

# MULTI-WORD PREPOSITIONAL EXPRESSIONS OF THE TYPE PREPOSITION V, NOUN, PREPOSITION K IN TECHNICAL TEXTS OF SLOVAK NATIONAL CORPUS

Marianna Hudcovičová\*

<sup>1</sup>University of Ss.Cyril and Methodius in Trnava, Faculty of Arts, Slovakia  
e-mail: [marianna.hudcovicova@ucm.sk](mailto:marianna.hudcovicova@ucm.sk)



**Abstract:** The article deals with multi-word prepositional expressions in technical texts of Slovak National Corpus of the type: preposition v + noun + preposition k. Data are collected from the subcorpus prim-10.0-public-prf that comprises texts of the popular scientific style, scientific articles, studies, encyclopaedias. It is expected that the highest frequency of multi-word prepositional expressions would be in this subcorpus of technical texts because of informing; announcing new information, results; introducing new approaches and discussing. From the frequency list of multi-word prepositional expressions of the above mentioned patterns, 15 expressions were identified to fulfill criteria for multi-word prepositions, i.e. vo vzťahu k(u), v protiklade k(u), v prístupe k(u), v pomere k(u), v opozícii k(u), v kontraste k(u), v smere k(u), v relácii k, v kontrapozícii k, v protipóle k, v kontrapunkte k, v protismere k, v súvzťažnosti k, v nepomere k, v súvislosti k. The expressions were classified and analysed according to three groups using lexico-semantic approach, i.e. neutral relationship, comparing relationship and opposite relationship. Development of terminology on multi-word prepositional expressions in the Slovak morphology is included.

Keywords: preposition, multi-word prepositional expression, Slovak National Corpus

Field: Social Sciences and Humanities

## 1. INTRODUCTION

Motivation for writing the article on multi-word prepositional expressions was the English morphology, i.e. classification of prepositions according to the structure. Prepositions are divided into simple (one-word prepositions, e.g. in) and complex (multi-word prepositions, e.g. in according to). Complex three-word prepositions consist of simple preposition + noun + simple preposition of the type: for: in exchange for, in return for; of: by means of, in case of, in front of, in spite of, on grounds of (Biber. D. et al. 1999). Prepositions are words that in connection with cases express circumstances, e.g. place, time, manner, reason and other relations. The meaning of prepositions on their own is general, abstract. They express only relationships between the sentences elements. They are called grammatical or functional words (Pauliny, E. 1981). Prepositions are words that in connection with the indirect cases of nouns, pronouns and numerals express relations of circumstance, object and attribution. (Dvonč, L. et al. 1966).

## 2. THEORETICAL BACKGROUND

### 2.1. Classification and terminology of prepositions in the Slovak morphology

Pauliny et al. (p.305, 1968) divided prepositions according to their origin into primary and secondary. In the Slovak language, primary prepositions are used in word formation in the function of prefixes, e.g.: vy-skúšať, na-variť, do-písať, etc. Primary (vlastné, primárne, prvotné) prepositions sa used only as prepositions in the prepositional structures. Secondary prepositions, e.g. mimo, blízko, miesto are prepositional cases or adverbs by origin, that are used as prepositions in the prepositional structures. According to the context they can function as adverbs or nouns. Oravec (1967) describes multi-word prepositions (MWPs) as secondary prepositions from the prepositional cases (druhotné predložky z predložkových pádov), e.g. v podobe, na úkor, na konto, etc. The term viacsovné predložky (multi-word prepositions) is not established in the Slovak morphology. Vaňko in Dolník (2010, p.301) mentions that primary preposition k is a part of prepositional expressions vo vzťahu k, v pomere k, v relácii k, v protiklade k denoting reference especially in the technical texts.

