

# Impact of Tense on the Interpretation of Bi-Aspectual Verbs in Czech

Jan Chromý

## ABSTRACT:

This paper is concerned with the interpretation of the so-called bi-aspectual verbs in contemporary Czech. In the first part, a theoretical account of bi-aspectual verbs in the aspectual system of Czech is introduced and three main areas of the research of bi-aspectual verbs are identified: (1) formation of bi-aspectual verbs, (2) mono-aspectualization process, (3) functioning of bi-aspectual verbs. In the second part of the paper, a simple but efficient method for the analysis of the interpretation of (borrowed) bi-aspectual verbs and a pilot experiment on the interpretation of Czech bi-aspectual verbs are presented. It has been found that the tense of the verb is a very strong factor which influences the interpretation of bi-aspectual verbs: there is a significant tendency to interpret present tense form as imperfective and past tense form as perfective. There are other factors which play an important role in the interpretation of the bi-aspectual verbs. Based on the results, we suggest that these are (at least) semantics of the verb (i.e. the difference durative vs. instantaneous) and subject number.

## KLÍČOVÁ SLOVA / KEY WORDS:

čeština, experimentální lingvistika, obouvidová slovesa, slovesná morfologie, vid aspect, bi-aspectual words, Czech, experimental linguistics, verb morphology

Like other Slavic languages, Czech distinguishes the perfective and imperfective aspect and this aspect is obligatorily expressed by all the verb forms. We can find many definitions of these concepts. Smith (1997, p. 3) argues that the perfective aspect “focuses on a situation in its entirety, including both the initial and final endpoints” whereas the imperfective aspect “focuses on a part of the situation, including neither initial nor final endpoints”. Filip (1999, p. 14) offers a more formal definition: according to her, a perfective verb “denotes events represented as integrated wholes (i.e. in their totality, as single indivisible wholes)” and an imperfective verb “relates eventualities denoted by the verb to their parts, where the notion of ‘part’ is understood in the sense of the weak ordering relation ‘ $\leq$ ’”.

Verbs in Czech are either perfective or imperfective. However, there is a special class of verbs which can be classified as both perfective and imperfective (in other words, these verbs can occur in contexts in which either perfective or imperfective verbs can be used; see below). These verbs are traditionally called bi-aspectual. In some approaches these verbs are called “aspectually-homonymous verbs” (see Komárek, 2002; Veselý, 2008) since bi-aspectuality may be interpreted as a “parallel existence of two homonymous aspectual paradigms” (Veselý, 2008, p. 212).

Most of these verbs in Czech are (late) borrowings (e.g. *akceptovat* ‘to accept’, *evakuovat* ‘to evacuate’, *ilustrovat* ‘to illustrate’, *novelizovat* ‘to amend’, *publikovat* ‘to publish’ etc.). It seems that most of the borrowed verbs tend to be initially bi-aspectual and

are differentiated in terms of their aspect only later. There is a tendency to aspectually specify (“perfectivize”) the verb with the use of a prefix (see Nübler, 2002, p. 529, or MČ2, p. 184); mostly the prefix *z-*: e.g. *aktivizovat* (B-A) > *zaktivizovat* (PF), *legalizovat* (B-A) > *zlegalizovat* (PF), *redukovat* (B-A) > *zredukovat* (PF), but also with the use of other prefixes, e.g. *motivovat* (B-A) > *namotivovat* (PF), *separovat* (B-A) > *vyseparovat* (PF). This tendency is sometimes interpreted as a process of the aspectual crystallization of the verb (Nübler, 2002, p. 529; Veselý, 2010, pp. 121–122) — the former bi-aspectual verb begins to be used imperfectively and the perfective interpretation is taken by its prefixed counterpart. However, the tendency to prefix bi-aspectual verbs does not necessarily mean an immediate decay of the bi-aspectual verb. On the contrary, in contemporary Czech there are many prefixed perfective derivatives which coexist with their bi-aspectual counterparts (Lebedová (1984) claims that 37% of the 800 bi-aspectual verbs which are noted in *Slovník spisovného jazyka českého* do have a prefixed perfective derivative). Also, the existence of non-borrowed Czech bi-aspectual verbs (e.g. *darovat*, *jmenovat*, *padělat*, *věnovat*, *soustředit se*, etc.) shows us that a bi-aspectual verb can be present in a language for a long time without the necessity to “crystallize” aspectually. Nevertheless, it is highly probable that the existence of a prefixed perfective variant could be a factor which leads to the “imperfectivization” of the original bi-aspectual verb (see Veselý, 2008, p. 213); and could even be a necessary condition for imperfectivization (Lebedová, 1980, p. 279).

