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**Приставочные глаголы движения и предлоги  
в хорватском языке**

**Аннотация.** Приставочный способ образования глаголов является наиболее продуктивным в хорватском языке. Присоединение приставки к основе глагола несовершенного вида обычно превращает его в глагол совершенного вида. Основное значение глагола при этом сохраняется, но частично модифицируется в соответствии со значением приставки (*letjeti* ‘лететь’ — *uletjeti* ‘влететь’). Согласно грамматическим описаниям хорватского языка, за таким глаголом часто следует аналогичный приставке предлог (*uletjeti u vodu* ‘влететь в воду’). Такое повторение характерно также для русского и ряда других славянских языков (Талму 2007). Настоящее исследование, основанное на материале корпуса хорватского языка hrWaC v2.2, имеет своей целью изучить взаимосвязи между четырьмя приставками (*do-* ‘до’, *od-* ‘от’, *u-* ‘в’, *iz-* ‘из’) и пятью глаголами движения (*ići* ‘идти’, *letjeti* ‘лететь’, *plivati* ‘плыть’, *ploviti* ‘плыть (о судне)’, *trčati* ‘бежать’), а также установить, оказывает ли воздействие на выбор пред-

лога, следующего за базовым имперфективом, его префиксация, и если оказывает, то каким образом. Основной задачей исследования является изучение (с привлечением корпуса) взаимосвязи между приставкой и предлогом для пяти основ глаголов движения (из общего количества в 20 приставочных глаголов) и подтверждение универсальности выбора омонимичного приставке предлога.

**Ключевые слова:** хорватский язык, hrWaC, глаголы движения с приставками, путь, предлоги.

## Prefixed Verbs of Motion and Prepositions in Croatian

**Summary:** Prefixation is the most productive type of word-formation of verbs in Croatian. Adding the prefix to the basic verb of the imperfective aspect usually changes it into perfective verb. The basic meaning of the verb with prefix is preserved but it is slightly modified in accordance with the meaning of the prefix (*letjeti* ‘fly’ — *uletjeti* ‘fly in’). According to Croatian grammars, such a verb is often followed by the same preposition (*uletjeti u vodu* ‘fly into the water’). This repetitive pattern is considered typical in Russian and some other Slavic languages as well (Talmy 2007). The aim of this research is, based on corpus data (from Croatian hrWaC v2.2 corpus), to examine the interrelation between four prefixes (*do-* ‘to’, *od-* ‘from’, *u-* ‘in’, *iz-* ‘out of’) and prepositions with five verbs of motion (*ići* ‘go’, *letjeti* ‘fly’, *plivati* ‘swim’, *ploviti* ‘sail’, *trčati* ‘run’) and to determine whether and how the word-formation with prefix changes the choice of preposition following the basic imperfective verb. Using corpus data, the main goal is to research the relation between prefix and preposition on five verb roots of motion (altogether 20 prefixed verbs) and to confirm the homonymous prefix-prepositional pattern.

**Key words:** Croatian, hrWaC, prefixed verbs of motion, path, prepositions

### Introduction: Prefixation in Croatian

In this work, we will research the relationship between prefix of a verb and a preposition, since verbs of motion are often followed by a prepositional phrase denoting space. This relation is often expressed with a homonymous prefix-prepositional pattern.

As Talmy (2007, 70) explained: “The ‘Path’ (with a capital ‘P’) is the path followed or site occupied by the Figure object with respect to the Ground object.” The Path is generally expressed fully by the combination of a satellite and a preposition. The satellite is “the grammatical category of any constituent other than a nominal complement that is in a sister relation to the verb root. It relates to the verb root as a dependent to

a head.” (Talmy 2007, 141, 139). In research of the verb *otići* in Croatian, it is concluded:

that the meaning of the preposition as a Path element of motion neutralizes the meaning of distancing or departing contained in the prefix *od-* lit. ‘from-’. It also indicates that the property of the Path element of motion weakens in the prefix *od-* in such collocations, while the property of the perfective aspect prevails. (Blagus Bartolec and Matas Ivanković 2017, 29–30)

