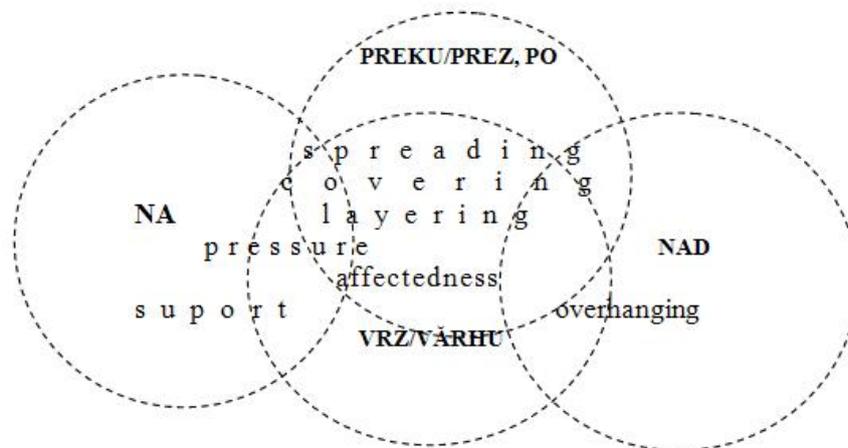


FIGURE 2: The scope of the preposition *vrz* in relation to similar prepositions

Similar overlaps are typical of non-spatial meanings. Abstract affectedness and/or control over a LM may be expressed by *na*; compare examples (39)–(43). The functional meaning “overhanging” in *vrz* that has derived from “focusing” attention (e.g., with the verb *raboti* ‘work’) may be coded by *nad* and *na*, but *vrz* implies greater directionality, hence involvement. *Vrz/vārhu* shares the functional domain of covering with *po*, *preku/prez*, and *na*, but *na* does not imply total spreading (all over the surface), as do *preku/prez* and *po*. Only *vrz/vārhu* has developed the “recursiveness” sense derived from “layering.”

The meaning of *support* is more central to spatial *na* than it is for *vrz/vārhu*, but *vrz* is more often used for moral support (*se potpiram vrz tebe* ‘I rely on you’ vs. *se potpiram na tebe* ‘I lean on you’). Examples (65)–(67) demonstrate how these prepositions are mutually interchangeable in some contexts, which indicates considerable overlap of their functional zones. Semantic and pragmatic factors such as the nature of participants and the type of activity the participants are involved in determine the choice of the suitable preposition for a particular situation.

- (65) Ja staviv knjigata **na** masata. (\**nad*, \**vrz*, \**preku*) (M)  
‘I put the book **on** the table.’
- (66) Go rasposlav čaršavot **na** masata. (\**nad*, ?*vrz*, *preku*) (M)  
‘I spread the tablecloth **on** the table.’
- (67) Ja staviv rakata **na** očite. (?*nad*, *vrz*, *preku*) (M)  
‘I put my hand **over** my eyes.’

To support the results presented in our analysis, it would be helpful to conduct a statistical investigation of the relationship of *vrz/vārhu* with other rival prepositions. The comparison of frequency of prepositions in different syntactic constructions should help reveal the factors influencing the choice of a particular preposition. Given that a rigorous statistical analysis was beyond the scope of this article, the findings of our analysis may serve as a foundation for future statistically based investigations.

#### [4] CONCLUDING REMARKS

In the above cognitive-based analysis of the prepositions *vrz* and *vārhu*, we have established the role of the functional element “affectedness” in the meaning of this spatial category. With the verticality dimension as part of this configuration, the category profiles not only a topological relation of attachment, but implies direction and impact. We adopt the view (held by other authors cited in this article) that spatial relations coded in prepositions are primary and that “[t]he functional element arises as a consequence of our daily interaction with the spatial configuration associated with the particular preposition” (Tyler & Evans 2004). Thus we assume that affectedness is a byproduct of directional movement in a force-dynamic pattern triggered by the frequent occurrence of these prepositions with a certain type of verbs. Affectedness has become their distinguishing feature, especially in the case of *vrz*. We argue that this preposition contains a functional component in all senses, which vary from “prominence” through “impact” to “covering.” Although “affectedness” prevails in the second sense, which is the most frequent and productive, it is also felt in the other two senses. All of these functional components trigger the creation of numerous extensions in the abstract domain. Furthermore, we have tried to uncover the interaction of the affectedness component and the superposition component in the conceptual structure of these prepositions. The analysis has led to the conclusion that dimensionality and contextual factors influence the prevalence of one or another component and subsequently determine the degree of affectedness.

The analysis has also focused on the polysemy of the prepositions *vrz/vārhu*. We have determined the meanings of these prepositions by positing the existence of dynamic and static pattern in their configurations, outlined in Section [2.11]. This enabled us to find associative links between different, seemingly unrelated meanings and demonstrate the structural character of the system lexicalized by these prepositions.

Finally, we have conducted two types of contrastive analysis: between the prepositions *vrz* and *vārhu* and between *vrz/vārhu* and the other prepositions of attached superposition. Whereas the aim of the first comparison was to delineate the functional zone of *vrz* versus *vārhu*, in the second comparison we isolated the

functional features that set *vrz/vārhu* apart from other semantically close prepositions.

## REFERENCES

- Andrejčin, L., L. Georgiev, S. Ilčev, I. Kostov, I. Lekov, S. Stojkov & C. Todorov. 1963. *Bălgarski tălkoven rečnik*. Sofia: Nauka i izkustvo.
- Beavers, J. 2002. Prepositions in UK Monolingual Learners' Dictionaries: Expanding on Lindstromberg's Problems and Solutions. *Applied Linguistics* 23(1). 34–140.
- Beavers, J. 2011. On Affectedness. *Natural Language and Linguistic Theory* 29. 335–370.
- Brala, M. 2005. Crosslinguistic diversities and cognitive universals in the semantic domain of superposition. In J. Granić (ed.), *Semantika prirodnog jezika i metajezik semantike*, 89–100. Zagreb: Hrvatsko društvo za primijenjenu lingvistiku.
- Coventry, K. R. 1998. Spatial Prepositions, Functional Relations, and Lexical Specifications. In P. Oliver & K. P. Gapp (eds.), *Representation and Processing of Spatial Relations*, 247–262. Mahwah, NJ: Lawrence Erlbaum.
- Coventry, K. R. 2003. Spatial Prepositions, Spatial Templates and “Semantic” versus “Pragmatic” Visual Representations. In E. Van der Zee & J. Slack (eds.), *Representing Direction in Language and Space*, 255–267. Oxford: Oxford University Press.
- Coventry, K. R. & S. C. Garrod. 2004. *Saying, Seeing and Acting: The Psychological Semantics of Spatial Prepositions*. Hove: Psychology Press.
- Dąbrowska, E. 1997. *Cognitive Semantics and the Polish Dative*. Berlin: Mouton de Gruyter.
- Navarro i Ferrando, I. 2001. Is Function Part of the Literal Meaning of English Prepositions? In L. Šarić & D. F. Reindl (eds.), *On Prepositions*, 36–62. Oldenburg: Bibliotheks und Informationssystem der Universität Oldenburg.
- Janda, L. A. 1993. *A Geography of Case Semantics: The Czech Dative and the Russian Instrumental*. Berlin: Mouton de Gruyter.
- Johnson, M. 1987. *The Body in the Mind: The Bodily Basis of Meaning, Imagination and Reason*. Chicago: University of Chicago Press.
- Koneski, K. (ed.). 2003. *Tolkoven rečnik na makedonskiot jazik*, vol. 2. Skopje: IMJ.

- Langacker, R. W. 2008. *Cognitive Grammar: A Basic Introduction*. Oxford: Oxford University Press.
- Lindstromberg, S. 1997. *English Prepositions Explained*. Amsterdam: John Benjamins.
- Mitkovska, L. 2007. Why Double Marking in the Macedonian *Dativus Sympatheticus*. In D. Divjak & A. Kochańska (eds.), *Cognitive Paths into the Slavic Domain*, 55–79. Berlin: Mouton de Gruyter.
- Mitkovska, L. & E. Bužarovska. 2012. The Preposition and Prefix *Nad* in South Slavic with Emphasis on Macedonian. *Jezikoslovlje* 13(1). 107–150.
- Murgoski, Z. 2005. *Rečnik na makedonskiot jazik*. Skopje: Murgoski.
- Pašov, P. 2002. *Balgarska gramatika*. Plovdiv: Hermes.
- Šarić, L. 2008. *Spatial Concepts in Slavic. A Cognitive Linguistic Study of Prepositions and Cases*. Wiesbaden: Harrassowitz.
- Skok, P. 1973. *Etimologijski rječnik hrvatskoga ili srpskoga jezika. Knjiga treća*. Zagreb: JAZU.
- Talmy, L. 2000. *Towards a Cognitive Semantics II: Typology and Process in Concept Structuring*. Cambridge, MA: MIT Press.
- Taylor, J. R. 2002. *Cognitive Grammar*. Oxford: Oxford University Press.
- Tyler, A. & V. Evans. 2001. Recognizing Prepositional Polysemy Networks: The Case of *Over*. *Language* 77(4). 724–776.
- Tyler, A. & V. Evans. 2003. *The Semantics of English Prepositions: Spatial Scenes, Embodied Meaning and Cognition*. Cambridge: Cambridge University Press.
- Tyler, A. & V. Evans. 2004. Rethinking English “Prepositions of Movement”: The Case of *To* and *Through*. *Belgian Journal of Linguistics* 18(1). 247–270.
- Van Valin, R. D. Jr. 2002. Semantic Macroroles in Role and Reference Grammar. <http://linguistics.buffalo.edu/people/faculty/vanvalin/rrg.html>.

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# MANNER OF MOTION, EVALUATIVE AND PLURACTIONAL MORPHOLOGY

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## ABSTRACT

Several works inspired by Talmy's typology provided a very complete survey and description of various kinds of linguistic elements and strategies across languages for expressing two basic components of motion events: path and manner. This research has mainly focused on lexical and syntactic means of expressing path and manner and how these elements are combined in a single clause. Morphological means are mentioned when talking about encoding the path of motion but hardly ever when studying the expression of manner. This article shows that some languages widely use many affixational and non-affixational processes of "evaluative" and "pluractional" morphology to express manner (e.g., Serbian *leteti* 'to fly' > *letuckati* 'to flutter', Zoque *wit* 'to walk' > *witwitnay* 'to walk aimlessly'). This research mainly focuses on data from Serbian, but also offers a comparative perspective to highlight the widespread use of such morphological means in encoding manner. It pays particular attention to the role of morphology in the linguistic expression of manner in the semantic domain of motion.

## [1] INTRODUCTION

Many theoretical and experimental studies have been carried out in recent decades on the expression of motion events across languages. The main impulse that motivated these studies came from the well-known Talmy's typology contrasting "Satellite framed" and "Verb framed languages"; see (Talmy 1975, 1983, 1985, 2000). By distinguishing a very small set of lexicalization patterns in the domain of motion verbs, this typology provides very powerful tools for exploring the relationship between language and cognition. It particularly brought to the fore various kinds of elements involved in expressing some basic components of motion events (e.g., path, manner, figure, ground, etc.) at both the syntactic and lexical levels. This article shows the importance of the morphological encoding of manner in the verbal domain from a cross-linguistic perspective.

The article is structured as follows: Section [2] briefly recalls the main assumptions of Talmy's typology. Section [3] presents various kinds of elements available across languages for expressing manner, with an emphasis on morphological elements. The fourth section is about "evaluative morphology" and "plu-

rationality”, which are currently the two main approaches to the study of verbs constructing the meaning of manner at the morphological level. The fifth section is a case study of Serbian derivative verbs involved in the morphological marking of manner. This section also presents some contrastive and more general typological considerations on manner, motion, and evaluative morphology. The last part concludes the study by summing up the main theoretical and analytical results, and suggests some open questions and directions for further research.

[2] TALMY’S TYPOLOGY: AN OVERVIEW

Talmy’s typology, which contrasts Verb framed and Satellite framed languages, is based on how two crucial semantic components of motion/location descriptions—path and manner—are encoded across languages. In Verb framed languages (VfLs; e.g., French, (1), Turkish, Japanese, Basque, and Hebrew), the “path of motion” is characteristically encoded by the verb so that the manner generally appears as optional information expressed by marginal adverbial elements. In Satellite framed languages (SfLs; e.g., English, (2), Slavic, Dutch, Finnish, and Hungarian), the path component is preferably encoded by various particles or “satellites” associated with the verb, such as prepositions, prefixes, postpositions, and so on, which makes it possible to express manner in the verb itself:

- (1) Jean **est entré** dans la maison en courant. (French, VfL)  
 ‘John entered the house running.’
- (2) John ran **into** the house. (English, SfL)

Scholars inspired by this typology have pointed to a wide variety of options for encoding each major semantic component of directed motion events. If path is encoded in the verb, and depending on more general language-specific lexical, syntactic, and morphological devices, manner may be expressed by:

- Adverbs (e.g., English)
- PPs (e.g., French)
- Gerunds (e.g., Spanish)
- Subordinate clauses (e.g., French)
- Ideophones<sup>1</sup> (e.g., Japanese; cf. (Wienold 1995))
- Verbs, if the language has serial verbs or compound verbs (e.g., Thai), and so on.

[1] Ideophones could be defined as onomatopoeic adverb formations that imitate sound or shape. These expressions are widely used in many African and Australian languages, as well as in, for example, Japanese, Korean, and Thai.

If manner is encoded in the verb, and depending on more general language-specific lexical, syntactic, and morphological markers, path can be expressed by:

- Adpositions (prepositions, postpositions, particles, etc.; e.g., English)
- Affixes (e.g., Slavic)
- Applicatives (e.g., Tswana)
- Semantic cases (e.g., Finnish)
- *Until*-markers (e.g., Japanese)
- Verbs, if the language has serial verbs or compound verbs (e.g., Thai), and so on.

This diversity of devices for encoding path and manner, as well as the fact that many languages present mixed typological profiles, call Talmy's two-way typology into question, but I do not address this issue here; see (Talmy 2000); (Slobin 1987, 1996, 2004); (Strömquist & Verhoevent 2004); (Beavers et al. 2010); (Filipovic 2007); (Zlatev & Yangklang 2004). Most of that research has focused on lexical and syntactic elements and how they are combined in a single clause. Interestingly, morphological means are mentioned when talking about encoding the path but hardly ever when talking about expressing the manner of motion; see, however, (Foley & Valin 1984); (Comrie 1985); (Levin 2009); (Eberhard 2009). Regardless of the descriptive or theoretical benefits of Talmy's typology, it does not take these kinds of linguistic elements into account. In more general terms, no studies have systematically investigated the morphological encoding of either manner of motion or manner in general.

I argue that many affixational and non-affixational processes of "evaluative" and "pluractional" morphology must be taken into account when studying cross-linguistic diversity in the expression of manner, as shown in (3):

- (3) *trčati* 'to run' / *trčkarati* 'to run around, to run slowly'  
*skakati* 'to jump' / *skakutati* 'to hop (around)'  
*skitati* 'to wander' / *proskitati* 'to wander around a bit' (Serbian)  
*marcher* 'to walk' / *marchotter* 'to walk with difficulty, to walk  
taking small steps, to walk unsteadily'  
*sauter* 'to jump' / *sautiller* 'to hop (around)' (French)  
*wit* 'to walk' / *witwitnay* 'to walk aimlessly' (reduplication) (Zoque<sup>2</sup>)

[2] The Zoque languages are spoken in Southern Mexico.

As seen in these examples, *trčkarati* refers to a very specific way of running, *marčotter* a very specific way of walking, and so on. These kinds of means can play a very important role in expressing manner of motion, particularly in languages with rich evaluative morphology. Moreover, if “the wide variation in motion event encoding falls out from general constraints on how manner and path may be encoded in language” (Beavers et al. 2010, 370), in some languages morphology may considerably contribute to the expression of manner in all semantic domains.

[3] MANNER BEYOND LEXICON AND SYNTAX (STOSIC 2011)

Stosic (2011) showed that the study of manner must be based on a multilevel approach because it can be expressed by at least five means: syntactic, lexical, morphological, grammatical, and suprasegmental. Accordingly, the term “syntactic manner” is used for expression at the syntactic level, “lexical manner” for expression at the lexical level, and so on. The following subsections briefly present all five types of encoding manner.

[3.1] *Syntactic Manner*

Languages use many kinds of syntactic units and constructions to express manner. In most languages, different types of syntactic constituents “manner adjuncts” or “manner adverbials”) are combined with verbs, adjectives, or other adverbs to indicate a specific way that a process, state, or quality is realized; for example, in Serbian:

- |     |   |                                 |
|-----|---|---------------------------------|
| (4) | Hodao je veoma <b>brzo</b> .              | (Adverbs)                       |
|     | ‘He was walking very quickly.’            |                                 |
| (5) | Bila je nekako <b>čudno</b> mirna.        |                                 |
|     | ‘She was somehow strangely quiet.’        |                                 |
| (6) | Trčao je <b>s neverovatnom lakoćom</b> .  | (Prepositional phrases)         |
|     | ‘He was running with unbelievable ease.’  |                                 |
| (7) | Ptice su letele <b>kao slepi miševi</b> . | (Subordinate clauses)           |
|     | ‘The birds were flying like bats.’        |                                 |
| (8) | Sve vreme je govorio <b>zamuckujući</b> . | (Gerunds / present participles) |
|     | ‘He talked stuttering all the time.’      |                                 |
| (9) | Odgovorio je <b>pognute glave</b> .       | (Genitive constructions)        |
|     | ‘He answered with his head bowed down.’   |                                 |

This list is not exhaustive: there are many other types of manner adjuncts and structures across languages. These manner expressions have been extensively studied over the last few decades; see (Hasselgård 2010); (Molinier & Lévrier 2000); (Lang et al. 2003), among many others.