In his paper, Veselý (2008) introduced an algorithm “for determining whether a paradigm is imperfective or perfective or whether two homonymous paradigms co-exist”. This algorithm includes two steps. In the first step, it is necessary to decide whether or not the verb could be interpreted as imperfective. This is based on a relatively well-known principle that imperfective verbs (unlike perfective) can be used in a periphrastic future form and/or in the combination with a phase verb (e.g. *začít*) (see also Filip, 1999, p. 181). If the verb in question can be used in at least one of these forms, we can establish that it is not solely perfective. The second step is more complicated — we have to decide if the verb could be interpreted (also) as perfective. Veselý suggests that we have to decide if it is possible to use the verb in at least one of the following three constructions: (1) in a temporal clause with the conjunction *až*, connected with a main clause containing a perfective verb in the present form, or with an imperfective verb in the periphrastic future form (e.g. *Až minimalizujeme ztráty, budeme slavit* ‘When we minimize the losses, we will celebrate’); (2) in a temporal clause with the conjunction *než*, connected to a main clause with a perfective verb in the present form or with an imperfective verb in the periphrastic future form (e.g. *Viktor si dá panáka, než o tom Jiřího informuje* ‘Viktor will have a shot before he informs Jiří’); (3) as an actual simple past form in a temporal clause with the conjunction *když*, connected with a main clause containing an actual perfective verb in the simple past form. Moreover, this sentence must enable two interpretations concerning the temporal sequence (e.g. *Když rezignoval na svou funkci, udělalo se mu špatně* could mean ‘while he was resigning his function, he began to feel sick’ or ‘after he resigned his function, he began to feel sick’).

This algorithm is a promising tool for determining the aspectual classification of a given verb. However, the problem is that in most cases it has to be based on introspection, since it is almost impossible to find enough examples of those sentence types for the successful completion of the second step.

It should also be noted that there are many questionable claims about bi-aspectuality in dictionaries (or in other scientific works). For example, both in the *Slovník spisovného jazyka českého* and in the *Slovník spisovné češtiny*, it has been said that the verb *předčít* ‘surpass’ is bi-aspectual. However, based on my introspection, I would say it could not be used as imperfective because neither the periphrastic future form (*\*bude předčít*) nor a combination with a phase verb (*\*začne předčít*) are grammatical. This could obviously be an error in the dictionaries. However, since these dictionaries are quite old (*Slovník spisovného jazyka českého* was published between 1960–1971 and *Slovník spisovné češtiny* in 1978), it could be the case that the verb changed from bi-aspectual to perfective (which would be a relatively specific developmental process, since the basic process for bi-aspectual verbs is to become imperfective). Another specific verb in this sense is *absolvovat* which was described as perfective in older dictionaries, but is described as bi-aspectual in the newer *Slovník spisovné češtiny* (and we can see that the crucial forms for imperfective interpretation, i.e. periphrastic future and combination with a phase verb, are sometimes used and can be found for example in the Czech National Corpus). Here, the process is even more interesting since a formerly mono-aspectual, perfective verb shifted to the bi-aspectual state. Most of the unconvincing claims in the dictionaries could be taken from the category of bi-aspectual verbs (see also Veselý, 2007, p. 213). Verbs like *komentovat* ‘to comment’ or *likvidovat* ‘to liquidate’ are described as bi-aspectual but in fact are — based on my introspection — imperfective (they would not pass Veselý’s test for perfectivity). Here, it is possible that the typical process has taken place: the verbs were formerly bi-aspectual but have been “imperfectivized” over the course of time.

