MORPHOSEMANTIC ANALYSIS OF CROATIAN NOUNS FORMED WITH THE PREFIX *PRED*-

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Overview

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Introduction

◦ The goal of this paper is to present an exhaustive and comprehensive morphosemantic analysis of nouns formed with the Croatian prefix *pred-* (or its allomorph *pret-*).

◦ *Pred-* is a native Croatian prefix which can form nouns, verbs and adjectives (Babić, 2002).

Cognitive linguistic approach to word-formation

◦ "the semanticization of word-formation analysis" (Ungerer 2010)

◦ The central tenet of CL is that all aspects of word-formation are treated as **meaningful** (Ungerer, 2010), which is in line with the axiom of the centrality of meaning (Langacker ,1987).

◦ As such, this framework considers prepositions and prefixes to be **polysemous radial categories** (e.g. Lakoff, 1987; Tyler and Evans, 2003; Šarić, 2008; Matovac, 2013; Petrak, 2021), which is quite different from the homonymous approach to these linguistic elements that had prevailed in traditional approaches to language (Peytard, 1975; Belaj, 2008).

◦ Cognitive linguistics is compatible with some basic tenets of the structuralist approach to word formation (Onysko and Michel, 2010; Štekauer and Lieber, 2005; cf. Raffaelli, 2004).

Previous work

◦ Šipka (1989) - means of forming antonymic pairs of motivated words

◦ Vulić (2020), contemporary literary works of Burgenland Croats; *pred-* is used to form masculine and feminine nouns

◦ Belaj's (2008) *pred-* verbs form a set unified by the pre-locativity superschema

◦ Matovac (2013) analyses the preposition *pred*, from which the prefix *pred-* originated, and claims that together with the prepositions *nad*, *pod* and *za*, *pred* makes the basis of the study of Croatian orientational prepositions.

Goal

◦ An exhaustive and comprehensive **morphosemantic analysis** of nouns formed with the Croatian prefix *pred-* (or its allomorph *pret-*)

◦ Such analyses are quite rare in the extant literature, but are highly important because they explore the **morphosemantic potential** of one specific derivational element, in this case a prefix, and analyse how it is used in the construal of the lexicon.

◦ By analysing both the formal level (i.e. the various word formation mechanisms it enters into) and the semantic level (i.e. the meanings that the prefix *pred-* realizes in its derivatives, and the mechanisms on which these meanings are based), we gain a detailed insight into its morphosemantic potential.

Methodology

◦ usage-based approach; CLASSLA-web.hr corpus (Kuzman and Ljubešić, 2023), the largest extant Croatian corpus (2.7 billion tokens crawled primarily from the national top-level internet domain *.hr)*

◦ graphic search for nouns starting with the graphemes *pred* and *pret* (freq ≥ 2)

◦ The corpus search resulted in initial two lists, one containing *pred-* (3,424) and the other *pret-* nouns (1,062). The lists contained a lot of noise

◦ Once all the manual work has been done, our search yielded a total of 1,006 nouns. When compared to the initial 4,486 types yielded by our corpus search, we can see that only about 22% of this initial bulk quantity of words were actually *pred-* prefixed nouns

Results & analysis

○ 1) Word-formation types

○

	Word-formation type	No.	%
1	prefixation	846	83,5
2	suffixation	129	13
3	prefix-suffix combination	27	3
4	backformation	5	0,5
Total		1,006	100%

Prefixation

◦ Prefixation is the prevalent word-formation type in our corpus (more than 80% of all nouns)

◦ Examples: *predpranje* 'prewash', *predromanika* 'pre-Romanesque period', *predznanje* 'prior knowledge', *predobrada* 'preprocessing', *predgovor* 'preface').

◦ At the semantic level, a great majority of these nouns realise the temporal meaning, which points to a regularity we could label as following: [*pred*-[N]]$_N$ 'before N'

Suffixation

◦ 13% of all formations

◦ e.g. *predsjednik* 'president', *prethodnik* 'predecessor', *predmetak* 'prefix', *predsjedatelj* 'chairman (m.)', *predvoditeljica* 'leader (f.)', *predradnica* 'foreman (f.)'

