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'Now' in Russian: a Corpus-Based Approach to *Teper'* and *Sejčas*

Egbert Fortuin and Ico Davids

1 Introduction¹

The Russian adverbs *teper'* and *sejčas*, which can both be translated as 'now' (at least in some contexts), can be seen as typical examples of near synonymous forms. The aim of this paper is to provide a corpus-based analysis of the meanings of these forms, which takes as its starting point the existing analyses, especially Mel'čuk (1985). The paper has the following structure. In section 1.1 we introduce the relevant theoretical notions for the study of *teper'* and *sejčas*, in section 1.2 we present Mel'čuk's (1985) analysis, and in section 1.3 we formulate our research questions. Section 2 contains our quantitative analysis of *teper'* and *sejčas* and in section 3 the qualitative analysis is given. Section 4 provides the conclusion of our paper.

1.1 *Relevant Notions*

In this section we will introduce some relevant notions for the study of the semantics of *teper'* and *sejčas*, which are necessary for the analysis:

- the **timespan** to which 'now' refers (the time of 'now')
- the **situation** that is associated with 'now'
- the **time of assertion**
- the **moment of speech (time of utterance)** of the sentence containing 'now'
- the **moment of reference** of 'now'

We will illustrate these notions with some English examples, before discussing the Russian data. Consider the following sentence containing *now*:

1 We would like to thank Marieke Droogsma and Tomas Busser for their help with the analysis and tagging of the data, and the anonymous reviewer for his/her valuable comments. We are also very grateful to Tore Nettet for providing us with the data from his research on *teper'* and *sejčas*. Finally, we are extremely thankful to Igor Mel'čuk who critically read our paper and made several useful comments. All remaining errors are of course our own. The Russian example sentences given in this paper are taken (unless indicated otherwise) from the Russian National Corpus (RNC), and the English example sentences are taken (unless indicated otherwise) from the British National Corpus (BNC).

- (1) He is having lunch **now**.

In this sentence the form *now* refers to a **timespan** that coincides with the **moment of speech**. Speakers use *now* because they want to provide information about something that takes place within the span of time referred to by *now*. As such, the meaning 'now' always presupposes the idea of a **situation** that takes place within the span of time to which *now* refers, and which is often provided in the sentence that *now* contains. In this case the situation that is associated with 'now' is "having lunch". The same is true for *teper'* and *sejčas* when they express 'now'.

Klein (1995) argues that there is often a difference between the time of the situation and the **time of assertion**. To give an example, according to him, in the sentence *Ivan rabotal, rabotaet i budet rabotat' v Moskve*. ('Ivan worked, works, and will work in Moscow.') the use of the imperfective past tense *rabotal* does not imply that the working was finished before the moment of speech. The imperfective past tense does, however, make an assertion about the working that is situated in the past. In the same vein, in (1) the lunch probably has started before the moment of speech, and will probably continue after that, but the assertion is made about a lunch that takes place at the moment of speech, which coincides with the span of time referred to by *now*. Note that if the situation has a more habitual character, the timespan referred to by *now* may also be associated with this larger span of time, and not just with the moment of speech. This is for example the case in the following sentence where *now* may refer to a whole period, for example the period since his self-confidence is up:

- (2) His self-confidence is up and he actually likes reading **now!**

As we will show, one of the hypotheses put forward in the literature is that in Russian such cases where the time for which the assertion is made is larger than the moment of speech are typically expressed by *teper'* rather than *sejčas*.

The **moment of reference** of 'now' in (1) and (2) is the moment of speech, since the moment of speech overlaps or coincides with 'now'. In some cases, however, the moment of reference does not equal the moment of speech, for example in the following sentence, which is a fragment of a past tense narrative discourse:

- (3) Having spoken to Devlin Parnham, she **now** understood the count's attitude at the hotel a little better.

In narrative discourse, events are primarily linked to each other rather than independently to the moment of utterance (see Boogaart 1999, 25). According to Langacker (1991, 242–246) the use of the past tense does not locate events prior to the moment of speech, but presents the events as “distanced” from the moment of speech (i.e. the “ground” in cognitive linguistic terms). This means that the use of the simple past tense in narratives as in (3) is in full accordance with the general meaning of the past tense. In such sentences the reference point of *now* is provided by the narrative discourse itself (in this case the timespan in which the subject understands it much better), and the moment of speech itself does not function as a reference point for *now*.

Note that in English the normal situation is that the span of time of ‘now’ coincides with the moment of speech, but that is not necessarily the case, as can be illustrated with the following sentences. In (4) we find the expression *just now*, which refers to a timespan just before the moment of speech, and which does not last at the moment of speech:

(4) He left **just now**.

In Russian, *sejčas* ‘now’ can occur without an element such as English *just*, to indicate a moment just before the moment of reference.² In Russian we also find instances where the form expressing ‘now’ is used to refer to a moment *just after* the moment of speech. In English such uses are not typically expressed by *now*, even though there are cases partly reminiscent of this use such as instances like (5) where *right now* is used with a an imperative or other future oriented tense or mood, implying that the timespan referred to by *now* is located immediately after the moment of speech:

(5) Yes, let’s start **right now**.

In this paper we will also talk about a **moment** or **period**, following Mel’čuk (1985, 272–273). A moment refers to the moment of speech and its immediate surroundings as in (1), whereas a period refers to a longer stretch of time as in (2). This difference is of course not clear-cut and fully objective, but in many cases the context makes clear whether ‘now’ refers to the moment of speech or has a broader temporal reference.

² According to a native speaker in this specific case one would not use *sejčas* but only *tol’ko čto* or *tol’ko sejčas* is possible.

1.2 *Starting Point: the Analysis by Mel'čuk*

Having provided the relevant notions necessary for the analysis, we will now provide a rather extensive discussion of how *teper'* and *sejčas* are analyzed by Mel'čuk (1985). Although there are several other semantic analyses of *teper'* and *sejčas* (e.g. Apresjan 2014, Gladkova 2012, Grenoble 1998, Nessel et al. 2013, Uryson 2004, Yoneshige 1989), they all build on the influential paper by Mel'čuk (1985).

Mel'čuk distinguishes two different types of *teper'*, each with its own meaning, namely *teper'*-1, and *teper'*-2. The first can be exemplified by the following sentences taken from Mel'čuk (1985):

- (6) *Ranše Leva kuril očen' mnogo, a teper' počti ne kurit.* (Mel'čuk 1985, 274)
'In the past Leva smoked a lot, but *now* he hardly smokes anymore.'
- (7) *Ona ranše vseгда vrala i teper' sovret.*
'She always lied in the past and she will lie *now*.' (Mel'čuk 1985, 269)

Mel'čuk provides the following definition for *teper'*-1:

- (8) In a given period (or interval), including the moment of speech or preceding the moment of speech; in relation to that which took place before the given period, and which is understood in the speech act. (Mel'čuk 1985, 268)

The first important feature of this definition is that *teper'* refers to timespan (a period or interval) that either includes the moment of speech or which precedes the moment of speech. In (6) and (7) *teper'* refers to a timespan that includes the moment of speech, but when it is used in a sentence or clause in a past tense it may refer to a span of time that precedes the moment of speech. This is the case in sentences like (9) where *teper'* is used in a past tense narrative discourse:

- (9) *Teper' u Borisa sideli gosti, i emu neoxota bylo dumat' o predstojaščem êkzamene.*
'Boris had guests over *now*, and he didn't want to think about the upcoming exam.' (Mel'čuk 1985, 274)

Note that we have argued with respect to the English example (3), with the same narrative mode, that it is not entirely correct to say that the events are located *prior* to the moment of speech because the past tense does not necessarily locate the events *before* the moment of speech, but this is the analysis provided by Mel'čuk here.

The second important feature in the definition given by Mel'čuk for *teper'* is that the moment referred to by *teper'*-1 is related to something which took place before the 'now'. In many cases the moment in the present is contrasted or juxtaposed to a situation in the past.³ This is for example the case in (6) where the smoking in the past is compared to the "almost not smoking" in the present (with the coordinative conjunction *a*), and in (7) where the situation that she lied in the past is contrasted to or juxtaposed to the situation when she lies in the future (with the coordinative conjunction *i*).

We will now move on to the second sense of *teper'*, namely *teper'*-2 as in (10):

- (10) Issledovanie moe zakončeno; *teper'* mne ostaetsja poblagodarit' tex, kto mne tak mnogo pomog.
'My research is finished; *now* I need to thank those who helped me so much.' (Mel'čuk 1985, 271)

Mel'čuk provides the following definition for *teper'*-2:

- (11) Since that, which happened before the moment of speech and which is implied in the speech act, is finished and it is desirable to switch to something else. (Mel'čuk 1985, 270–271).

Mel'čuk provides a separate definition for this sense, although in this case we also find the feature of juxtaposition, but this feature is related to the discourse: by using *teper'* the speaker relates the current moment in the discourse to the moment in the discourse preceding it.

