English Equivalents of the Most Frequent Czech Prepositions
A Contrastive Corpus-based Study

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Abstract
The study exploits access to parallel corpus data in order to explore the type and distribution of English equivalents of two of the ten most frequent prepositions in Czech, spatiotemporal *v/ve* and *po*. Based on 600 parallel concordance lines for each preposition (4 contemporary fiction texts), the analysis identifies prepositional and non-prepositional equivalents and correlates their distribution with syntactic analysis and the semantics of the Czech prepositions. The equivalence patterns of the two prepositions exhibit clear differences (in the proportion of prepositional/non-prepositional equivalents, the presence of a dominant equivalent and other features) and specific idiosyncrasies. The results are of theoretical and practical relevance, offering a substantial improvement on the lexicographic description in Czech-English dictionaries.

1. Introduction

There are several reasons for a contrastive study of prepositions. To begin with, primary prepositions are ideal for testing work with parallel texts of the parallel corpus under compilation as part of the InterCorp project. An uninflected word class (apart from morphonological variants), prepositions are easy to search for even in an inflectional language such as Czech; moreover, they are mostly free of homonymy and their limited number offers a good chance of completing the investigation of the whole set of them. Compared to other classes of words prepositions are still relatively underresearched and may hold unexpected surprises.

The first one came at the very beginning. What was not quite unexpected was to find that in the frequency list for English, based on the British National Corpus, ranking among the 25 most frequent words are 8 prepositions (*of, in, to, for, with, on, by, at*). Similarly Dizier (2006, 3; see Fig.1a) reports that the "WFWSE web site indicates that English prepositions (on the lexeme basis) are distributed as follows in ordinary, everyday English. Among the 30 most frequent words in English, there are 9 prepositions: Rank indicates here the usage rank of the term all words considered. For example, *of* is the second most frequently used word in English."

Fig. 1a - Preposition uses in English

preposition	rank
OF	2
IN	5
TO	8
FOR	11
WITH	13
ON	16
BY	18
AT	20
FROM	29

What we found surprising, however, was that the frequency dictionary for Czech, Frekvenční slovník češtiny (2004), based on the Czech National Corpus comparable to the BNC in size and composition, shows that the 25 most frequent words include even 10 (!) primary prepositions (*v/ve* (2), *na* (5), *s/se* (7), *z/ze* (8), *o/vo* (11), *do* (13), *k/ke/ku* (15), *za* (17), *pro* (19), *po* (25)). And, just as interesting, both the English and the Czech sets of these primary prepositions include mostly prepositions which are in bilingual Czech-English and English-Czech dictionaries regarded as translation equivalents. The frequency prominence of prepositions in English as an analytic language is taken for granted. We may hypothesize that in Czech prepositions make explicit and expand the range of meanings expressed by case forms but why they should have the same, in fact higher, prominence in the highly-inflected Czech is truly remarkable.

The tentative hypothesis may be that the need for explicit expression of semantic relations is in both languages the same on account of the similar needs of stylistic diversification of the written language (sometimes the claim of the growing "intellectualisation" of language is made) and this need is independent of typological differences. The larger number of Czech prepositions

at the top of the ranking list may be related to their being somewhat less polysemous than the English prepositions.

The frequency of the prepositions in both languages (and the semantic similarity between the two sets of the most frequent ones) inevitably results in considerable negative interference. Error analysis in Czech learners of English (Klimšová, 1999) shows that prepositions are the third most frequent cause of errors (14 percent), exceeded only by errors in the use of articles (24 percent) and lexical errors. These three together account for more than a half of Czech speakers' errors in English. Yet there has been no substantial study so far that would examine how the Czech prepositions translate into English. The problem is compounded by the fact that no existing monolingual dictionary of Czech (and consequently no bilingual Czech-English dictionary) is based on corpus data. These constitute two more reasons for launching a corpus-based contrastive study of prepositions.

In this first stage of research, the description of how textual correspondence in the translation of prepositions is achieved is expected to reveal the range of textual equivalents, provide their classification, and indicate the reasons for using a particular translation equivalent.

2. Project: material, methods and hypotheses

This paper focuses on two of the ten most frequent prepositions in Czech, spatiotemporal *v* (ranking the highest) and spatiotemporal *po* (the last ranking among the ten). It was hoped that the choice of the most frequent and the least frequent of the ten prepositions would bring out the differences between them in sharp relief and yield as wide range of translation solutions as possible.

2.1 Material

The stock of available aligned parallel texts in English and Czech which is currently built as part of the multilingual parallel corpora project InterCorp (under the aegis of the Institute of Czech National Corpus of the Arts Faculty, Charles University in Prague) is still far from finished. It offers texts of Czech novels from the second half of the 20th century. Three outstanding modern Czech novelists were chosen, Kundera, Viewegh and Fuks, whose acclaim was a guarantee that their novels were published by good publishing houses and translated by good translators. The following three pairs of original texts and their English translations were chosen:

Kundera, M. (2006) Nesnesitelná lehkost bytí, Brno: Atlantis.
Kundera, M. (1984) The Unbearable Lightness of Being, Penguin – transl. Michael Henry Heim.

Viewegh, M. (1994) Výchova dívek v Čechách, Praha: Český spisovatel.
Viewegh, M. (1997) Bringing up Girls in Bohemia, USA: Readers International – transl. A.G. Brain.

Fuks, L. (1963) Pan Theodor Mundstock, Praha: Odeon (4th ed. 2005).
Fuks, L. (1968) Mr Theodore Mundstock, New York: Orion Press – tranl. Iris Urwin.

Additional texts:
Otčenášek, J. (1958, 1963) Romeo, Julie a tma, Praha: Československý spisovatel.
Otčenášek, J. (1959) Romeo and Julie and the Darkness, Praha – Artia. - tranl. Iris Urwin.

The dates of publication of the novels define the period of language in which they were written (1963-2006) and we may assume that they represent language usage prevailing in the written language of middle-aged (educated) Czech speakers (between 50-60 years of age).

After considering the suitable, i.e. sufficient but not excessive, amount of instances (concordance lines), it was decided to limit the number of consecutive occurrences for each preposition to 600. It means that 200 first occurrences of the preposition were chosen from each

text. In the case of the preposition *po* a fourth text (Otčenášek) had to be added to complete the 600 items limit as there were not enough occurrences of *po* in the Viewegh and Fuks texts. All four pairs of aligned parallel texts were processed using Michael Barlow's ParaConc. The concordance lines were then analysed manually.

2.2 Formal classification of the English equivalents of the Czech prepositions

The contrastive analysis of the material takes account of any morphological unit, free or bound, which is the bearer of the meaning corresponding to the meaning of the preposition in the original text, or the meaning of the whole whose part the preposition happens to be. Such an equivalent may be not only a discrete morphological item, i.e. a TL preposition, but the same meaning may be conveyed by any other word class or a pattern of several forms.