There is still a great deal we do not know about bi-aspectual verbs. At least three main research topics can be posited:

- (1) **FORMATION OF BI-ASPECTUAL VERBS:** How do the bi-aspectual verbs come into existence? How does the borrowing process work and which factors play a role in the aspectual classification of the borrowed verb?
- (2) **MONO-ASPECTUALIZATION PROCESS:** How does the process of perfectivization influence the bi-aspectual verb?
- (3) **FUNCTIONING OF BI-ASPECTUAL VERBS:** How do bi-aspectual verbs function in different contexts? Do speakers handle them as bi-aspectual or do they interpret them as either perfective or imperfective based on the given context?

The first topic is mainly semantic. For Russian bi-aspectuals the question is partially answered by Janda (2007; 2011), who argues that “the lexical semantics of the borrowed verb strongly influence its aspectual fate in Russian” (Janda, 2007, p. 84) and claims that there is a difference between the semantic profile of Russian imperfective borrowed verbs and of bi-aspectual borrowed verbs: imperfective borrowed verbs “have a Non-Completable construal and can form Complex Act Perfectives” (ibid., p. 94), whereas typical bi-aspectual verbs “lack a Non-Completable and hence also lack Complex Act Perfectives”. In other words, it might be the case that foreign verbs are classified as imperfective, perfective or bi-aspectual based on their lexical semantics.

The second topic considers the later development of bi-aspectual verbs. It is commonly known that many bi-aspectual verbs undergo prefixation. However, we do not know how the resulting prefixed perfective derivate changes the interpretation of the source bi-aspectual verb. Although it could be that the bi-aspectual verb is forced to become imperfective, there are cases of verbs which still maintain their bi-aspectuality after the emergence of a prefixed derivate. This is not altogether so surprising, taking into account the fact that the prefixed variant always changes the semantics of the verb and that there are no empty aspectual prefixes (Isačenko, 1960; Komárek, 2006; Veselý, 2010). Overall, the situation is quite unclear and empirical data is needed before we can safely say how the process of the aspectual crystallization works.

The third topic explores how the bi-aspectual verbs are processed in Czech. Most scholars agree that bi-aspectual verbs are contextually disambiguated (Janda, 2007; Gladney, 1982). Should that be true, it might be possible to look for the factors which influence the disambiguation. For example, it may happen that the bi-aspectual verbs are interpreted as perfective, if they are used in the past tense form (Zaliznjak — Šmelev, 2000, p. 75). Furthermore, an answer to this question might be the key to answering the second one. It might be possible that some of the bi-aspectual verbs are interpreted as imperfectives in most contexts (even in the past tense) and that the prefixed perfective emerges precisely for this reason — because it is already largely imperfective and, contrary to popular belief, not because of its ambiguity.

## EXPERIMENTAL RESEARCH ON THE INTERPRETATION OF BI-ASPECTUAL VERBS

To my knowledge, there is no experimental (or even empirical) research dealing with how Czech bi-aspectual verbs function in different contexts. The research introduced here is a pilot experiment which attempts to establish the impact of the tense on the interpretation of bi-aspectual verbs and hence takes up the third research topic mentioned above.

My basic assumption is that when used in a particular utterance, the bi-aspectual verbs (for a given speaker/listener) may function either as perfective or imperfective but never as bi-aspectual. This assumption is explicitly stated for example in MČ2 (p. 184). I am aware that it is more problematic than it may initially appear (cf. MacDonald — Pearlmutter — Seidenberg, 1994; Fernández — Smith Cairns, 2011, pp. 198–201; see also below in the “Method” part), but for our present purposes I am putting these problems aside.

The second assumption lies in what I call the “substitutional equivalence”. This is a principle which is commonly used in linguistics (e.g. the algorithm by Veselý heavily relies on it). In short, it proposes that if an ambiguous construction *X* is used in an actual context *A* and speaker *N* substitutes construction *X* with an unambiguous construction *Y* (which is — at least partially — synonymous with construction *X*), the construction *X* in a given context has the meaning of construction *Y* (for speaker *N*). This works best in a context where there is a clearly restricted possibility of substitution. For example, the bi-aspectual verb *renovovat* ‘to renovate’ in the sentence