Mel'čuk also discusses *sejčas* and distinguishes four senses. An example of the first sense (*sejčas*-1) is given below:

- (12) On *sejčas* zanjat.
'He is busy *right now*.' (Mel'čuk 1985, 261)

This usage type occurs in sentences in the present tense, imperative or subjunctive mood. Mel'čuk provides the following semantic description:

3 The term used by Mel'čuk (1985, 269) in his paper is *sopostavlenie* 'comparison', even though in his definition in (8) he uses the term *v svjazi s tem* 'in relation to that'. Mel'čuk (1985, 273) also refers to *teper'*-1 as anaphoric, in contrast to *sejčas* which is deictic.

- (13) At the moment of speech (or in a period that includes the moment of speech). (Mel'čuk 1985, 261)

Note that according to Mel'čuk, *sejčas*-1 typically refers to a *moment* or a *period* (in contrast to *teper'*-1). According to him, sentences featuring *sejčas*-1, are without additional context always interpreted as referring to the moment of speech, and not to a larger timeframe (cf. English *nowadays*) and this interpretation can only be overruled by additional contextual means.

The second type of *sejčas* (*sejčas*-2) differs from the first type because the time frame to which the 'now' refers does not coincide with the moment of speech, but with a moment just after the moment of speech (*v bližajšij moment posle momenta reči*; Mel'čuk 1985, 264). This use is typical for the future tense or other constructions that place the event associated with *sejčas* after the moment of speech:

- (14) *Sejčas pridu!*
 'I'll be there *right away*.' (Mel'čuk 1985, 261)

As the following examples show, the idea of a moment "just after" the moment of speech is a relative matter. In the following example there may be quite some time between the moment of speech and the realization of the event *sejčas* refers to:

- (15) Igor' ostanovil mašinu: – Zanimajte mesto, ja *sejčas* vernus'. Doedu do svoix znakomyx i vernus'... (A. Rybakov, *Priključenija Kroša*)⁴
 'Igor' stopped the car. "Take your places, I will be back *right away*. I will drop by my friends and return..."

The third sense of *sejčas* (*sejčas*-3) expresses a moment *just before* the moment of speech ('*v bližajšij moment pered momentom reči*'; Mel'čuk 1985, 267), as illustrated by the following example provided by Mel'čuk, which might for example be an answer to the question "Where is Sasha? Have you seen him?":

- (16) *Sejčas on tut byl!*
 'He was here *just now*!' (Mel'čuk 1985, 261)

4 <http://e-bookcase.ru/ru/read/53184-rybakov-anatolij/189154-priključenija-krosha/page39>
 (Accessed 26 November 2018).

This use only occurs with the past tense, and the suggestion here is that at the moment of speech the subject has already left. In the following example this interpretation is even more clear, because of the temporal indication:

- (17) *Ja sejčas byl tam, minut 15 nazad.*⁵
 ‘I was there *just now*, about 15 minutes ago.’

We now turn to the last sense (*sejčas-4*), which refers to a moment that took place in the past (expressed by the past tense) but which is presented by the speaker as if it were the moment of speech:

- (18) ‘At a given moment, taking place in the past, but presented by the speaker as if it were the moment of speech.’ (Mel’čuk 1985, 267)

Mel’čuk provides the following (isolated) sentence, which is part of a larger narrative discourse:

- (19) *Sejčas on vnušal žalost’.*
 ‘Now he just inspired pity.’ (Mel’čuk 1985, 261)

Note that this use is reminiscent of the use of *teper’* given in (9) earlier, but there is a difference. The use of *sejčas* as in (19) has a very specific semantics according to (Mel’čuk 1985, 274), which is absent from similar sentences with *teper’*. The following example illustrates this difference:

- (20) *Teper’ (*sejčas) u Borisa sideli gosti, i emu neoxota bylo dumat’ o predstojaščem ékzamene.* ((9) repeated)
 ‘Boris had guests over *now*, and he didn’t want to think about the upcoming exam.’ (Mel’čuk 1985, 274)

Mel’čuk (1985, 274) argues that in such a past tense narrative discourse the use of *teper’* is stylistically neutral, whereas the use of *sejčas* in the same context is stylistically marked (indicated by him with “*”), because the events are described from the perspective of a “foreign” consciousness (*čuzoe soznanie*). This is because in the case of *sejčas-4* the events are presented as if they occur at the moment of speech (Mel’čuk 1985, 276). Note that such cases of *sejčas* share properties with the historical present, where the speaker and listener

⁵ <https://www.ntv.ru/novosti/397596/> (Accessed 26 November 2018).

are 'moved' towards the situation in the past by using the present tense in the case of a narrative sequence of events (see, for example, Chernova 2010 for a discussion). In this case, however, we find a past tense, typical for the narrative mode, but the transfer is the result of the use of *sejčas*, which is prototypically used in cases where the time referred to by 'now' coincides with the moment of speech.

It should be noted that the phenomenon of "transfer" of the moment of speech to a point in the past tense narration can also be found with *sejčas-3*. Mel'čuk (1985, 64, 65) argues that *sejčas-3* indicates a moment just before the *moment of speech*. Note, however, that in the case of a past tense discourse the reference point does not always equal the moment of speech. Such instances can be found in third person narratives with free indirect speech:⁶

- (21) Was that a proverb, she queried? No, he had *just* made it up. (Vladimir Nabokov, *Transparent things*, 1972)
Russian translation: Èto čto, poslovica? Net, èto on *sejčas* pridumal. (Vladimir Nabokov, *Prosvetivajuščie predmety*, translated by A. Dolinin, M. Mejlaš, 1991)

Here the reference point is provided by the inner voice of the subject as mediated through the narrator. As such, these instances are very similar to instances of *sejčas-4*. Besides such cases, we find instances with a third person narrative and a verb of mental activity, which occurs with a subordinate clause containing *sejčas*. This matrix verb gives a description of the author of the perspective of the third person conceptualizer on the information expressed in the complement, relative to which something just happened:

- (22) Potom, uže na xodu, on naprjagsja, **soobražaja**, s kem èto on *sejčas* razgovarival. (Aleksandr Solženicy'n, *V krugu pervom*, t.1, gl. 1–25, 1968)
 'Later, already on the move, he strained himself, **figuring out** with whom he had been talking *just now*.'

Similarly, in the case of *sejčas-2* ('right away') and a narrative discourse the reference point may be provided by the past tense (third person) narrative context:

⁶ In this case the English expression *just* is ambiguous, since *just made it up* can mean something like "simply made it up", but also "made it up just now".

- (23) Vdrug on podnjalsja, ešče ne znaja začem i **ne soznava**ja, čto skažet *sejčas*, čerez minutu, kakova budet ta mysl', čto zarodilas' tol'ko čto v bessoznatel'noj glubi duši,... (I. A. Novikov, *Zolotykresty*, 1907)
 'Suddenly he stood up, still not knowing why **and not aware** of what he was going to say *next/now*, in a minute, what would be the thought, that emerged just recently from the unconscious depth of his soul,...'

As such, in many cases, it is better to speak about a moment of reference relative to which a situation just happened or is going to happen, rather than a moment of speech.

Mel'čuk observes that only two senses of *teper'* and *sejčas* can be seen as near-synonymous, namely the senses expressed by *sejčas*-1 and *teper'*-1. Unlike *sejčas*, *teper'* cannot refer to a moment just before or just after the moment of speech ('just now', 'right away'). Because of this *teper'* is not a near-synonym of *sejčas*-2 and *sejčas*-3. This explains, for example, why it is not possible to change the order of *teper'* and *sejčas* in the following example by Tolstoj (which according to Mel'čuk 1985 (267) would be better rendered with *sejčas že* in modern Russian):

- (24) a. A *teper'* ja edu *sejčas*! (Mel'čuk 1985, 257)
 b. ?A *sejčas* ja edu *teper'*!
 'But *now* I am leaving *right away*!'

Unlike *teper'*, *sejčas* is not used to introduce a new move in the discourse. Because of this, *sejčas* is not a near-synonym of *teper'*-2. Even though both *teper'* and *sejčas* can be used in past tense narrative discourse, they cannot be seen as near-synonyms in such contexts. This is because in such contexts *teper'* is stylistically neutral, whereas *sejčas* is not. Therefore Mel'čuk argues that in such cases *sejčas* has to be classified as an instance of *sejčas*-4.⁷

In Mel'čuk's view there are two important semantic differences between *teper'*-1 and *sejčas*-1. The first difference is that *sejčas*-1 does not inherently relate the 'now' to something in the past, whereas *teper'*-1 always facilitates a juxtaposition to something in the past, as indicated above. This was illustrated by (6) and (7) and the difference between *sejčas*-1 and *teper'*-1 can further be illustrated with the following sentences:

7 One could of course argue that in the case of near-synonyms the meanings are not exactly the same, and that *teper'*-1 can therefore be seen as a near-synonym of *sejčas*-4. One could also argue that *sejčas*-4 must in fact be seen as a special instance of *sejčas*-1. We will say more about this in section 3.