[3.2] *Lexical Manner*

In addition to syntactic means of expressing manner, all languages have a very large lexicon of verbs, simple adverbs, nouns, ideophones, and so on whose meaning involves a manner component.

- (10) *to fly, to walk, to run, to sneak, to hop, to jump, to limp, etc.* (English verbs)  
*fast, hard, well, etc.* (adverbs)  
*manner, way, method, style, approach, etc.* (nouns)

Lexicalization of manner has been studied from many different approaches in lexical semantics, particularly in the verbal domain.

First, there is very extensive research on “Lexical Conceptual Structure” and similar notions (see (Levin & Hovav 2005; Levin 2009); (Levin & Hovav 2011); (Hovav & Levin 1998); (Jackendoff 1983, 1990); (Hale & Keyser 2002)) that all involve some type of predicate decomposition and are designed to capture facets of meaning that determine the grammatical behavior of the verb. In these lexical decomposition approaches, manner is one of basic semantic components that structures both linguistic knowledge and cognition (for an overview, see (Levin & Hovav 2011)).

Second, several linguistic and psycholinguistic studies based on Talmy’s typology (see (Talmy 2000); (Berman & Slobin 1994); (Slobin 1987, 1996, 2004); (Bowerman 1996); (Hickmann & Robert 2006); (Strömquist & Verhoevent 2004); (Beavers et al. 2010); (Filipovic 2002); (Zlatev & Yangklang 2004)) have led scholars to make and compare inventories of manner of motion verbs in many languages. This has shown that SFLs (Serbian, English, German) generally have a very large vocabulary of manner of motion verbs. Given the availability of the verb for encoding manner (path being expressed by satellites), manner is linguistically and cognitively much more salient in SFLs than in VFLs; see (Slobin 2003, 2006).

Finally, Miller and Fellbaum, who developed the *WordNet* lexical database (Fellbaum 1998), proposed a third approach to the lexicalization of manner in verbs (Fellbaum & Miller 1990); (Miller & Fellbaum 1992); (Fellbaum 2002). The objective is to establish lexical relations that structure the lexicon by carving it up into semantically coherent sub-wholes. English verbs are mainly organized in terms of troponymy, which is a hierarchical “manner” relation: “most lexicalized verb concepts refer to an action or event that constitutes a manner elaboration of another activity or event” (Miller & Fellbaum 1992, 217). Thus, troponymy links verbs like *to walk, to run, to jump, to fly* to the basic motion verb *to move*. According to Fellbaum (2002, 24), “the subordinate concept contains the superordinate, but adds some additional semantic specification of its own”:

- (11) *to move*: ← T → *to walk* ← T → *to stumble* (English)  
*to walk*: ‘move at a regular pace by lifting and setting down each foot in

turn'  
to *stumble*: 'walk unsteadily' (*WordReference*)

The originality of this approach is that it is not limited to the motion domain and it shows the widespread lexicalization of manner in all semantic domains.

These various studies in lexical semantics have shown the importance of lexical encoding of manner across languages.

### [3.3] *Morphological Manner (MM)*

In many languages different morphological processes form manner adverbs, as shown in (12)–(13):

- (12) *brief-ly, wrong-ly, slow-ly, frog-wise, prayer-wise, etc.* (English)
- (13) *tim-e-tim-e* 'secretly, in hiding', *jem'-jem* 'regularly, repeatedly, often', *gung-ga-rang* 'aimlessly, of roaming about', (*Burling 2003*, 264–265) (Garo<sup>3</sup>)

Regarding the verbal domain, although morphological means of expressing manner are rarely discussed in the literature, there are a few mentions of such means. Thus, *Foley & Valin (1984, 39–47)* report some data from Lakhota<sup>4</sup> with many prefixes (e.g., *ya-*, *na-*) that describe the way some actions happen; combined with verb stems, these prefixes form verbs expressing manner:

- (14) *ya-* 'with the mouth'  
*na-* 'with the foot or leg'  
*ka-* 'by a sudden impact', etc. (Lakhota)
- (15) *ya-blečha* 'break or cut with the teeth'  
*na-blečha* 'break by kicking or stepping on', etc. (Lakhota)  
(cf. also *Levin 2009*)

Further, *Comrie (1985, 344)* explicitly claims that: "derivative verbs exist in many languages to indicate the manner in which an event occurs". He gives some examples from Zulu<sup>5</sup>, in which manner verbs formed with the suffix *-isisa* indicate "that an action is carried out with force, with greater than expected intensity":

- (16) *buza* 'to ask' > *buz-isisa* 'to ask insistently'  
*thanda* 'to love' > *thand-isisa* 'to love exceedingly' (Zulu)

[3] Garo is spoken in Bangladesh.

[4] Lakhota is spoken in North Dakota, South Dakota, North Nebraska, South Minnesota, Northeast Montana, and in Canada.

[5] Zulu (about ten million speakers) is spoken in South Africa.

Comrie (1985) also mentions that such manner derivatives may indicate attenuative meaning. In Russian, for example, this meaning arises with the prefix *pri-*, and in Zulu through reduplication, as shown in (17):

- (17) *nažat* ‘to press’ > *pri-nažat* ‘to press lightly’ (Russian)  
*ndiza* ‘to fly’ > *ndizandiza* ‘to fly a little’ (Zulu)

Furthermore, Comrie includes in manner derivatives many aspectuals expressing actions that occur very quickly, for a short time, or for a long time, which are repeated at intervals or iterated, and so on. Such meanings can be expressed by either affixation or reduplication, as in the following Russian examples:

- (18) *stojat* ‘to stand’ > *po-stojat* ‘to stand for a short time’  
*kašljat* ‘to cough’ > *kašlj-anu-t* ‘to give a cough’ (a momentary event)  
 (Russian)

Finally, (Amiot & Stosic 2011) and (Stosic & Amiot 2011) showed that French verbal derivatives such as *sautiller* ‘to hop (around)’ (< *sauter* ‘to jump’), *boitiller* ‘to limp slightly’ (< *boiter* ‘to limp’), *voleter* ‘to flutter’ (< *voler* ‘to fly’), and *marchotter* ‘to walk with difficulty / taking small steps / unsteadily’ (< *marcher* ‘to walk’) all express a specific way of performing the action indicated by the verb stem. All of them are formed by a particular kind of suffixation belonging to “evaluative morphology” (see Section [4.1] below).

Even though these types of manner expressions are scarcely ever mentioned in the literature on motion, the meanings that they construct are regularly taken into account when languages code them at the lexical or syntactic level. In the following examples, there is no plausible reason to consider only the expressions that occur in a) as encoding manner but not those in b), which all convey a specific manner of motion:

- (19) a. English *to hop (around)*  
 b. Serbian *skakutati*; French *sautiller*; Italian *balzellare* ‘to hop (around)’
- (20) a. English *to flutter (about)*  
 b. Serbian *letuckati*; French *voleter*; Italian *volacchiare* ‘to flutter (about)’
- (21) a. English *to trudge (along)*; Japanese *tobotobo aruku*; French *marcher péniblement/d’un pas lourd*  
 b. Hebrew *dišdeš*; Serbian *hoduckati* ‘to trudge (along)’

The same conceptual content is rendered by different kinds of linguistic elements: lexical or syntactic ones in a) and morphological ones in b) (by reduplication in Hebrew, and by affixation in French, Italian, and Serbian). Definitions in monolingual dictionaries are also very explicit about the presence of the manner ‘com-

ponent' in such derivatives; the French verb *marchotter* (< *marcher* 'to walk') is defined as 'to walk with difficulty, to walk taking small steps, to walk unsteadily' (TLFi). Thus, in the verbal domain, a number of manner concepts are widely expressed by different morphological means.

#### [3.4] Grammatical Manner

Languages generally possess a small set of grammatical items referring to a few basic conceptual categories such as PERSON, OBJECT, ACTIVITY, SPACE, TIME, QUALITY, and MANNER. Manner is one of the few basic domains of conceptualization that are crucial for structuring experience, cf. (Jackendoff 1983); (Heine et al. 1991); (Haspelmath 1997). In the majority of languages it may also be expressed by interrogative and indefinite adverbs or pronouns. Very often, these expressions are monomorphemic, but not always.

- (22) *how?, anyway, anyhow, someway, somehow, no way* (English)  
*kako? 'how?', nekako 'somehow', nikako 'in no way', ikako 'in any way', on-*  
*ako 'in that way', ovako 'in this way', svakako 'anyhow', tako 'this way'*  
 (Serbian)

#### [3.5] Suprasegmental Manner

The use of pitch and prosodic phenomena to encode manner is very frequent in some languages, in which the kind and position of the pitch distinguish meaning. In such languages, manner adverbials can be marked by a change in quality or quantity. For example, in Serbian, which has four "pitch accents" involving rising or falling pitch on long or short vowels, in some cases two different accents distinguish adjectives from cognate manner adverbs, as in (23)–(24):

- (23) *Mâlō se pomerilo.* (long falling tone = adjective) = *Nešto mālō se pomerilo.*  
 'Something little moved'
- (24) *Màlo se pomerilo.* (short falling tone = adverb) = *Nešto se mào pomerilo.*  
 '(Something) moved a little'

This opposition is not a systematic one in Serbian.

According to Patri (1998, 153), in Diyari, spoken in Australia, inserting a prosodic break after an adjective integrated in the subject NP turns it into a manner adverb:

- (25) *nawu-ja ŋanti tuŋka pani-ji*  
 Pr-3p.sg N-meat Adj-rotten V-smell-3p.sg.pres  
 'this rotten meat smells'
- (26) *nawu-ja ŋanti | tuŋka pani-ji*  
 Pr-3p.sg N-meat Adv-MAN.rotten V-smell-3p.sg.pres

‘this meat smells rotten’

In both Serbian and Diyari, elaboration of the manner component in discourse is obtained by using prosodic elements in speech.

To sum up, an onomasiological approach to the linguistic expression of manner is needed because of its considerable complexity and the variability of encoding strategies across languages. Languages differ greatly in how they make use of each of the five types of manner pointed out in this section. English, for instance, is known for its ability to encode a large variety of manner meanings at the lexical level, cf. (Fellbaum 1998). For example, English verbs expressing crying distinguish among *cry*, *weep*, *sob*, *blubber*, *whimper*, *pule*, and *mewl*, whereas Japanese simply has *naku* ‘to cry’. In order to express the same distinctions, Japanese must combine at the syntactic level its only neutral verb for crying with ideophones obtained by partial or complete reduplication (see (Wienold 1995, 319–323):

*Table 7. Japanese ideophones for ‘crying’ (Kindaichi 1988 I, 191)*

cry	waawaa	naku
weep	mesomeso	naku
sob	kusunkusun	naku
blubber	oioi	naku
whimper	shikushiku	naku
pule	hihii	naku
mewl	yowayowashiku	naku

FIGURE 1: From (Wienold 1995, 320)

English is not without evaluative suffixation or reduplication (e.g., *to zigzag*), but it only infrequently uses these to express manner of motion.

Regarding the expression of manner at the morphological level, many works mention this possibility but no systematic study has been conducted on this topic; see, however, (Stosic & Amiot 2011).

[4] FROM EVALUATIVE MORPHOLOGY AND PLURACTIONALITY TO MANNER

This section assesses the possible role of morphological manner in the expression of motion. The study mainly includes relevant data from Serbian, but I also offer a comparative view to highlight the widespread use of such morphological means in encoding manner. Two main research directions have focused on this type of linguistic element: evaluative morphology and a broad field of research on pluractionality.

[4.1] *Evaluative morphology*

Evaluative morphology is a subfield of derivational morphology that forms lexemes expressing some deviation from the “norm” or “standard” fixed by the base. More precisely, lexical items and constructions are traditionally considered to be evaluative if they carry values such as BIG, SMALL, GOOD, and BAD, that is diminution, augmentation, endearment, contempt, and so on: *booklet*,  *aunty*,  *doggy*,  *sweetie*,  *weakling*; see (Scalise 1986); (Stump 1993); (Dressler & Merlini-Barbaresi 1994); (Mel’čuk 1994); (Grandi 2002, 2009); (Fradin 2003); (Grandi & Montermini 2005); (Fradin & Montermini 2009). Grandi defines evaluation in the following way:

In short, a construction can be defined as evaluative if it satisfies two conditions, one relating to semantics and the other to the formal level. The first condition indicates that a linguistic construction can be defined as evaluative if it has the function of assigning a value, which is different from that of the “standard” (within the semantic scale which it is part of), to a concept. This value is assigned without resorting to any parameters of reference external to the concept itself. The second condition indicates that an evaluative construction must include at least the explicit expression of the standard (by means of a linguistic form which is lexically autonomous and is recognised by the speakers of the language as an actual word) and an evaluative mark (a linguistic element that expresses at least one of the semantic values traditionally classed as evaluative: BIG, SMALL, GOOD, BAD). (Grandi 2009, 46)

Commonly called diminutives, these expressions are often considered as belonging to expressive language because their use is always based on the speaker’s qualitative or quantitative appreciation of what he is talking about. As such, evaluative morphology (or subjective morphology) is usually opposed to conceptual morphology, which is much more objective/realistic (e.g., *run* > *runner*, *form* > *formation*, *bad* > *badly*, etc.). Across languages, several morphological processes are used in forming evaluatives: affixation, reduplication, apophony, and so on, as observable in (27):

- (27) *pevati* ‘to sing’ / *pevušiti* ‘to hum’ (Serbian affixation)  
*nam* ‘to sleep’ / *nimnem* ‘to dose, to take a nap’ (Hebrew reduplication)  
*loqu* ‘to play/sing’ / *loequ* ‘to play/sing repeatedly’ (Chechen apophony)

Note that some (less inflecting and/or more analytic) languages construct evaluative meanings at the syntactic level:

- (28) a little boy (English)  
 Donne-moi ta petite main!

'Give me your little hand'	(French)
oioi naku	(Japanese)
'to blubber'	

Evaluative morphology rules are characterized by several properties, which have been the topic of many discussions in the literature; see (Scalise 1986, 132 ff.); (Stump 1993); (Dressler & Merlini-Barbaresi 1994); (Bauer 1997); (Grandi 2009); (Fradin & Montermini 2009). The most important of these rules are:

a) They express some deviation from the "norm" or "standard" fixed by the semantics of the base:

- (29) *pevati* 'to sing' vs. *pevušiti* 'to hum, to sing sotto voce' (Serbian)

In some cases, this deviation can be purely pragmatic because nothing really changes in the event processing at the referential level (e.g., when talking about infants or in the presence of babies and children). This is what (Bauer 1997, 560) calls "strong 'expressive' pragmatic effect" and what leads Savickiene et al. (2007, 85) to argue that diminutives have two basic meanings, the semantic meaning of smallness and a pragmatic meaning indicating endearment, sympathy, empathy, pleasure, and irony.

b) They allow consecutive application:

- (30) *inja* 'dog', *injana* 'little dog', *injanyana* 'very little dog' (Zulu)  
(Stump 1993, 4)  
*soba* 'room', *sobica* 'little/small room', *sobičak* 'very small room' (Serbian)

c) They do not change the syntactic category of the base (homocategoriality):

- (31) V > V: *raditi* > *raduckati* 'to work half-heartedly' (Serbian)

d) They form paradigms so that in many cases they are substitutable:

- (32) *pevati* 'to sing' > *pevušiti*, *pevuckati*, *pevkati*, *pevuškati* (Serbian)

e) The same evaluative morpheme can take as input more than one category of the base:

- (33) (-et) N > N: *sac* 'bag' > *sachet* 'little bag'  
Adj > Adj: *gentil* 'kind' > *gentillet* 'sweetie, pleasant enough'  
V > V: *voler* 'to fly' > *voleter* 'to flutter' (French)

Most works dealing with evaluation have focused on nominal and adjectival evaluatives, whereas the verbal domain has not been sufficiently explored across languages; see (Greenberg 2010); (Grandi 2009); (Tovena & Kihm 2008); (Amiot & Stosic 2011, forthcoming); (Stosic & Amiot 2011). According to Grandi (2009), the

main reason for this lack is the relatively small cross-linguistic diffusion of verbal evaluatives compared to nominal ones. It is not excluded, however, that both formal and semantic complexities of verbal evaluatives act as a deterrent.

Although the term “evaluation”, as already indicated, allows the recognition of a particular type of morphology, in the verbal domain it does not plausibly explain what the deviation from the norm is actually due to. Where does the non-conformity in the realization of a process really come from? Which change in event processing can make one use evaluative verbs instead of their bases? Diminution in itself is not a satisfactory explanation because in many cases it is very difficult to determine which dimension of the action is reduced. Thus, traditional semantic values such as diminution or augmentation seem to be much more suitable for the nominal domain. For this reason, the complementary notion of pluractionality must be taken into account when describing these kinds of morphologically complex verbs.

#### [4.2] *Pluractionality*

Many works deal with the same type of phenomena without using the idea of evaluation.<sup>6</sup> This research, which explores the notion of pluractionality, draws a very interesting parallel between nominal and verbal plurality by making the hypothesis that certain verbs are capable of denoting sets of events in the same way that some nouns designate sets of objects (cf. (Newman 1980, 2012); (Laca 2006); (Cabredo & Laca 2012)). The term “pluractionality” thus indicates that “the event denoted by the verb is, in some sense, pluralized: repeated in time, distributed in various locations, holds of many participants, etc.” (Greenberg 2010, 119). Pluractionality has been widely studied in morphology, semantics, and typology, as well as in various works describing individual languages; see (Newman 1980, 1990); (Cusic 1981); (Yu 2003); (van Geenhoven 2005); (Laca 2004); (Wood 2007); (Greenberg 2010); (Tovena & Kihm 2008). From a semantic point of view, Cusic’s dissertation (Cusic 1981) provides one of the most systematic explanations of the wide range of readings associated with pluractional markers. I therefore follow that analysis in this article.