Inasmuch as translation results from the cooperation of different levels of language, it is impossible to describe translation equivalents using criteria from just one level (e.g., morphological). The classification of equivalents is therefore heterogeneous, using two, or rather three basic types of equivalent:

(1) prepositional equivalent – regardless of whether the function and meaning of the Czech preposition (phrase) matches those of the English preposition (phrase);

(2) non-prepositional equivalent

(a) lexical-structural, i.e., the translation involves a lexical and/or structural transposition that compensates for the SL preposition; if anything the prepositional complement is preserved either as a free morpheme (noun, verb, etc.) or as bound one; cases where the preposition was translated as conjunction (homomorphous with a preposition) were assigned to his category as well;

(b) zero: the SL sentence has an unambiguous TL sentential counterpart, but it is impossible to assign the meaning of the Czech preposition to any form in the TL sentence. In other words, there is equivalence at the level of text, but no identifiable equivalent (explicit or implicit) of the Czech preposition. Textual equivalence is not impaired, only the message is possibly less detailed (or some kind of modulation was used), e.g., *Všichni na ni pohlédli s bezradnými výrazy* ***v tváři***. [All of them looked at her with perplexed expressions in their faces] translated as *They all looked at her in perplexity*.

These cases are regarded as potentially significant as even the omission may tell us something about the nature of the preposition (its function and meaning). Some uses and meanings may be more amenable to omissions than others.

The last possibility is textual non-correspondence, i.e. the Czech sentence has no correlate in the English text. These cases were excluded from the samples as they tell us nothing about the ways and possibilities of translating the preposition. They are either higher-level textual shifts, the translator's licence, clumsiness, or inattention. Unlike lexical-structural transpositions and formal zero translations, where some kind of compensation can be detected, they involve virtual absence of any equivalent whatever.

Obviously, in some cases it may be difficult to distinguish between non-prepositional equivalents or even between prepositional and non-prepositional ones, e.g., when the lexical-structural transposition results in a sentence with a preposition which, however, is unrelated to the source text preposition. Similarly, we found translations with an English preposition unrelated to the source text one and with no morpheme corresponding to the Czech prepositional complement. Such cases were considered zero equivalents, e.g., *v téhle rodině, ať se kouknou, kam chtějí, je všechno ve znamení fantazie* [in this family, wherever they look, everything is under the sign of fantasy] translated as *Wherever you look in this household you see fantasy at the helm.*

2.3 Stages of analysis

Analysis of the material takes place in three successive steps, focusing in turn on the English equivalent, its types and distribution, and the Czech preposition, its syntactic function and meaning and their correlations with the equivalent. The resultant picture is fairly complex and raises a number of questions, most of which cannot be dealt with in this paper.

Formal equivalent analysis aims to survey the different types of realization which the Czech preposition assumes when translated into English. It divides the translations into prepositional equivalents and non-prepositional equivalents, subdivided into lexical structural transpositions and zero equivalents, as described above, and ascertains their frequencies and variety.

Syntactic analysis examines the syntactic function of the Czech prepositional phrase (PP) headed by the preposition. The purpose of this analysis is to determine the representation of the possible functions the PPs may have. The analysis is made in the belief that there is, broadly speaking, a relation between the syntactic function of the PP and the kind of syntagmatic unit it is, i.e. whether the PP is a "free" combination or a fixed lexical string. We assume that free combinations will generally tend to be translated by prepositional equivalents, while lexical strings may more often be translated non-prepositionally. This prepares the ground for the next step.

Semantic analysis concentrates exclusively on the adverbial uses of the Czech PPs on the assumption that it is in semantically compositional adverbials which are not part of any multiword unit (MWU) that the core meanings of the preposition (associated with it through the meaning of the PP) are best identified. The analysis assigns English equivalents to the individual senses of the Czech prepositions and thus makes an explicit link between a particular sense and particular English prepositions (or other types of equivalent).

Each type of analysis includes a brief comparison between the two sets of results found in the two Czech prepositions. There is one further step that will have to be made, i.e. the explicit correlation between the Czech PPs forming MWUs and the English equivalents. However, this will be the subject of another study.

2.4 Hypotheses

The above steps are based on certain assumptions which can be formulated as working hypotheses which the results may support or throw in doubt. They are as follows:

1. Prepositions as function words (synsemantic and synsyntagmatic), i.e. dependent on lexical word classes in terms of meaning and valency, will be more prone to various transpositions in translation than lexical words. We may expect a continuum of translation equivalents with word-class correspondence at one end (prepositional equivalents) and the absence of formal translation at the other end (zero equivalents).

2. Some syntactic functions of PPs (adverbial and adverbial-related postmodification) will tend to correlate with free combinations, i.e. syntactic structures newly generated in text, while other functions (obligatory complementation) will tend to correlate with set lexical strings. The difference will be signalled by the proportion of the prepositional vs. non-prepositional equivalents.

3. Prepositions in free syntactic combinations (adverbials, esp. adjuncts, and adverbial-related postmodifiers), i.e. semantically compositional, will be less prone to various transpositions in translation than prepositions in set lexical strings (MWUs). These correlations will manifest themselves only as strong tendencies since free combinations in Czech may have MWU counterparts in English and, conversely, Czech MWUs may have English structural parallels.

3. Formal analysis of the English equivalents

Formal analysis of the equivalents begins with presenting the findings in each text. Their comparison shows to what extent they are similar or discrepant. Marked differences between the texts may suggest that the use of the preposition is influenced by such factors as the author's idiolect, style or the topic. The summary results for all the texts make possible comparison with the other preposition and the same applies to the lists of prepositional equivalents made for each preposition. The analysis begins with the most frequent Czech preposition *v* (both morphonological variants of the prepositon, *v* and *ve*, were taken into account).

3.1 Equivalents of the preposition *v*

Table 1 shows that all three samples have one thing in common: there is one equivalent which far exceeds the others, the preposition *in*. The preposition *in* as an equivalent of *v* appeared more often than the whole group of non-prepositional equivalents together (31.8 percent) and is also more frequent than the rest of the other prepositional equivalents (18.5 percent). In fact, it accounts for almost 50 percent of equivalents of the Czech *v*. We may therefore speak of a dominant prepositional equivalent.

The existence of such an equivalent is interesting in that it raises several questions. Firstly, is the high incidence of *in* caused by the Czech preposition being used in one sense (or two senses) only, or, secondly, is it due to a considerable functional and semantic overlap between the Czech and the English preposition? The answers will be provided by the semantic analysis later on. Also, the existence of a dominant prepositional equivalent inevitably makes us look for it in the other Czech prepositions.