- (25) *Ran'še i teper'*.
'In the past and *now*.'
- (26) **Ran'še i sejčas*. (unacceptable according to Mel'čuk)
'In the past and *now*.'

In sentences without explicit contextually provided contrast, however, it would be possible to exchange the two forms, but this would lead to a difference in meaning, for example:

- (27) *On teper' zanjat*.
'He is busy *now*.' (for example: but first when you came earlier he was not)
- (28) *On sejčas zanjat*.
'He is busy *now*.' (no contrast or juxtaposition intended)

Mel'čuk (1985, 274) notes, however, that when the idea of contrast is essential and explicitly expressed in the broader context, it is often possible to replace *teper'* with *sejčas*. This is for example the case in the following sentence where we find the contrastive structure "*ran'še X, a teper'/sejčas Y*":

- (29) a. *Ran'še Leva kuril očen' mnogo, a teper' počti ne kurit*.
b. *Ran'še Leva kuril očen' mnogo, a sejčas počti ne kurit*.
'In the past Leva smoked a lot, but *now* he hardly smokes anymore.'

The fact that an explicit contrastive context is in fact in accordance with *sejčas* is rather remarkable, since only *teper'* inherently expresses a juxtaposition/contrast. As such there is no one-to-one correspondence between a contrastive context and *teper'*. This topic is one of the main topics we will investigate in this corpus-based research.

Second, a difference between the two near-synonymous forms is that *sejčas*-1 refers to a point in time or moment in time, while *teper'*-1 refers to a period in time. However, Mel'čuk also notes that these properties of *teper'*-1 or *sejčas*-1 can be overruled by the context, since the element of "point" for *sejčas*-1 and "period" for *teper'*-1 is secondary (Mel'čuk 1985, 273).

1.3 *Research Questions*

Having discussed the main theory about *teper'* and *sejčas*, we will now turn to our research questions. Even though many important conclusions have been drawn about *teper'* and *sejčas* by Mel'čuk (1985), they are for the most part not corroborated by systematic corpus data, with the exception of Nessel et al.

2013, who provide corpus-based analysis. In this paper we will provide a quantitative and qualitative corpus-based research, which addresses the following research questions based on hypotheses given by Mel'čuk (1985):

- I. Are the hypotheses about the difference in meaning between *teper'* and *sejčas* as put forward by Mel'čuk correct?:
 - (i) Is the property "juxtaposition" (or "contrast") inherently associated with *teper'* (and not with *sejčas*)?
 - (ii) Does *sejčas* (and not *teper'*) typically refer to a moment in time (as opposed to a period), especially in the case where they are near-synonyms (i.e. *sejčas*-1 and *teper'*-1)?
 - (iii) Additionally, we also want to test whether there are morphosyntactic features of the verb, other than aspect and tense of the predicate, with which *sejčas* and *teper'* are used, that are more typical for *sejčas* than for *teper'* (and vice versa).
- II. Is it possible to explain on the basis of the semantics of *sejčas* and *teper'*:
 - a. why *sejčas* and not *teper'* never refers to a moment before or after the moment of speech?
 - b. why *sejčas* plus a past tense is stylistically marked, whereas *teper'* and plus a past tense is not?
 - c. why *teper'* and not *sejčas* can present a new episode in the discourse?
 - d. whether the different sub-uses of the two forms can be seen as discrete separate meanings or not?

For the analysis we used the statistical program R, which contains different statistics relevant to test the hypothesis (see R Development Core Team 2008). We focus on a quantitative analysis in order to provide an objective answer to the research question. However, as we will discuss, because in the end the quantitative analysis is based on subjective judgments of the linguist, it has to be complemented with a qualitative analysis.

2 Quantitative Analysis: Testing the Hypotheses about *Sejčas* and *Teper'*

2.1 *The Corpus*

To test the hypotheses given in Section 1 a corpus was created using the Russian National Corpus (RNC), by randomly selecting instances of *teper'* and *sejčas*, from sources from 2010, 2011 and 2012. The choice for 2010, 2011 and 2012 is partly arbitrary, but in accordance with our wish to get insight into contemporary Russian. From the search results the first 600 tokens were selected that either contained *teper'* or *sejčas*. The sentences in our corpus originate

from various genres (blog entries, notes, interviews, comments, memoirs, reports, stories (literary texts), articles, and forum discussions). Table 1 provides the sub-division of these 600 tokens over the various usage types. Note that the number of tokens of each usage type (or “meaning”) is enough to draw statistically significant conclusions.

TABLE 1 Frequency of instances of usage types

Mel'čuk's senses	Amount
<i>sejčas</i> -1 ('now')	261
<i>sejčas</i> -2 ('right away')	50
<i>sejčas</i> -3 ('just now')	11
<i>sejčas</i> -4 ('now' in a narrative)	21
<i>teper'</i> -1 ('now')	237
<i>teper'</i> -2 ('now', to move on to the next topic)	20
<i>Total</i>	600

Each token was tagged for a number of properties. An overview of all the property tags is given in Table 2. Some of these properties are formal (morphosyntactic) properties of the verb with which the two adverbs occur, such as aspect and tense. Note, that the importance of these properties, especially tense and aspect, is also discussed in the previous literature (Mel'čuk 1985 and Grenoble 1998). In addition to tense and aspect we also tagged every token for mood and the type of subject the verb occurs with. Other properties we tagged for are semantic-contextual properties that are said to play an important part in the distinction of the different meanings in the literature.⁸

8 Initially, we also tagged for the property “persistence” as put forward by Gladkova (2012). Gladkova (2012), argues that in order to describe *teper'*-1, two semantic properties are necessary, the second of which is not mentioned by Mel'čuk. First, one needs the concept of “change”, which can be identified with the concept of “juxtaposition” pointed out by Mel'čuk. Secondly, one needs the concept of “persistence”, which is explicated as ‘when something happens, it can be like this for some time’ (Gladkova 2012: 184–185). The term persistence implies that the newly changed situation is not likely to change again soon. However, while examining the various sentences it turned out to be difficult, if not impossible, to assign this property in an objective way. In a pilot research with 300 sentences we assigned the properties YES, NO, MAYBE to the property “persistence”. We could, however, not find any (significant) correlations. Because of this we decided to leave this property out of our subsequent research.

TABLE 2 ID-tags and their respective levels

Property/ID-tag	Tag levels	Definition
1. Sentence personality	personal, impersonal	Does the sentence feature a predicate and, if so, is it a personal or impersonal construction?
2. Verb tense	past, present, future, undefined	Tense of the predicate, if available.
3. Verb form	imperative, indicative, infinitive, interrogative, irrealis, optative, participle, undefined	Mood of the predicate, if available.
4. Verb person	1, 2, 3, undefined	Person of the predicate, if available.
5. Verb number	singular, plural	Number of the predicate, if available.
6. Verb aspect	perfective, imperfective, undefined	Aspect of the predicate, if available.
7. Inclusive	yes, no	Does the timespan of 'now' include the reference time (moment of speech)? ^a
8. Juxtaposition	yes, no	Is there a juxtaposition with respect to some real or imaginary situation preceding the timespan referred to by the temporal adverb? This other situation is either explicitly mentioned or suggested in the context.
9. Right now	yes, no	Does the timespan of 'now' pertain to the moment of speech (or another reference time), and in case it overlaps with it, is it relevant only or primarily with respect to the moment of speech?

a This property essentially sets apart *sejčas-2* and *sejčas-3* from the other uses (see Grenoble 1998, for further discussion).

In order to be as objective as possible, four persons were involved in the tagging of the sentences. The 600 sentences were divided into two groups of each 300 tokens. Each out of 300 tokens was individually and separately tagged by two persons, and in those cases there was a difference between the way the token was tagged a decision was made about the best way to tag the sentence.

To give an idea of how the sentences in the corpus sample were tagged, let us look at the sentence in (30):

- (30) I esli krupnye kompanii ili krupnye zakazčiki snimali trubku i dogovarivalis' po telefonu, to *teper'* im prihoditsja xodit' na élektronnye aukciony. (Andrej Kondrat'ev, *Ėksperty: "Goszakaz nuždaetsja v modernizacii"*, 2011.03.23)
'Whereas big companies or big clients used to pick up the phone and negotiate their business over the telephone, *nowadays* they have to turn to electronic auctions.'

First, we classify the instance of *teper'* or *sejčas* according to Mel'čuk's system. In this case it is the first meaning of *teper'* as defined by Mel'čuk (*teper'*-1). The relevant verb has the following features (impersonal, present tense, third person singular, imperfective). Since *teper'*-1 includes the moment of speech it has the property "inclusive". There is a clear reference to the way it used to be before and the way it is now, so we tagged the property "juxtaposition" as "yes". The timespan *teper'* refers to (the 'now') is larger than the moment of speech, so we assigned the value "no" to the property "right now" (cf. the translation here with 'nowadays'). This differs from cases where the 'now' refers to something that is relevant specifically with respect to the moment of speech, for example:

- (31) Eva, ja *sejčas* nemnogo zanjat... (Vjačeslav Soldatenko (Slava Sè), *Eva*, 2010)
'Eva, I am kind of busy *right now*...'