\*Corresponding author: [marianna.hudcovicova@ucm.sk](mailto:marianna.hudcovicova@ucm.sk)



Dvonč et al. (1966, s.621) state that the role of secondary prepositions can be substituted by other word classes: a) structures (tvary) i.e. plain or prepositional cases of nouns, e.g. vďaka, vzdor, ohľadom, následkom, vinou, v záujme, za cieľom; b) structures from the structures of nouns and primary prepositions, e.g. vzhľadom na, so zreteľom na, bez ohľadu na, na rozdiel od; c) absolute non-finite verb participles (on its own or in connection with the primary prepositions), e.g. začínajúc, končiac, počítajúc do toho, nevyvímajúc, nepozerajúc na, odhliadnuc od. The authors of the Morphology of the Slovak language in 1966 state that such multi-word prepositional structures exist but they are not defined as prepositions. Other word classes, examples a, b, c are considered and defined in the Czech morphology as multi-word prepositions. They belong to the word class of prepositions. (Čermák, 1996, Blatná, 2006). Certain MWP are recorded in Slovník súčasného slovenského jazyka (SSSJ, 2006, p.424) e.g. s cieľom is defined as a preposition followed by infinitive e.g. s cieľom poskytnúť pomoc. It is recorded under the noun, the entry cieľ.

The term complex prepositions and the term secondary complex expressions with prepositional validity (druhotné zložené výrazy s predložkovou platnosťou) is applied in the connection of prepositionalization of prepositional cases. Dvonč et al. (1966, s.671) stated that prepositional cases become complex preposition when the meaning of the primary preposition faded away or its meaning is unclear. Then noun expresses the same as the preposition or when the preposition gets new shade of meaning. Complex prepositions express mainly derived adverbial relations (reference, means, manner, effect, reason, concession), e.g. vzhľadom na, s ohľadom na, so zreteľom na, v porovnaní s, vo vzťahu, etc. Basic adverbial relations. i.e. place and time are not expressed by complex prepositions so much.

Complex prepositions represent a fixed combination of words. Not all combinations of words are considered to be fixed. (Hudcovičová, 2020).

## 2.2. Meaning, multi-word character as a feature of phrasemes

Primary prepositions have general meaning. They can express several meanings, depending on the case they are connected with and other features, e.g. preceding verb, noun, adjective. Hudcovičová (2009) found out that the Slovak dependent preposition na can have eleven English prepositional counterparts e.g. na - to, of, at, on, for, into, onto, with, against, in, about). Each preposition has a basic meaning that can be more general or specific. Additional meanings induce from the basic meaning. The specific meaning of prepositions depends on the words, they are connected with, from their grammatical and semantic nature of the words (Dvonč et al., 1966, s.307). Šimková (2006) mentions that two-word and other multi-word prepositions are lemmatized in the Slovak National corpus as the connection of preposition or prepositions and the noun in accordance with structural-morphological principle.

Multi-word prepositions show typical features of multi-word expressions known from phraseology. In the English phraseology, complex prepositions belong to so-called grammatical collocations. Hudcovičová (2007) analysed Slovak preposition z and their English prepositional equivalences in the context of the sentence. She postulated that typical patterns of verbs and prepositions are expected because of the transitive character of the verbs that precede the prepositional phrase. Occurrence of the preposition is not random but expected and depends on the character of the preceding verb.

Grammatical collocations of the type verb + preposition of or to were analysed by Hudcovičová (2017). These typical fixed expressions contain one lexical word and one functional word. The analysis brought interesting results and confirm that certain semantic groups of verbs are connected with a certain semantic type of prepositions. The meaning of the preposition is close to the meaning of the verb with which it collocates. The fixed expressions of the type, e.g. functional word + grammatical word: verb + preposition, adjective + preposition, preposition + noun, preposition + noun + preposition share the features of phraseological units in a different degree, e.g. multi-word character, fixedness, ready-made character, conventionality, functional unity, etc.

Petkevič (2020, p.52) see relationship between multi-word prepositions and collocations of the grammatical character. Complex prepositions show the so-called statistical idiomaticity, which means that these expressions are usually not semantically idiomatic but have an above-average frequency and restricted collocability. Banášová (2022, p.88) analysed prepositional multi-word expressions of the type out of the question. She states that prepositional multi-word expressions have a character of lexicalized minimal phraseological unit.