Prefixation is the most productive type of word-formation of Croatian verbs. Adding the prefix to the basic imperfective verb usually changes it into perfective verb. The basic meaning of the verb with prefix is preserved but it is slightly modified in accordance with the meaning of the preposition (*letjeti* ‘fly’ — *uletjeti* ‘fly in’). According to Babić (1986, 484–492), the Croatian prefix *od-* with verbs of motion has the meaning of separation, distancing, moving away, disassembling, and completion of the verb action, among others. Prefix *do-* means that the action of the verb is done to the end or to some spatial or time limit and that the action is carried out to the extent necessary. Prefix *iz-* means to remove, to extract from the place where something was by the action of the verb, to lead to a result and that the action goes from one subject or object onto the other (*iznapijati se* ‘get drunk’). Prefix *u-* among other denotes movement of action into the interior of something (Babić, 1986, 492). By each of those three prefixes (except for *od-*) stands the remark that their characteristic complement is a parallel preposition (*do,* *iz* with genitive, and *u* with accusative).

Our goal was, based on corpus data, to research the relation between prefixes (satellites) and prepositions on five verb roots of motion (altogether 20 prefixed verbs) and to confirm the homonymous prefix-prepositional pattern.

### Methodology: Corpus-based analysis

In this research, five verbs of motion were analyzed: *ići* ‘go’, *letjeti* ‘fly’, *plivati* ‘swim’, *ploviti* ‘sail’, *trčati* ‘run’ in combination with four prefixes: *do-* ‘to’, *od-* ‘from’, *u-* ‘in’, *iz-* ‘out of’. We searched them on hrWaC and focused on frequency data obtained from the corpus. For each of listed imperfective verbs we have made their perfective forms by adding prefixes (which gave us 20 perfective verbs: *otići* ‘go away’, *doći* ‘come’, *izaći*<sup>66</sup> ‘go out’, *ući* ‘go in’, *odletjeti* ‘fly away’, *doletjeti* ‘fly in’,

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<sup>66</sup> Although *izaći* is considered colloquial in Croatian (standard form is *izići*), it is more frequent in hrWaC, so we used that form.

*izletjeti* ‘fly out’, *uletjeti* ‘fly into’, *otplivati* ‘swim away’, *doplivati* ‘swim to’, *isplivati* ‘swim out’, *uplivati* ‘swim in’, *otploviti* ‘sail away’, *doploviti* ‘sail to’, *isploviti* ‘set sail’, *uploviti* ‘sail into’, *otrčati* ‘run off’, *dotrčati* ‘come running’, *istrčati* ‘run out’, *utrčati* ‘run into’). In our search we used regular expressions (for example [lemma=”uploviti”][lemma=”biti|htjeti”]?[tag=”S.\*”] for the verb *uploviti*). Enclitics (auxiliary verbs *biti* ‘be’ and *htjeti* ‘will’ as a part of complex tenses like perfect or future) often come after the verb so we included them in regular expression. The word-order in Croatian is relatively free and adverbials can come at different places in the sentence, but when they are in the form of a prepositional phrase, they usually come after the verb (unlike adverbs, which often come before the verb, e. g. *brzo trčati* ‘run fast’). That is why we focused on *verb + preposition* order and placed the preposition (as the head of a prepositional phrase) in the first place after the verb. Then we looked for frequency of lemmas in the nod and used first ten results. For each one of them we counted the percentage of number of the preposition in proportion to the number of all the other prepositions used with that verb. Results are shown in Table 1.

According to Talmy’s motion-aspect formulae (2007, 93) and the general meaning of distancing or closing, verbs from the list can be divided into ‘move to’ verbs (with prefixes *do-* and *u-*) and ‘move from’ verbs (with *iz-* and *od-*). Most of prepositions obtained with corpus search can also be divided into ‘to’-type prepositions (like *u* ‘into’, *na* ‘onto’, *do* ‘to’, *po* ‘for, after’, *za* ‘for’, *k* ‘at’, *kod* ‘at’) and ‘from’-type prepositions (like *s* ‘from’, *iz* ‘out of’, *od* ‘from’).