With respect to the feature of "juxtaposition" it should be noted that the idea of a juxtaposition or contrast is not always explicitly present in the context, but it may be implicit and suggested in the context. This can be illustrated with the examples (32) and (33) where some situation in the present is linked to the past: because of some event in the past, water is dripping from the ceiling in the present; because someone has done something stupid, the situation has changed and it is unclear how to proceed:

- (32) V novogodnjuju noč' nad moej kvartiroj kto-to slomal kryšu i *teper'* v vannoj s potolka kapaet. (Vjačeslav Soldatenko (Slava Sè), *Drugie opusy*, 2010)
 'During new year's eve someone damaged the roof of my house and *now* it is dripping from the ceiling in my bathroom.'
- (33) Čto že ty opjat' nadelala? – govorit mama. – Čto že budet *teper'*? (Nina Ščerbak, *Roman s filfakom* // *Zvezda*, 2010)
 "What have you done this time?", mama says. "What will happen *now*?"

In these sentences the idea of juxtaposition is less explicit in the context than in the case of sentences such as (30) with *teper'* or the following sentence with *sejčas*, where there is an explicitly expressed contrast between the past and the present ("feeling bad for some time" versus "feeling good now"):

- (34) **Nekotoroe vremja** on naxodilsja v tjaželom sostojanii, no *sejčas* emu lučše. (Vjacheslav Soldatenko (Slava Sje), *Eva*, 2010)
 'For some time his condition was very bad, but *now* he is better again.'

It should be stressed that according to our definition given earlier, we have tagged all sentences as containing the feature "juxtaposition" where there was an explicit juxtaposition or contrast indicated in the context, or if this juxtaposition or contrast was implicit and suggested in the context. In both cases the condition for assigning the feature was that there were contextual clues that pointed to the presence of a juxtaposition or contrast. It should be remarked already here that if a word expresses "juxtaposition" does not necessarily have to be expressed in the context in which the word is used. In this case, however, our presupposition is that if one word expresses a juxtaposition (*teper'*), whereas the other word does not (*sejčas*) we expect that the percentage of contexts with the property "juxtaposition" will be considerably higher in the case of *teper'* and in the case of *sejčas*. The general idea is that the context will reflect or sustain the juxtaposition expressed by *teper'*.

A final remark is in order about the terms "contrast" and "juxtaposition". Note that in our paper the terms "juxtaposition" and "contrast" are used interchangeably, even though we prefer the use of "juxtaposition". This is because the term "contrast" refers to a comparison that highlights differences. This term is less suitable for sentences like (7) given earlier where a past situation is compared to a similar future situation.⁹

9 In sentence (32) one can also speak about an actual contrast between the normal situation that existed somewhere in the past ("no water dripping from the ceiling") and the situation

Tagging a corpus for subtle semantic features such as “juxtaposition” is always partly a subjective matter since there are no fully objective and hard criteria to decide what counts as a necessary and sufficient condition for inclusion of a sentence in the category “juxtaposition”. There were relatively many instances (about 30%) where there was no immediate consensus and where a decision was taken after discussion of the example. However, because four persons were involved in the tagging we can speak about an *intersubjective* consensus on the matter. Furthermore, and perhaps more importantly, it should be emphasized that since we look at the feature of “juxtaposition” in a comparative way (*teper’* versus *sejčas*) it will be the relative occurrence of the feature which is telling and which will provide interesting information about the semantics of these forms. We will say more about the way the corpus was tagged and what this means for the analysis in the following sections.

2.2 Association between *Teper’*, *Sejčas* and “Juxtaposition” and “Right Now”

2.2.1 Juxtaposition

In this section we will test the following hypothesis:

Hypothesis 1 *Teper’* (and not *sejčas*) inherently expresses “juxtaposition”.

Our presupposition is that if juxtaposition is inherently expressed by *teper’* (and not *sejčas*), there must be a relatively strong association between instances of *teper’* and contexts which point at the feature of juxtaposition. In Table 3 the number of sentences with *sejčas*-1 and *teper’*-1 and the property “juxtaposition” is given.

TABLE 3 Amount of instances with “juxtaposition” (*teper’*-1 and *sejčas*-1)

	Juxtaposition	No juxtaposition	Total
<i>sejčas</i> -1	77 (29%)	184 (71%)	261 (100%)
<i>teper’</i> -1	162 (68%)	75 (32%)	237 (100%)

in the present (“water dripping from the ceiling”). One might also argue that in the case of sentences like (7) there is an actual contrast between the lying in the past and the expectation of the non-lying in the future (which is contradicted). However, we think it is better to use the more abstract term “juxtaposition”, following Mel’čuk (1985).

A Chi-square test of the data in Table 3 shows that there is indeed an association between *teper'*-1 and the presence of the feature of “juxtaposition” (Chi-square = 73.57; df = 1; $p = < 0.0001$; $n = 498$). This means that the hypothesis that they are not related must be rejected. As a measure of the strength of the association several statistics are used in the literature, for example the Phi-coefficient, which is often used to measure dichotomous distributions. Like the regular Pearson correlation on which it is based, the Phi-coefficient can range from -1 to 1 . In this case Phi is 0.39 , which means that there is a considerable but not extremely strong association between *teper'*-1 and “juxtaposition”.¹⁰

If we look at all the instances of *teper'* and *sejčās* including other sub-types, as in table 4, we get more or less the same picture (Chi-square = 118.90; df = 1; $p = < 0.0001$; $n = 600$; Phi = 0.45).

TABLE 4 Number of instances with “juxtaposition” (*teper'* and *sejčās*)

	Juxtaposition	No juxtaposition	Total
<i>sejčās</i>	87 (25%)	256 (75%)	343 (100%)
<i>teper'</i>	181 (70%)	76 (30%)	257 (100%)

To sum up, on the basis of the data we analyzed the hypothesis that *teper'* (and not *sejčās*) inherently expresses “juxtaposition” is not falsified. The data do indeed point at a considerable association between *teper'* and juxtaposition, even though there are still relatively many instances of *teper'* where there was no indication in the context that pointed at the feature of “juxtaposition”. We will go into this topic deeper in below and in section 2.4, where we will argue that the feature of “juxtaposition” inherent to *teper'* does not have to be explicit in the context in which it is used exactly because it is expressed by *teper'* itself. The percentages given here may therefore very well be seen as verification for the hypothesis.

It should be noted that our results differ from those of Nessel et al. (2013). They looked at 150 randomly selected tokens in the Russian National Corpus of *sejčās* and 150 randomly selected tokens of *teper'* to determine whether it had the feature (temporal or modal) “contrast” (cf. our notion of “juxtaposition”).

¹⁰ In the case of a 2×2 contingency table (where df = 1) the Phi coefficient is equal to Cramér's V ($\Phi = \sqrt{\text{Chi-square}/n}$; $V = \sqrt{\text{Chi-square}/(n * \text{df})}$). The Cramér's V's is often given to indicate the strength of the association.

Note that they used the same type of context we used (namely the broader context provided by the RNC). Their results are given in Table 5.

TABLE 5 Number of instances with “contrast” in Nessel et al. (2013)

	Contrast	No contrast	Total
<i>sejčas</i>	30 (20%)	120 (80%)	150 (100%)
<i>teper'</i>	147 (98%)	3 (2%)	150 (100%)

Although the percentage of sentences with *sejčas* and contrast (20%) is comparable to the percentage in our dataset (25%), almost all sentences with *teper'* in Nessel et al.'s (2013) database are of the contrastive type (98%), whereas in our database this percentage is considerably lower (70%). We have no explanation for this difference, even though it may be indicative of the difficulty to define in an objective way whether and when a subtle semantic feature is present in the context. It may also be the case that we have been too conservative in assigning the feature “juxtaposition”, and that we missed particular instances whereas the person tagging the corpus used by Nessel et al. (2013) had a better understanding of the way the feature “contrast” was reflected in the context. Note that our corpus was tagged by two teams of two non-native speakers of Russian with knowledge of linguistics, whereas the corpus of Nessel et al. (2013) was tagged by one native speaker of Russian, with knowledge of linguistics. In both cases the people tagging the data were aware of the aim of the research. One might argue that it is more difficult for non-native speakers of Russian to interpret the data correctly. In general, there may be a tendency to assign the feature “juxtaposition” to an instance of *teper'*, exactly because this feature is expressed by the form itself, even in those cases where it is not explicitly or implicitly expressed in the context. In order to avoid this circularity, 300 sentences from our database (i.e. half of our database) were tagged again by a native speaker of Russian, after she had been instructed how to tag the corpus. In order to avoid circularity (the presence of *teper'* leads to looking for contrast/juxtaposition, whereas the use of *sejčas* does not), we provided the sentences without the relevant forms and replaced all instances of *teper'* and *sejčas* with the general English word ‘now’. This way, the person tagging the sentence would not be influenced by the forms in the sentence. Also note that the person tagging the data was not a linguist and not aware of the purpose of the research. The numbers of this second round of tagging are given in Table 6.