*Martin začne renovovat poškozený byt* ‘Martin will start to renovate the damaged flat’ is substitutable only by imperfective verbs with roughly the same meaning (e.g. *opravovat*, *obnovovat*, etc.) but not with perfective verbs (e.g. *opravit*, *obnovit*). Hence, we can say that in the given context, the verb is used as imperfective. Similarly, word *kniha* can mean either ‘a book’ or ‘omasum, third stomach’ in Czech and in a sentence like *Sliznici knihy tvoří listy* (‘The mucosa of the omasum consists of leaves’) it can be substituted with the construction *třetí předžaludek* ‘third stomach’ or *omasum*, but not with words *spis* ‘written work’ or *dílo* ‘work’. Therefore, we can claim that *kniha* in this context definitely means ‘omasum’ and not ‘book’.

However, the restricted possibility of substitution does not appear very often. In fact, we may say that a clear restriction of this type is very uncommon. In most cases, the ambiguous construction *X* is substitutable by at least two other constructions differing in meaning. To use similar examples to those given above, we may consider the sentences *Martin renovoval poškozený byt* ‘Martin has renovated / renovated / was renovating the damaged flat’ and *Knihu si odnese Karel* ‘Karel will take the book / omasum’. In the former case, it is entirely possible to substitute the verb for both aspectual alternatives (*opravit/opravovat* or *obnovit/obnovovat*). In the latter case, we can substitute the word *kniha* both for a synonym of book or as omasum. We can go even further and say that based on our intuition, one of the interpretations is more probable (or even more plausible), but this is an end-point where we cannot say more without concrete data. We have to employ empirical, or rather experimental, methods to determine which interpretation is more probable or, in other words, what the tendencies for the interpretation of ambiguous constructions in different contexts are. Summarizing the above, the use of empirical methods makes it possible to establish which factors play a role in the interpretation of a given construction and what is the weight of these factors. As has been mentioned earlier, the following experiment is concerned with one factor (tense) and with its influence on the interpretation of bi-aspectual verbs.

## PARTICIPANTS

The experiment took place in January 2012 and the participants were 60 students (mean age 22.12 years) of the Faculty of Arts, Charles University in Prague. Participation was voluntary, all participants filled out a questionnaire in the same room before a lecture took place. Participants were randomly divided into two groups (30 people each), and each group filled out a different questionnaire.

## METHOD

As has been said, two questionnaires were used. Each contained 14 sentences, each of these in turn comprising 3 to 4 loanwords and some domestic Czech words. In every sentence, one of the loanwords was a bi-aspectual verb (bi-aspectuality was established introspectively by me and my colleague, dr. Lehečková, independently). The sentences were identical in both questionnaires and their order was the same; the

only thing which differed was the tense of the verb. In each questionnaire, there were 7 verbs in the simple past form and 7 verbs in the present tense form. The wording of the sentences in each questionnaire is attached in appendices A and B.

The participants were not told what the precise aims of the research were in order not to bias the results. The research was therefore presented as aiming to find out how native speakers of Czech understand borrowings. The task was to “reformulate each sentence”, i.e. substitute all the loanwords with Czech domestic words and at the same time keep the meaning of the sentence as close to the original as possible. I formulated one null hypothesis and three working hypotheses:

- H<sub>0</sub>: There is no relationship between the tense of the bi-aspectual verb and aspectual interpretation of this verb in a particular context.
- H<sub>1</sub>: If a bi-aspectual verb is used in the present tense form, it will be interpreted as imperfective.
- H<sub>2</sub>: If a bi-aspectual verb is used in the simple past form, it will be interpreted as perfective.
- H<sub>3</sub>: Bi-aspectual verbs in the simple past form will tend to be interpreted as perfective significantly more than bi-aspectual verbs in the present tense form, although in an otherwise identical context. (This hypothesis basically works the other way round.)