Table 1

**The list of verbs and prepositions with percentage of preposition in proportion to the total number of prepositions according to hrWaC statistics**

verb + preposition	%	verb + preposition	%	verb + preposition	%	verb + preposition	%
otići u	36,85	doći do	39,03	izaći iz	36,16	ući u	79,3
otići na	25,94	doći u	18,45	izaći na	27,66	ući biti u	7,31
otići sa	5,95	doći na	16,36	izaći u	11,87	ući na	3,66
otići do	5,58	doći biti do	4,9	izaći sa	7,49	ući sa	3,41
otići iz	5,04	doći sa	3,32	izaći biti iz	2,62	ući među	0,85
otići biti u	3,85	doći iz	2,53	izaći biti na	2,04	ući htjeti u	0,63

verb + preposition	%						
otići kod	2,65	doći biti u	1,69	izaći pred	1,91	ući kroz	0,56
otići biti na	2,03	doći po	1,43	izaći biti u	1,17	ući bez	0,51
otići po	1,52	doći k	1,33	izaći za	0,82	ući biti sa	0,32
otići od	1,27	doći biti na	1,22	izaći prije	0,57	ući pod	0,3
odletjeti u	46,42	doletjeti u	26,02	izletjeti iz	34,94	uletjeti u	64,44
odletjeti na	12,85	doletjeti iz	16,68	izletjeti sa	23,01	uletjeti biti u	11,75
odletjeti sa	7,28	doletjeti na	14,03	izletjeti na	10,4	uletjeti na	9,24
odletjeti za	5,13	doletjeti do	13,06	izletjeti biti iz	5,05	uletjeti sa	4,77
odletjeti biti u	4,7	doletjeti sa	10,15	izletjeti u	4,89	uletjeti među	1,59
odletjeti do	4,14	doletjeti biti u	3,93	izletjeti kroz	3,44	uletjeti biti na	1,49
odletjeti iz	3,87	doletjeti biti iz	2,91	izletjeti biti sa	3,29	uletjeti kroz	1,08
odletjeti prema	2,76	doletjeti biti na	1,63	izletjeti pred	1,91	uletjeti htjeti u	0,67
odletjeti preko	1,5	doletjeti za	1,12	izletjeti izvan	1,76	uletjeti za	0,41
odletjeti kroz	1,08	doletjeti od	1,02	izletjeti biti na	1,61	uletjeti iz	0,41
otplivati do	22,45	doplivati do	64,83	isplivati na	56,69	uplivati u	57,99
otplivati u	22	doplivati biti do	10,87	isplivati iz	13,17	uplivati na	30,72
otplivati na	12,02	doplivati u	6,91	isplivati u	11,2	uplivati sa	4,08
otplivati za	11,11	doplivati na	4,6	isplivati za	3,91	uplivati biti u	1,57
otplivati prema	4,31	doplivati sa	2,94	isplivati biti na	3,47	uplivati kod	1,25
otplivati biti do	3,63	doplivati iz	2,69	isplivati sa	1,74	uplivati među	0,94