TABLE 6 Amount of instances with “juxtaposition” (native speaker non-linguist)

	Juxtaposition	No juxtaposition	Total
<i>sejčas</i>	101 (49%)	105 (51%)	206
<i>teper'</i>	61 (65%)	32 (35%)	93
<i>Total</i>	162	137	299 ^a

a One instance was tagged as “undefined”, which means that the total set of sentences is 299.

We can provide the following statistical information: Chi-square: 6.969591704 ($p = 0.008290641$; $df = 1$; $n = 299$); $\Phi = 0.16$.¹¹ This can be compared to the way the same 300 sentences were tagged by the team of two non-native speakers (linguists) given in table 7 (where Chi-square = 55.25; $p = 1.06319E^{-13}$; $df = 1$; $\Phi = 0.44$).

TABLE 7 Number of instances with “juxtaposition” (non-native speakers linguists)

	Juxtaposition	No juxtaposition	Total
<i>sejčas</i>	52 (25%)	154 (75%)	206
<i>teper'</i>	67 (71%)	27 (29%)	94
<i>Total</i>	119	181	300

In about 60% of the 300 sentences, the tagging was done in the same way as in the case of previous tagging, which means that there was a considerable difference in the way the sentences were tagged. What is especially striking is that *teper'* has been tagged in more or less the same way by the two teams of linguists and by the native speaker (a non-linguist), whereas *sejčas* has been tagged differently. More specifically, in the case of *sejčas* the native speaker indicated significantly more instances of “juxtaposition” than the team of two linguists. Because of this, the correlation between *teper'* and “juxtaposition” is much weaker than in the database tagged by us.

11 If we only look at the instance of *sejčas*-1 and *teper'*-1, we get a similar picture (Chi-square: 6.6; $p = 0.01$; $df = 1$; $n = 299$; $\Phi = 0.17$).

In our view, there are two possible explanations for this result. First, it may be that the first people that tagged the corpus were (subconsciously) influenced by the presence of the form in the example sentence. More specifically, it may be that the occurrence of *teper'* in the example sentence subconsciously triggered the idea of "juxtaposition" and *sejčas* the idea of "non-juxtaposition", because of which the team looked harder for clues in the context that indicate such a juxtaposition in the case of *teper'* than in the case of *sejčas*. The result may have been that there were relatively too few instances of *sejčas* that were tagged with "juxtaposition". Second, and in addition to that, it may be that the non-linguist native speaker tagging the corpus chose to indicate that the context pointed to a juxtaposition in those cases where it was less clear, whereas the first people tagging the corpus relatively frequently chose to tag "no juxtaposition" in such contexts. This may have had an impact on the correlation between this feature and *teper'*.

To conclude, an additional check on the database by a native speaker of Russian who tagged in a "blind" fashion did not, as one might perhaps expect, result in a higher correlation between *teper'* and "juxtaposition". On the contrary, the correlation between *teper'* and "juxtaposition" in the additionally tagged corpus was lower than in the database tagged in our initial research. This outcome is even more different from that of Nessel et al. (2013). One possible explanation is that the people involved in the tagging for Nessel et al. (2013), like our team of four non-native speakers of Russian, were influenced in the process of tagging by the presence of the forms in the example sentences, and that the outcomes are therefore perhaps to some degree distorted. Another possible explanation is that it is difficult for non-linguists, even if they are native speakers of the language, to correctly identify an indication in the context that point to a contrast or juxtaposition. This would suggest that the tagged data used by Nessel et al. (2013) (tagged by a linguist and native speaker) were more reliable than our original data (tagged by linguists but not native speakers). More research is necessary to draw further conclusions.

2.2.2 Period versus Moment

In this section, we will test the following hypothesis:

Hypothesis 2 *Sejčas* typically refers to a *moment* in time and *teper'* typically refers to a *period* in time.

Our presupposition is that *teper'* is associated with the absence of the feature "right now", whereas *sejčas* will be associated with the presence of the

feature “right now”. Note that this means that the idea of a “period” is not in accordance with the idea of “right now”. As is remarked by Mel’čuk, this feature may be overruled by the context, but even if that is the case, we may expect that the association will be present.

Table 8 shows that the majority of sentences with both *teper’-1* and *sejčas-1* have the feature “right now_no”. In the case of *sejčas-1*, the percentage of sentences with the property “right now_yes” is, however, higher than in the case of *teper’-1*.

TABLE 8 Number of instances with ‘right-now’ of *teper’-1* and *sejčas-1* including percentages

	Right now_yes	Right now_no	Total
<i>sejčas-1</i>	105 (40%)	156 (60%)	261 (100%)
<i>teper’-1</i>	65 (27%)	172 (73%)	237 (100%)

The Chi-square statistic shows that there is an association between *teper’-1* and “right now_no”, and between *sejčas-1* and right “now_yes” (Chi-square = 9.06; df = 1; p = 0.002613; n = 498). As such the hypothesis put forward by Mel’čuk cannot be fully rejected. Note, however, that according to the hypothesis the feature of “right now” is expected to be *typical* of *sejčas-1*. If that is the case, we expect that the majority of sentences with *sejčas-1* will have this feature and that there will be a relatively strong association between *sejčas-1* and this feature. This is, however, not corroborated by our data, since there is a relatively small negative association between *teper’-1* and “right now_yes” (Phi = -0.13). We find more or less the same picture, when we look at all instances (types) of *teper’* and *sejčas*, as is shown in Table 9 (Chi-square = 14.50; df = 1; p = <0.00014; n = 600; Phi = -0.16).

TABLE 9 Number of instances with “right-now” of *teper’* and *sejčas* including percentages

	Right now_yes	Right now_no	Total
<i>sejčas</i>	165 (48%)	178 (52%)	343 (100%)
<i>teper’</i>	83 (32%)	174 (68%)	257 (100%)

It is possible that there is an association between *teper’* and the idea of a period because *teper’* refers to a timespan (long or short) which can be seen as

a new episode, which may therefore more easily be interpreted as something that will last (cf. Gladkova 2012, who uses the term “persistence”). As such, it can be expected that this accords well, but certainly not exclusively, with the idea of a period of time that *teper'* refers to.

In sum: even though the property “right now” is less typical for *teper'* than for *sejčas*, both forms occur most frequently in sentences where the ‘now’ does not solely refer to the moment of speech. As such, the hypothesis put forward by Mel'čuk is not fully corroborated by our data.

2.3 *More Insight into the Relevant Properties: CART Analysis*

In the preceding section we have looked at two individual properties (“juxtaposition”, “right now”), and the association between these properties and *sejčas* and *teper'*. In this section we also look at the question whether there are other properties besides these two, for example tense, aspect, person, that are associated with either *sejčas* and *teper'*. For this the CART analysis will be used.¹²

The CART looks at all the properties we tagged for, that is the semantic properties (juxtaposition, right now, inclusive) and the morphosyntactic properties (tense, aspect, mood, subject). Perhaps surprisingly, the CART-analysis clearly shows that there is just one property which distinguishes *teper'* from *sejčas*, namely the property “juxtaposition”. This is shown in Figure 1.¹³

12 CART is an acronym for Classification And Regression Trees (see Baayen 2008, 148–154). CART trees function as a model to predict, based on the properties we tagged for, which of the two words is probably used in the sentence. In our case the tree functions as way to classify the data, which shows which properties are specifically of importance in distinguishing the different words. The tree is built as follows: first, the single variable is found which best splits the data into two groups. The data are separated, and then this process is applied separately to each sub-group, and so on, until the subgroups either reach a minimum size or until no further improvement can be made. One needs a measure of impurity of a node to decide how to split a node, or which node to split.

13 For a description of the way rpart decides how to split a tree, see for example Therneau & Atkinson (2014). This diagram was rendered using the rpart package and its rpart function in R (see for example Therneau & Atkinson 2014). The general command structure in R of rpart is: `rpart formula, data, weights, subset, na.action = na.rpart, method, model = FALSE, x = FALSE, y = TRUE, parms, control, cost, ...`. We have asked for `method = "class"`. The R function rpart calculates a so-called cost-complexity parameter that indicates how big the tree should be, i.e. how many branches it should have, for it to be statistically significant. Using the function `prune` we “pruned” the tree and removed insignificant branches from the tree accordingly. For a more detailed explanation of cost-complexity pruning we refer the reader to Baayen (2008, 150).