The analysis proceeded as follows: If the speaker chose to substitute the original verb with a perfective verb, it was counted as perfective (and vice versa). If the speaker chose to substitute the original verb with a different bi-aspectual verb (e.g. *nominovat* ‘to nominate’ > *jmenovat*) or with a semantically different verb (e.g. *detoxikovat* ‘to detoxicate’ > *otrávit* ‘to poison’), or did not substitute the original verb at all, it was counted as “discarded”. Very rare (only 11 altogether) were cases where the participant chose two equivalents of the bi-aspectual verb. If the bi-aspectual verb was substituted with two semantically similar verbs with the same aspect, the aspect of the two equivalents was counted once (this happened in 7 cases: *renovovat* ‘to renovate’ > *předělat/zlepšovat* ‘to remake / to improve’ + *opravovat/vylepšovat* ‘to repair / to improve’; *emigrovat* ‘to emigrate’ > *přesunovat se / stěhovat se* ‘to move’ + *opouštět zemi / stěhovat se* ‘to leave the country’; *skórovat* ‘to score’ > *dávat gól / trefovat branku* ‘to score a goal / to hit the net’ + *dávat body / být úspěšný* ‘to score points / to be successful’; *identifikovat* ‘to identify’ > *označit/poznat* ‘to mark / to recognize’). If the bi-aspectual verb was substituted with two semantically similar verbs, one of which was bi-aspectual and one perfective or imperfective, it was counted as the aspect of the latter verb (this happened in 3 cases: *skórovat* ‘to score’ > *bodovat / dávat gól* ‘to score a point/goal’ + *bodovat / dávat branku* ‘to score a goal’; *nominovat* ‘to nominate’ > *jmenovat/vybrat* ‘to nominate / to choose’). In the data, it happened only once that a bi-aspectual verb was substituted by two equivalents one of which was perfective and one imperfective (*demonstrovat* ‘to demonstrate’ > *ukazovat/představit* ‘to show / to introduce’). I counted it as “discarded”. However, I am aware that this particular case is in contradiction to our basic assumption that the bi-aspectual verbs do function either as perfective or as imperfective in a particular context. Nevertheless, I believe, it does not

make the results implausible, since this happened only in one of 840 sentences. Still, this is a potentially interesting problem and would be worth looking into in the future.

## RESULTS

In Table 1 the results are summarized. Without any inferential statistics, it is evident that only two verbs behave in contradiction to our hypothesis ( $H_1$ ): *explodovat* ‘to explode’ and *rezignovat* ‘to resign’. In other words, we can see a clear effect of the present tense on the interpretation of 12 out of 14 verbs. There is a large amount of discarded data for the verb *skórovat* ‘to score’, which has two sources: in some cases it remained unsubstituted, while in other cases it was substituted with another bi-aspectual verb *bodovat* ‘to score a point’ and therefore it could not be counted in the results. Only three verbs behave in contradiction with our second hypothesis ( $H_2$ ): *demonstrovat* ‘to demonstrate’, *renovovat* ‘to renovate’, and *emigrovat* ‘to emigrate’. The remaining verbs show a very clear tendency for the preference of the perfective interpretation in the simple past form. The relatively high number of discarded instances of *nominovat* ‘to nominate’ is due to the usage of the bi-aspectual verb *jmenovat* in the substitution.

verb	present tense form			past tense form		
	perfective	imperfective	discarded	perfective	imperfective	discarded
<i>mobilizovat</i>	3	24	3	26	1	3
<i>demonstrovat</i>	0	30	0	19	10	1
<i>dešifrovat</i>	2	26	2	27	2	1
<i>rezervovat</i>	6	16	8	29	0	1
<i>explodovat</i>	19	9	2	28	0	2
<i>renovovat</i>	0	26	4	12	15	3
<i>skórovat</i>	1	10	19	21	0	9
<i>nominovat</i>	2	19	9	17	1	12
<i>emigrovat</i>	0	29	1	14	12	4
<i>realizovat</i>	0	27	3	29	0	1
<i>rezignovat</i>	9	13	8	28	0	2
<i>expandovat</i>	0	26	4	27	1	2
<i>identifikovat</i>	1	25	4	28	0	2
<i>detoxikovat</i>	0	28	2	23	6	1

TABLE 1: A summary of the preferences for perfective or imperfective interpretations of bi-aspectual verbs in the present tense and simple past condition.