In the theory by F. Čermák prepositional expressions of the type na konto, bok po boku, s cieľom are considered as the multi-word expressions (frazémy) and compiled in dictionaries. (Čermák et al., 2009, p. 495). Jarošová (2007, p.81) stated that the status of synsemantic multi-word structures, e. g. multi-word prepositions, conjunctions, interjections is unclear. (Dvonč et al., 1966, p. 667) states that prepositionalization of the meaning of the word or the multi-word expression means that the word or the

multi-word expression loses independence of the meaning, it does not function as a sentence element and behaves as a functional (grammatical) word.

Dependence of the meaning (významová nesamostatnosť) in the multi-word prepositional expressions is remarkable by the following features:

1. Secondary cases of the personal pronouns in the 3rd person following the multi-word prepositional expressions begins with ň that is typical for primary prepositions, e.g. následkom neho, pomocou nej

2. Relative pronouns follow the multi-word prepositional expressions that is typical for primary prepositions, e.g. následkom ktorého, pomocou ktorej, prostredníctvom ktorých, vďaka ktorému, zvonku ktorého ...

3. When the multi-word prepositional expressions represent one complex, the premodifier of the head (the head represents a noun in the structure) cannot be inserted, e.g. v podmienkach, v oblasti.

4. In the multi-word prepositional expressions noun cannot be substituted by their synonyms, e.g. v dôsledku, v záujme.

5. In the multi-word prepositional expression a basic preposition cannot be substituted by other prepositions or the case of the noun by other cases.

Blatná (2006, p.12) uses the term multi-word prepositions (MWP) and define them as follows:

1. MWP fulfils functional criteria for syntagmatic status

2. Fixedness, i.e. the sufficient frequency

3. Occurrence of at least one, maximum two simple prepositions in the structure of MWP.

4. In the case of MWP, the premodifier or postmodifier of the head (the head represents an abstract noun in the structure) cannot be inserted

5. Necessity of the valency, MWP precedes the noun in a specific case or nominalized structure.

6. Restricted possibility of abstract noun pluralization

7. The Identical simple preposition cannot be used twice in the initial as well as final position.

Frequency dictionary of the Czech language contains only MWP with the ratio between the frequency of the lemma of the abstract noun and the number of occurrences of MWP as one complex reach over 50%. Čermák (1996b, p.38) introduces 7 structural types of MWP: 1a prep S abstract, e.g. z hlediska; 1b pred S abstract, e.g. prep v souvislosti s; 2 Vf prep nehledě na; 3 ADV prep spolu s; 4 Sc prep vzhledem k; 5 S prep S tváří v tvář; 6 izolované co do, až na; 7 cizí à la. Schillová (2012, p. 428) analysed Czech complex prepositions of the type adverb + preposition, type 3 in above-mentioned classification. She postulated that in the top ten most frequent combinations, there are two expressions that are already considered as complex prepositions in linguistic literature. These are spolu s (together with) (rank 2) and společně s (jointly with) (rank 7).

Subject of our analysis are multi-word prepositional expressions of the type 1b: simple preposition v + abstract noun + simple preposition k, e.g. vo vzťahu k. Number of occurrences of the preposition v in the Slovak National Corpus, version 10.0 is 36 811 949. Number of occurrences of the preposition k in the Slovak National Corpus is 4 626 729. The subcorpus prim-10.0-public-prf was selected because it was expected that the occurrence of multi-word prepositional expressions would be the highest in this type of subcorpus. It contains professional texts on scientific literature, articles, journals, university textbooks, popular science, special interest magazines, primary and high school textbooks, encyclopedia, alphabetically arranged works manuals, operating instructions, recipes, etc. Oravec (1962, p. 262) states that certain new prepositions (vzhladom na, vo vzťahu k, etc.) are frequent in the academic style while other are still rare. The typical features of academic style is to describe things in relations, i.e. relations that are more abstract, more complicated or more precise in comparison with using primary or secondary prepositions. That is the reason why the frequency of prepositions describing relationship is increasing.