◦ In most of the suffixed words, the whole nouns gets a new, metaphorical reading

◦ E.g. *predsjednik* 'president' is formed from *pred-* 'before' + *-sjed-* 'sit' and the agentive suffix *-nik*, where 'sitting in front of other people' stands for 'presiding' according to the LEADING IS BEING AHEAD metaphor (cf. Petrak, 2021)

Prefix-suffix combination

◦ 3% of derivatives

◦ *predslovlje* 'preface', *predsoblje* 'anteroom, antechamber', *predgrađe* 'suburbs', *predgorje* 'foothills', *predvečerje* 'early evening'

  ◦ A majority of these derivatives realise a concrete spatial meaning (*predsoblje* 'antechamber', *predgorje* 'foothills', etc.), but some have a temporal meaning (*predvečerje* 'eve' < *pred-* + *večer* 'evening' + *-je>*, *predzorje* < *pred-* + *zor(a)* 'dawn' + *-je>* 'dusk',).

  ◦ Most of these nouns receive the suffix *-je*, while only a few appear with other suffixes as well: *predoltar**nik*** < *pred-* + *oltar* 'altar' + *-nik* > 'altar frontal', *predkolumb**ijanac*** <*pred-* + *Kolumbo* 'Columbus' + *ijanac* > 'pre-Columbian', *pred-bolonj**ac*** < *pred-* + *Bolonja* + *-ac* > 'student before the Bologna Process'.

◦ One proper noun: *Predkavkazje* 'fore-Caucasus'

Back-formation

◦ 0,5% of derivatives

◦ E.g. *predstava* 'theatre piece', *pretklon* 'the forward lean', *predosjećaj* 'presentiment', *predrasuda* 'prejudice').

◦ These nouns can have both concrete (*pretklon < pretkloniti < pred- + kloniti >*)'to lean forward' >) and abstract meanings (*predstava < pred- + -stav- 'put' + -a >*)
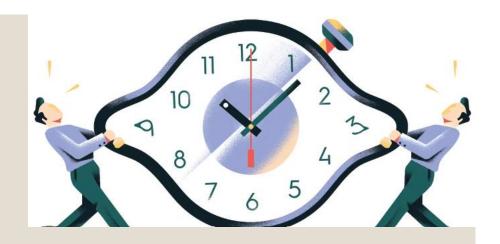
Semantic analysis

	Meaning type	No.	%
1	concrete (spatial)	110	11
2	temporal	801	80
3	metaphorical & metonymical	95	9,4
	Total	1,006	100%

Spatial meaning

◦ Nouns in which *pred-* retains its concrete meaning 'in front of'

◦ E.g. *predgrađe* < *pred-* + *grad* 'town' + -je > 'suburbs', *predvorje* < *pred-* + *dvor* 'court; courtyard' + *-je* > 'vestibule' and *predbroj* < *pred-* + *broj* 'number' > 'telephone prefix'. Most of these nouns are a result of the prefix-suffix combination, but there are also some examples of prefixation (*predbroj*).

Temporal meaning

◦ The largest semantic group

◦ the prefix has the meaning '(occurring) before (something)'

◦ the PAST IS BEHIND metaphor (Lakoff and Johnson, 1980), according to which events happening in the future are conceptualized as being in front of the speaker.

◦ E.g. *predjelo* 'appetizer', *predradnja* 'activity preceding another one' or *predtestiranje* 'pre-testing

◦ This metaphor is a rather frequent one in Indo-European languages, and it is an entailment of the very common TIME IS SPACE metaphor (e.g. Radden, 2003).

◦ calques from English?