Before we advance to the inferential statistic analysis, we should consider the verbs which did not behave as expected. One difference which comes to mind is the opposition durativity — instantaneousness. Verbs *explodovat* and *rezignovat*, which behave contradictory to our  $H_1$ , are clear cases of instantaneous verbs, which could be the factor behind their enhanced perfective interpretation in present tense form. The

problem is that *nominovat* and *skórovat* are also instantaneous, as are at least some interpretations of the verbs *emigrovat* and *identifikovat*. These four verbs seem to behave in accordance with the hypothesis. The verbs *demonstrovat* and *renovovat* are clearly durative and their interpretation in the simple past form is more imperfective than predicted. The second factor which may play a role is the subject number. We can claim that the plurality of the subject could enhance the imperfective interpretation (Esvan, 2002, pp. 152–154). There were five verbs in the experiment which had a subject in the plural: *renovovat*, *nominovat*, *emigrovat*, *identifikovat* and *detoxikovat*. Three of these verbs have a higher imperfective interpretation in the past tense form than expected — this might be an especially strong factor for the verb *emigrovat*, which is instantaneous but with the plural subject is more likely to be interpreted as iterative.

Thus, a generalized linear mixed model for binomial data with two random effects (verb and respondent) and three fixed effects (tense, durativity and subject number) was constructed. The results are presented in Table 2.

Fixed effects	Estimate (SE)	p
Intercept	-6.69 (0.949)	< 0.001
Tense	6.798 (0.556)	< 0.001
Durativity	2.758 (0.791)	< 0.001
Subject number	3.024 (0.814)	< 0.001

  

Random effects	Variance	SD
Verb	1.534	1.238
Respondent	0.379	0.616

**TABLE 2:** The generalized linear mixed model with tense, durativity and subject number as fixed effects and the verb and respondent as random effects. The referential values are present tense, durative verb and singular subject.

## INTERPRETATION

The results of this pilot experiment are promising but still preliminary. Firstly, only 14 verbs have been analyzed (out of possibly hundreds of bi-aspectual verbs in Czech). It is possible that the same analysis of other bi-aspectual verbs would yield different results (based on the effect of durativity/instantaneousness we can clearly see that the semantics of the verb play an important role). Secondly, the subject number had not been controlled properly in the experiment. In other words, the model only reflects one subject number value for each verb. This needs to be analyzed in further experiments, since there it might be the case that the subject number effect would be weaker or even not present. Thirdly, there are other possible effects which may influence the results. One of these factors might be the use of temporal adverbials and adverbials of degree which complement the verb. The adverb *masivně* ‘massively’ was used in the sentence with *emigrovat*, which might be the reason for the enhancement of this verb’s imperfective interpretation in the simple past form. Another fac-

tor might be the object number (see Esvan, 2002). As in the case of the subject, we can speculate that the plurality of the object could lead to the strengthening of the imperfective interpretation both in the simple past form and in the present tense form. The word-order might also be an important factor — we might predict that if the verb is in the sentence focus, its perfective interpretation may be strengthened.

Despite these problems, our results clearly show that the tense of the bi-aspectual verb strongly influences its interpretation in the sense that a bi-aspectual verb in the present tense form tends to be interpreted as imperfective and the same verb in the simple past form (in the otherwise same context) tends to be interpreted as perfective. In other words, our hypotheses seem to be strong in light of current findings.

In addition, it is shown that the semantics of the verb play an important role — instantaneous verbs tend to be interpreted more perfectly and durative verbs more imperfectively. This might be a promising finding since durativity/instantaneousness could possibly be important factors influencing the aspectual classification of the verb as such and might assist us in answering the questions associated with the research topic 2 above.

An important question for future research is the relation of the present results to the interpretation of aspectually unambiguous verbs, primarily for the imperfective ones. The Czech imperfective is sometimes described as “unmarked” (whereas perfective is “marked” — see Filip, 1999, pp. 187–188). In other words, Czech imperfective verbs can be used to say that a process had not yet come to its final endpoint (e.g. sentence *Adam se hrbí* ‘Adam arches his back’) or to say that the process took place without any reference to an endpoint (which could happen in reality; e.g. *Tereza nařizovala Adamovi, aby se narovnal* ‘Tereza ordered Adam to straighten his back’). We can for example hypothesize that the second interpretation of the imperfective verb will be much more common in simple past forms than in the present tense forms, and we might of course find other factors which could influence these interpretations. In other words, it does not have to be the case that the present research on the interpretation of bi-aspectual verbs shows something which is completely different from the interpretation of perfective or imperfective verbs. However, the method presented cannot be used for the analysis of verbs other than bi-aspectual; for those, another type of analysis must be employed. These issues will be addressed in more detail in my future research.