### 3. RESEARCH

In the subcorpus prim-10.0-public-prf the research on multi-word prepositional expression of the type prep v + noun + prep k has been carried out via query [lemma="v"] [tag="S.\*"] [lemma="k"]. The frequency list of the multi-word prepositional expressions was analysed item by item. The list contains 1 556 prepositional multi-word expressions. Some examples were repetitive and represented only different orthographic forms, e.g. capital letter in the initial preposition, a vocalised form vo, ku, capitalized complete multi-word prepositional expressions in the headings were listed separately. Criterion for defining the pattern as an independent (to a certain degree) multi-word prepositional expressions was the fact that in the case of MWP, the premodifier or postmodifier of the head (the head represents an abstract noun in the structure) cannot be inserted. It means that the pattern represents one complex recognizable from

the preceding and following patterns with the clear first constituent in the pattern, i.e. simple preposition v, and the clear final constituent, i.e. simple preposition k. There is really a tight relationship between all their constituents. The following multi-word prepositional expressions were selected manually and were further analysed, i.e. vo vzťahu k(u), v protiklade k(u), v prístupe k(u), v pomere k(u), v opozícii k(u), v kontraste k(u), v smere k(u), v relácii k, v kontrapozícii k, v protipóle k, v kontrapunkte k, v protismere k, v súvzťažnosti k, v nepomere k, v súvislosti k.

Fig 1 Frequency list of MWP of the type prep v + noun + prep k

MWP	Frequency			Blatná
	MWP	abstract noun frequency	ARF	
1. vo vzťahu k(u)	17 166	158 633	63 129	ve vzťahu k
2. v protiklade k(u)	908	8 182	3 046	v protikladu k
3. v prístupe k(u)	671	56 087	22 421	0
4. v pomere k(u)	520	28 252	11 437	v poměru k
5. v opozícii k(u)	295	5 514	1 817	0
6. v kontraste k(u)	141	4 822	1 879	v kontrastu k
7. v smere k(u)	74	47 882	22 689	ve směru k
8. v relácii k	49	6 172	1 839	0
9. v kontrapozícii k	8	103	38	0
10. v protipóle k	5	1010	501	0
11. v kontrapunkte k	5	468	42	0
12. v protismere k	4	135	70	0
13. v súvzťažnosti k	3	419	161	0
14. v nepomere k	3	431	231	0
15. v súvislosti k	2	50 213	23 353	0

0 indicates that Blatná did not mention Czech MWP counterparts in her study. 15 MWPs were identified in the research, i.e. vo vzťahu k(u)- in relation to, v protiklade k(u)- in contradiction to; v prístupe k(u) - in the attitude towards; v pomere k(u) - in ratio towards; v opozícii k(u) - in the opposition towards; v kontraste k(u) – in contrast to; v smere k(u) - in direction towards; v relácii k(u) – in relation towards; v kontrapozícii k(u)- in anteposition towards; v protipóle k(u)- in opposition towards; v kontrapunkte k(u)- in opposition towards; v protismere k(u)- in anteposition towards; v súvzťažnosti k(u) – in correlation to; v nepomere k(u) - in disproportion towards; and v súvislosti k(u) - in relation to. According to the frequency of the MWP the most frequent is definitely vo vzťahu k – in relation to with the value 17 166. In the range of frequency 1000 - 500 the following MWPs were included: v protiklade- in contradiction to; v prístupe - in the attitude towards, v pomere k – in ratio towards. In the range of frequency 500 – 100 the MWPs v opozícii k - in the opposition towards, v kontraste k - in contrast to were detected. In the range of frequency 100- 50 only one MWP fell into this group, i.e. v relácii k - in relation towards. The last 7 MWPs fall into the range of frequency 10 - 2, e.g. v kontrapozícii k - in anteposition towards, v protipóle k - in opposition towards, v kontrapunkte k - in opposition towards, v protismere k - in anteposition towards, v súvzťažnosti k - in correlation to, v nepomere k - in disproportion towards, v súvislosti k - in relation to.

1. V postoji k- in the attitude towards, v prístupe k - in the attitude towards indicate neutral relationship. V smere k(u) - in direction towards can fall into this semantic group only in the meaning in relation to, e.g.