Metaphorical & metonymical

◦ leading meaning in this group is a result of the LEADING IS BEING AHEAD metaphor, which is an entailment of the GOOD IS IN FRONT metaphor (Belaj, 2008) – e.g. metonymical basis, being in front is used to refer to 'leading' (SALIENT PROPERTY FOR CATEGORY, Littlemore, 2010): e.g. *predmolitelj* < *pred-* + *moliti* 'pray' > 'leading celebrant', *predradnik* < *pred-* + *radnik* 'worker' > 'foreman', *predvođenje* < *pred-* + *voditi* 'lead' + *-nje* > 'leading'

◦ Another relatively important subgroup: *predokus* < *pred-* + *okus* 'taste' > 'foretaste', *predosjećanje* <*pred-* + *osjećati* 'feel' + *-nje*> 'presentiment', *predskazivanje* < *pred-* + *kazati* 'tell' + *-nje* > 'foretelling' or *predskazatelj* < *pred-* + *kazati* 'tell' + *-telj* > 'foreteller; PART FOR WHOLE metonymy, according to which foretelling or presentiments are conceptualised as saying, tasting or feeling something before something else + PAST IS BEHIND METAPHOR

◦ A third subgroup: *predočenje* 'presentation', *predodžba* 'idea, conception', *predočivost* 'imageability', etc. < *predočiti* 'display, put forward' > ; the common metaphor KNOWING IS SEEING, on the basis of which mental activities are conceptualised as the act of seeing

Word-formation <> semantic pairings

1) [*pred-* + Noun] frequently results in nouns with a temporal meaning 'before N'

2) The suffixed nouns group is the most heterogenous one, in which various meanings appear: concrete (*predmetak* 'prefix'), temporal (*predškolka* 'preschooler (f.)') and metaphorical/metonymical (predvodnik 'leader'), based on different metaphors and/or metonymies

3) In prefix-suffix formation, [*pred-* + N + *-je*] frequently results in nouns with a spatial meaning 'the space in front of N': e.g. *predvorje* 'antechamber, entrance hall'< *pred-*' before' + *dvor-* 'court' + *-je* >

4) Backformations are very heterogenous and exhibit no clear regularities.

Comparison of high- and lower-frquency types

HIGH-FREQUENCY NOUNS			
	Word-formation type	**No.**	**%**
1	prefixation	846	83,5
2	suffixation	129	13
3	prefix-suffix combination	27	3
4	backformation	5	0,5
	Total	1,006	100

LOW-FREQUENCY NOUNS			
	Word-formation type	**No.**	**%**
1	prefixation	491	96
2	suffixation	11	2,1
3	prefix-suffix combination	10	1,9
4	backformation	0	0
	Total	512	100

◦ On the semantic level, in the largest majority of the lower-frequency nouns, *pred-* has a temporal meaning: e.g. *predčistilište* 'ante-Purgatory', *preddijagnoza* 'pre-diagnosis', *predglačanje* 'pre-ironing'

◦ TIME IS SPACE metaphor

Concluding remarks

○ detailed study of the morphosemantic potential of a single morpheme, prefix *pred-*

○ Pred- is found in numerous nouns whose morphosemantic structures exhibit interesting **regularities**

○ Four types of word-formation processes: prefixation, suffixation, prefix-suffix formation and back-formation

○ In *pred-* nouns the prefix seldom retains its prototypical spatial meaning, and such nouns are usually the result of prefix-suffix combination

○ In the largest number of nouns, which are the result of prefixation, *pred-* gets a temporal meaning according to the TIME IS SPACE metaphor

○ Suffixation usually produces nouns which get an extended meaning as a whole, based on metaphor, metonymy or both of these mechanisms.

○ Our study of *pred-* nouns adds up to research proving that formal and semantic motivation are indeed intertwined (cf. Koch and Marzo, 2007), and sheds some more light on the semantic structure of motivated words, which remains a rather unexplored area of morphology (cf. Onysko and Michel, 2010)

References

Stjepan Babić, Dalibor Brozović, Ivo Škarić, and Stjepko Težak. 2007. *Glasovi i oblici hrvatskoga književnoga jezika*. Nakladni zavod Globus, Zagreb.

Stjepan Babić. 2002. *Tvorba riječi u hrvatskome književnome jeziku*. Globus and HAZU, Zagreb.

Branimir Belaj. 2008. Pre-locativity as the schematic meaning of the Croatian verbal prefix *pred-*. *Jezikoslovlje* 9 (1-2): 123–140.