First of all, it is important to distinguish between *event-internal pluractionality* and *event-external pluractionality*. The former is observed “when a single event on a single occasion consists of internal phases” (e.g., *to nibble*), and the latter “when a single bounded event (internally plural or not) is repeated on a single occasion” or “when a single bounded event is repeated on different occasions” (e.g., *to nibble again, to call again and again*; (Cusic 1981, 67)). The following discussion only concerns *event-internal pluractionality*, which can lead to a large variety of semantic

[6] Tovena’s statement is very revealing of this fact: “A situation described by an event-internal pluractional verb is presented as modified with respect to a canonical one, which can be viewed as setting the standard or constituting the prototype.” (Tovena 2011, 51)

effects according to Cusic. Some of them, such as diminutive and augmentative readings, are shared among many works dealing with evaluative morphology and others are specific to the domain of pluractionality, such as “tentative,” “incassative,” and “conative” readings. A brief definition of these values will provide a better understanding of how they can be subsumed into a more general concept of manner.

Diminutive reading is observed when the event is reduced in some of its dimensions. Diminution can apply to the entire event, some of its subparts, any entity involved in the process, and so on. According to Cusic (1981, 81–82), “the repetition decreases the size or importance of the units of the action, as if to keep a constant overall quantity while increasing the number of parts.” Augmentative reading appears when “the amount of activity increases and possibly also the amount of ‘substance’ implied as being acted upon” ((Cusic 1981, 85); e.g., Serbian *trajati* ‘to last’ > *potrajati* ‘to take a while, longer than expected’). Tentative reading is available when “the action is performed half-heartedly or with less effort than expected” ((Cusic 1981, 82–83); e.g., Serbian *raditi* ‘to work’ > *raduckati* ‘to work without much enthusiasm, to work half-heartedly’). Incassative reading is assigned to situations with “a kind of repetitive plurality in which there is no attempt to do anything in particular, merely an aimless or undirected activity” ((Cusic 1981, 83–84); e.g., Serbian *trčati* ‘to run’ > *trčkarati* ‘to run around, to run here and there’). Finally, conative reading is obtained when a verb describes an action that “falls short of producing some desired result” ((Greenberg 2010); e.g., Serbian *hodati* ‘to walk’ > *hoduckati* ‘to walk with difficulty, to walk taking small steps, to walk unsteadily’).

Note that evaluation and pluractionality are two distinct phenomena that are not mutually exclusive and that only partially overlap. Although the same set of means or elements is often used to express both of them across languages (affixes, apophony, reduplication, etc.), each is quite autonomous. This means that there is evaluation without pluractionality (34) and that there exists pluractionality without evaluation (35)–(36):

- (34) *pomaziti* ‘to stroke’, *propržiti* ‘to fry a little’, *pevušiti* ‘to hum’ (Serbian)
- (35) **Poskakali su u vodu.** (plural subject obligatory)  
‘They jumped into the water one after the other.’ (Serbian)
- (36) **Poispremeštao je stolove/burad.** (plural or collective object obligatory)  
‘He moved all the tables/barrels.’ (Serbian)

There is overlap between evaluation and pluractionality in Serbian when derivatives obtained by some evaluative affixes express event internal pluractionality; see (Amiot & Stosic forthcoming). Thus, the verb *letuckati* ‘to flutter’ (< *leteti* ‘to fly’) conveys both the evaluative and pluractional meaning: the representation of

the action of flying does not match its canonical representation because there is “increase in frequency and decrease of one or more other dimensions” (Tovena 2011, 43). This irregularity or deviation from the norm, due to fragmentation (i.e., internal pluralization) of the action, is what semantically justifies the use of evaluative morphology to describe such situations in many languages. Henceforth, I use the term “evaluative-pluractional (E-P) verb/marker” to refer to elements at the intersection of the two sets of derivatives:

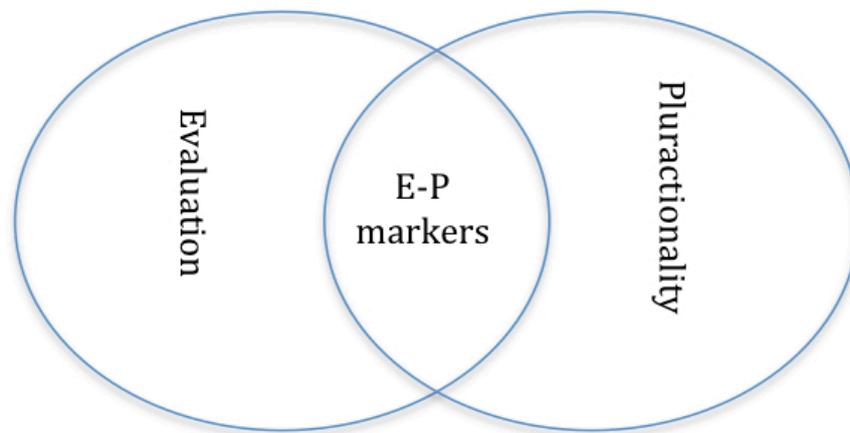


FIGURE 2: Evaluation and Pluractionality as partly overlapping phenomena

Thus evaluative and pluractional markers very often (but not always) suggest a substantial modification in the realization of events described by verb stems, especially in their internal structure; see, among others, (Cusic 1981); (Newman 1990); (van Geenhoven 2005); (Grandi 2009); (Greenberg 2010); (Tovena 2010, 2011); (Amiot & Stosic 2011). This is why a connection is regularly made with aspect; see (Cusic 1981); (Shluinsky 2009); (Cabredo & Laca 2012); (Amiot & Stosic 2011, forthcoming). Interestingly, even though some evaluative and pluractional verbs clearly encode a particular way in which the action described by the base happens, the phenomena that they express have never been related to manner. In (37), all of the Serbian derived motion verbs highlight some deviation from a prototypical way of running, jumping, hopping, and trotting:

- (37) *ska-kut-ati* ‘to hop (around), to skip along’  
*trč-kara-ti* ‘to run around, to run here and there’  
*hram-uck-ati* ‘to limp slightly’  
*kas-k-ati* ‘to trot around, to jog’

Example (37) suggests that the derived verb expresses a process of the same type as the process denoted by the base verb, albeit not totally identical (its intensity is weaker, the motion is “broken” or faltering, the object it bears upon is more limited, etc.). Because of this modification, signaled by the morphological marking, the action is conceived as being taken in a specific way, and hence as not being in conformity with its prototypical representation. As argued in (Stosic & Amiot 2011), this deviation from the norm—whatever values it is based on—is what generates the manner interpretation of morphologically complex verbs at issue.

What emerges from this survey of research on evaluation and pluractionality is, first, that a valuable description of these kinds of linguistic phenomena needs to combine the two approaches<sup>7</sup> and, second, that some evaluative and pluractional verbs must be considered as a possible strategy for expressing manner. The case study of Serbian in the following section further illustrates this descriptive and theoretical necessity.

#### [5] MORPHOLOGICAL ENCODING OF MANNER IN SERBIAN

Even though there is no explicit theoretical or methodological link between the approaches to manner discussed in the three previous sections, each of them contributed to inventorying various linguistic means for expressing manner and made it possible to study how morphology plays a role in its expression. In line with our previous research, whose originality lies in establishing a direct connection between evaluative and/or pluractional morphology and manner in the verbal domain (cf. (Stosic 2011); (Amiot & Stosic 2011); (Stosic & Amiot 2011)), this section addresses the extent to which morphological means of expressing manner can be used in languages and how much languages can differ from one another in their use of this encoding strategy. I first present a case study of Serbian data. I then introduce some contrastive considerations.

##### [5.1] *Evaluative verbs in Serbian*

Evaluative verbs in Serbian have been discussed in many works dealing with “diminutives”; see (Grickat 1955, 1995); (Žibreg 1982); (Babić 1986); (Ristić 1997); (Klajn 2003); (Veljković-Stanković 2007).<sup>8</sup> Some grammarians have also attempted to provide a consistent account of their formation and semantics; see (Stanojčić et al. 1989); (Barić et al. 1997); (Silić & Pranjković 2005). These studies have shown that evaluative verbs are mainly formed by means of suffixes, but that there are also a few prefixes capable of constructing evaluative and/or pluractional meanings.

[7] For more details about this methodological necessity, see (Stosic & Amiot 2010).

[8] Even though some of these studies deal with Serbo-Croatian or Croatian, they are highly relevant for describing evaluatives in Serbian.

Note that in Serbian, unlike most Indo-European languages, suffixes forming evaluative verbs are different from those used to form evaluative nouns or adjectives:<sup>9</sup>

TABLE 1: Evaluative suffixes in Serbian

PARTS OF SPEECH	SUFFIX
Noun	-ac, -ak, -arak, -erak, -eljak, -uljak, -ičak, -etak, -ce, -ance, -ašce, -ence, ešce, če, -inče, -iče, -ica, -čica, -ić, -čić, -ka, -ca, -ić-ak, -ič-ak, -ič-ica
Adjective	-kast, -ičast, -cki, -ešan, -ušan, -ašan, -ahan, -ačak, -unjav, -uškast, -uljast
Verb	-k-ati, -nu-ti, -uc-ati, -ck-ati, -uck-ati, -uk-ati, -ut-ati, -kara-ti, -ucnu-ti, -kari-ti, ak-ati, -uši-ti, -šk-ati, -ulji-ti, -ta-ti, -ušk-ati, -ik-ati, -as-ati, -at-ati, -ek-ati, -et-ati, -uknu-ti, -ket-ati, -olji-ti, -cnu-ti, -lji-ti, -ra-ti, -a-ti, -ota-ti

As seen in Table 1, there are about thirty verbal evaluative suffixes in Serbian. Some of them have many allomorphs and some can be analyzed into two morphemes, but that is not the issue here; see (Grickat 1955); (Klajn 2003).

Regarding prefixes, much less numerous than suffixes, Serbian uses the same units to form evaluative/pluractional verbs, and evaluative adjectives and adverbs. Table 2 shows this parallelism:<sup>10</sup>

TABLE 2: Evaluative prefixes in Serbian

PREFIX	VERB	ADJECTIVE	ADVERB
po-	<i>poigrati se</i> 'to play for a while'	<i>podebeo</i> 'rather stout'	<i>pomalo</i> 'a little bit, now and then'
na-	<i>načuti</i> 'to hear of vaguely'	<i>nagluv</i> 'hard-of-hearing'	
pri-	<i>pridržati</i> 'to hold for a while'	<i>priglup</i> 'rather stupid'	
pro-	<i>prolutati</i> 'to roam for a while'	<i>prohladan</i> 'rather cool'	

Previous research on evaluative verbs in Serbian has not measured how widespread they are in the lexicon. The most complete inventory can be found in (Žibreg 1982), who lists about 330 derivatives of this kind; see also (Klajn 2003).

[9] However, according to Grickat (1955), nominal and verbal evaluative suffixes are historically related:  
N: *devojka* 'girl' / *devojču-ra-k* 'little girl'  
V: *trčati* 'to run' / *trč-ka-ra-ti* 'to run around'.

[10] In this analysis, I do not take into account the prefixes *pre-* 'over, hyper' *nad-* 'over, super', and *pod-* 'under', expressing such evaluative meanings as TOO, TOO MUCH / NOT ENOUGH, e.g., *preceniti* 'overestimate', *preosetljiv* 'hypersensitive', *potceniti* 'underestimate', *pothranjen* 'underfed', *nadjačati* 'to overcome'; see (Amiot & Stosic forthcoming).

In order to establish how productive verbal evaluative morphology is, I took an inventory of verbs from the *Serbian Electronic Dictionary*, which has about 300,000 entries; see (Simić 2005). I extracted and analyzed 20,000 potential candidates formed by one of these suffixes or prefixes. This method, based on a large sample of lexicographic data, allowed me to identify around 1,570 evaluative verbs from all semantic domains. Some of them are exclusively formed by suffixation (about 600), some exclusively by prefixation (about 610), and the others combine suffixation and prefixation (about 360). As shown in Figure 3, all suffixes are not equally productive: in my sample, the suffixes *-k* and *-nu* are the most frequent and they form half of my corpus:

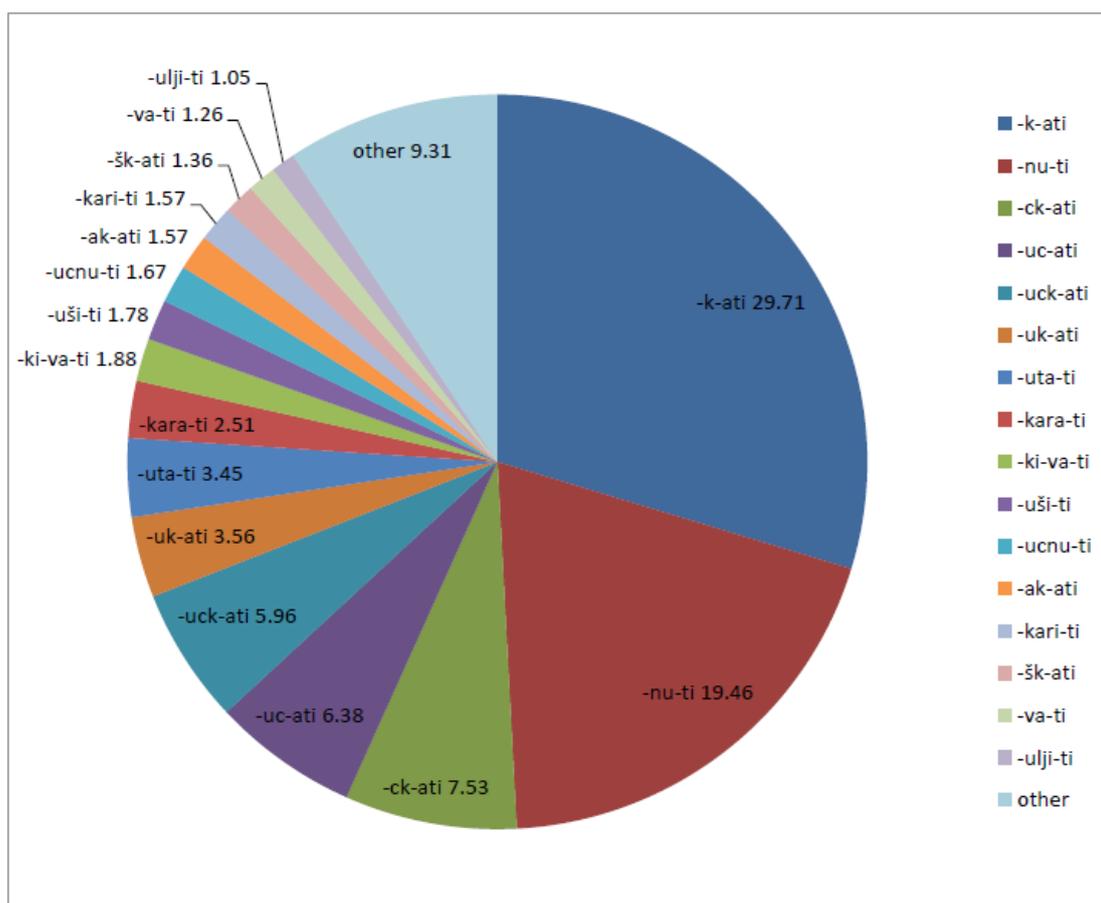


FIGURE 3: Productivity of Serbian evaluative suffixes (%)

The distribution of prefixes in the corpus is given in Figure 4 on the next page.

These prefixes deserve an in-depth study because of the variety of evaluative values that they can construct; some of them mostly convey diminution (such as *pro-*), others mainly express augmentation (e.g., *na-*), and many prefixes intricately combine evaluation and pluractionality (e.g., *po-*). Because my primary objective is to inventory evaluative verbal derivatives in Serbian, this article does

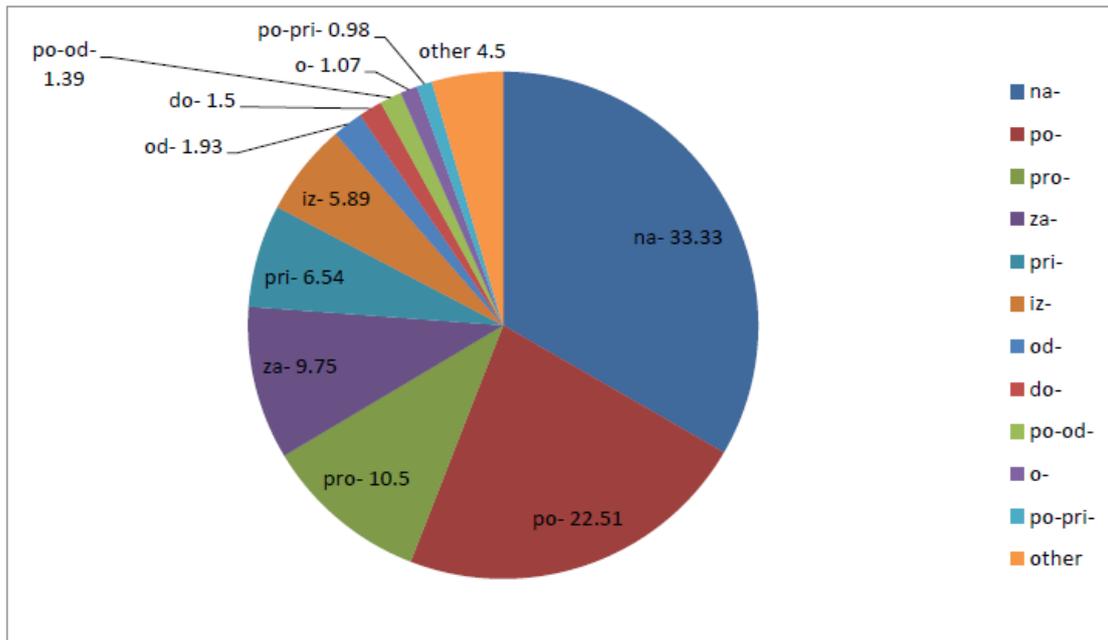


FIGURE 4: Prefixes forming evaluative verbs in Serbian (%)

not address possible semantic distinctions. It should be noted that in the verbal domain, among all these prefixes, only *na-*, *po-*, *pro-*, and *pri-* can convey evaluative meanings independently of suffixation.