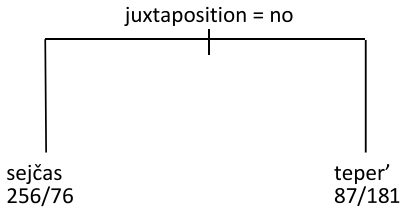


FIGURE 1
Preliminary CART diagram for *teper'* and *sejčas*

The tree is built by the following process: first the single variable is found which best splits the data into two groups; in this case “juxtaposition”. The top node of the tree asks whether the “juxtaposition” property equals yes or no. If it is “no”, follow the left branch (*sejčas*); otherwise (in the case of the factor being yes), follow the right branch. The numbers at the ends of the bottom-level branches indicate the importance of the decision. For instance, *sejčas* 256/76 indicates that this decision is supported by 256 and contradicted by 76 sentences. Note that in the case of right branches, the right number indicates the supporting, and the left – the contradicting cases, respectively.

There are two things worth mentioning here. First, the property “juxtaposition” is the *only* property to distinguish *teper'* from *sejčas*. Other properties, such as the morphosyntactic properties of the verb (aspect, tense, etc.), which are of course also associated with their meaning, and other semantic properties, such as “right now” or “inclusive”, do not have any explanatory (or predictive) power. With respect to the property “inclusive”, it should be remarked that this property is only relevant to distinguish some uses of *sejčas* (*sejčas-2*) which are not very frequent. Since most instances of *teper'* and *sejčas* are instances of *teper'-1* and *sejčas-1* it can be expected that those features which set these meanings apart are relevant for the CART-analysis. Since Mel'čuk argues that *teper'-1* can occur both with a present and with a past tense, whereas *sejčas-1* can occur only in the present tense, the expectation was that tense would also be an important predictive (or explanatory) factor. This is, however, not the case. The reason that tense has no predictive power is probably that in our corpus there are in fact instances of *sejčas-1* and a past tense. Such uses occur because the past tense in Russian can be used to refer to a resultative state. The following sentence is a clear example from the RNC:¹⁴

14 Mel'čuk (1985, 264) also remarks that the past tense occurs in complement clauses with a matrix verb of perceiving. For example, *on ponjal, čto sejčas...* ('He understood that now...'). From his discussion it is not fully clear to us, however, why such uses should not be analyzed as instances of *sejčas-4*.

- (35) Dvojurodnyj brat u menja tam futbolom zanimaljsja, *sejčas* brosil. (Aleksij Slapovskij, *Bol’shaja Kniga Peremen* // Volga, 2010)
 ‘My cousin used to play football there [i.e. in the sport school], but he has stopped now.’

Second, the data also show that, even though the only explanatory-predictive feature is “juxtaposition”, at the same time this feature is still not very reliable. The “predict” function can predict the outcome for each of the 600 sentences based on the average profile of *teper’* and *sejčas* on a scale of 0 to 1. Values below 0.5 predict that the sentence features *teper’*; values equal to or higher than 0.5 predict that the sentence contains *sejčas*. Table 10 shows the results of this prediction test. From this we can see that out of 600 predictions 87 + 181 were incorrect, which comes down to a failure rate of about 45%, which is quite large.

TABLE 10 Outcome of predictions for *sejčas* and *teper’*

	Correct	Incorrect	Total
<i>sejčas</i>	256	87	343
<i>teper’</i>	76	181	257
<i>Total</i>	332	268	600

We did the same analysis with those two uses that are the most closely related according to the qualitative literature, namely *sejčas*-1 and *teper’*-1. The CART-tree is given in Figure 2. Again, the most important property for distinguishing between *sejčas* and *teper’* is “juxtaposition” with options yes or no. Again, we can predict the choice for *teper’* and *sejčas* and calculate the failure rate of this prediction. The results are presented in Table 11. The failure rate of prediction is a bit smaller than in the case of the whole set of sentences: 40%.

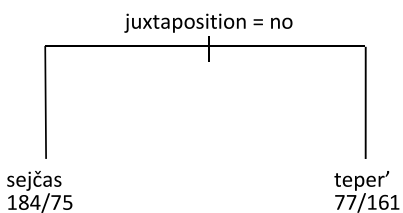


FIGURE 2
 CART diagram for *teper’*-1 and *sejčas*-1

TABLE II Outcome of predictions for *sejčas*-1 and *teper*'-1

	Correct	Incorrect	Total
<i>sejčas</i> -1	184	77	261
<i>teper</i> '-1	75	162	237
<i>Total</i>	259	239	498

In sum: the CART-analysis shows the importance of the feature of “juxtaposition” which sets *teper*' apart from *sejčas*. The feature of “right now”, as was expected, but also the factors tense and aspect, have no explanatory-predictive power.¹⁵

2.4 Conclusion of Quantitative Analysis and the Role of Context

Our quantitative analysis has partly corroborated and partly falsified the hypotheses, put forward by the literature as described in Section 1.

The statistical analyses have shown that the hypothesis that *teper*' typically expresses a period in time, whereas *sejčas* typically expresses a moment in time cannot be maintained. Instead, it seems better to argue that the very weak association between *teper*' and “period” (as compared to *sejčas*) must be seen as a matter of pragmatics rather than of meaning. Exactly because *teper*' always relates (juxtaposes) the ‘now’ to something preceding it, it is suitable to be used in contexts where the speaker focuses not only on something happening right at the moment of speech, but at a somewhat larger timeframe.

Moreover, the analysis has shown that the feature of “juxtaposition” as something that is expressed or suggested in the context is indeed more typical for *teper*' than for *sejčas*. It should be pointed out, though, that there are still relatively many instances of *teper*' where this feature is not explicitly present

15 As an additional test we also conducted a canonical correspondence analysis (CCA) on the data, by using the ANACOR-package in R (De Leeuw & Mair 2009), which can compute the canonical correlations. The data were plotted by the function `jointplot`. The CCA corroborated the idea put forward in the literature that a basic division must be made between uses that are non-inclusive (*sejčas*-2 and *sejčas*-3) and uses that are inclusive (*sejčas*-1, *teper*'-1 and *teper*'-2), and that in the former case tense plays an important role. It also corroborates the hypothesis that *sejčas*-1 and *teper*'-1 are the most similar uses, with the provision that in this cluster we also find *teper*'-2. The CCA also showed a rather weak correlation between *teper*' and “juxtaposition”, which is in line with the outcomes of the previous statistical analysis. Because ANACOR did not provide any new insights, we leave it out of the discussion here.

in the context (30% of the sentences), and we also find this feature in the case of *sejčas*. This explains why the explanatory power of this feature is not extremely strong. Note, however, that according to Mel’čuk, *teper’* inherently expresses “juxtaposition”. However, we do not think that the results of our analysis have to be regarded as a falsification of Mel’čuk’s (1985) claims about the meanings of *teper’* and *sejčas*:

- First, it is to be expected that if *teper’* inherently expresses the idea of juxtaposition, this feature is not necessarily always expressed or suggested in the context. As such, the presence of the form itself can sometimes be enough to signal this meaning.
- Second, it may be that in some cases the relevant context where the idea of “juxtaposition” is expressed or suggested is larger than the context that was taken into account by us.
- Third, as we remarked in our discussion in Section 1, Mel’čuk (1985) argues that the property “juxtaposition” is an inherent property of *teper’*, which can also be expressed by *sejčas*, if it is expressed in the context. As such, the correlation between *teper’* and *sejčas* will never be absolute.

For a better understanding of the data, it is therefore important to explain why both *teper’* and *sejčas* can be used in contrastive contexts. Consider, for example, the following contrastive sentence with the structure [*snačala* X, a *sejčas/teper’* Y] ‘first X but now Y’:

- (36) K ljudjam ne mogu privyknut’. Xotja i malo s kem sošelsja. **Snačala** kak-to neprijatno bylo, a *teper’* radujus’ (...). (Roman Senčin, *Eltyševy*, 2008) // “Družba Narodov”, 2009)
 ‘I cannot get used to the people. Even though I made a few friends. **First** I found it rather unpleasant, but *now* I am glad (...).’
- (37) Gorod ne prisposobljen dlja našej raboty. Na ploxie dorogi i nevozmožnost’ pod”exat’ k domu iz-za priparkovannyx mašin my uže ne obraščаем vnimanja. Ja praktičeski vsegda ezžu odna (brigady ne ukomplektovany), **snačala** bylo strašno, a *sejčas* uže vse ravno. (kollektivnyj, “Skoraja” zapazdyvaet” // Ogonek, 2013)
 ‘The city is not suitable for our [line of] work. We don’t pay attention to the bad roads anymore, nor the impossibility to drive up to the house, because of the parked cars. I practically always drive alone (the teams are not sufficiently staffed), **at first** it was scary, but now it’s all the same to me.’