Peter Koch and Daniela Marzo. 2007. A two-dimensional approach to the study of motivation in lexical typology and its first application to French high-frequency vocabulary. *Studies in Language* 31 (2): 259–291.

Tanja Kuzman and Nikola Ljubešić. 2023. CLASSLA-web: Bigger and better web corpora for Croatian, Serbian and Slovenian on Clarin.si concordancers. https://www.clarin.si/info/k-centre/classla-web-bigger-and-better-web-corpora-for-croatian-serbian-and-slovenian-on-clarin-si-concordancers/

George Lakoff and Mark Johnson. 1980. Conceptual metaphor in everyday language. *The Journal of Philosophy* 77 (8): 453–486.

George Lakoff. 1987. *Women, Fire and Dangerous Things. What Categories Reveal About the Mind*. University of Chicago Press, London, Washington, DC.

Janet Littlemore. 2010. *Metonymy: Hidden Shortcuts in Language, Thought and Communication*. Cambridge University Press, Cambridge.

Darko Matovac. 2013. *Semantika hrvatskih prijedloga*. PhD dissertation. Sveučilište J. J. Stossmayera, Osijek, Filozofski fakultet.

Alexander Onysko and Sascha Michel. 2010. Introduction: unravelling the cognitive in word formation. In *Cognitive Perspectives on Word Formation*. De Gruyter Mouton, pages 1–28.

Marta Petrak. 2021. Complex interplay of metaphor and metonymy: the case of *pred-* prefixed verbs. In *2nd International Conference for Young Researchers in Cognitive Linguistics (YRCL) Book of Abstracts*. Universidad de Alcalá, page 37.

Jean Peytard. 1975. *Recherches sur la préfixation en français contemporain*. Librairie Honoré Champion, Paris.

Günter Radden. 2003. The Metaphor TIME AS SPACE across Languages. In *Übersetzen, Interkulturelle Kommunikation, Spracherwerb und Sprachvermittlung - das Leben mit mehreren Sprachen. Festschrift für Juliane House zum 60. Geburtstag. Zeitschrift für Interkulturellen Fremdsprachenunterricht*. AKS-Verl, pages 226–239.

Ida Raffaelli. 2004. Odnos strukturalne semantike prema kognitivnoj. *Suvremena lingvistika* 57-58(1-2):67–92.

Ida Raffaelli. 2013. The model of morphosemantic patterns in the description of lexical architecture. *Lingue e linguaggio* 1:47–72.

Ida Raffaelli. 2015. *O značenju. Uvod u semantiku*. Matica hrvatska, Zagreb.

Eleanor Rosch. 1975. Cognitive Representations of Semantic Categories. Journal of Experimental Psychology: General 104: 193–233.

Ljiljana Šarić. 2008. Spatial Concepts in Slavic. A Cognitive Linguistic Study of Prepositions and Cases. Harrasowitz Verlag, Wiesbaden.

Danko *Šipka*. 1989. *Tvorbena sredstva* antonimizacije. *Jezik: časopis za kulturu hrvatskoga književnog jezika* 37(5): 139–145.

Pavol Štekauer and Rochelle Lieber. 2005. *Handbook of Word-Formation*. Springer, Dordrecht.

Andrea Tyler and Vyvyan Evans. 2003. *Semantics of English Prepositions: Spatial Scenes, Embodied Meaning and Cognition*. Cambridge University Press, Cambridge.

Stephen Ullmann. 1966. Semantic universals. In *Universals of language*. MIT Press, Cambridge MA, pages 217–262.

Friedrich Ungerer. 2010. Word-Formation. In *The Oxford Handbook of Cognitive Linguistics*. Oxford University Press, Oxford.

Sanja Vulić. 2020. Tvorbeno motivirane riječi u suvremenim gradišćanskohrvatskim književnim djelima. *Čakavska rič: Polugodišnjak za proučavanje čakavske riječi* XLVIII (1-2): 9–31.

THANK YOU FOR THE ATTENTION!

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