## CONCLUSION

In this paper, I have shown that the tense of bi-aspectual verbs is a relatively strong factor influencing the interpretation of these verbs. I have also argued that durativity and subject number play an important role. A simple but efficient method for the analysis of the interpretation of (borrowed) bi-aspectual verbs was presented. In future research, it is necessary to account for other factors such as object number, word-order, verb negation, voice, use of temporal adverbials or adverbials of degree etc. Furthermore, it is necessary to include more bi-aspectual verbs in the analysis. The ultimate output of these experiments could be an algorithm based on which it would be possible to establish the aspectual interpretation of the respective bi-as-

pectual verb. It is possible that clues clarifying possible changes in the system of bi-aspectual verbs in contemporary Czech may be found, and assist in answering the second research topic proposed above.

## REFERENCES:

- ESVAN, François (2002): Korpus jako zdroj popisu vidové struktury českého slovesa. In: Zdeňka Hladká — Petr Karlík (eds.), *Čeština — univerzálie a specifika 4: Sborník konference v Brně 15.-17. 11. 2001*. Praha: Nakladatelství Lidové noviny, pp. 151–156.
- FERNÁNDEZ, Eva M. — SMITH CAIRNS, Helen (2011): *Fundamentals of Psycholinguistics*. Chichester: Wiley-Blackwell.
- FILIP, Hana (1999): *Aspect, Eventuality Types and Nominal Reference*. New York, NY: Routledge.
- GLADNEY, Frank Y. (1982): Biaspectual verbs and the syntax of aspect in Russian. *The Slavic and East European Journal*, 26, pp. 202–215.
- ISAČENKO, Aleksandr Vasil'evič (1960): Slovesný vid, slovesná akce a obecný charakter slovesného děje. *Slovo a slovesnost*, 21(1), pp. 9–16.
- JANDA, Laura A. (2007): What makes Russian bi-aspectual verbs special? In: Dagmar Divjak — Agata Kochanska (eds.), *Cognitive Paths into the Slavic Domain: Cognitive Linguistics Research*. Berlin — New York, NY: Mouton de Gruyter, pp. 83–109.
- JANDA, Laura A. (2011): Completeness and Russian aspect. In: Marcin Grygiel — Laura A. Janda (eds.), *Slavic Linguistics in a Cognitive Framework*. Vienna: Peter Lang, pp. 13–35.
- KOMÁREK, Miroslav (2002): Ke vztahu mezi videm a tzv. způsoby slovesného děje. In: Zdeňka Hladká — Petr Karlík (eds.), *Čeština — univerzálie a specifika 4: Sborník konference v Brně 15.-17. 11. 2001*. Praha: Nakladatelství Lidové noviny, pp. 135–140.
- KOMÁREK, Miroslav (2006): Prefixace a slovesný vid (K prefixům prostě vidovým a subsumpci). In: Miroslav Komárek, *Příspěvky k české morfologii*. Olomouc: Periplum, pp. 183–195.
- LEBEĐOVÁ, Světlana (1980): K ztrátě obouvidovosti u sloves cizího původu v současné češtině. *Slovo a slovesnost*, 41(4), pp. 279–285.
- LEBEĐOVÁ, Světlana (1984): Spojování sloves cizího původu s českými předponami. *Naše řeč*, 67(3), pp. 117–121.
- MACDONALD, Maryellen C. — PEARLMUTTER, Neal J. — SEIDENBERG, Mark S. (1994): Lexical nature of syntactic ambiguity resolution. *Psychological Review*, 101(4), pp. 676–703.
- MČ2: KOMÁREK, Miroslav — KOŘENSKÝ, Jan — PETR, Jan — VESELKOVÁ, Jarmila (eds.) (1986): *Mluvnice češtiny: 2, Tvarosloví*. Praha: Academia.
- NÜBLER, Norbert (2002): Vid. In: Petr Karlík — Marek Nekula — Jana Pleskalová (eds.), *Encyklopedický slovník češtiny*. Praha: Nakladatelství Lidové noviny, pp. 527–531.
- SMITH, Carlota S. (1997): *The Parameter of Aspect*. Dordrecht — Boston, MA — London: Kluwer Academic Publishers.
- VESELÝ, Luboš (2008): Testy pro zjišťování vidové hodnoty vidového paradigmatu slovesa (indikátory slovesného vidu). *Slovo a slovesnost*, 69(3), pp. 211–220.
- VESELÝ, Luboš (2010): Ke slovesnému vidu v češtině. *Naše řeč*, 93(3), pp. 113–124.
- ZALIZNJAK, Anna Andreevna — ŠMELEV, Aleksej Dmitrievič (2000): *Vvedenie v russkiju aspektologiju*. Moscow: Jazyki russkoj kul'tury.