The second finding which the formal analysis brings is that the proportion of equivalents in the three texts is very similar. As shown by Table 2, in all three the distribution of the dominant prepositional equivalent, the other prepositional equivalents, the lexical-structural transpositions and zero equivalents is roughly the same.

text	***in***	**%**	**other prepositons**	**%**	**lex.-str. transpositions**	**%**	**zero**	**%**	**total**
Kundera	93	*46.5*	36	*18.0*	55	*27.5*	16	*8.0*	200
Viewegh	99	*49.5*	40	*20.0*	56	*28.0*	5	*2.5*	200
Fuks	106	*53.0*	35	*17.5*	47	*23.5*	12	*6.0*	200
total	**298**	*49.7*	**111**	*18.5*	**158**	*26.3*	**33**	*5.5*	**600**
range		*6.5*		*2.5*		*4.5*		*5.5*	

Table 1: Distribution of *v* equivalents in the texts

The overall similarity between the three texts is underlined by Table 2, which gives the aggregate frequencies of the prepositional and non-prepositional equivalents. However, it sets apart the Kundera text from the other two: it has the smallest proportion of prepositional equivalents and the highest proportion of non-prepositional equivalents (by as much as 6 percent in either type) compared to the Viewegh and Fuks texts where the proportions are almost the same. Even if the differences between the texts should prove statistically significant, pinning down the actual reasons for it might be rather difficult. The similarities in equivalent distribution definitely prevail.

text	**prep. equivalent**		**non-prep. equivalent**		**total**	
Kundera	129	*64.5 %*	71	*35.5 %*	**200**	*100 %*
Viewegh	139	*695*	61	*30.5*	**200**	*100*
Fuks	141	*70.5*	59	*29.5*	**200**	*100*
total	**409**	***68.2 %***	**191**	***31.8 %***	**600**	*100 %*
range		*6.0 %*		*6.0 %*		

Table 2: Distribution of prepositional and non-prepositional *v* equivalents in the texts

Finally, Table 3, listing all prepositional equivalents that were used to translate the Czech *v*, shows several things. First of all, the range of prepositional equivalents, including 21 different prepositions (three of them complex) surpassed all expectations. For comparison, the largest bidirectional Czech-English electronic dictionary Lingea Lexicon 2002 mentions only 5 prepositional equivalents, *in, at, on, into*, and *for*. Although it has to be admitted that the choice of the first four tallies with the results of this study (the fifth one appears to be marginal according to our results), the presentation of these four key prepositional equivalents in the dictionary by no means gives an adequate idea as to their respective prominence as equivalents of the Czech *in*.

Table 3 also brings home the magnitude of the dominance of the preposition *in* as an equivalent. The difference between its frequency and the second most frequent preposition *at* is considerable indeed. The table thus underlines the overall marginality of the other prepositions. The frequencies of occurrence of *in* and the other prepositions as shown by the results are no doubt highly relevant for ELT and from a lexicographic point of view.

No	**preposition**	**frequency**	**%**
1	in	298	*72.9*
2	at	34	*8.3*
3	on	27	*6.6*
4	into	13	*3.2*
5	about	5	*1.2*
6	to	4	*1.0*
7	with	4	*1.0*
8	during	3	
9	through	3	
10	under	3	
11	by	2	
12	from	2	
13	inside	2	
14	within	2	
15	among	1	
16	behind	1	
17	for	1	
18	in and out of	1	
19	in at	1	
20	out	1	
21	out of	1	
total		409	*100.0*

Table 3: The list of all English prepositional equivalents of the Czech *v*

3.2 Equivalents of the preposition *po*

The picture presented by the *po* equivalents is notably different (Table 4). First of all, the differences between the texts are much larger. The situation is complicated by the fact that there is no dominant prepositional equivalent in the sample –with the exception of the Viewegh text in which *after* accounts for more than 50 percent of prepositional equivalents. Although *after* ranks first in three of the texts (see Table 5), it is certainly not a dominant equivalent in the Kundera and Fuks texts where it competes with *for*, and in the Otčenášek text it is only the third (!) most frequent prepositional equivalent. So, while *in* as the equivalent of *v* accounts for 49.7 percent, *after* as a *po* equivalent only 18.0 percent in the respective aggregate samples.

Similarly, we find a 10-percent difference between the occurrence of lexical-structural transpositions in the Viewegh and the Otčenášek text (the difference between the zero equivalents is less pronounced in these texts). In short, the distribution of the particular types of *po* equivalents in

the four texts (i.e. *after*, the other prepositional equivalents, lexical-structural and zero equivalents) is fairly uneven, certainly much more so than the distribution of the *v* equivalents.

We may surmise that the differences between the four types of equivalent may be related to the fact that the sample consists of four texts rather than three and that three of them are considerably shorter. It is also possible that the semantic diversity of the Czech *po* (see semantic analysis below), which is reflected in the multitude of different English prepositions that appeared in the translations, may play a role as well.

However, Table 6, giving the aggregate equivalent frequencies in the texts, shows that when only prepositional and non-prepositional equivalents are considered the differences are nowhere as dramatic, the largest discrepancies between the Kundera and the Otčenášek texts reaching 7.7 percent (in the *v* samples the largest difference was 6 percent). As far as *v* and *po* are concerned, the general distribution of their prepositional and non-prepositional equivalents appears to be very consistent across the texts, the differences appear in specific types of equivalent (and, of course, when the *v* and *po* equivalents are compared).

text	***after***	***%***	**others**	***%***	**lex-str**	***%***	**zero**	***%***	**total**	***%***
Kundera	36	*18.0*	82	*41.0*	70	*35.0*	12	*6.0*	200	*100.0*
Viewegh	51	*30.7*	50	*30.1*	60	*36.1*	5	*3.0*	166	*100.0*
Fuks	15	*11.9*	67	*53.2*	35	*27.8*	9	*7.1*	126	*100.0*
Otčenášek	6	*5.6*	66	*61.1*	27	*25.0*	9	*8.3*	108	*100.0*
total	108	*18.0*	**265**	*44.2*	**192**	*32.0*	**35**	*5.8*	**600**	*100.0*
range		*25.1*		*31.0*		*11.1*		*5.3*		

Table 4: Distribution of *po* equivalents in the texts

text	***after***	***for***	***in***	***on***	***over***	**sum**	***%***	**others**	***%***	**total**	***%***
Kundera	36	29	4	3	1	73	*61.9*	45	*38.1*	118	*100.0*
Viewegh	51	5	4	10	2	72	*71.3*	29	*28.7*	101	*100.0*
Fuks	15	13	12	4	4	48	*58.5*	34	*41.5*	82	*100.0*
Otčenášek	6	9	3	5	14	37	*51.4*	35	*47.6*	72	*100.0*
total	108	56	23	22	21	**230**	*61.7*	**143**	*38.3*	**373**	*100.0*