Even though this inventory must be completed and refined (see footnote 10), it is clear that Serbian greatly exploits the morphological device for expressing manner, mainly through the formation of a large number of evaluative verbs, including those that convey event-internal pluractionality. The cross-linguistic evidence below further emphasizes the importance of this manner of encoding strategy in Serbian.

#### [5.2] *Contrastive considerations*

To better evaluate the potential role of morphological means in expressing manner, I first compare Serbian data, presented in the previous section, with French and Italian data. This choice is guided first by the fact that French and especially Italian are known for their very rich evaluative morphology (see (Grandi 2009, 61)), and second by the availability of studies collecting and presenting comparable data from these two languages (see (Grandi 2009) for Italian, (Amiot & Stosic 2011) for French). Moreover, as is the case with this analysis, those dealing with French and Italian are based on lexicographic material.

As shown in Table 3 on the facing page, compared to French and Italian, Serbian has a very high capacity to form and use evaluative affixation in the verbal domain.

TABLE 3: Evaluative derived verbs in French, Italian, and Serbian

LANGUAGE	VERBS #	SOURCE	CORPUS #	REFERENCE STUDY
Serbian	1,550	SED <sup>1</sup>	300,000	
Italian	300	GRADIT	270,000	Grandi (2009)
		DISC	185,000	
French	180	TLFi	100,000	Amiot & Stosic (2011)

<sup>1</sup> Serbian Electronic Dictionary

This table confirms that languages differ in their richness in evaluatives (cf. Savickiene et al. 2007) and it shows that a direct correlation can be established between the degree of inflectionality and the number of evaluatives found. Thus, Serbian as a strongly inflecting language has many more evaluative verbs than Italian and French, considered weakly inflecting languages, cf. (Dressler 2007). Moreover, according to Dressler et al. (2012, 240), French morphology is less inflecting than Italian morphology, which matches exactly with their respective richness in evaluative verbs. Although confirmation of this correlation requires a larger sample of languages, the results suggest that there are languages, such as Serbian, that make very extensive use of evaluative verbs for describing actions that are performed in a non-canonical way. The case study of Serbian thus provides a strong argument for why morphological devices should not be ruled out when trying to capture the options available to languages for encoding manner.

### [5.3] Morphological expression of manner of motion in Serbian

In the semantic domain of motion, I examine the extent to which morphological encoding of manner component is exploited in the lexicon of Serbian motion verbs. The data indicate that there is a relatively small set of motion verbs that can construct additional manner senses by using evaluative suffixation and/or prefixation:

- (38) Thirty motion verbs used as base for morphologically encoding manner in Serbian:

*bazati* 'to roam about', *bežati* 'to flee', *cunjati* 'to wander', *ćopati* 'to limp', *gegati (se)* 'to waddle', *gmizati* 'to crawl', *hodati* 'to walk', *hramati* 'to limp', *jezditi* 'to ride', *juriti* 'to race', *kasati* 'to trot, to run', *klizati (se)* 'to skid, to slip', *krstariti* 'to cruise', *leteti* 'to fly', *lunjati* 'to wander', *lutati* 'to wander', *ploviti* 'to sail', *puzati* 'to crawl', *šepati* 'to limp', *šetati (se)* 'to go for a walk', *skakati* 'to jump (imp)', *skitati* 'to wander', *skočiti* 'to jump (perf)', *švrljati* 'to roam', *teturati se* 'to stagger', *trčati* 'to run', *tumarati* 'to roam', *voziti (se)* 'to drive', *vrzmati se* 'to move around', *vući se* 'to hang around'

It thus seems that motion verbs are not fertile bases for evaluative morphology: they represent about 5% (30/600) of all the base verbs from which the evaluative verbs examined are derived. These bases form about one hundred evaluative motion verbs, which represent around 6% of all evaluative verbs in my corpus. Figure 5 shows which motion verbs give the greatest number of evaluatives as output (e.g., *leteti* 'to fly' > *letuckati*, *letkariti*, *letkarati*, *letnuti*, *leteškati*, *letkati*, *letucati*, *letati*, *doletnuti*, *poletnuti*):

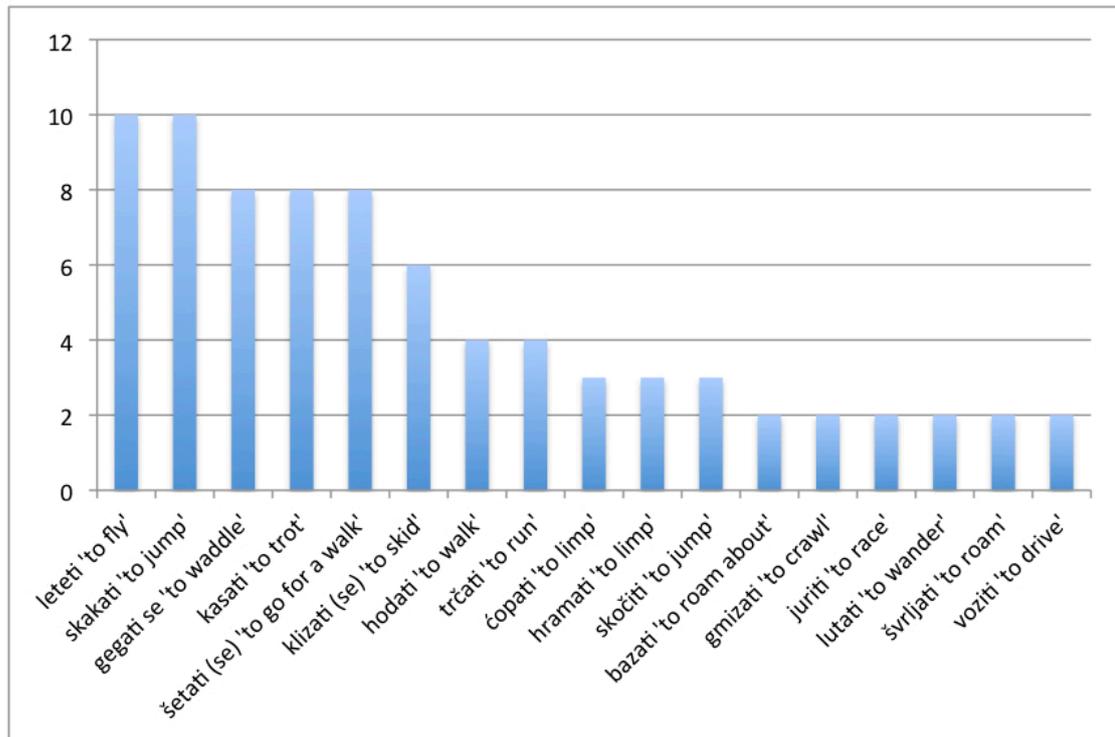


FIGURE 5: The most productive Serbian motion verbs as base for forming evaluatives

Essentially the same phenomenon can be observed in French and in Italian, as shown in the lists in (39) and (40), respectively, extracted from (Amiot & Stosic 2011) and (Grandi 2009):

- (39) Fifteen motion verbs used as base for morphologically encoding manner in French:

*bouger* 'to move', *courir* 'to run', *danser* 'to dance', *flâner* 'to stroll', *galloper* 'to gallop', *glander* 'to loaf about', *lambiner* 'to dilly-dally', *marcher* 'to walk', *nager* 'to swim', *promener* 'to go for a walk', *rôder* 'to roam around', *sauter* 'to jump', *traîner* 'to hang around', *troter* 'to trot', *voler* 'to fly', *voyager* 'to travel'

- (40) Seven motion verbs used as base for morphologically encoding manner in Italian:  
*balzare* ‘to jump’, *girare* ‘to ramble, to wander’, *guidare* ‘to drive’, *inciampare* ‘to trip’, *saltare* ‘to jump’, *trottare* ‘to trot’, *volare* ‘to fly’

Even though our lists are based on sample data, and are hence incomplete, the same pattern works for the three languages: one usually finds items that [Wienold \(1995, 314\)](#) called “basic manner of motion verbs” such as *to jump*, *to trot*, *to fly*, *to walk* but not any pure path verb. The low compatibility between motion and evaluation can probably partly explain (but not justify) the omission of morphological encoding of manner in typological studies dealing with motion descriptions. However, further investigations are required to explain both this relative reluctance of the motion domain to use evaluative morphology and why (at least in Serbian, French, and Italian) path verbs cannot be modified by evaluative morphemes.

Although there are not too many motion verbs that allow manner modification at the morphological level, in languages with rich verbal evaluative morphology this way of expressing manner is all the more important because it directly operates on the verb, which is the only “clause-obligatory category” in most motion descriptions across languages (see [Beavers et al. 2010](#)). Yet, the manner component is not lexicalized in the verb root, but it remains conveyed by the verb predicate, as being constructed at the morphological level. This is one of the major factors contributing to the importance of morphological encoding of manner in languages like Serbian.

## [6] CONCLUSION

This study is a preliminary empirical investigation of the importance of morphologically encoding manner in the verbal domain, with particular emphasis on manner of motion, from a cross-linguistic perspective. My starting point was Talmy’s typology as well as many other works inspired by it because this research offers the most comprehensive survey of strategies for encoding manner of motion across languages. [Beavers et al. \(2010\)](#) further proposed that expressing manner of motion is dependent on more general morphological, lexical, and syntactic devices that languages make available for encoding manner. Missing from all of these studies is any reference to morphological means of expressing manner. This article examined the role of morphology in the expression of manner by showing that in the verbal domain many evaluative and/or pluractional morphological markers do express a non-canonical way of performing an action described by the base verb.

The following conclusions may be drawn. First, at the theoretical level, I have shown how evaluative (including evaluative-pluractional) morphology meets man-

ner and why taking this encoding strategy into consideration is crucial for a comprehensive analysis of the linguistic expression of manner, especially in languages with rich evaluative morphology. Second, at the descriptive level, I have provided an extensive account of evaluative verbs in Serbian, showing at the same time that they are very numerous in the lexicon (over 1,500) and that they play a very important role in expressing a great number of manner meanings that, in many well-documented languages such as English, Spanish, and French, are either lexicalized or syntactically encoded. The widespread use of verbal evaluative/ pluractional morphology in some languages thus appears to be an essential manner-encoding option.

Concerning the motion domain, morphologically encoding manner is rather limited to a small group of motion verbs, all of which involve manner in their lexical meaning, but never path. This suggests that motion is rather reluctant to evaluative morphology, which would only affect the “basic manner of motion verbs.” Further research is needed to determine the accuracy of these observations; first by comparing the semantic domain of motion to other ones, and second by extending comparison to a greater number of typologically different languages.

These results point to an important area of inquiry for future research. Thus, in light of my findings on the role of Serbian evaluative verbs in language structure, it would be interesting to explore the extent to which there is widespread adoption of morphological encoding of manner by speakers in language use: how does the productivity of the evaluative morphological pattern relate to its frequency in speech?

Another natural research direction that this work calls for is applying these results to more general cross-linguistic and typological purposes. Going back to Talmy’s opposition between Satellite-framed and Verb-framed languages, the issue is the possible typological implications of taking into account morphological means for encoding manner across languages. In this regard, [Slobin \(2004, 2006\)](#) has argued that, as a consequence of the availability of the verb for expressing manner in SFLs, the concept of manner is linguistically and cognitively much more salient in SFLs (e.g., English, Slavic) than in VFLs (e.g., French). Therefore, one can ask whether the more extended use of verbal evaluative morphology can make manner of motion more salient and what its impact could be on the distinction between “high-manner-salient” and “low-manner-salient” languages. Admittedly, English codes a great number of manner meanings at the lexical level, but Serbian obviously carries out some of these meanings and many others by morphological means. The questions to be asked are whether the lexical encoding of some manner meanings such as *to flutter* in English makes it linguistically and cognitively more salient than its morphological encoding for Serbian *let-uck-ati* ‘to flutter’ and whether or not their conceptualization and their cognitive processing are signif-

icantly different depending on the encoding strategy used. These issues will be addressed in future research.

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#### SOURCES

Trésor de la langue française informatisé (TLFi),  
<http://atilf.atilf.fr/tlf.htm>.

#### REFERENCES

- Amiot, D. & D. Stosic. 2011. Sautiller, voleter, dansoter: évaluation, pluriactionnalité, aspect. In E. Arjoca-Ieremia, C. Avezard-Roger, J. Goes, E. Moline & A. Tihu (eds.), *Temps, aspect et classes de mots: études théoriques et didactiques*, 277–297. Arras: Artois Presses Université.
- Amiot, D. & D. Stosic. forthcoming. Morphologie aspectuelle et évaluative en français et en serbe.
- Babić, S. 1986. *Tvorba riječi u hrvatskom književnom jeziku*. Zagreb: JAZU, Globus.
- Barić, E., M. Lončarić, D. Malić, S. Pavešić, V. Zečević & M. Znika. 1997. *Hrvatska gramatika*. Zagreb: Školska knjiga.
- Bauer, L. 1997. Evaluative Morphology: In Search of Universals. *Studies in language* 21(3). 533–575.
- Beavers, J., B. Levin & S. W. Tham. 2010. The Typology of Motion Expressions Revisited. *Journal of Linguistics* 46(2). 331–377.
- Berman, R. A. & D. I. Slobin. 1994. *Relating Events in Narrative: A Crosslinguistic Developmental Study*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Bowerman, M. 1996. Learning How to Structure Space for Language: A Crosslinguistic Perspective. In P. Bloom, M. Peterson, L. Nadel & M. Garrett (eds.), *Language and Space*, 385–436. Cambridge: MIT Press.
- Burling, R. 2003. *The Language of the Modhupur Mandi (Garo)*. Ann Arbor, MI: The Scholarly Publishing Office, The University of Michigan.
- Cabredo, P.H. & B. Laca. 2012. *Verbal Plurality and Distributivity*. Berlin: Mouton De Gruyter.

- Comrie, B. 1985. Causative Verb Formation and Other Verb-Deriving Morphology. In T. Shopen (ed.), *Language Typology and Syntactic Description*, 309–348. Cambridge: Cambridge University Press.
- Cusic, D. 1981. *Verbal Plurality and Aspect*: Stanford University dissertation.
- Dressler, W. U. 2007. Introduction to: Early development of nominal and verbal morphology from a typological perspective. In S. Laaha & S. Gillis (eds.), *Typological perspectives on the acquisition of noun and verb morphology*, vol. 112 Antwerp Papers in Linguistics, 3–9. Cambridge: Cambridge University Press.
- Dressler, W. U., L. Lettner & K. Korecky-Kröll. 2012. Acquisition of German diminutive formation and compounding in a comparative perspective: Evidence for typology and the role of frequency. In F. Kiefer, M. Ladányi & P. Siptár (eds.), *Current Issues in Morphological Theory: (Ir)regularity, Analogy and Frequency*, Amsterdam: John Benjamins.
- Dressler, W. U. & L. Merlini-Barbatesi. 1994. *Morphopragmatics. Diminutives and Intensifiers in Italian, German, and Other Languages*. Berlin: Mouton de Gruyter.
- Eberhard, D. 2009. *Mamaindê Grammar: A Northern Nambikwara Language and Its Cultural Context*. Utrecht: LOT.
- Fellbaum, C. 2002. On the Semantics of Troponymy. In R. Green, C. Bean & S. Hyon Myaeng (eds.), *The Semantics of Relationships: An Interdisciplinary Perspective*, 23–34. Dordrecht: Kluwer Academic Publishers.
- Fellbaum, C. & G. Miller. 1990. Folk Psychology or Semantic Entailment? A Reply to Rips and Conrad. *Psychological Review* 97. 565–570.
- Fellbaum, C. (ed.). 1998. *WordNet. An Electronic Lexical Database*. Cambridge, MA: MIT Press.
- Filipovic, L. 2002. *Verbs in Motion Expressions: Structural Perspectives*: Cambridge University dissertation.
- Filipovic, L. 2007. *Talking about Motion. A Crosslinguistic Investigation of Lexicalization Patterns*. Amsterdam: John Benjamins.
- Foley, W. A. & R. D. Van Valin. 1984. *Functional Syntax and Universal Grammar*. Cambridge: Cambridge University Press.
- Fradin, B. 2003. Le traitement de la suffixation en *-et*. *Langages* 152. 51–77.
- Fradin, B. & F. Montermini. 2009. La morphologie évaluative. In B. Fradin, F. Kerleroux & M. Plénat (eds.), *Aperçus de morphologie du français*, 231–266. Vincennes: Presses Universitaires de Vincennes.