The form *sejčas* says nothing about the idea of “juxtaposition” or “contrast”, but this does not mean that its meaning is not in accordance with contexts

where the idea of juxtaposition is explicitly present, such as contrastive contexts. As such, in a contrastive context the speaker may very well decide not to use *teper'*, since it may be that the speaker merely wants to focus on the 'now'. In the case of *teper'*, the speaker wants to highlight the idea of juxtaposition (or to put it differently, present the 'now' as something that is different from the situation in the past or different from what could be expected on the basis of the past), whereas in the case of *sejčas*, the speaker wants to point at the timespan expressed by *sejčas*, emphasizing its actuality, independent from whether this timespan is contrasted with another situation. The difference between (36) and (37) therefore has to do with what information the speaker wants to highlight, even though the difference in meaning may be very subtle because the idea of "juxtaposition" inherent to *teper'* is "absorbed", one could say, by the meaning expressed by the contrastive context. According to native speakers we asked, changing *teper'* for *sejčas* in (36) made no difference to them, whereas some speakers felt that in (37) the use of *sejčas* refers to one particular moment, whereas the use of *teper'* in this sentence would give the idea of "being indifferent" a more general character. This is in accordance with the idea that *sejčas* is a deictic element which points at a timespan that coincides with the moment of speech, emphasizing the idea of actuality. This differs from *teper'*, which points both at a timespan which coincides with the moment of speech, but also requires a more distant perspective in order to juxtapose this timespan to something preceding it. Because of this, with some situations *teper'* more easily gets a general character, referring not only to something relevant at the moment of speech, but also to something preceding the moment of speech. This difference in meaning can be defined as follows:

Sejčas₋₁ = The span of time referred to by *sejčas* coincides with the moment of speech, and the situation associated with *sejčas* is 'actual' at the moment of speech. If there is a contrast/juxtaposition indicated or suggested in the context, this contrast emphasizes the actuality of situation associated with *sejčas*.

Teper'₋₁ = The span of time referred to by *teper'* coincides with the moment of speech, and is juxtaposed (contrasted) with another timespan preceding this span of time.

The difference in meaning can further be illustrated with the following sentences where we find the construction [*čto delat' teper'/ sejčas*]:

- (38) Èto zagadka, kotoraja stoit mnogix zagadok. Kogda-nibud' ej najdut rešenie i vse, verojatno, okažetsja očen' prosto. Kogda-nibud'! No **čto delat' sejčas?** (Ju. V. Trifonov, *Otblesk kostra*, 1965)

'That is a mystery that is worth many mysteries. At some point they will find the solution, and it will probably turn out to be very easy. At some point! But **what to do now?**'

- (39) Nedavno ja ponjal, čem mne mil devjattnadcatyj vek, vo vsjakom slučae ego načalo: byli pravila – vezde i vsjudu. Pravila xorošego tona, duèl'nyj kodeks, pravila povedenija na balu, tanceval'nye pravila, kupečeskoe slovo, kodeks remeslennikov – u vsech soslovij i sloev byli svoi zakony, i ty vsegda znal, kak sebja vesti. Ponjatno, čto nado bylo ix vyučit' i vypoln'jat'. **A čto delat' teper'?** Neverojatno tjaželo prodolžat' vypoln'jat' kakieto pravila, kogda vse vokrug ètogo ne delajut. (Aleksandr Semenov, "Bez pravil" // "Znanie – sila", 1998)

'Not long ago I found out why the nineteenth century is so dear to me, in any case, the beginning of the nineteenth century: there were rules everywhere. Rules of etiquette, dueling code, rules of conduct at the ball, dancing rules, the rule of the word of the merchant, the artisans code – all classes and strata had their own laws and rules, and you always knew how to behave yourself. It was commonly understood that they you had to learn and execute these rules. But **what to do now?** It is extremely difficult to continue to execute rules when all around you no one is following them.'

The difference between the use of *sejčas* or *teper'* can be explained in terms of their general meanings. In (38) the contrast between 'at some point', where the mystery will be solved and 'now', where the mystery is not solved, does in fact strengthen the temporal reading, focusing on the current span of time.¹⁶ In (39), on the other hand, the use of *teper'* focuses on the idea that the current situation, that is contrasted to the past, is in fact a new type of situation (or episode in time), because of the different status of rules. *Teper'* emphasizes the difference between the 'now' and the past, and is used in this specific construction where the new 'now' presents the speaker with a new and challenging situation. In the case of *sejčas* this feature is not part of the meaning, since *sejčas* refers solely to the moment of speech and is therefore more neutral in this respect.

16 This is reminiscent of the remark by Mel'čuk (1985, 274) that because *teper'* inherently expresses a contrast with something that happened in the preceding situation (the past), it cannot occur in phrases like (1), where there is a juxtaposition with something in the future, whereas (2) is fully acceptable:

1. **teper' i potom* ('now and afterwards')
2. *sejčas i potom* ('now and afterwards')

A contrast with some future event can easily shift the focus on the 'now', and hence trigger the use of *sejčas* instead of *teper'*.

As we explained, the absence of a strong correlation between juxtaposition and *teper'* is to be expected, because this feature is an inherent part of the meaning of *teper'*, which, because of this, does not need to be expressed in the context. In fact, it may be hypothesized that in contexts where an actual explicit contrast is intended, both *teper'* and *sejčas* can be used equally well. In such contexts, the form *teper'* is not necessary anymore to signal the idea of contrast, which gives the language user the possibility to focus either on the idea of 'now', or on the idea of 'now' as a new episode.

Our analysis differs theoretically from that of Nessel et al. (2013: 233, 243), who argue against an analysis in terms of general meanings and context-dependent meanings of *sejčas* and *teper'*, and in favor of an approach that explains differences in terms of different radial category profiles. The concept of a radial category is explained by Lakoff (1987, 84) as a structure where there is a central case and conventionalized variations on it, which cannot be predicted by general rules. As is stressed by Bartsch (1998), categories must be defined in terms of oppositions to other categories, which may also have a radial (or prototype) structure. As such, one can only define *teper'* in relation to *sejčas*, and vice versa. In our view, such an analysis is, however, difficult to apply to the feature "juxtaposition/contrast". One could of course argue that this feature is part of the central use of *teper'*, and a peripheral use of *sejčas*, but that does not explain how language users would know when to use *teper'* and when to use *sejčas* in an explicit contrastive context. More importantly, it is not clear at all whether the use of *sejčas* in a contrastive context has to be seen as a peripheral but independent use. As such we think it is better to say that *teper'* expresses juxtaposition (contrast) and *sejčas* does not, but that the meaning of *sejčas* may very well be compatible with a contrastive context.

3 Explaining the Distribution of Use of *Sejčas* and *Teper'* on the Basis of Their Meaning

We have provided a detailed quantitative analysis of Russian *teper'* and *sejčas*, where we have shown the importance of the feature "juxtaposition" in distinguishing these two forms. We can now come back to the last questions we asked in the introduction:¹⁷

17 In our preliminary research we also used quantitative methods to answer question (4) such as the Multidimensional Scaling method (see also Baayen 2008). We used this statistic in order to find out whether the different tokens in our corpus cluster together

1. Why does *teper'* not express a moment just before or just after the moment of speech just like *sejčas*?
2. Why is the specific stylistically marked semantics of *sejčas-4* not part of *teper'* in a past tense narrative context as well?
3. Why does *sejčas* not express a move in the discourse like *teper'* does?
4. Can the different sub-uses of the two forms be seen as discrete separate meanings or not?

First, exactly because *teper'* inherently expresses a juxtaposition with something preceding the timespan *teper'* refers to, it is not suitable to refer to a moment *just before* or *just after* a reference point. To illustrate the difference between the two forms with respect to this, compare examples (40) with *teper'* and (41) *sejčas* both with a perfective present (future tense) of *skazat'* 'say':

- (40) – Ja sprosila odnaždy, a ty govoriš': ja tebe skazal vse, što xotel skazat'...
 – A *teper'* **skazu** vse, što xočeš' uslyšat'. (Anna Berseneva, *Polet nad razlukoj*, 2003–2005)
 "I once asked, but you say: I have told you everything I wanted to say..."
 "But *now* I **will tell** you everything you want to hear."
- (41) Polina Leonidovna, ja dumaju, što vy ne obidites', što ja vam *sejčas* **skazu**. (Sočinenie o vstreče s teatrom, 2004)
 'Polina Leonidovna, I think that you won't be offended by what I am **going to tell** you (*right*) *now*.'

In (40) *teper'* refers to a timespan that overlaps with the moment of speech, and which is juxtaposed with something preceding it. *Teper'* presents a new episode or new and changed situation because of the juxtaposition with something preceding it, relative to which another event will be realized. This differs from (41) where *sejčas* refers to a timespan just after the moment of speech,

according to their classification (*teper'-1*, *teper'-2*, *sejčas-1-4*). This did, however, not yield sufficient interesting or clearly interpretable insights. In the Multidimensional Scaling plot the uses of *sejčas*, which are non-inclusive (*sejčas-2-3*), clearly cluster together, which can probably be explained because they were tagged with this property, which sets them apart in the first place (in addition to other grammatical features such as the tense of the verb). There was no clear difference between *sejčas-1* and *teper'-1*, which might be due to their similar function and grammatical contexts in which they occur. *Teper'-1* did not cluster together with *teper'-2*, which can possibly be explained in terms of the specialized contexts in which this latter use occurs. We got similar (i.e. non-clearly interpretable) results from a Cluster Analysis, which yielded a hierarchical clustering. Whether such statistics are suitable for this kind of research we leave for further research.

which coincides with the realization of the event expressed by the predicate. The semantics of *teper'* is not in accordance with the semantics 'right away' because it would require a very complicated construal. It would require that the the moment of speech functions as the reference point for the future timespan referred to ('right away'), while at the same time this future moment is juxtaposed with something preceding the moment of speech. In the same vein, *teper'* cannot be used to refer to a moment just before the moment of speech, because if the deictic element refers to something preceding the moment of speech, it is unclear what moment preceding that moment it could be juxtaposed with.