Table 5: Prominent prepositional equivalents of *po* in the texts

text	**prep. equivalent**		**non-prep equivalent**		**total**	
Kundera	118	*59.0*	82	*41.0*	**200**	*100 %*
Viewegh	101	*60.8*	65	*39.2*	**166**	*100*
Fuks	82	*65.0*	44	*35.5*	**126**	*100*
Otčenášek	72	*66.7*	36	*33.3*	**108**	*100*
total	**373**	***62.2 %***	**227**	***37.8 %***	**600**	*100 %*
range		*7.7*		*7.7*		

Table 6: Distribution of prepositional and non-prepositional *po* equivalents in the texts

Where the equivalents of the two Czech prepositions differ is the range of prepositional equivalents. While *v* was translated by 21 different prepositions, *po* translations include 36 prepositions. One of the equivalent prepositions, *before*, must be discounted as the Czech adverbial *krátce po osmé* [shortly after eight o'clock] was for no apparent reason translated as *shortly before eight o'clock*. Still, 36 prepositions is a surprisingly high number, considering that the bidirectional Czech-English electronic dictionary Lingea Lexicon mentions only 9 English prepositions, *after, along, about, as far as, at, by, for, on*, and *through* (interestingly *as far as* did not appear in the sample). One plausible explanation for so many different prepositional equivalents translating the Czech *po* is the semantic diversity of this preposition, another may be its somewhat different distribution of functions in the text (see below).

No.	**preposition**	**freqency**	**%**
1.	after	108	*28.9*
2.	for	56	*15.0*
3.	in	23	*6.2*

4.	on	22	*5.9*
5.	over	22	*5.9*
6.	at	19	*5.1*
7.	along	18	*4.8*
8.	through	13	*3.5*
9.	down	13	*3.5*
10.	of	10	*2.7*
11.	up	8	*2.1*
12.	from (- to)	7	*1.9*
13.	to (from – to)	7	*1.9*
14.	about	7	*1.9*
15.	across	6	*1.6*
16.	round (and round)	6	*1.6*
17.	side by side with	3	
18.	past	3	
19.	following	2	
20.	around	2	

21.	throughout	2	
22.	in the wake of	2	
23.	against	1	
24.	by	1	
25.	over at	1	
26.	about on	1	
27.	after the fashion of	1	
28.	apres	1	
29.	before?	1	
30.	down to	1	
31.	during	1	
32.	in search of	1	
33.	in spite of	1	
34.	on account of	1	
35.	on top of	1	
36.	on to	1	
Total		**373**	***100.0***

Table 7: The list of all English prepositional equivalents of the Czech *po*

3.3 A summary: English equivalents of Czech prepositions

The results given in Tables 8 and 9 can be viewed in two ways. On the one hand, the equivalents of *v* and *po* display clearly contrasting patterns. Compared to *po*, the preposition *v* has more prepositional equivalents (68.2 percent), consisting of 21 English prepositions. The opposite is true of the preposition *po* – it has more non-prepositional equivalents (37.8 percent) than *v*, fewer prepositional equivalents (62.2 percent), yet the number of English prepositions they include is much bigger (35).

As suggested above, there may be at least two reasons for these differences. The large number of different English prepositions translating the Czech *po* is very likely related to the greater polysemy of this preposition (see its dictionary entry below) compared to the preposition *v*; the more senses, the more different prepositions are needed to translate them. On the other hand, the large number of specialized senses increases the probability that the preposition will figure in MWUs. Translation of MWUs (typically syntactically irregular and semantically non-compositional) is prone to rely on compensatory, i.e. non-prepositional equivalents. The other reason may be the somewhat different distribution of syntactic functions realized by *v* and *po*. As the syntactic analysis below (Tables 11-18) shows, the Czech *v* appeared in adverbial function in 75.7 percent, while *po* only in 67.2 percent (an 8.5 percent difference). Although the connection between the higher incidence of adverbial function of and prepositional equivalents in the preposition *v* compared to *po* is hardly straightforward, clearly each of the two Czech prepositions requires a different approach when translated.

equivalent	**subtype**	**number**	**%**	**total**	**%**
prepositional	*in*	298	*49.7*	409	*68.2*
	others	111	*18.5*		
non-prepositional	lex.-struct.	158	*26.3*	191	*31.8*
	zero	33	*5.5*		
total		600	*100.0*	600	*100.0*

Table 8: A summary table of *v* equivalents

equivalent	**subtype**	**number**	**%**	**total**	**%**
prepositional	*after*	108	*18.0*	373	*62.2*
	others	265	*44.2*		
non-prepositional	lex.-struct.	192	*32.0*	227	*37.8*
	zero	35	*5.8*		
total		600	*100.0*	600	*100.0*

Table 9: A summary table of *po* equivalents

On the other hand, looked at from a broader perspective, the equivalence patterns emerging from the translations of the two prepositions display the same tendency. It is summed up in Table 10 and can be described as follows: the Czech preposition tends to be translated by an English preposition in almost two thirds of cases (65.2 percent). Conversely, in close to one third of cases (34.8 percent) translation equivalence is achieved by other means than a preposition. Compared to the results of a study (Klégr, 1995) that measured correspondence between nouns in translation and found it to be 90 percent, the 65.2 percent correspondence between prepositions in translation is considerably lower.

There is a high probability (33.8 percent) that the translation will rely on one particular preposition, the dominant prepositional equivalent. In other words, there appears to be a prototypical prepositional equivalent for the Czech preposition, which sounds like good news for teaching purposes on the basic level. However, as the number and range of English prepositional equivalents turns out to be quite large, the position of the dominant prepositional equivalent may differ considerably from one Czech preposition to another. In fact, it may be too early to generalize on the basis of two prepositions but the picture outlined makes sense and it is not unreasonable to expect the same translation pattern in the remaining eight of the ten most frequent Czech prepositions.

equivalent	**subtype**	**number**	**%**	**total**	**%**
prepositional	dominant prep	406	33.8	782	*65.2*
	others	376	31.3		
non-prepositional	lex.-structural	350	29.2	418	*34.8*
	zero	68	5.7		
total		1200	100.0	1200	*100.0*

Table 10: A summary of the equivalents translating the Czech prepositions *v* and *po*

To conclude, several important findings emerged from the equivalence analysis: the general translation pattern for both prepositions is a 2 : 1 proportion of prepositional and non-prepositional equivalents; the range of prepositional equivalents is much wider than described in current bilingual dictionaries; there is a tendency for one preposition to be a dominant equivalent; very few of the non-prepositional equivalents, i.e. lexical-structural transpositions can be found in the dictionary.