- van Geenhoven, V. 2005. Atelicity, Pluractionality, and Adverbial Quantification. In H. Verkuyl, H. de Swart & A. van Hout (eds.), *Perspectives on Aspect*, 107–124. Dordrecht: Springer.
- Grandi, N. 2002. *Morfologie in contatto. Le costrizioni valiative nelle lingue del Mediterraneo*. Milan: FrancoAngeli.
- Grandi, N. 2009. Restrictions on Italian Verbal Evaluative Suffixes: The Role of Aspect and Actionality. *York Papers in Linguistics* 2(10). 46–66.
- Grandi, N. & F. Montermini. 2005. Prefix-Suffix Neutrality in Evaluative Morphology. In G. Booij, E. Guevara, A. Ralli, S. Scalise & S. C. SgROI (eds.), *Proceedings of the 4th Mediterranean Meeting of Morphology and Language Typology*, 143–156. Bologna: Università degli Studi di Bologna.
- Greenberg, Y. 2010. Event Internal Pluractionality in Modern Hebrew: A Semantic Analysis of One Verbal Reduplication Pattern. *Brill's Annual of Afroasiatic Languages and Linguistics* 2(1). 119–164.
- Grickat, I. 1955. Deminutivni glagoli u srpskohrvatskom jeziku. *Južnoslovenski filolog* 21(1–4). 45–96.
- Grickat, I. 1995. O nekim osobenostima deminucije. *Južnoslovenski filolog* 51. 1–30.
- Hale, K. & D. Keyser. 2002. *Prolegomenon to a Theory of Argument Structure*. Cambridge: MIT Press.
- Haspelmath, M. 1997. *Indefinite Pronouns*. Oxford: Clarendon Press.
- Hasselgård, H. 2010. *Adjunct Adverbials in English*. Cambridge: Cambridge University Press.
- Heine, B., U. Claudi & F. Hünnemeyer. 1991. *Grammaticalization: A Conceptual Framework*. Chicago: University of Chicago Press.
- Hickmann, M. & S. Robert. 2006. *Space across Languages: Linguistic Systems and Cognitive Categories*. Amsterdam: John Benjamins.
- Hovav, M. Rappaport & B. Levin. 1998. Building Verb Meanings. In M. Butt & W. Geuder (eds.), *The Projection of Arguments. Lexical and Compositional Factors*, 97–134. Stanford, CA: CSLI Publications.
- Jackendoff, R. 1983. *Semantics and Cognition*. Cambridge, MA: MIT Press.
- Jackendoff, R. 1990. *Semantic Structures*. Cambridge, MA: MIT Press.

- Klajn, I. 2003. *Tvorba reči u savremenom srpskom jeziku*, vol. 2. Belgrade: Zavod za udžbenike.
- Laca, B. 2004. Progressives, Pluractionals and the Domain of Aspect. Paper presented at the conference Domain(e)s, Journées d'Etudes Linguistiques.
- Laca, B. 2006. Pluriactionnalité. In D. Godard, L. Roussarie & F. Corblin (eds.), *Sémanticlopedie: dictionnaire de sémantique*, Paris: GDR Sémantique & Modélisation, CNRS.
- Lang, E., C. Maienborn & C. Fabricius-Hansen (eds.). 2003. *Modifying Adjuncts*. Berlin: Mouton de Gruyter.
- Levin, B. 2009. The Root: A Key Ingredient in Verb Meaning. Paper presented at the Department of Linguistics, University of Texas, Austin.
- Levin, B. & M. Rappaport Hovav. 2005. *Argument Realization*. Cambridge: Cambridge University Press.
- Levin, B. & M. Rappaport Hovav. 2011. Lexical Conceptual Structure. In P. Portner, C. Maienborn & K. von Stechow (eds.), *An International Handbook of Natural Language Meaning*, 420–440. Berlin: Mouton de Gruyter.
- Mel'čuk, I. 1994. *Cours de morphologie générale*. Montréal: Presses de l'Université de Montréal – CNRS Editions.
- Miller, G. & C. Fellbaum. 1992. Semantic Networks of English. In B. Levin & S. Pinker (eds.), *Lexical & Conceptual Semantics*, 197–229. Oxford: Blackwell.
- Molinier, C. & F. Lévrier. 2000. *Grammaire des adverbes. Description des formes en -ment*. Geneva: Droz.
- Newman, P. 1980. *The Classification of Chadic within Afroasiatic*. Leiden: Universitaire Pers Leiden.
- Newman, P. 1990. *Nominal and Verbal Plurality in Chadic*. Dordrecht: Foris.
- Newman, P. 2012. Pluractional Verbs: An Overview. In P. Hofherr Cabredo & B. Laca (eds.), *Verbal Plurality and Distributivity*, 185–209. Berlin: Mouton de Gruyter.
- Patri, S. 1998. Fondements indiciels de la syntaxe du complément circonstanciel. In S. Rémi-Giraud & A. Roman (eds.), *Autour du circonstant*, 139–172. Lyon: Presses Universitaires de Lyon.
- Ristić, S. 1997. Leksička semantika ekspresivnih glagola u savremenom srpskom jeziku. *Zbornik Matice srpske za filologiju i lingvistiku* 40(1). 167–176.

- Savickiene, I., W. U. Dressler, V. Barcza, P. Bodor, N. Kertez, K. Korecky-Kröll, M. Palmovic, U. Stephany & E. Thomadaki. 2007. Diminutives as Pioneers of Derivational and Inflectional Development: A Cross-Linguistic Perspective. *Antwerp Papers in Linguistics* 112. 81–92.
- Scalise, S. 1986. *Generative morphology*. Dordrecht: Foris.
- Shluinsky, A. 2009. Individual-Level Meanings in the Semantic Domain of Pluractionality. In P. Epps & A. Arkhipov (eds.), *New Challenges in Typology. Transcending the Borders and Refining the Distinctions*, 175–198. Berlin: Mouton de Gruyter.
- Silić, J. & I. Pranjković. 2005. *Gramatika hrvatskoga jezika za gimnazije i visoka učilišta*. Zagreb: Školska knjiga.
- Simić, M. 2005. *Srpski elektronski rečnik (CD)*. <http://www.rasprog.com/>.
- Slobin, D. I. 1987. Thinking for Speaking. In *Proceedings of the Thirteenth Annual Meeting of the Berkeley Linguistics Society*, 435–444. Berkeley: Berkeley Linguistics Society.
- Slobin, D. I. 1996. From “Thought and Language” to “Thinking for Speaking”. In J. J. Gumperz & S. C. Levinson (eds.), *Rethinking Linguistic Relativity*, 70–96. Cambridge: Cambridge University Press.
- Slobin, D. I. 2003. Language and Thought Online: Cognitive Consequences of Linguistic Relativity. In D. Gentner & S. Goldin-Meadow (eds.), *Language in Mind: Advances in the Study of Language and Thought*, 157–192. Cambridge: MIT Press.
- Slobin, D. I. 2004. The Many Ways to Search for a Frog: Linguistic Typology and the Expression of Motion Events. In S. Strömquist & L. Verhoeven (eds.), *Relating Events in Narratives: Typological and Contextual Perspectives*, 219–257. Mahwah, NJ: Lawrence Erlbaum Associates.
- Slobin, D. I. 2006. What Makes Manner of Motion Salient? Explorations in Linguistic Typology, Discourse, and Cognition. In M. Hickmann & S. Robert (eds.), *Space in Languages: Linguistic Systems and Cognitive Categories*, 59–81. Amsterdam: John Benjamins.
- Stanojčić, Ž., L. Popović & S. Micić. 1989. *Savremeni srpskohrvatski jezik i kultura izražavanja*. Belgrade: Zavod za udžbenike i nastavna sredstva.
- Stosic, D. 2011. Le sens de manière comme critère de définition d’un paradigme. In F. Hrubaru & E. Moline (eds.), *La Construction d’un paradigme, Actes du XVII<sup>e</sup> Séminaire de Didactique Universitaire*, 117–142. Recherches ACLIF: Echinoux.

- Stosic, D. & D. Amiot. 2010. Evaluation et pluriactionnalité: une mise au point qui s'impose. Colloque international de morphologie – Décembrettes 7.
- Stosic, D. & D. Amiot. 2011. Quand la morphologie fait des manières: les verbes évaluatifs et l'expression de la manière en français. In D. Amiot, W. De Mulder, E. Moline & D. Stosic (eds.), *Ars Grammatica. Hommages à Nelly Flaux*, 403–430. Bern: Peter Lang.
- Strömquist, S. & L. Verhoevent. 2004. *Relating Events in Narrative: Typological and Contextual Perspectives*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Stump, G. 1993. How Peculiar is Evaluative Morphology? *Journal of Linguistics* 29. 1–36.
- Talmy, L. 1975. Semantics and Syntax of Motion. In J. Kimball (ed.), *Syntax and Semantics*, 181–238. New York: Academic Press.
- Talmy, L. 1983. How Language Structures Space. *Language* 1. 225–282.
- Talmy, L. 1985. Lexicalization Patterns: Semantic Structure in Lexical Forms. In T. Shopen (ed.), *Language Typology and Syntactic Description. Grammatical Categories and the Lexicon*, vol. 3, 57–149. New York: Cambridge University Press.
- Talmy, L. 2000. *Toward a Cognitive Semantics*. Cambridge MA: MIT Press.
- Tovena, L. 2010. Pluractionality and the Unity of the Event. In M. Aloni & K. Schulz (eds.), *Amsterdam Colloquium 2009*, 465–473. Heidelberg: Springer.
- Tovena, L. 2011. When Small is Many in the Event Domain. *Lexis* 6. 41–58.
- Tovena, L. & A. Kihm. 2008. Event Internal Pluractional Verbs in Some Romance Languages. *Recherches linguistiques de Vincennes* 37. 9–30.
- Veljković-Stanković, D. 2007. Poetski diptih u osam deminutivnih poteza – obrada pesme Duška Radovića “Mali život” u osnovnoj školi. *Književnost i jezik* 54(3–4). 335–346.
- Žibreg, I. 1982. Prilog upoznavanju glagolske deminucije u srpskohrvatskom jeziku. *Prilozi proučavanju jezika* 18. 79–85.
- Wienold, G. 1995. Lexical and Conceptual Structures in Expressions for Movement and Space: With Reference to Japanese, Korean, Thai, and Indonesian as Compared to English and German. In U. Egli, P. Pause, C. Schwartz, A. von Stechow & G. Wienold (eds.), *Lexical Knowledge in the Organization of Language*, 301–340. Amsterdam: John Benjamins.

- Wood, E. J. 2007. *The Semantic Typology of Pluractionality*: University of California, Berkeley dissertation.
- Yu, A. 2003. Pluractionality in Chechen. *Natural Language Semantics* 11. 289–321.
- Zlatev, J. & P. Yangklang. 2004. A Third Way to Travel. In S. Strömquist & L. Verhoeven (eds.), *Relating Events in Narrative: Typological and Contextual Perspectives*, 159–190. Hillsdale, NJ: Lawrence Erlbaum Associates.

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# DISPERSED MOTION METAPHORS OF EMOTION IN SLOVENE. A COGNITIVE GRAMMATICAL ANALYSIS OF THE PREFIX RAZ- IN VERBS OF EMOTIONAL EXPERIENCE

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## ABSTRACT

This article analyzes Slovene constructions with verbs of emotional experience formed by the prefix *raz-* ‘in different directions, apart’. The author argues that the prefix metaphorically extends its spatial (physical) meaning and denotes metaphorical motion resulting in the emergence of an emotional state (i.e., the first stage of the emotion scripts) and the occurrence of a physical reaction (i.e., the third stage). The author discusses not only metaphorical extensions of the prefix but also how its spatial meanings are mapped onto the course of an event of emotional change. The author also reflects on types of causation implied by the experiencer-object and experiencer-subject of emotions, and on verbs of physical reaction that are prefixed by *raz-*.

## [1] INTRODUCTION

Recent findings in experimental psychology (e.g., (Richardson et al. 2001); (Craford et al. 2006)) confirm that the conceptualization of emotional states is spatially shaped and underlain by sensorimotor experience. At the lexical level, this is reflected in expressions of emotional states that are based on the metonymy MOTION STANDS FOR EMOTION (e.g., Slovene *biti ganjen* ‘be moved’ and English *be moved, be touched*). At the syntactic level, the sensorimotor basis of emotions is embodied in constructions with prepositional phrases (e.g., Slovene *zaljubiti se v koga*, literally ‘to fall to love in somebody-ACC’, *tresti se od strahu*, literally ‘to tremble from anger-GEN’, and English *fall for somebody, tremble with fear*), as well as in constructions formed by verbs accompanied by spatial particles, such as Slavic prefixes and English verb-particles (e.g., Slovene *vzradostiti se*, literally ‘up-happy-VERB’ and English *cheer up*).

In this article I propose a systematic analysis of Slovene constructions formed by verbs of emotional experience that are prefixed by *raz-* (‘in all directions’,

‘apart’) and attempt to account for the metaphorical shift of *raz-* from the spatial domain to the emotional domain.<sup>1</sup> The analysis includes the following verbs of emotional experience: verbs of emotion (experiencer-object and experiencer-subject) and verbs denoting physical experience caused by emotions. In the physical realm, the prefix denotes movements on a dispersed path (spread motion) that can result in dispersion or separation; for example, *razpršiti* ‘to spread’ and *raziti se* ‘to go in various directions’, respectively. The prefix’s meaning of dispersion in some verbs can also express expansion (enlargement), as in *razrasti se* ‘to grow in all directions’. I argue that, in verbs of emotional experience, the prefix metaphorically extends the spatial senses and denotes a mental change of the figural entity. Thus, emotional processes reflected in verbs prefixed by *raz-* are conceptualized in terms of the metaphor CHANGE IS MOTION. The aim of this analysis is to show that in verbs of emotion (e.g., *razveseliti se* ‘to rejoice’) the prefix expresses the metaphorical spread and expansion of an emotional state, whereas in verbs of physical reactions (e.g., *razpočiti se od jeze* ‘to explode with anger’) the prefix expresses metaphorical separation of the affected participant’s body parts. Because many verbs discussed in the article denote an emotional change by virtue of metaphorical or metonymical extension of their meanings derived from the physical domain, this article also discusses (spatial and ontological) metaphors and metonymies that interrelate with spatial metaphors implicated by *raz-*. This study also attempts to identify how the spatially-based senses of the prefix correlate with their function as modifiers of the course of events denoting emotional change (in terms of Aktionsart).<sup>2</sup> Moreover, I examine *raz-* in verbs of emotional experience, taking into account the entire construal of the change event. Thus, the degree to which participants of the change event are specified in terms of causality is also investigated in this article.

This analysis is part of an extensive study on how emotion scripts are represented in prefixed verbs in Slovene. The reference grammar of Slovene (Toporišič 2000) lists eight prefixes that can combine with verbs of emotion: *vz-* (as well as *z-* and *s-*), *raz-*, *o(b)*, *pre-*, *po-*, *za-*, *na-*, and *u-*. In (Będkowska-Kopczyk 2012a,b), it is shown that the prefixes *vz-* and *o(b)*- embody different types of sensorimotor experience associated with the emergence of emotions. In verbs of anger, happiness, fear, and love, *vz-* ‘up, upwards’ metaphorically extends the spatial sense of upward movement of psycho-physical sensations inside the human body. On the other hand, in verbs denoting shame, fear, happiness, outrage, and irritation, the prefix *o(b)*- ‘around’ indicates that emotional processes are conceptualized

[1] The data for the analysis was excerpted from the internet edition of *Slovar slovenskega knjižnega jezika* (SSKJ). The occurrences and meanings of the verbs were checked against the corpuses of written and spoken Slovene *Gigafida* (henceforth Gf) and *Nova beseda*.

[2] The notions of aspect and Aktionsart are not conceived as being in the same category in this article. *Raz-*, as a grammatical morpheme, makes all of the verbs analyzed in this article perfective. As a modifier of the course of a change event, the prefix is considered to interrelate with the semantics of a base verb.

in terms of circular motion; that is, metaphorical movement of emotion around people. The schematic representations of both prefixes mapped onto the emergence of emotions contribute two different types of information: (i) upward motion is associated with the accessibility of emotions: emotions become accessible (see the metaphor *VISION IS UP*, (Šarić 2012)), and (ii) circular motion is associated with the entirety of the emotional process; that is, the emergence of emotions is perceived to completely affect the referent coded as experiencer. Regarding the emergence of emotions, this study proposes that the notion of dispersed movement instantiated by *raz-* is associated with the rapid increase and intensity of an emotional state.

Studies dealing with other Slavic languages (e.g., (Klikovac 2004); (Przybylska 2006); (Janda & Nessel 2010); (Zlatev et al. 2012)) offer evidence supporting the thesis that prefixed verbs of emotional experience are motivated by the metaphor *CHANGE IS MOTION*. Some of these studies are discussed further in this article.

The structure of this article is as follows: Section [2] discusses the meanings of *raz-* as defined in reference grammars of Slovene and in *Slovar slovenskega knjižnega jezika* (Standard Slovene Dictionary, henceforth *SSKJ*). Section [3] presents a theoretical account of the cognitive approach to prefixes and the state of the art related to the properties of the prefix *raz-* in verbs of emotion in some Slavic languages. In Section [4], I discuss types of motion events, including the category of self-contained motion, which is considered relevant for the analysis of Slovene *raz-* in verbs of emotional experience. The analysis is conducted in Section [5]. Section [6] presents conclusions.