<b>verb + preposition</b>	<b>%</b>						
otplivati biti u	3,4	doplivati za	1,53	isplivati nakon	1,01	uplivati po	0,63
otplivati sa	2,95	doplivati biti u	1,02	isplivati biti u	0,98	uplivati od	0,63
otplivati od	2,72	doplivati od	0,64	isplivati do	0,49	uplivati kroz	0,63
otplivati biti na	2,04	doplivati pred	0,38	isplivati htjeti na	0,46	uplivati za	0,31
otploviti u	34,52	doploviti do	35,73	isploviti iz	34,89	uploviti u	80,98
otploviti na	15,36	doploviti u	20,39	isploviti u	12,4	uploviti biti u	9,29
otploviti do	9,86	doploviti iz	10,03	isploviti na	12,34	uploviti sa	2,43
otploviti prema	9,14	doploviti na	7,97	isploviti prema	8,17	uploviti na	2,21
otploviti iz	5,17	doploviti sa	5,91	isploviti biti iz	6,54	uploviti htjeti u	0,92
otploviti sa	5,09	doploviti biti u	4,46	isploviti sa	5,24	uploviti prije	0,33
otploviti za	4,37	doploviti biti do	4,37	isploviti za	4	uploviti pod	0,33
otploviti biti u	2,83	doploviti biti iz	2,06	isploviti biti u	3,38	uploviti nakon	0,26
otploviti od	1,7	doploviti biti sa	1,37	isploviti biti na	1,3	uploviti biti na	0,26
otploviti preko	1,37	doploviti biti na	1,03	isploviti po	1,07	uploviti kroz	0,22
otrčati u	28,6	dotrčati do	46,3	istrčati na	33,23	utrčati u	55,79
otrčati do	20,64	dotrčati biti do	13,24	istrčati u	17,83	utrčati na	19,56
otrčati na	8,76	dotrčati u	8,58	istrčati iz	12,19	utrčati biti u	9,58
otrčati biti do	5,96	dotrčati na	7,62	istrčati sa	7,6	utrčati biti na	3,48
otrčati po	5,8	dotrčati sa	6,95	istrčati za	4,47	utrčati sa	2,68

verb + preposition	%						
otrčati biti u	5,56	dotrčati iz	3,03	istrčati pred	3,84	utrčati iza	1,34
otrčati prema	3,6	dotrčati k	2,37	istrčati biti iz	3,2	utrčati među	0,87
otrčati za	3,16	dotrčati za	2,07	istrčati protiv	2,75	utrčati iz	0,67
otrčati sa	2,52	dotrčati biti u	1,85	istrčati biti na	2,6	utrčati ispred	0,67
otrčati biti na	1,32	dotrčati pred	1,04	istrčati bez	2,07	utrčati za	0,54

### Analysis of the results

Considering the results presented in Table 1, it is possible to conclude the following:

1. Table shows that the strongest correlation is between prefix *u-* and preposition *u*. *Uploviti u* has the highest percentage of all combinations (80,98%), followed closely by *ući u* (79,3%).

2. *Iz-*verbs also highly correlate with preposition *iz* with exception of the verbs *isplivati* and *istrčati*, with the most frequent constructions *isplivati na* (often as a part of an idiom *isplivati na površinu* ‘to be found out’) and *istrčati na*.

3. The weakest correlation is between prefix *od-* and preposition *od* (with verbs *odletjeti*, *otrčati*, this relation is not even among the first ten combinations), which means that the meaning of separation, distancing, moving away of the prefix is not primarily expressed, and that the meaning of the completion of action is in focus.

4. With all *od-* prefixed verbs ‘to’-type prepositions prevail. The only ‘from’-type prepositions that show up with these are *s* (with *otići*, *odletjeti*, *otplivati*, *otrčati*), *iz* (with *otići*, *odletjeti*, *otploviti*), and *od* (with *otići*, *otplivati* and *otploviti*). All the others can be described as ‘to’-type prepositions, which is in the opposition with the meaning of prefix.

### Conclusion

This corpus-based research on 20 prefixed verbs in Croatian confirms that verbs of motion with prefixes *do-*, *iz-* and *u-*, as prevailing complement have correlated prepositions or semantically related preposition. The exception are verbs with prefix *od-*.

Finally, these results lead to the conclusion that the meaning of perfectivisation in the prefix *do-/od-/iz-/u-* stands out in relation to the their ‘move’ meaning. This research is based on statistic numbers retrieved from the corpus. Detailed examination of examples based on the broader semantic context in which such prefix-prepositional constructs appear, would give insight that is more precise since some of the constructions have metaphoric meaning or can be considered collocations and idioms.

### **Acknowledgments**

This paper is written within the research project Croatian Web Dictionary — MREŽNIK (IP-2016–06–2141), financed by the Croatian Science Foundation.

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