The next logical step is the detailed analysis of the non-prepositional equivalents (350 items). This, however, will be part of the next paper. It is intended to deal with the correlation between the proportion of prepositional and non-prepositional equivalents and the proportion of source text PPs as free combinations and as MWUs. It is assumed that a significant number of the Czech PPs which are MWUs will be translated by non-prepositional equivalents and the analysis of this type of equivalent will be part of the task.

Finally a note on the lists of prepositional equivalents in Tables 3 and 7. Of the 21 English prepositions translating *v* and 36 (or 35, excluding *before*) translating *po*, ten of them overlap (*about, at, by, during, for, from, in, on, through, to*). Still, we can say that translating two Czech prepositions the translators used the following 47 different English prepositions: *about, about on, across, after, after the fashion of, against, along, among, apres, around, at, behind, by, down, down to, during, following, for, from, in, in and out of, in at, in search of, in spite of, in the wake of, inside, into, of, on, on account of, on to, on top of, out, out of, over, over at, past, round, side by side with, through, throughout, to, under, up, with, within*. Even considering the number of senses of the Czech prepositions it is a respectable figure which indicates that at least some senses of the Czech preposition can be translated by several different English prepositions.

4. Syntactic analysis

The goal of the syntactic analysis is to classify the PPs headed by *v* and *po* according to their syntactic function. As the syntactic analysis is not the primary goal, it uses general, coarse-grained

categories: A adverbial (without distinguishing between adjunct, disjunct and conjunct), M postmodifier, O prepositional object, and C complement, subsuming the rest of obligatory complementation (subject and object complement). One other category, F function element, was distinguished, PPs functioning as complex prepositions or conjunctions.

The analysis shows the distribution of these functions in the Czech texts and assigns the PPs in each function to a particular type of equivalent (prepositional and non-prepositional). Syntactic analysis of the PPs is motivated by the assumption that the syntactic function of the PP has a significant bearing on how it is translated into English. In keeping with the hypotheses in 2.4 above it is assumed that some syntactic functions tend to be realized by free combinations, others by lexical strings. This is important in two respects. If true, we may expect adverbial and postmodifying PPs to be typically translated by prepositional equivalents, while PPs realizing obligatory complementation will attract most of the non-prepositional equivalents.

Second, if this line of reasoning is correct, then syntactic analysis distinguishing PPs in syntactic functions typically translated by prepositional or non-prepositional equivalents will provide a useful basis for the subsequent semantic analysis. Semantic analysis will then concentrate on PPs whose function predisposes them to be translated by free combinations as only semantically compositional free combinations can be subject to meaningful semantic analysis.

4.1 Syntactic analysis of *v*-headed PPs

The results of the analysis are summed up in Tables 11-13. They show some differences between the texts (Table 11), especially between Kundera and Fuks, the biggest one in postmodifiers. Presumably they are connected with the topic and style of the text. The aggregate results in Table 12 reveal the adverbial (75.7 percent) to be the dominant function, while the modifier, the second most frequent function (10.5 %), and the object and the complement are only marginal (5.5 percent and 4.0 percent respectively). Thus, the adverbial and postmodifying PPs account for 86.2 percent, PPs realizing obligatory complementation for just 9.5 percent of cases, and PPs as function elements for 4.3 percent.

function / text	**Kundera**	**Viewegh**	**Fuks**	**total**
adverbial	159	145	150	454
modifier	6	21	36	63
object	13	11	9	33
complement	9	12	3	24
function element	13	11	2	26
total	200	200	200	600

Table 11: Distribution of syntaction functions of *v*-headed PPs in the texts

equivalent function	**prepositional**		**non-preposition.**		**total**	
	in	**others**	**lex.-str.**	**zero**		
adverbial	239	88	101	26	454	*75.7 %*
modifier	38	9	12	4	63	*10.5 %*
object	7	11	15	0	33	*5.5 %*
complement	4	2	16	2	24	*4.0 %*
function element	10	2	13	1	26	*4.3 %*
total	*49.7%* 298	*18.7%* 112	*26.2%* 57	*5.5%* 33	600	*100.0 %*

Table 12: Correlation between the function of *v*-headed PPs and the type of equivalent

function / equival	**prepositional**		**non-preposit.**		**total**	
adv-mod	374	*72.3 %*	143	*27.3 %*	517	*100.0 %*
obj-compl.-funct	36	*43.4 %*	47	*56.6 %*	83	*100.0 %*
total	410	*68.3 %*	190	*31.7 %*	600	*100.0 %*

Table 13: Correlation between the groups of function of *v*-headed PPs and the type of equivalent

Table 13, which correlates function and the type of equivalent, shows that the adverbial and postmodifying PPs (86.2 percent) are translated by prepositional equivalent in almost two thirds of cases (72.3 percent), while in PPs realizing obligatory complementation and function elements (13.8 percent) more than a half of the equivalents (56.6 percent) are non-prepositional. Especially the latter result supports the initial assumption linking prepositional equivalents to adverbial and postmodifying functions and non-prepositional equivalents to the others.

The reason why adverbials are in one third of the cases translated by non-prepositional equivalents is not only the presence of MWUs among them. Non-prepositional equivalents can be due to a number of specific causes, such as the different nature of the subject in Czech and English. While English commonly uses locative subjects, Czech requires the use of adverbials in such cases, e.g. ***v jeho hlase*** *nebyl sebemenší náznak pokání* [in his voice there was not a trace of regret] - ***his voice*** *betrayed not the slightest regret*; ***v bílé obálce*** *byl krátký dopis* [in a white envelope there was a short letter] - ***the white envelope*** *contained a brief letter.*

4.2 Syntactic analysis of *po*-headed PPs

The situation in the *po*-headed PPs (Table 15) is somewhat different (differences between the texts revealed in Table 14 are disregarded): adverbial and postmodifying PPs account for 71.5 percent (67.2 and 4.3 respectively), which is almost by 15 percent less than in *v*-headed PPs (86.2 percent). Conversely, the PPs realizing obligatory complementation and function elements appeared in 28.5 percent (27.7 and 0.8 respectively) compared to *v*-headed PPs (13.8 percent).

Table 16 shows that 66.2 percent of the adverbial and postmodifying PPs are translated by prepositional equivalents and 33.8 percent by non-prepositional ones. By contrast, slightly more than a half of the complementing and function element PPs were translated by non-prepositional equivalents (50.9 percent). In other words, the *po*-headed PPs display the same tendency of adverbial and postmodifying PPs favouring prepositional equivalents and the complementing and function element PPs attracting non-prepositional ones as the *v*-headed PPs, only somewhat less empathically.