[2] RAZ- IN LINGUISTIC STUDIES, REFERENCE BOOKS, AND THE STANDARD SLOVENE DICTIONARY

*Raz-* and its Slavic cognates originate from Common Slavic \**orz-* ‘apart, from’ (Snoj 1997, 524).<sup>3</sup> Bajec (1959) identifies two main spatial meanings of *raz-*: separation and spreading. The author links these two senses, giving priority to the former: “what has been separated from an object is becoming further from it and spreading in all directions” (Bajec 1959, 122). The third identified sense of *raz-* is defined as ‘undoing the result of a previous action’ and, according to the author, it does not relate to the previous two. Bajec (1959, 122) points out that in verbs denoting physical spreading *raz-* also implicates intensification of the action expressed by the base verb (an augmentative sense). This also applies to verbs of emotional experience such as *razdražiti* ‘to agitate’, *razhuditi* ‘to make angry’, and *razveseliti* ‘to rejoice’. The author notes that *raz-* can also give an inchoative meaning to verbs

[3] *Od zadnji slovar slovenskega jezika* (Slovene Reverse Dictionary; henceforth, *OSSJ*) annotates 798 verbs prefixed with *raz-*. Note that among the Slavic languages only Slovene has a cognate preposition *raz* ‘from, off’ (Bajec 1959, 121); however, the preposition is considered archaic. This is reflected in the corpus *Nova beseda*, which attests *raz* mostly in literary texts from the nineteenth and early twentieth century.

of emotion. However, as he claims, this meaning very often combines with the augmentative one. This claim is illustrated by two examples: *razvneti* ‘to fire up’ and *razsrditi se* ‘to become angry’:

... ogenj se razvnel, pomeni, da je prišlo vnemanje do konca, to pa je začetek plamenenja; razsrditi se pove, da je srd dospel do tiste stopnje, ko izbruhne [... *ogenj se razvnel* (literally: ‘fire has been fired up’) means that the fact of setting fire is perceived as accomplished and this results in the beginning of the flaming; *razsrditi se* (‘to become very angry’) tells us that anger has reached such a level that it can explode] (Bajec 1959, 123).

*Slovenska slovnica* (Slovene Reference Grammar) by Toporišič (2000, 221) ascribes the following spatial and abstract senses to *raz-*:

- (i) separation, movement in various directions, as in *razgnati* ‘to disperse something (e.g., a crowd)’
- (ii) undoing the result of a previous action, as in *razpakirati* ‘to unpack’
- (iii) noticing, explaining, as in *razpoznati* ‘to recognize’ and *razložiti* ‘to explain’, respectively.

Toporišič (2000) also recognizes three meanings of *raz-* referring to the course of action: augmentative, inchoative, and resultative. The augmentative sense is explained as developing an activity to a high level of intensity, as in *razgreti* ‘to warm up’. The inchoative and resultative senses are presented by the author in one gloss (i.e., gloss 4 in (Toporišič 2000, 221) and are illustrated by several verbs, including such verbs of emotion as *razveseliti se* ‘to rejoice’ and *razhuditi* ‘to become angry’, and verbs that refer to manifestations of emotions, such as *razjokati se* ‘to begin to cry’. However, the author does not explicitly define which aspectual meaning of *raz-* (i.e., inchoative or resultative) is ascribed to the particular verbs given as examples. Toporišič (2000) probably means that *raz-* carries both senses, which would be consistent with Stevanović, who argues that *raz-* includes three senses: (i) an active beginning of an action or going into the state (inchoative sense), (ii) the end of the action (resultative sense), and (iii) intensity of the state or action denoted by the base verb (intensive sense<sup>4</sup>). As he writes:

Examples like *rasplakati* (burst out crying), *razbuktati* (burst into flames) and so on convey another meaning of the prefix RAZ-. They do not

[4] In this article, the terms “intensive” (Stevanović 1970) and “augmentative” (Bajec 1959) are treated as synonyms.

only mean an active beginning of an action but they also mean going into the state marked by the base verb and they often mark the end of the action: *razljutiti se* (become angry), *raširiti* (spread). At the same time it expresses the intensity of the verb: *rasplamsati*, *razbjesniti se* (enrage), *razletjeti* (fly apart). (Stevanović 1970), cited in (Hanić 2009, 167).

*SSKJ* identifies eight senses of *raz-* as a verbal prefix, out of which seven correspond to the textbook definitions discussed above. In verbs of emotion, *raz-* is assigned an inchoative and augmentative meaning (“the beginning of a state, usually to a large extent,” glossed as 1č in *SSKJ*). The dictionary mentions two senses of *raz-* that have not been identified in the reference grammar: “expressing a fact that some things are not together or in their original position anymore”; that is, changing from a compact to a dispersive state, as in *razsuti* ‘to scatter’ (glossed as 1b in *SSKJ*), and ‘reaching a desired goal’, as in *razbrati* ‘to understand’ (glossed as 1d).

To conclude, in Slovene linguistics the prefix *raz-* is recognized as conveying three spatial meanings: separation and spreading (Bajec, Toporišič, *SSKJ*), and changing from a compact state to a dispersive one (*SSKJ*). Only the first two senses are considered to be related to each other and only by Bajec (1959). As I show in Section [5], these three senses are interrelated.

As concerns temporal characterization of the course of action, all Slovene linguistic sources ascribe *raz-* the sense of intensity; however, these works are not consistent in relating this temporal sense with the meanings of emotion verbs. Only Bajec and *SSKJ* associate the notion of intensity (augmentative sense) with the beginning (inchoative sense) of an emotional state denoted by the verb. As already observed, Toporišič interprets *raz-* in verbs of emotion as combining the meaning of inchoativeness (the beginning) and resultativeness (the accomplishment). Later in this article I show that in verbs of emotion the inchoative, resultative, and augmentative senses correlate with the spatial meaning of *raz-*.

The other senses of the prefix in question that are recognized in Slovene linguistics—that is, ‘undoing the result of a previous action’ (Bajec, Toporišič, *SSKJ*), ‘noticing, explaining’ (Toporišič), and ‘reaching a desired goal’ (*SSKJ*)—seem to emerge from the meanings of the base verbs, and not from the meaning of *raz-*. This means that these sources do not consistently differentiate between the meaning that comes from the verb, the meaning that comes from the prefix, and the degree of overlap between the two. A more systematic study would show that, in verbs that are used as illustrations of these senses, the prefix metaphorically extends its spatial meanings (e.g., separation in *razpakirati*).

## [3] COGNITIVE APPROACHES TO PREFIXES IN SLAVIC LANGUAGES

In contrast, in the framework of cognitive linguistics (e.g., (Janda 1986, 2007); (Przybylska 2006); (Šarić 2012)) it is suggested that prefixes, similarly to prepositions and cases, are polysemous and all their usages are semantically motivated. Cognitive approaches to prefixes in Slavic languages make use of a radial category (Lakoff 1987). Accordingly, prefixes form semantic networks of spatial (physical) and abstract sub-meanings (or subcategories; (Janda & Nessel 2010)) organized around the prefixes' prototypical meaning, which is spatial in nature. The abstract sub-meanings of prefixes are motivated by metaphorical and metonymic extensions of the prototype. The sub-meanings bear a family resemblance (Wittgenstein 1953) to the prototype.

The combinations of prefixes and verbs of emotion (e.g., *raz-* 'in all directions' and *jeziti* 'to anger' in *razjeziti* 'to make angry') are considered to form abstract argument structure constructions in which *raz-* denotes the core event-structure schema consisting of a spatial configuration between a *trajector* (TR) and a *landmark* (LM). A TR/LM organization in linguistic expressions is an instance of the more general perceptual phenomenon of figure-ground organization between two or more participants in the given scene (Langacker 1987).<sup>5</sup> The TR is the focal (i.e., most prominent) participant in a profiled relationship, whereas the LM is the relationship's less salient participant. It must be stressed that, in the scenes evoked by prefixed verbs, the prefix and the base verb establish two different kinds of relationship (or configuration); thus the prefix and the base verb may have different TRs and/or different LMs (Nessel 2010). For example, the TR/LM relationship profiled by transitive *raz-* verbs (e.g., *razpršiti* 'to scatter around') provides the conceptual basis for the notion of subject and object.<sup>6</sup> In (1), the verb *razpršiti* profiles a causative relation between the TR specified by the clausal subject ("explosion") and the LM specified by the object ("metal pieces"), which is undergoing a change of location. On the other hand, the TR/LM relationship profiled by *raz-* provides the conceptual basis for the spatial and temporal organization of the scene participants in terms of a figure/ground (or *locatum/relatum*) configuration. The TR of *raz-* in *razpršiti* is elaborated by the new (dispersed) location of the metal pieces, whereas the point of reference of their new location (LM) is their previous (concentrated) location.

[5] As noted in (Talmy 2000b, 136), Langacker's notions of trajector and landmark are highly comparable to Talmy's notions of Figure and Ground. Although I refer further to Talmy's framework, I use Langacker's terms because they better illustrate the spatial configurations evoked by Slavic prefixed verbs; see (1).

[6] Langacker (1991) accounts for the conceptual structure of subject/object alignment via the notion of an action chain: the transitive verbs profile a causative relation between the sources of energy (clausal subjects) and the objects that are the consumers of energy (clausal objects).

- (1) Eksplozija je razpršila železne  
 Explosion-SG.NOM be-3RD.PRS. RAZ.scattered-3RD.SG.PST metal  
 delce (Gf)  
 pieces-PL.ACC  
 ‘The explosion scattered around metal pieces.’

The meanings of prefixes integrate with the meanings and grammatical features of verbal constituents (see (Šarić 2012); (Endresen et al. 2012)). As noted in (Tchizmarova 2012), Slavic prefixed verbs resemble English verb-particle combinations in that the “verb contributes to the source domain (literally, metonymically, or metaphorically) and the prefix is the expression of a cognitive image schema (CONTAINMENT, VERTICALITY, etc.), instantiated either literally or metaphorically” (Morgan 1997, 329), cited in (Tchizmarova 2012, 227). Thus, constructions comprising *raz*-verbs of emotion, such as *To ga je razveselilo* ‘It made him rejoice’, are assumed to be examples of spatial metaphors due to the spatially-based meanings of the prefix denoting a dynamic image schema indicating dispersed motion.

The prefix *raz*- (and its Slavic cognates such as *roz*- in Polish) has been the subject of several cognitive studies – (Klikovac 2004) for Serbian; (Belaj 2004) for Croatian; (Przybylska 2006) for Polish; (Hanić 2009) for Bosnian; and (Janda & Nessel 2010). All of these studies reflect on the prototypical (or schematic) senses identified for the physical meaning of *raz*- and *inter alia* on metaphorical sub-meanings of *raz*- in verbs of emotion. The limited scope of this article makes it impossible to discuss all of these studies in detail; therefore, I focus only on the prototypical senses of the prefix and their extensions relevant for verbs of emotional experience.

Klikovac (2004) defines the central sense of *raz*- as movement from the center to the periphery, in different directions, and from upwards to downwards. These meanings have physical and metaphorical sub-meanings. In verbs denoting intensive emotions defined as “expansive” states, such as anger and joy, *raz*-metaphorically extends the physical meaning of increasing in volume; that is, a three-dimensional spread of an entity. This meaning is motivated by two inter-related cross-domain mappings: INTENSITY IS SIZE and EMOTION IS SUBSTANCE. The latter metaphor can be further elaborated as EMOTION IS A HOT SUBSTANCE (see the metaphor ANGER IS HOT FLUID IN A CONTAINER (Lakoff & Kövecses 1987)) and EMOTION IS SUBSTANCE IN MOTION (Klikovac 2004, 176). Increasing in volume is defined as the central sense of *raz*- in Bosnian by Hanić (2009, 168), who suggests that the metaphor EMOTIONS ARE FLUIDS IN A CONTAINER refers not only to the concept of anger, but also to other intensive emotions, such as joy, being upset, and sadness (Hanić 2009, 170). On the other hand, Klikovac (2004) claims that in verbs denoting emotions associated with emotional infirmity, such as sadness, longing, and painfulness, *raz*- denotes a two-dimensional increase in size. According to Be-

laj (2004), the change from a compact state to a dispersive one motivates all uses of *raz-* in Croatian. In verbs of emotion, *raz-* denotes that a referent is undergoing a physical or metaphorical spread. The referents are either body parts whose physical spread is caused by an emotion (e.g., *raspaliti se* ‘to become inflamed’) or an emotion, which metaphorically spreads itself (e.g., *razbjesniti (se)* ‘to become mad’; (Belaj 2004, 8)).

Przybylska (2006, 218) links the schematic meaning of Polish *roz-* with a notion of centrifugal movement (see also (Klikovac 2004)) and with a change from a compact state to a dispersive one (see also (Belaj 2004)). According to the author, in verbs of emotional experience *roz-* extends the notion of movement “in an imaginative space.” The author places *roz-*verbs of emotion into three semantic groups. The first group comprises verbs implying metaphorical motion that “illustrates an occurrence and gradual increase of some feature” linked with the “loss of a proper structure of personality” in a person that experiences the emotional state (e.g., *rozdraznić* ‘to make agitated’). The second group includes verbs that imply metaphorical motion related to a change from “a passive to an active state” (e.g., *rozzłościć* ‘to make angry’). The last group includes verbs in which metaphorical motion is related to a change from “a normal activity to an activity beyond measure” (e.g., *rozemocjonować się* ‘to become emotional’; (Przybylska 2006, 218–220).

Janda & Nessel (2010) define the prototypical meaning of Russian *raz-* as APART; that is, departing from a common point in different directions (see also (Klikovac 2004); (Przybylska 2006)). The subcategory APART is metonymically extended to SPREAD, denoting that the edges of an object move away from each other, and to SWELL, denoting that the boundaries of an object move apart in a three-dimensional expansion (see “increasing in volume” in (Klikovac 2004)). SPREAD and SWELL motivate the sub-meaning of EXCITE (as in *razgoret’* ‘to warm up’), because “excitement tends to spread and things that are excited often swell” (Janda & Nessel 2010, 492). *Raz-* in verbs of emotion, such as *razveselit’ sja* ‘to cheer up’, metaphorically extends the sub-meaning of EXCITE to the domain of emotions (METAPHORICAL EXCITE). Moreover, Janda & Nessel (2010, 493) argue that both excitement and metaphorical excitement can lead to the new state. Thus, they form the next subcategory, INGRESSIVE, which refers only to the initial state or beginning of emotions. *Raz-*verbs of physical acts such as *razplakat’ sja* ‘to burst into tears’ and abstract verbs such as *razvolnovat’ sja* ‘to become upset’ also belong to this subcategory (for more verbs, see (Janda & Nessel 2010, 491; 496)).

In the following analysis I differentiate between *raz-*verbs that express emotions literally due to extensions of their physical meanings. This analysis provides further insight into metaphor and metonymy that interrelate with spatial conceptualization of emotion events represented by the prefix, as well as temporal characterization of change events in the domain of emotion.

## [4] MOTION EVENT

We assume that the schematic meaning of Slovene *raz-* is based on a spatial notion of dispersed movement on a three-dimensional PATH,<sup>7</sup> resulting in separation (in verbs of motion; e.g. *razbežati se* ‘to run in different directions’), distribution (in verbs of action; e.g., *razpršiti* ‘to disperse’, ‘to scatter around’), or increase in intensity (in verbs denoting processes undergone by physical referents; e.g., *razgoreti se* ‘to burst into flames’). In all these types of verbs, the prefix denotes a change from a compact state in space to a dispersive one. Its schematic meaning is mapped onto the aspectual one of the active and intensive beginning of an action or state, and its end.

Verbs combined with *raz-* depict dynamic situations involving motion events.<sup>8</sup> Thus, before I account for the metaphorical senses of this prefix in verbs of emotional experience, in this section I discuss various types of motion events.

According to Talmy (2000b), two types of motion events can be distinguished: a translational one and a self-contained one. In the former, “an object’s basic location shifts from one point to another in space”; in self-contained motion, “an object keeps the same, or ‘average,’ location” (Talmy 2000b, 35). Talmy associates self-contained motion with oscillation, rotation, dilation, wiggling, local wandering, or rest. The spatial meaning of *raz-* interrelates with the meanings of verbs it combines with, and can express both translational and self-contained dispersed motion. In verbs of motion and action, the prefix implies translational motion because the moving objects are dislocated from a spatial source. On the other hand, in verbs expressing physical processes the prefix denotes self-contained motion because the object (e.g., fire in *razgoreti se* ‘to burst into flames’) does not shift from the source but undergoes motion within its boundary. This type of motion can be perceived as resulting in an increase in size (in a three-dimensional space; e.g., *razgoreti se* ‘to burst into flames’, *razrasti se* ‘to grow’) or changing of shape (in a two-dimensional space; e.g., *razliti se* ‘to spill all over something’). The following analysis shows that, in verbs denoting the occurrence of an emotion, *raz-* implies metaphorical self-contained motion; that is, motion within the boundaries of the experiencer participant’s body.<sup>9</sup> In contrast, in verbs denoting physical reactions (metaphorical exploding), the prefix implies metaphorical translational motion resulting in separation of the experiencer participant’s body parts.

[7] Peña Cervel (2003, 137–139) considers two parameters of the image schematic notion of path. They are dimensionality and directionality. Accordingly, the author distinguishes among one-, two- and three-dimensional paths and among horizontal, vertical, and circular paths.

[8] Note that motion is inherent to the meaning of many base verbs that combine with *raz-*; for example, *bežati* ‘to move fast’, ‘to escape’ or *pršiti* ‘to disperse’.

[9] Zlatev et al. (2012) specify this type of motion as non-translocative unbounded motion.