## APPENDIX A: WORDING OF THE SENTENCES FROM QUESTIONNAIRE A

1. Prezident mobilizoval vojska kvůli agresorům.
2. Lektor demonstruje publiku funkce přístroje.
3. Pedagog dešifruje nečitelné litery ve studentově práci.

4. Ambasador rezervuje pro své hosty vstupenky na premiéru představení.
5. Substance explodovala při kontaktu se vzduchem.
6. Jeho kabinet renovují profesionálové.
7. Ofenzivní plejer v zápase skóroval.
8. Zaměstnanci nominovali kandidáty na post manažera firmy.
9. Příslušníci minorit masivně emigrují.
10. Jeho šéf realizoval výzkum imigrace do České republiky.
11. Opoziční lídr rezignuje kvůli obvinění z finančních úniků.
12. Firma expandovala do industriální sféry.
13. Ve fabrice identifikují zbytky toxického odpadu.
14. Lidé detoxikovali svůj organismus pomocí alternativních léčiv.

#### APPENDIX B: WORDING OF THE SENTENCES FROM QUESTIONNAIRE B

1. Prezident mobilizuje vojska kvůli agresorům.
2. Lektor demonstroval publiku funkce přístroje.
3. Pedagog dešifroval nečitelné litery ve studentově práci.
4. Ambasador rezervoval pro své hosty vstupenky na premiéru představení.
5. Substance exploduje při kontaktu se vzduchem.
6. Jeho kabinet renovovali profesionálové.
7. Ofenzivní plejer v zápase skóruje.
8. Zaměstnanci nominují kandidáty na post manažera firmy.
9. Příslušníci minorit masivně emigrovali.
10. Jeho šéf realizuje výzkum imigrace do České republiky.
11. Opoziční lídr rezignoval kvůli obvinění z finančních úniků.
12. Firma expanduje do industriální sféry.
13. Ve fabrice identifikovali zbytky toxického odpadu.
14. Lidé detoxikují svůj organismus pomocí alternativních léčiv.

#### ABSTRAKT:

**Vliv slovesného času na interpretaci českých obouvidových sloves.** Studie se zabývá interpretací tzv. obouvidových sloves v současné češtině. První část pojednává z teoretického hlediska o postavení těchto sloves v rámci vidového systému češtiny a identifikuje tři hlavní oblasti výzkumu obouvidových sloves: (1) vznik obouvidových sloves, (2) proces vidového vyhraňování, (3) fungování obouvidových sloves. V druhé části článku je představena jednoduchá a efektivní metoda analýzy interpretace (cizích) obouvidových sloves a prezentovány jsou rovněž výsledky pilotního experimentu zaměřeného na interpretaci obouvidových sloves v češtině. Ukazuje se, že velmi silným faktorem, který ovlivňuje interpretaci obouvidových sloves, je gramatický čas slovesa: existuje silná tendence interpretovat obouvidová slovesa v přítomném čase jako nedokonavá a v minulém čase jako dokonavá. Interpretaci obouvidových sloves ovlivňují i další faktory. Předkládané výsledky poukazují na to, že těmito faktory jsou (přínejmenším) sémantika slovesa (tj. rozdíl durativní vs. instanciální sloveso) a číslo subjektu.