Again there are various reasons why free-combination adverbials are translated non-prepositionally. In 7 cases the preposition complemented by a deverbal noun in Czech changes into a conjunction followed by a dependent clause in translation, e.g., *krátce* ***po*** *jejich seznámení* [shortly after their meeting] translated as *shortly after they met*. Sometimes the Czech adverbial is only a surface variation of the object showing the closeness between the two functions: *hladit někoho po ruce* [to stroke sb on his hand] translated as *stroke sb's hand* (6 instances). By contrast, the relatively high proportion of prepositional translations among object PPs is due the correspondence between Czech and English prepositional verbs, cf. *toužit* ***po*** *něčem*, translated by *to long* or *to yearn for st* which account for most cases of prepositional equivalents, though the non-prepositional alternative (*to desire st*) occurs as well. Another example of correspondence between the Czech and the English prepositional verb is *lapat* ***po*** *dechu – to gasp for breath.*

function / text	**Kundera**	**Viewegh**	**Fuks**	**Otčenášek**	**celkem**
adverbial	116	132	82	73	403
modifier	10	7	5	4	26
object	64	22	20	26	132
complement	5	5	19	5	34
function element	5	-	-	-	5
total	200	166	126	108	600

Table 14: Distribution of syntaction functions of *po*-headed PPs in the texts

equivalent / **function**	**preposit.**	**non-preposition.**		**total**
		lex.-struc.	**zero**	

adverbial	273	111	19	403 *67.2 %*
modifier	11	11	4	26 *4.3 %*
object	72	51	9	132 *22.0 %*
complement	12	19	3	34 *5.7 %*
function element	-	-	5	5 *0.8 %*
total	*61.3 %* 368	*32.0 %* 192	*6.7 %* 40	600 *100.0 %*

Table 15: Correlation between the function of *po*-headed PPs and the type of equivalent

function / equival	**prepositional**	**non-preposit.**	**total**
adv-mod	284 *66.2 %*	145 *33.8 %*	429 *100.0 %*
obj-compl.-funct	84 *49.1 %*	87 *50.9 %*	171 *100.0 %*
total	368 *61.3 %*	232 *38.7 %*	600 *100.0 %*

Table 16: Correlation between the groups of function of *po*-headed PPs and the type of equivalent

4.3 A summary: correlation between syntactic function and the type of equivalent

Tables 17 and 18, summarizing the results for both prepositions, show that the overall proportion of adverbial/modifying to complementing and function element PPs in the two samples is 78.8 percent to 21.2 percent. They also show that the adverbial/modifying PPs in all texts together favour prepositional equivalents (69.6 percent) rather than non-prepositional ones, while in the complementing and function element PPs with 52.8 percent of non-prepositional equivalents it is the other way round. We believe that the link between syntactic function and the type of equivalent is reasonably strong, though admittedly it is a general tendency rather than the rule, just as the presumed link between syntactic function and the free or fixed nature of the syntagmatic unit which realizes it.

equivalent function	**preposit.**	**non-prepositional**			**total**
		sum	**lex.-struc.**	**zero**	
adverbial	600	257	212	45	857 *71.4 %*
modifier	58	31	23	8	89 *7.4 %*
object	90	75	66	9	165 *13.8 %*
complement	18	40	35	5	58 *4.8 %*
function element	12	19	13	6	31 *2.6 %*
total	778	422	349	73	1200 *100.0 %*

Table 17: Correlation between the function of PPs and the type of equivalent

function / equival	**prepositional**	**non-preposit.**	**total**
adv-mod	658 *69.6 %*	288 *30.4 %*	946 *100.0 %*
obj-compl.-funct	120 *47.2 %*	134 *52.8 %*	254 *100.0 %*
total	778 *64.8 %*	422 *35.2 %*	1200 *100.0 %*

Table 18: Correlation between the groups of function of PPs and the type of equivalent

5. Semantic analysis

In the previous section the Czech PPs are divided according to their syntactic functions. The analysis thus singles out PPs functioning as adverbials and these are set apart for the purposes of semantic analysis in this section. There are several reasons why the semantic analysis focuses on adverbial PPs. They are the very core of PP use and their prepositional head is not semantically dependent on a superordinate element (unlike in PPs in complement function). In addition, of the 857 adverbial PPs, 600 (70 percent) are translated by prepositional equivalents and 257 (30 percent) by non-prepositional equivalents, which is taken as an indication that most of adverbial

PPs are structurally close to their Czech source text counterparts. In other words, it is assumed that they are mostly free combinations and therefore suitable for semantic analysis, again unlike PPs functioning as objects, complements and function elements. (Postmodifying PPs which are close to adverbial PPs in these respects, in fact they are typically based on them, have been excluded to keep the analysis within reasonable limits.) Non-adverbial, PPs (and function element PPs), which significantly more often favour non-prepositional equivalents (52.8 percent) and whose prepositional head is typically part of a higher complex expression, will be the subject of another study.

The analysis aims to determine the general distribution of the senses of the Czech prepositions *v* and *po*, their correlation with particular types of equivalent and specifically their correlation with particular English prepositions.

The description of the senses of the prepositions is based on the respective entries in the only contemporary dictionary of Czech (Filipec, Daneš, 1978, 1997), intended as the standard reference for "schools and the general public" (the dictionary predates the corpus era). The senses of the prepositions (prepositional phrases) are first arranged into sections according to the case of the noun governed by the preposition (accusative, locative). Within these sections the senses appear to be arranged from the basic (probably most frequent) ones to valency uses where the preposition is part of the superordinate expression.

5.1 Semantic analysis of the preposition *v*

The classification is based on the dictionary entry (see Appendix) which has been modified for the purposes of the study, i.e. the accusative and locative senses are merged where overlapping, likewise senses differing in minor ways, or literal and figurative senses, are lumped together to simplify classification. The resultant list of the mainly adverbial senses of *v* (supplied with English translation, verbatim wherever possible, of the Czech illustrations) is as follows:

1. **spatial location** (be situated, situate, take place 'where'): *be in a wardrobe/in a picture, rummage in a bag, fold hands in one's lap*
2. **temporal location** (take place in/at/on: 'when'): *in winter, in the last century, at three, at noon, on Wednesday*
3. **mode, manner** (take place, do 'how'): *live in harmony, come in twos, cast in bronze, built in the Baroque style*
4. **causal relation** (purpose, reason, effect, result): *come in the matter of do in a deliberate attempt to, disintegrate into factions, dissolve in laughter, make a collection in favour of*
5. **respect:** *change in behaviour, true in love, increase in price, expert in physics*

The semantic analysis of the 454 adverbial *v*-headed PPs, in addition to the above aims, i.e. to establish the distribution of the senses as provided by the Czech dictionary and to correlate the senses with the types of English equivalent (and identify any patterns if present), also takes note the presence of additional uses of the preposition not listed in the dictionary.