Both translational and self-contained motion can be further specified as self-agentive, caused, or non-agentive, cf. Mandler (1992) and (Talmy 2000a,b).<sup>10</sup> Self-motion is defined as an object's self-induced motion resulting from the moving entity's will and intention, whereas caused motion is explained as being instigated by an external causative factor.<sup>11</sup> In the physical space, self-motion is denoted by *raz*-verbs of motion with the clitic *se* 'self', which assign the semantic role of agent, such as *razbežati se* 'to run in different directions'. The moving objects are coded by the verbs' nominative complements or inanimate objects whose motion is perceived to be driven by an inner force or engine (e.g., planets, vehicles). Caused motion is denoted by transitive verbs such as *razpršiti* 'to disperse'; the moving objects (assigned as patient) are coded as the verbs' accusative complements denoting objects distributed by people or natural forces. On the other hand, *raz*-verbs with the clitic *se* 'self' denoting processes, such as *razgoreti se* 'to burst into flames', denote a third type of motion that is neither self-motion (i.e., volitional) nor caused motion. I specify this type of motion as non-agentive (Talmy 2000a, 41) because the participant is not perceived as being actively involved in the process; that is, the figural entity neither has control over the ongoing process resulting in the physical change nor contributes to the energy developed in the ongoing process—the process is perceived as “happening by itself” (Dirven & Verspoor 2004, 80).<sup>12</sup> The verbs combine with nominative noun complements denoting objects such as fire, plants, and liquids that are perceived as undergoing a process of dispersed motion. The objects are assigned the role of patient (or an “Undergoer” in the sense of (Talmy 2000a)). *Raz*-verbs with the clitic *se* 'self', such as *razbežati se* 'to run in different directions' and *razgoreti se* 'to burst into flames', can form constructions that imply both self- and non-agentive motion. I claim that in verbs that imply self-motion (a volitional activity; e.g., *razbežati se*) *se* 'self' is a marker of reflexiveness, whereas in verbs that imply non-agentive motion (e.g., *razgoreti se*) the clitic is a marker of middle constructions that depict a non-volitional change of state (Maldonado 2008).

[5] ANALYSIS

According to cognitive psychologists (Fehr & Russell 1984) and linguists (Kövecses 1986, 2000); (Radden 1998), the conceptualization of emotions can be accounted

[10] Talmy (2000a) distinguishes nine types of causation, among which there are six types of causative situations; these are: an Agent and Author causation, inductive causation, resulting-event causation, causing event causation, and instrument causation. The limited scope of this article makes it impossible to discuss all of these types in detail here; however I refer to a few types in the analytic part of this article.

[11] As Zlatev et al. (2012, 421) observe, the notion of causality “concerns the (naïve) human Lifeworld and not our scientific understanding of the universe.” Therefore, many inanimate objects, such as vehicles and planets, are perceived to display self-motion.

[12] According to Talmy's framework, such processes can be defined as an “autonomous event” (Talmy 2000a, 517).

for by means of an abstract schema (a prototype and script), in which emotion events are laid out in a causal and temporal sequence. Emotion scripts comprise at least three stages that can be described as (i) the emergence of an emotion, (ii) an emotion state, and (iii) physiological and behavioral responses triggered by the emotion. The verbs analyzed in this section reflect either the first or third stage, or both stages at once.

[5.1] *raz-* in verbs expressing occurrence of emotions

SSKJ lists twenty-four verbs prefixed by *raz-* that reflect the first stage of an emotion script. The verbs denote the emergence of the following intensive emotional states:

- (i) anger and wrath: *razjeziti (se)*; *razhuditi (se)*; *razjariti (se)*; *razpeteliniti se*; *razpištoliti se* ‘to make/become angry’; *razbesneti (se)*; *razsrditi (se)*; *raztogatiti (se)*; *razkuriti (se)*; *razkačiti (se)* ‘to make/become very angry’
- (ii) happiness: *razveseliti (se)* ‘to make/become happy’
- (iii) sadness: *razžalostiti (se)* ‘to make/become sad’
- (iv) being upset: *razžaliti* ‘to upset’
- (v) (positive or negative) emotional agitation, such as *razveneti se*, *razdražiti (se)*, *razburkati (se)*, *razburiti (se)* ‘to stir up, agitate / to become stirred up/agitated’<sup>13</sup>

Among these verbs, I distinguish two classes: 1) verbs that occur only in emotional contexts and contain the name of an emotion in their roots, such as *jeza* ‘anger’ in *razjeziti (se)*, the name of a process, such as *kačiti* ‘to make very angry’ in *razkačiti (se)*, or a property, such as *jar* ‘angry’ in *razjariti (se)*, and 2) verbs that occur in non-emotional contexts, such as *razkuriti (se)*. These verbs express an emotional change due to metaphorical extension of their concrete meaning derived from the domain of physical processes (see the metaphor EMOTIONAL PROCESSES ARE PHYSICAL PROCESSES, (Klikovac 2004)). These verbs in the physical realm denote making something hot: *razkuriti (se)*, bursting into flames: *razvneti se*, stirring up water: *razburiti se* and *razburkati se*, and a physical stimulation: *razdražiti (se)*. The metaphorical cross-domain mapping between the domain of physical processes and emotional processes gives rise to the polysemy of these verbs and enables them to function in emotional contexts. Two other verbs—*razpeteliniti se*

[13] Seven verbs are marked as either ‘obsolete’ or ‘literary’ in SSKJ; they are: *razgneviti*, *razjaditi*, *razljutiti*, *razgaditi*, *razgorčiti* ‘to make angry’, *razradostiti* ‘to make happy’, and *raztožiti* ‘to make sad’. These verbs are not attested in *Gigafida* nor are they recognized as being used contemporarily by native speakers of Slovene. With the exception of *razgorčiti*, they occur in *Nova beseda* but mostly in literary texts originating from the first half of the twentieth century.

and *razpištoliti se*, which are derived from the nouns *petelin* ‘rooster’ and *pištola* ‘handgun’—denote only an emotional change. However, their meanings seem to be underlain by the cross-domain mappings A MAN IS A ROOSTER and A MAN IS A HANDGUN and metonymy: BEHAVIOR OF A ROOSTER STANDS FOR BEHAVIOR OF AN ANGRY MAN and LOUD SOUNDS OF A HANDGUN STAND FOR BEHAVIOR OF AN ANGRY MAN.

Verbs of emotion, like other verbs of mental experience, assign the semantic role of experiencer. As regards the clausal position of the experiencer, there are two types: experiencer-object (experiencer in the object position) and experiencer-subject (experiencer in the subject position; (Croft 1991)).<sup>14</sup> Raz-verbs of emotion in transitive use, such as *razjeziti* ‘to make angry’ and *razjariti* ‘to make very angry’ in (2) and (3), respectively, are experiencer-object:

- (2) je dodal Tomo Šokota, ki je  
 be-3RD.SING.PRS added-3RD.SG.PST Tomo Šokota, who be-3RD.SING.PRS  
 Domžalčane pred tekmo  
 Domžale resident-3RD.PL.ACC before game-SG.INST  
 razjezil z izjavo (Gf)  
 RAZ-anger-3RD.SG.PST with statement-SG.-INST  
 ‘added Tomo Šokota, whose statement before the game made the Domžale residents angry.’
- (3) Baskerville je pasje tuljenje tako  
 Baskerville be-3RD.SING.PRS dog’s howling-SG so  
 razjarilo (Gf)  
 RAZ.anger-3RD.SG.PST  
 ‘The dog’s howling made Baskerville so angry.’

In terms of an action chain, which is based on the billiard-ball model (Langacker 1991), the verbs establish a causative relationship between an active and passive scene participant (i.e., the verb’s TR and LM). The active participant (the TR, agent) is perceived as a cause of anger due to transmitting a force to the passive participant (the LM, experiencer). The force is being extended into the mental domain (Croft 1991, 215–219). The active participant can be either a human instigator, as is the man called Tomo Šokota in (2), or an event; that is, howling that is triggered by the non-human instigator; namely, the dog in (3). It must be noted that the human instigator in (2) can be an involuntary agent or, in terms of Talmy (2000a), an Author (i.e., an entity whose “volitional act initiated the causal sequence (or led to the final event)” but whose act was non-intentional with regard

[14] In (Belletti & Rizzi 1988), the category of experiencer-object verbs is further divided into transitive verbs completed with the accusative experiencer object and intransitive verbs that have a dative or oblique experiencer object. The latter type does not occur in the verbs discussed in this article.

to the preceding event; (Talmy 2000a, 514).<sup>15</sup> The cause that triggers emotion in (3) is an event that is explained in Talmy's framework as the "causing event"; that is, the very event that the speaker's attention is focused on (Talmy 2000b, 71).

Raz-verbs of emotion with the clitic *se* 'self', such as *razveseliti se* 'to rejoice' in (4) and *razburiti se* 'to become stirred up' in (5), assign an experiencer to the subject:

- (4) Daril sem se razveselil. (Gf)  
 Gift-PL.GEN be-1ST.SG.PRS self RAZ.rejoice-3RD.SG.PST  
 'I became happy because of the gifts.'
- (5) Razburil se je, ko mu  
 RAZ.agitated-3RD.SG.PST self be-3RD.SG.PRS when he-SG.DAT  
 je policist rekel, naj pihne v  
 be-3RD.SG.PRS policeman-SG.NOM tell-3RD.SG.PST to blow-3RD.SG in  
 alkotest. (Gf)  
 sobriety test-SG.ACC  
 'He became angry when the policeman told him to take the sobriety test,  
 and he hit him.'

The cause of emotions can be expressed in many different ways in constructions formed by such verbs. For instance, in (4) the cause (the gifts) is coded by a complement in the genitive case. In (5), the man's agitation is perceived as being caused by an event (i.e., the policeman's request to take the sobriety test); the cause is expressed by a temporal relative clause. Another example (6) shows that experiencer-subject verbs of emotion expressing anger, such as *razjeziti se* 'to become angry', can occur in constructions with the preposition *na* and a noun expressing an object of emotion in the accusative:

- (6) Razjezi se na Nikki, ki mu je  
 RAZ.Angry-3RD.SG.PRS self at Nikki-ACC who he-DAT be-3RD.SG.PRS  
 vse prikrivala. (Gf)  
 everything-ACC keep from-3RD.SG.PST  
 'He got angry at Nikki, who kept everything from him.'

Whereas the prefix metaphorically denotes the emergence of emotion, the preposition extends its spatial meaning and codes the emotional relation between the experiencer and the object of the emotion.

[15] Talmy distinguishes the semantic concept of "Agent" from that of an "Author" regarding whether the subject of a syntactically causative construction can intend the final caused event or not (Talmy 2000a, 514). As concerns agency-implied transitive verbs of emotion, the first condition for agentive reading is that the stimulus is a human participant. Then it can be tested by volitional and imperative tests, as presented in (Verhoeven 2010). Such tests are, however, beyond the limited scope of this article.

In all verbs discussed so far, *raz-* denotes a change of mental state of the scene participants coded as experiencer. The prefix profiles a relationship between the participant's previous and new emotional state; the participant's state before the change is the point of reference (the prefix's LM) of the new emotional state (the prefix's TR). I argue that, in combination with verbs denoting emotions, *raz-* metaphorically extends the physical meaning of self-contained dispersed motion typical in its combination with verbs of observable physical processes (see Section [4]). The schematic representation of dispersed motion is mapped onto a change of mental state (i.e., emergence of emotions) by means of the orientational metaphor CHANGE IS MOTION (Lakoff & Johnson 1999). Experiencer-object *raz-*verbs of emotion have a causative meaning (transitive verbs), and thus they imply metaphorical caused motion (motion is perceived as being caused externally). Thus, the change of emotional state is perceived as caused (2)–(3). In contrast, the emotional outburst of the participant of experiencer-subject verbs that occur with *se* 'self' is perceived as a non-volitional reaction to an external cause (4)–(5) or an object (6). Thus, I claim that these verbs indicate metaphorical non-agentive motion and, consequently, the emotional change is perceived as non-agentive.

This interpretation is not consistent with approaches according to which Slavic emotion verbs with *se* are interpreted as reflexive and denoting self-instigated, volitional processes (see (Wierzbicka 1992); (Dziwirek & Lewandowska-Tomaszczyk 2010); (Zlatev et al. 2012)). If it were the case, the *raz-*verbs of emotion with the clitic *se* would imply self-motion. I adopt here the approach of Maldonado (2008), which claims that, in Spanish, the clitic *se* 'self' in verbs of mental experience (perceptual, emotional, and intellectual) is a marker of middle voice because it imposes a reading of unexpectedness and it develops an inchoative reading related to a change of state undergone by the experiencer in the event. Thus, the change cannot be regarded as volitional. I argue that metaphorical movement evoked by the prefix *raz-* in Slovene verbs of emotion with *se* implies rapidness and unexpectedness of the occurrence of an emotion. Thus, in combination with *raz-* these verbs also form middle constructions.<sup>16</sup> Because intensive emotions emerge simultaneously with inner and outer physical changes observable by both the person and outside observers, in verbs that occur only in emotional contexts, such as *razjeziti (se)* 'to make/become angry', the schematic meaning of *raz-* is mapped onto an emergence and rapid increase in the emotional property of the scene participant coded as an experiencer; in this case, 'becoming angry'. The prop-

[16] This claim is supported also by Slovene linguists that consider Slovene verbs of emotion with *se* as implying autonomous events and marking middle voice (see discussion in (Tomišić 2011)). This refers to both imperfective and perfective verbs of emotion.

erty results from psychosomatic sensations<sup>17</sup> associated with emotions denoted by the verbs' root. In the spatial domain, *raz-* denotes the occurrence of a rapid increase in some physical property (e.g., shining brightly in *razblesteti* 'to begin to shine brightly'). Therefore, in verbs that denote emotional states by means of the metaphor EMOTIONAL PROCESSES ARE PHYSICAL PROCESSES—such as *razkuriti (se)* 'to make/become very angry', *razburiti (se)*, *razdražiti (se)* 'to agitate / to become agitated'—the schematic meaning of *raz-* is mapped onto an emergence and rapid increase in the physical processes associated with the given emotion; for example, becoming hot → becoming angry in *razkuriti se*. On this basis, I claim that in the verbs of emotion discussed here the spatial sense of dispersed motion correlates with the temporal sense of inchoativeness (the emergence of an emotional state).

As far as resultativeness is concerned, it cannot be claimed that the prefix marks the end of the action (Stevanović 1970). However, it expresses the fact that the event of emotional change (whether caused or non-agentive) denoted by the verb is accomplished. Thus, I argue that the schematic meaning of *raz-* also correlates with the resultative sense.

Finally, in all of the verbs of emotion discussed here, the spatial meaning of dispersed motion correlates with the sense of intensity (augmentative sense). In verbs that occur only in emotional contexts, the augmentative sense is motivated by the interrelated metonymies DISPERSED MOTION STANDS FOR EXTENSIVENESS and EXTENSIVENESS STANDS FOR INCREASE IN INTENSITY (i.e., the more extensive the property of the process, the more intensive the process). On the other hand, in verbs that in the physical domain denote observable processes of becoming hot, flaring, and stirring up, the sense of intensity is implicated by virtue of other interrelated metonymies: DISPERSED MOTION STANDS FOR INCREASE IN VOLUME and INCREASE IN VOLUME STANDS FOR INCREASE IN INTENSITY (cf. Klikovac 2004). The referents of such verbs (i.e., the verbs' TRs) are conceptualized in terms of SPREADING HEAT (*Andrej je razkuril peč* 'Andrej heated up the stove' → *poslanec je razkuril spor* 'a dispute made the members of parliament angry'), FIRE (*veter je razvnel ogenj* 'the wind flared up the fire' → *govornik je razvnel občinstvo* 'the speaker agitated the public'), and WATER (*veter je razburil morje* 'the wind stirred up the sea' → *govornik je razburil občinstvo* 'the speaker stirred up the public'). Moreover, because intensive processes are also indicated by their roots in both verbs of emotion and polysemous verbs of physical processes, the prefix reinforces the augmentative meaning of these verbs.

[17] Endresen et al. (2012, 264) analyze the abstract meaning of the prefix *vz-/voz-* 'up' in Russian verbs of emotion, such as *vspylit* ('to fly into a rage'), and they explain the meaning in terms of a metaphorical rise of the energy level triggered by emotional agitation. This interpretation is adopted in (Będkowska-Kopczyk 2012b) for Slovene *vz-* ('up, upwards') in verbs of emotion.

Note that the verbs expressing the processes in question (in addition to *razkuri*) often occur in idiomatic constructions denoting the emergence of both intensive short- and long-term emotions. In these constructions, emotions are conceptualized in terms of spreading FIRE and WATER; cf. *razplamtiti čustva/jezo/sovraštvo* ‘to fire up emotions/anger/hate’, *razvneti čustva/jezo* ‘to fire up emotions/anger’, *razplameniti sovraštvo* ‘to fire up hate’, *razžgati ljubosumnost/sovraštvo* ‘to fire up jealousy/hate’, *razburkati čustva*; *razburiti čustva* ‘to stir up emotions’. The idioms show that in the folk model of emotions not only anger is conceptualized in terms of rapidly spreading fire,<sup>18</sup> but also love, hate, jealousy, and emotions in general.

Summing up, I conclude that the schematic representation of *raz-* depicted by dispersed motion on a three-dimensional PATH is mapped onto the emergence of emotions and rapid increase of their intensity. The schematic meaning of the prefix combined with the verbs analyzed in this section correlates with all three senses identified by [Stevanović \(1970\)](#): inchoative, resultative, and intensive (augmentative).

[5.2] *raz-* in verbs denoting physical reactions caused by emotions

The prefix *raz-* occurs in three verbs: *razpočiti se*, *raznesti*, and *razgnati* ‘to explode’, which denote uncontrollable intensive physical reactions (metaphorical exploding) caused by strong emotions; for instance, anger, fear, delight, and happiness. These verbs occur in idiomatic constructions with a prepositional phrase formed by *od* ‘from’ and the emotion noun in the genitive, as in (7).

- (7) Če bi naju sedaj videla Verena May, bi jo  
 If would us-ACC now see-3RD.SG.PST Verena May-NOM would she-ACC  
 razneslo od zavisti. (Gf)  
 RAZ.exploded-3RD.SG.PST from envy-GEN  
 ‘If Verena May saw us now, she would explode with envy.’

Such constructions can be explained as underlain by the metonymy EXPLODING STANDS FOR STRONG EMOTIONS, which is an elaboration of a general metonymy EFFECTS OF A STATE STAND FOR THE STATE ([Kövecses 2000](#), 134); however, it seems that the abstract use of these verbs is also underlain by another conceptualization of emotion events.