Jeho nejednoznačnosť sa ďalej prejavuje v postoji ku skutočnosti. His ambiguity is further manifested in his attitude towards reality. (SNK)

2. MWPs v protiklade k - in contradiction to; v kontraste k - in contrast to, v opozícii k - in opposition towards; v kontrapunkte k - in opposition towards; v kontrapozícii k – in contradiction towards; v kontrapozícii k - in anteposition towards; v protipóle k- in anteposition towards; v protismere k - in anteposition towards, v nepomere k - in disproportion towards represent similar meaning. They indicate relationship of opposition, e.g.

Situácia sa vyvíja v protiklade ku koncepcii zákona o verejnoprospešnej činnosti. The situation is developing in opposition to the concept of the Act on Public Benefit Activities. V našom prípade sa jedná o princípy severoatlantického modelu mediálneho systému v kontrapunkte k severo-stredoeurópskemu modelu médií. In our case, it is about the principles of the North Atlantic model of the media system in counterpoint to the North-Central European model of the media. (SNK)



3. MWP's vo vzťahu k – in relation to; v pomere k - in ratio towards, v relácii k - in relation towards; v súvzťažnosti k - in correlation to indicate comparing relationship, e.g.

Ulohou modelov je reprezentovať realitu a poskytovať určitú predikciu vo vzťahu k správaniu spotrebiteľov. The role of models is to represent reality and provide a certain prediction in relation to consumer behavior. Štiavnické pohorie je v pomere k podobným výškam všetkých slovenských pohorí najteplejšie. The Štiavnica Mountains are the warmest in relation to similar heights of all Slovak mountains. (SNK)

## 4. CONCLUSION

Terminology varies and is not unified when describing MWP's in the Slovak linguistics. Dvonč et al. (1966) state that secondary prepositions can be substituted by other word classes: structures (tvary) i.e. plain or prepositional cases of nouns, e.g. v záujme, za cieľom; structures from the structures of nouns and primary prepositions, e.g. vzhľadom na; absolute non-finite verb participles (on its own or in connection with the primary prepositions), e.g. nepozerajúc na, odhliadnuc od. Above-mentioned other word classes can represent multi-word prepositions when they have character of the functional words described by Dvonč (1966) or Blatná (2006). Dvonč et al. use another term complex prepositions (zložené predložky) and the term secondary complex expressions with prepositional validity (druhotné zložené výrazy s predložkovou platnosťou). Vaňko in Dolník (2010) describes them as prepositional expressions vo vzťahu k, v pomere k, v relácii k, v protiklade k.

Selected MWP's with the pattern prep v + noun + prep k express relationship, i.e. neutral, e.g. V postoji k, v prístupe k; comparing relationship is significant in the examples vo vzťahu, v pomere k, v relácii k, v súvzťažnosti; the relationship of opposition is expressed by e.g. v protiklade k, v kontraste k, v opozícii k, v kontrapunkte k. Certain MWP can occupy even initial position in the sentence. Some of them can help to express relations not only within the sentence as it is in the case of simple prepositions. They are able to link ideas within two sentences in sequence, e.g. v protiklade k in the sentence b. a) Vďaka tomu sa jeho postoj odlišuje od tradičných teórií prirodzeného zákona, ktoré tvrdia, že svedomie je vrodené poznanie morálnych princípov. b) V protiklade k tomu Locke tvrdí, že svedomie je domnienka o správnosti alebo nesprávosti vlastných činov a takéto domnienky možno získať učením a zo zvyku. (SNK). The most frequent MWP is vo vzťahu k with the value 17 166. In the range of frequency 1000 - 500 the following MWP's were included: v protiklade, v prístupe, v pomere k. Frequency scale 500 – 100 is represented by v opozícii k, v kontraste k. Frequency 100 - 50 contains only MWP v relácii k. The last 7 MWP's fall into frequency scale 10 - 2, e.g. v kontrapozícii k, v protipóle k, v kontrapunkte k, v protismere k, v súvzťažnosti k, v nepomere k, v súvislosti k.

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