As regards sense distribution, the results summarized in Table 19 show that *v*-head PPs are principally used in three ways: first and foremost to provide information on spatial location (62.2 percent), temporal location (20.9 percent) and finally on the mode of action (12.5 percent). However, it revealed two minor uses of *v* not mentioned in the Czech dictionary: intensifying function of the PP (*vždyť se s ní tehdy viděl teprve podruhé **v životě**! - he had seen her only once before in his life!*) and the use of the PP as discourse marker (***v každym případě** toho nechte* [in any case] - *but I'd leave it at that, if I were you*). The senses of purpose (*Zeptal se **v** divné předtuše, co... - He asked what, feeling in his bones...*) and respect (***v** tom je po mamince - in this she takes after her mother*) are only marginal. The preposition *v* in the sample is predominantly spatial.

text / sense	spatial	temporal	mode	intensifier	discourse marker	purpose	respect	total
Kundera	96	34	22	5	2	-	-	159
Viewegh	83	32	22	3	3	-	2	145

Fuks	105	29	13	-	-	3	-	150
total	**284**	**95**	**57**	**8**	**5**	**3**	**2**	**454**
%	*62.6*	*20.9*	*12.5*	*1.8*	*1.1*	*0.7*	*0.4*	*100.0*

Table 19: Distribution of the senses of *v* in the texts

equivalent / sense		**spatial**	**temporal**	**mode**	**intens.**	**discourse marker**	**purpose**	**respect**	**total**	**%**
prepositional		215	65	40	3	1	-	2	326	*71.8*
non-prepos.	**lex.-struct.**	53	24	15	4	3	3	-	102	*22.5*
	zero	16	6	2	1	1	-	-	26	*5.7*
total		**284**	**95**	**57**	**8**	**5**	**3**	**2**	**454**	*100.0*
%		*62.6*	*20.9*	*12.5*	*1.8*	*1.1*	*0.7*	*0.4*	*100.0*	

Table 20: Correlation between the sense of *v*-headed PPs and the type of equivalent

Correlation between sense and type of equivalent (Table 20) reveals two interesting things in the three main uses of *v*, spatial, temporal and mode: (a) it shows that each group of these PPs displays a similar proportion of prepositional equivalents (75.7 percent for spatial PPs, 68.4 percent for temporal PPs, 70.4 percent for mode PPs) that we have seen for the whole sample (68.2 percent); which means, (b) each group of these PPs has roughly the same proportion as well, regardless of size and sense. It looks as if the 2 : 1 proportion of prepositional and non-prepositional equivalents holds constant across the two samples.

Finally, results in Table 21 answer the questions which preposition accommodates most of the senses of *v* in translation and which of its senses is translated by more English prepositions. It shows that the high incidence of *in* (the dominant prepositional equivalent) is due to the fact that most of the locative PPs rely on it and that it translates all of the other senses of *v* found in the sample as well. In general, the number of English prepositions translating the senses of *v* is proportional to the incidence of these senses; thus spatial location is translated by 15 different prepositions, temporal location by 6 prepositions. However, mode PPs are translated by 7 prepositions, intensification by 3, i.e. out of proportion to their actual occurrence.

	preposition	**spatial**	**tempor**	**mode**	**intensif**	**respect**	**discour**	**total**
1.	about	3	3					6
2.	at	5	26					31
3.	behind	1						1
4.	by		1	1				2
5.	for		1					1
6.	from			1				1
7.	in	180	21	30	3	2	1	237
8.	in and out of	1						1
9.	in at	1						1
10.	inside	2						2
11.	into	2		1				3
12.	on	9	13	4				26
13.	out	2						2
14.	through	1		2				3
15.	to	3						3
16.	under	2						2
17.	with	2		1				3
18.	within	1						1
	total	**215**	**65**	**40**	**3**	**2**	**1**	**326**

Table 21: English prepositions translating the Czech preposition *v* in adverbial PPs

5. 2 Semantic analysis of the preposition *po*

As with the preposition *v* the description of *po* is based on a dictionary which has been similarly modified for the purposes of the analysis. Unlike the preposition *v*, however, the range of senses associated with *po* is much wider, including a number of distinct meanings that cannot be merged without loss. The resultant list of adverbial senses (again supplied with English examples) which served as the basis for the analysis is as follows:

1. temporal limit, range: *up to the present,*
2. temporal extent (how long): *for years, throughout the year*
3. temporal sequence, order: *after lunch, after a time, one by one*
4. temporal repetition: *go places, work nights, pay in instalments, twice*
5. spatial surface (in contact with): *stream down one's face, walk on the grass*
6. spatial limit, range: *up to one's knees*
7. spatial direction: *up the wind*
8. spatial distribution: *go to exhibitions*
9. origin, source: *inherit from one's father, be slippery after the rain*
10. manner, mode: *on tiptoes*
11. criterion (according to): *know sb by voice*
12. respect: in this regard he is fine

As regards the distribution of *po* senses (Table 22), 85.6 percent of PPs express just two senses: temporal order (48.9 percent) and surface (36.7 percent). Only two more senses are of any prominence, mode (4 percent) and temporal extent (3.7 percent). One sense given in the dictionary, respect, was not found in the sample; by contrast, there was one sense in the sample not mentioned by the dictionary. It was the use of the PP as a discourse marker, found in the *v* sample as well: *po pravdě řečeno* translated as *I must admit/I confess/To tell you the truth/To be quite frank*. In contrast to *v*, the preposition *po* in the sample is predominantly temporal.

text /sense	temporal			spatial				origin	mode	criter	disc.	total
	order	extent	repet.	surface	limit	direct	distrib.				marker	
Kundera	59	3	-	52	-	-	1	-	1	-	-	116
Viewegh	89	4	5	15	1	4	1	-	7	1	5	132
Fuks	37	6	-	32	-	-	2	1	4	-	-	82
Otčenášek	12	2	2	49	1	-	1	2	4	-	-	73
total	**197**	**15**	**7**	**148**	**2**	**4**	**5**	**3**	**16**	**1**	**5**	**403**
%	*48.9*	*3.7*	*1.7*	*36.7*	*0.5*	*1.0*	*1.2*	*0.7*	*4.0*	*0.3*	*1.2*	*100.0*