In the spatial realm, *raz-* in *razpočiti se*, *raznesti*, and *razgnati* ‘to explode’ instantiates dispersed motion on a three-dimensional PATH that results in separating the physical object’s parts (translational motion). The same meaning emerges also from the base verbs (cf. *počiti* ‘explode’, *nesti* ‘carry’, *gnati* ‘corral’), and thus the prefix not only makes the verbs perfective but also reinforces their meaning of separation. Because the concrete meaning of these verbs derives from the

[18] See the metaphor ANGER IS HOT FLUID IN THE CONTAINER ([Lakoff & Kövecses 1987](#)).

domain of physical processes (as it does in the case of verbs such as *razburiti se*, discussed in Section [5.1]), I argue that the metaphor EMOTIONAL PROCESSES ARE PHYSICAL PROCESSES (Klikovac (2004) motivates their extension to the domain of emotion and gives rise to their polysemy. The other metaphor that links exploding with emotional processes is THE HUMAN BODY IS AN EXPLODING CONTAINER. The schematic meaning of *raz-* (i.e., separating) is also mapped onto the occurrence of a physical reaction due to the metaphor CHANGE IS MOTION, which in the constructions formed by prefixed verbs discussed here interrelates with the metaphors and metonymy mentioned above. Moreover, it is observed that the spatially based meaning denoted by *raz-* correlates with the sense of resultativeness because *raz-* verbs indicate the final result of an action.

As regards a type of causality implied by *raz-* verbs expressing physical reactions, it has been already stated that the metaphorical exploding of the experiencer participant's body is perceived as being caused by the emotion (caused motion). In Talmy's framework, constructions formed by English prepositional phrases with *from* (e.g., *The window cracked from the wind*) indicate resulting-event causation; that is, causation implied by situations in which the main event "has resulted from another event and would not otherwise have occurred" (Talmy 2000b, 70). In Slovene, the cause-emotion is coded by an ablative construction with the preposition *od* 'from' + emotion noun in the genitive case, such as *od zavisti* 'with envy' (literally: 'from envy-GEN'), as in (7).<sup>19</sup> In Będkowska-Kopczyk (2011, 260–261) it is shown that the prepositional phrase conveys the idea of emotions as uncontrollable causes of physical reactions. In the spatial use, Slovene phrases with *od* 'from' are perceived to encode the spatial human or non-human SOURCE or initial point of self-instigated motion. As shown in (Peña Cervel 2003, 146–148), the essential concept behind the caused motion, as in the verbs under investigation, is COMPULSION, one of the types of FORCE image schema (Johnson 1987, 145). Thus, the metaphorical extension of the source concept to the metaphorical meaning of EMOTION AS CAUSE of uncontrollable physical reactions is related to the idea of EXTERNAL FORCE, which influences people independently of their will.

The verbs *razpočiti se*, *raznesti*, and *razgnati* 'to explode' can also occur in a sentence without the prepositional phrase. I argue that, although the emotion is not explicitly expressed, the context of the utterance and information alone about physical reactions is sufficient to recognize an emerging emotion (by virtue of the metonymy EFFECTS OF A STATE STAND FOR THE STATE, (Kövecses 2000). One can also observe another regularity. In SSKJ, the verbs *razjeziti se* 'to become angry', *razbesneti se* 'to become very angry', *razdražiti se*, and *razburiti se* 'to become

[19] In other Slavic languages (e.g., Polish), a cause-emotion can be expressed by ablative, elative, and instrumental constructions; see the discussion on causality in Indo-European languages in the framework of localist theories in (Kempf 2007) and emotional causality in the light of ablative, elative, and instrumental constructions in Slovene and Polish in (Będkowska-Kopczyk 2011).

agitated', which, as shown in Section [5.1], typically denote the emergence of emotions, have a second meaning glossed as 'to express "big" (intensive) anger' (*razjeziti se; razbesneti se*), and 'to express "big" (intensive) agitation' (*razdražiti se; razburiti se*). This suggests that in some contexts verbs of emotion metonymically express symptoms of emotions and people's behavioral reactions related to these emotions (see discussion in (Jędrzejko & Nowakowska-Kempna 1985)).<sup>20</sup>

I conclude that for the sake of economy and by means of the cognitive process of metonymy, linguistic expressions reflecting only one stage of an emotion script (either the first or the third one) are sufficient to communicate both the emergence of emotions and reactions that are typically caused by those emotions.

## [6] CONCLUSIONS

In Section [5], I demonstrated that Slovene *raz-*, when contained in verbs of emotional experience, metaphorically extends the notion of movement on a dispersed path and denotes a change in the domain of emotion. I argued that in verbs of emotion (e.g., *razveseliti (se)* 'to make/become happy'), as well as verbs that denote emotional processes by the extension of their physical meaning (e.g., *razkurtiti (se)* 'to make/become angry'), the prefix expresses the metaphorical spread and expansion of an emotional state that is associated with the emergence of an emotion. On the other hand, in verbs that express a physical change caused by an emotion, *raz-* expresses metaphorical separation of the experiencer participant's body (e.g., *razpočiti se od jeze* 'to explode with anger'), which is associated with the occurrence of a reaction. The spatial interpretation of metaphorical extensions of *raz-* presented in this article is consistent with the analyses of verbs of emotion prefixed by *raz-* in other Slavic languages. However, I showed that *raz-* interrelates with the meanings of the imperfective verbs it combines with in the sense that in verbs of emotion it implies self-contained motion, whereas in verbs of physical reaction it implies a translational one. Moreover, the prefix reinforces the meaning of intensive processes (verbs of emotion) and separation (verbs of physical experience) encoded by the base verbs.

I also showed that constructions formed by the prefixed verbs under investigation are underlain by interrelated metaphors and metonymies, among which the metaphor CHANGE IS MOTION and EMOTIONAL PROCESSES ARE PHYSICAL PROCESSES (Klikovac 2004) seem to play a major role in the conceptualization of an event of emotional change. The first metaphor motivates all verbs of emotional experience prefixed by *raz-* and can be elaborated as EMOTIONAL CHANGE IS DISPERSED

[20] Moreover, in narrative texts *raz-*verbs of emotion discussed in this article can also occur as speech act verbs Wierzbicka (1992, 403). Bearing in mind that verbs that denote physical responses metonymically refer to emotional states, I assume that *raz-*verbs used as speech act verbs indicate a specific manner of speaking (e.g., angrily in *razjeziti se* 'to become angry') and also metonymically represent emotional states.

MOTION. The latter metaphor motivates polysemy of verbs that extend their physical meaning to the domain of emotion.

The other concern of this article was the relation between the spatially based senses of the prefix and its function as a modifier of the course-of-change event. I showed that, in the case of verbs expressing the emergence of an emotion, the spatially-based meaning of the prefix correlates with inchoative, resultative, and intensive (augmentative) senses, whereas in verbs of physical reactions it correlates only with resultativeness. Because Slovene linguistic sources are not consistent in relating these temporal meanings to the meanings of emotion verbs, my findings can contribute to an analysis of the meaning of *raz-* in terms of Aktion-sart.

The last issue that this article raised is the types of causation implied by the experiencer-object and experiencer-subject of emotions, and verbs of physical reaction. I observed that constructions formed by experiencer-object verbs imply caused change, whereas those formed by experiencer-subject verbs (with the clitic *se*) imply a non-agentive change. Thus, the latter verbs form middle voice constructions. Verbs of physical reactions caused by an emotion also represent a caused change. The causing event is denoted by prepositional phrases with *od* 'from' and a noun expressing cause. All constructions analyzed in this article indicate that both the emergence of emotions and emotional responses are conceptualized as being beyond the control of the person that experiences them.

#### GLOSSES AND ABBREVIATIONS

In examples (1)–(7) the following glosses are used:

ACC = accusative case, DAT = dative case, FUT = future, GEN = genitive case, INS = instrumental case, NOM = nominative case, PL = plural, PRS = present tense, PST = past tense, SG = singular.

Throughout the text the following abbreviations are used:

TR = trajector, LM = landmark, and Gf = Gigafida corpus.

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## SOURCES

*Corpuses*

- Gigafida = Gigafida corpus. Available from: <http://demo.gigafida.net> (Accessed 10 March 2013).
- Nova beseda = Nova beseda corpus. Available from: <http://bos.zrc-sazu.si> (Accessed 12 March 2013).

*Dictionaries*

- *Odzadnji slovar slovenskega jezika* (Reverse Slovene Dictionary, OSSJ). Electronic version. Hajnšek-Holz, M. and P. Jakopin (eds.) Ljubljana: Založba ZRC, ZRC SAZU. Available at <http://bos.zrc-sazu.si/odzadnji.html>. (Accessed 10 March 2013).
- *Slovar slovenskega knjižnega jezika* (Standard Slovene Dictionary, SSKJ). Electronic version. Bajec, A. et al. (eds.). Ljubljana: Založba ZRC, ZRC SAZU. Available at <http://bos.zrc-sazu.si/sskj.html>. (Accessed 10 March 2013).

## REFERENCES

- Bajec, A. 1959. *Besedotvorje slovenskega jezika. IV: Predlogi in predpone*. Ljubljana: SAZU.
- Belaj, B. 2004. Značenjska analiza hrvatskoga glagolskog prefiksa RAZ- i njegovih alomorfa RAS-, RAŠ-, RAŽ-, RAZA-, RA-. *Rasprave instituta za hrvatski jezik i jezikoslovje* 30. 1–17.
- Belleti, A. & L. Rizzi. 1988. Psych-Verbs and  $\theta$ -Theory. *Natural Language and Linguistic Theory* 6. 291–352.
- Będkowska-Kopczyk, A. 2011. Emotions as Causes of Human Behavior in Polish and Slovene. In L. A. Janda & M. Grygiel (eds.), *Slavic Linguistics in a Cognitive Framework*, 251–270. Frankfurt am Main: Peter Lang.
- Będkowska-Kopczyk, A. 2012a. Semantic and Grammatical Features of o-/ob- in Verbs of Emotion in Slovene. *Jezikoslovje* 13(1). 19–38.
- Będkowska-Kopczyk, A. 2012b. The Prefix vz- and its Allomorphs on Verbs of Emotional Experience in Slovene. Grammatical Evidence for UPWARD MOTION Metaphors of EMOTIONS. In L. Pavera (ed.), *Filologie, areál a praxe. Inovativnost v současných filologických oboreh*, vol. II, 82–105. Prague: Verbum.
- Peña Cervel, S. M. 2003. *Topology and Cognition: What Image-Schemas Reveal about Metaphorical Language of Emotions*. Munich: Lincom Europa.

- Craford, E., S. M. Margolies, J. T. Drake & M. E. Murphy. 2006. Affect Biases Memory of Location: Evidence for the Spatial Representation of Affect. *Cognition and Emotion* 20(8). 1153–1169.
- Croft, W. 1991. *Syntactic Categories and Grammatical Relations. The Cognitive Organization of Information*. Chicago: University of Chicago Press.
- Dirven, R. & M. Verspoor. 2004. *Cognitive Explorations of Language and Linguistics*. Amsterdam: John Benjamins.
- Dziwirek, K. & B. Lewandowska-Tomaszczyk. 2010. *Complex Emotions and Grammatical Mismatches*. Berlin: Mouton de Gruyter.
- Endresen, A., L. A. Janda, J. Kuznetsova, O. Lyashevskaya, O. Makarova, T. Nessel & T. Sokolova. 2012. Russian “Purely Aspectual” Prefixes: Not So “Empty” after All? *Scando-Slavica* 58(2). 229–289.
- Fehr, B. & J. A. Russell. 1984. Concept of Emotion Viewed from a Prototype Perspective. *Journal of Experimental Psychology: General* 113(3). 464–486.
- Hanić, J. 2009. Prefixes and Prototypes: Contrasting the English Verbal Prefix *un-* and Bosnian *raz-*. *Jezikoslovje* 10(2). 153–181.
- Janda, L. A. 1986. *A Semantic Analysis of the Russian Verbal Prefixes Za-, Pere-, Do-, and Ot-*. Munich: Otto Sagner.
- Janda, L. A. 2007. Aspectual Clusters of Russian Verbs. *Studies in Language* 31(3). 607–648.
- Janda, L. A. & T. Nessel. 2010. Taking apart Russian RAZ-. *Slavic and East European Journal* 54. 476–501.
- Jędrzejko, E. & I. Nowakowska-Kempna. 1985. O u ich objawach w aspekcie semantyki leksykalnej. *Przegląd Humanistyczny* 7(8). 81–90.
- Johnson, M. 1987. *The Body in the Mind: The Bodily Basis of Meaning, Imagination, and Reason*. Chicago: University of Chicago Press.
- Kempf, Z. 2007. *Próba teorii przypadków*, vol. 2. Opole: Wydawnictwo Uniwersytetu Opolskiego.
- Klikovac, D. 2004. *Metafore u mišljenju i jeziku*. Belgrade: Biblioteka XX vek.
- Kövecses, Z. 1986. *Metaphors of Anger, Pride, and Love. A Lexical Approach to the Structure of Concepts*. Amsterdam: John Benjamins.

- Kövecses, Z. 2000. *Metaphor and Emotion: Language, Culture, and Body in Human Feeling*. Cambridge: Cambridge University Press.
- Lakoff, G. 1987. *Women, fire and dangerous things: What categories reveal about the mind*. Chicago: University of Chicago Press.
- Lakoff, G. & M. Johnson. 1999. *Philosophy in the Flesh. The Embodied Mind and its Challenge to Western Thought*. New York: Basic Books.
- Lakoff, G. & Z. Kövecses. 1987. The Cognitive Model of Anger Inherent in American English. In D. Holland & N. Quinn (eds.), *Cultural Models in Language and Thought*, 195–221. New York: Cambridge University Press.
- Langacker, R. W. 1987. *Foundations of Cognitive Grammar. Theoretical Prerequisites*, vol. 1. Stanford, CA: Stanford University Press.
- Langacker, R. W. 1991. *Foundations of Cognitive Grammar. Descriptive Application*, vol. 2. Stanford, CA: Stanford University Press.
- Maldonado, R. 2008. Spanish Middle Syntax. A Usage Based Proposal for Grammar Teaching. In S. De Kopp & T. De Rycker (eds.), *Cognitive Approaches to Pedagogical Grammar. A Volume in Honour of René Dirven*, 155–196. Berlin: Mouton de Gruyter.
- Mandler, J. 1992. How to Build a Baby: II Conceptual Primitives. *Psychological Review* 99(4). 587–604.
- Morgan, P. S. 1997. Figuring out Figure Out: Metaphor and the Semantics of English Verb-Particle Construction. *Cognitive Linguistics* 8(4). 327–357.
- Nesset, T. 2010. Is the Choice of Prefix Arbitrary? Aspectual Prefixation and Russian Verbs of Perception. *Slavic and East European Journal* 54. 666–689.
- Przybylska, R. 2006. *Schematy wyobrazeniowe a semantyka polskich prefiksów czasownikowych do-, od-, prze-, roz-, u-*. Kraków: Universitas.
- Radden, G. 1998. The Conceptualization of Emotional Causality by Means of Prepositional Phrases. In A. Athanasiadou & E. Tabakowska (eds.), *Speaking of Emotions: Conceptualization and Expression*, 273–294. Berlin: Mouton de Gruyter.
- Richardson, D. C., M. J. Spivey, S. Edelman & A. D. Naples. 2001. “Language is Spatial”: Experimental Evidence for Image Schemas of Concrete and Abstract Verbs. In J. D. Moore & K. Stenning (eds.), *Proceedings of the 23rd Annual Meeting of the Cognitive Science Society*, 845–850. Mahwah, NJ: Erlbaum.
- Šarić, L. 2012. A Cognitive Semantic Account of the Prefix *uz-* in Croatian. *Jezikoslovlje* 13(1). 191–218.

- Snoj, M. 1997. *Slovenski etimološki slovar*. Ljubljana: Mladinska knjiga.
- Stevanović, M. 1970. *Savremeni srpskohrvatski jezik (gramatički sistemi i književnojezička norma) I*. Belgrade: Naučna knjiga.
- Talmy, L. 2000a. *Toward a Cognitive Semantics: Typology and Process in Concept Structuring*, vol. 1. Cambridge, MA: MIT Press.
- Talmy, L. 2000b. *Toward a Cognitive Semantics: Typology and Process in Concept Structuring*, vol. 2. Cambridge, MA: MIT Press.
- Tchizmarova, I. 2012. A Cognitive Analysis of the Bulgarian Prepositions and Verbal Prefixes NAD and POD. *Jezikoslovje* 13(1). 219–260.
- Tomišić, M. 2011. *Oprostite, zaspal sem se! Glagoli s se v slovenščini*. Bielsko-Biała: Zora.
- Toporišič, J. 2000. *Slovenska slovnica*. Maribor: Obzorja.
- Verhoeven, E. 2010. Agentivity and Stativity in Experiencer Verbs: Implications for a Typology of Verb Classes. *Linguistic Typology* 14(2–3). 213–251.
- Wierzbicka, A. 1992. *Semantics, Culture, and Cognition: Universal Human Concepts in Culture-Specific Configurations*. Oxford: Oxford University Press.
- Wittgenstein, L. 1953. *Philosophical Investigations*. Oxford: Blackwell.
- Zlatev, J., J. Blomberg & U. Magnusson. 2012. Metaphor and Subjective Experience. A Study of Motion-Emotion Metaphors in English, Swedish, Bulgarian and Thai. In A. Foolen, M. U. Lüdtke, T. P. Racine & J. Zlatev (eds.), *Moving Ourselves, Moving Others. Motion and Emotion in Intersubjectivity, Consciousness and Language*, 243–250. Amsterdam: John Benjamins.

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