Table 22: Distribution of the senses of *po* in the texts

equivalent / sense		temporal			spatial				origin	mode	criter.	disc. m.	total
		order	extent	repet.	surface	limit	direct	distrib.					
preposition		140	8	2	103	1	4	2	2	11			273
non-prep	**lex-str**	51	7	5	34	1		1	1	5	1	5	111
	zero	6	-	-	11	-		2					19
total		**197**	**15**	**7**	**148**	**2**	**4**	**5**	**3**	**16**	**1**	**5**	**403**
%		*48.9*	*3.7*	*1.7*	*36.7*	*0.5*	*1.0*	*1.2*	*0.7*	*4.0*	*0.3*	*1.2*	*100.0*

Table 23: Correlation between the sense of *po*-headed PPs and the type of equivalent

Sense-equivalent correlation (Table 23) interestingly shows the same proportion of prepositional to non-prepositional equivalents in the two main senses in the same, temporal order (71.1 percent of prepositional equivalents) and spatial surface (69.6 percent of prepositional equivalents), as is found in the whole sample and the three main senses of *v*, forming a 2 : 1 pattern. This proportion holds even for mode (11 : 5) but, naturally enough, in senses with an increasingly small incidence the pattern disappears as with the marginal senses of *v*.

Finally, the correlation between sense and prepositional equivalent not unexpectedly highlights two senses, temporal order and spatial surface, as being translated by the greatest number of

different prepositions: 16 and 18 (!) respectively. Especially the number of English prepositions used to translate the sense of movement on the surface is astonishing. This sense of *v* evidently provides scope for subtle distinctions which the translators interpret by using a range of specific English prepositions. The dominant preposition *after* figures as a translation equivalent in only 4 different senses (in three of them marginally). Compared to the ubiquitous *in* (which appears even as the equivalent of *po*), *after* is highly specialised in temporal order. This and the much wider range of senses of *po* (compared to *v*) explains why *after* is nowhere as dominant a prepositional equivalent as *in*.

No.	preposition	temporal			spatial				orig.	mode	total
		order	extent	repet.	surface	limit	direct	distrib.			
1.	about				6						6
2.	about on				1						1
3.	across				6						6
4.	after	99	1		1				1		102
5.	after the fashion of									1	1
6.	against				1						1
7.	along	1			17						18
8.	apres	1									1
9.	around				1						1
10.	at	3			2				1		6
11.	before?	1									1
12.	by				1						1
13.	down				13						13
14.	during			1							1
15.	following	2									2
16.	for	5	5	1							11
17.	from (- to)							2			2
18.	in	12			2		1			5	20
19.	in spite of	1									1
20.	in the wake of	2									2
21.	of	1									1
22.	on	6			8					5	19
23.	on top of	1									1
24.	over	1			19						20
25.	past	3									3
26.	round (& round)	1			5						6
27.	side by side with				1						1
28.	through		1		10						11
29.	throughout		1		1						2
30.	to (from – to)					1	3				4
31.	up				8						8
total		**140**	**8**	**2**	**103**	**1**	**4**	**2**	**2**	**11**	**272**

Table 24: English prepositions translating the Czech preposition *po* in adverbial PPs

5.3 Summary of semantic analysis

The analysis has shown several things: in spite of the extensive polysemy of *v* and especially *po*, their respective PPs cluster around just 3 and 2 senses respectively in the sample; all these major senses of *v* and *po* display the same pattern of being translated by prepositional and non-prepositional equivalents in the proportion of 2 : 1; all these major senses are translated by a surprisingly wide range of English prepositions, which might be interpreted as translating explicature. The analysis also shows that the dictionary entries missed only two uses found in the sample, intensifying and that of discourse marker, and only one adverbial sense given in the entries, respect with *po*, was not found in the samples.

6. Conclusions

The study has yielded a great amount of data, especially on context-specific translations of *v*-headed and *po*-headed PPs. However, it has also produced some interesting findings of general importance, such as:

- the general distribution of equivalents is typically in the proportion of 2 : 1 (two prepositional equivalents to one non-prepositional) and this pattern holds for both prepositions and for all their major senses
- the range of prepositional equivalents for both prepositions is unexpectedly wide (19 for *v* and 35 for *po*), far surpassing the information in current dictionaries
- for both prepositions there is one prepositional equivalent dominant in terms of frequency and the number of senses it can translate, which could be a useful starting point for TESL and the compilation of entries for prepositions
- both prepositions appear to have a typical distribution of senses which holds across the texts, which could be useful in terms of TESL and the compilation of dictionary entries
- the distribution of senses in the samples shows which uses have been missed by dictionaries
- analysis of the samples provides extensive quantitative and qualitative information on which senses correlate with which types of equivalent (specifically which set of prepositions)
- analysis of the samples provides valuable information on non-prepositional equivalents which are mostly missing in dictionaries (some of them are translation-specific, some of them, however, are systematic transpositions due to typological differences between SL and TL)

The study confirms the enormous advantages of corpus-based contrastive research. Even at this preliminary stage the data on prepositions and their translation equivalents show great promise for their theoretical and lexicographic description and for practical application in TEFL.

References

Adamska-Sałaciak, A. (2008). "Prepositions in Dictionaries for Foreign Learners: A Cognitive Linguistic Look". In E. Bernal and J. DeCesaris (eds.) *Proceedings of the XIII EURALEX International Congress* (Barcelona, 15-19 July 2008). Barcelona: Universitat Pompeu Fabra, 1477-1486.

Bennett, D.C. (1975). *Spatial and Temporal Uses of English Prepositions*. Longman.

Čermák, F., M. Křen et al. (2004) *Frekvenční slovník češtiny* [The Czech Frequency Dictionary]. Prague: NLN.

Filipec, J. and F. Daneš (eds)(1978, 1997). *Slovník spisovné češtiny pro školu a veřejnost* [Dictionary of Standard Czech for School and the Public]. Praha: Academia (electronic version, Leda, 1997).

Hoffmann, S. (2005). *Grammaticalization and English Complex Prepositions. A Corpus-Based Study*. London and New York: Routledge.

Klégr, A. (2002). *English Complex Prepositions of the Type* in spite of *and Analogous Sequences*. Prague: Karolinum Press UK.

Klégr, A. (1995). *The Noun in Translation. A Czech-English Contrastive Study*. Prague: Karolinum Press UK.

Klimšová, K. (1999). *Zdroje chyb českých mluvčích v angličtině* [Sources of Errors in Czech speakers of English]. MA thesis. Praha: FF UK.

Lindstromberg, S. (1998). *English Prepositions Explained*. Amsterdam/Philadelphia: John Benjamins.

Saint-Dizier, P. (ed.)(2006). *Syntax and Semantics of Prepositions*. Dordrecht: Springer.

Tyler, A. and V. Evans, (2003). *The Semantics of English Prepositions*. Cambridge: Cambridge University Press.