Second, the reason why *teper'* in a narrative past tense discourse is not stylistically marked like *sejčas* is, can be explained quite straightforwardly on the basis of the semantics of these forms. *Sejčas*-4 must essentially be seen as a variation of *sejčas*-1 in narrative discourse, which shows similarities to free indirect discourse. This means that *sejčas* has a deictic meaning and refers to a timespan, which overlaps with a reference point in the narrative chain of events. The narrator describes the timespan the temporal adverb refers to as if it happens right before his and the reader's eyes, while maintaining the past tense context. This use therefore has a more vivid character than similar uses with the near-synonymous form *v tot moment* 'at that moment', which points to a specific moment in the narrative, without bringing the vantage point to the narrative discourse:

- (42) Imenno *v tot moment* on ponjal, čto dolžen zaščičat' ee. (Aleksej Šoloxov, *Podval*)
'Exactly at that moment he understood, that he had to defend her.'

Such cases are also different from instances with *teper'*. In the case of *teper'*, the focus is not solely on the timespan that *teper'* refers to, but also refers to the 'now' as something that is a new episode, and as something that differs from something in the time preceding the 'now'. The temporal adverb therefore does not have the effect of seeing the events as if they happen right before one's eyes. Compare the following sentences:

- (43) No direktor nedovol'no pomorščilsja. *Sejčas* on ponjal: net, do mass èto ne dojdët. (Ju. O. Dombrovskij, *Fakul'tet nenužnyx veščej*, čast' 1, 1978)
'But the director made a wry face. *Now* (i.e. at that moment) he understood: no, that won't reach the masses.'
- (44) Timonin priščuril glaza, vystavil vpered golovu, siljas' razgljadet' detalj. *Teper'* on ponjal, čto letčik uže mertv ili blizok k tomu. (Andrej Troickij, *Udar iz prošlogo*, 2000)

'Timonin screwed up his eyes, leant his head forward, trying to figure out the details. *Now* (i.e. at that moment, having done that) he understood that the pilot was already dead or close to that.'

In (43) the temporal adverb refers to a timespan that coincides with the reference point in the past. Put differently, *sejčas* brings the reader back to one moment in the past, focusing on this one moment only and emphasizing its actuality. In this example we find a mental verb ('understand') which facilitates the identification with the subject in the narration, but the effect of bringing the reader back to one moment in the past or in the narration also occurs in other contexts, as the following example shows, where the identification with the reference point in the narration is sustained by the author who describes what he himself has experienced:

- (45) *Napravo ot menja za sdvnutymi stolami sideli novye russkie i ne menee novye abkazy. Oni naelis' i napilis' i sejčas predavalis' igrovomu vesel'ju.* (Fazil' Iskander, *Slučaj v gorax*, 1980–1990)
 'To the right from me behind the tables that were pushed together new Russians were sitting and no less new Abkhazians. They had been eating and drinking a lot and *now* they had some fun in a game.'

This differs from (44) with *teper'*. This temporal adverb does not have this effect, exactly because it points to a timespan that is related to something preceding it, presenting the timespan as a new episode. This presupposes a more distant perspective from which both the situation preceding the timespan and the timespan (new episode) can be viewed. This is the perspective of the narrator, who oversees the totality of the events, and not just the perspective of the subject, who experiences something at one moment in time. This analysis also explains the difference between (19) and (20) given earlier:

- (46) a. *Sejčas on vnušal žalost'.* (repeated (19))
 'Now he just inspired pity.' (Mel'čuk 1985, 261)
 b. *Teper' (*sejčas) u Borisa sideli gosti, i emu neoxota bylo dumat' o predstojaščem êkzamene.* (repeated (20))
 'Boris had guests over *now*, and he didn't want to think about the upcoming exam.' (Mel'čuk 1985, 274)

In (46)a the use of *sejčas* is acceptable. This sentence refers to an experience of the subject, making it possible to transfer the reader to the moment in time in the narrative where this feeling is present, whereas in (46)b the use of *sejčas*

is at least marked, and instead the use of *teper'* merely reflects a new episode in the narrative seen from the vantage point of the narrator.

Third, the discourse function that is expressed by *teper'-2* does not occur with *sejčas*, because it can be seen as the prototypical context where the speaker refers to a moment that coincides with the moment of speech, and where this moment can be seen as a new episode. In such cases, it is in fact very difficult to focus on the timespan not taking into account the preceding events or situation. This differs from contexts where both *teper'-1* and *sejčas-1* can be used such as (29), where the speaker can either focus on the current timespan (the 'now') or on the relation with the preceding context. We found one exception to the rule that *sejčas* does not indicate a move in the discourse in the following sentence, which shows that even such contexts do sometimes allow another conceptualization:

- (47) *Sejčas, požaluj, umestnee ljubyx kommentarijev avtora budet basnja Èzopa...* (Tat'jana Solomatina, *Devjat' mesjacev, ili "Komediya ženskix položenij"*, 2010)
 'Now, perhaps a fable by Aesop is more appropriate than various comments by the author...'

Interestingly, sentences with a present perfect and 'now' in English seem to be rendered by *teper'* in Russian and not by *sejčas*. For example:

- (48) 'We have *now* seen him for what he is: that is, a most proud, bloody, luxurious, cruel, and selfpleasing tryant.' (Clive Staples Lewis, *The Chronicles of Narnia. The Horse and His Boy*, 1954)
Russian translation: – *teper'* my uvideli ego doma, a ne v gostjax. Zdes', u sebja, on gordyj, žestokij, rasputnyj bezdel'nik. (Klajv Stejplz L'juis, *Xroniki Narnii, Kon' i ego mal'čik* (translated by G. A. Ostrovskaja, 1991)
- (49) "Friends," said Caspian, "we have *now* fulfilled the quest on which you embarked. [Clive Staples Lewis. *The Chronicles of Narnia. The Voyage of the 'Dawn Treader'* (1952)]
Russian translation: – Druz'ja moi, – skazal Kaspian, – *teper'* my ispolnili to, začem otpravilis' v putešestvie. (Klajv Stejplz L'juis, *Xroniki Narnii, Plavanie "Utrennego Putnika"* (translated by G. A. Ostrovskaja, 1991)

Note that according to Mel'čuk (1985, 271) *teper'-2* does not occur with the past tense, but with a future tense (as in (10)), a (modal) present tense with a future orientation or an imperative. As such these instances must be seen as examples of *teper'-1*. Nevertheless, in these sentences, *teper'* refers to a new episode

in some chain of events and the closing of an old episode. As such, these cases clearly show properties of both *teper'*-1 and *teper'*-2, which underlines that it is difficult to strictly keep these two usage types apart.¹⁸

Fourth, the data show that in some cases it is not possible to draw a clear line between the different sub-meanings. This is especially clear with respect to the difference between *teper'*-1 and *teper'*-2 (as explained above) and with respect to *sejčas*-1 and *sejčas*-4 (the latter of which can be seen as a special instance of *sejčas*-1 as we have argued). The question remains, however, whether it is always possible to draw a clear line between *sejčas*-1 and *sejčas*-2, *sejčas*-1 and *sejčas*-3 and *sejčas*-2 and *sejčas*-3. One could argue that *sejčas* has one general (abstract) meaning, and that, depending on the context, this meaning is interpreted as an instance of *sejčas*-1, *sejčas*-2, or *sejčas*-3. If the different types of *sejčas* should indeed be seen as interpretations of a more abstract meaning rather than as independent meanings, we would expect there to be instances that are in between two types or that cannot really be classified as falling under one of the two types.¹⁹

In the data from our corpus confusion between *sejčas*-2 and *sejčas*-3 does not occur at all because there are no instances which lie in between the past and the future, and the context always makes clear whether the event refers to the past or the future. In the majority of cases it was also relatively easy to determine whether an instance of *sejčas* should be seen as an example of *sejčas*-1 or *sejčas*-2.²⁰ There are, however, few instances where it was not immediately clear whether *sejčas* should be seen as an instance of *sejčas*-1 or of *sejčas*-2. This occurs in those contexts where *sejčas* is combined with *budet* or present tense of verbs like *idti* 'go' which can express an immediate future. The reason for this is that in such instances *sejčas* seems to be used in contexts where the event will be realized in the future, as indicated by the future tense form, but where the realization of this future event is immanent or pressing at the moment of speaking, and where the preliminary stage of the event does in fact already start at the moment of speech, even though it will be completed

18 Mel'čuk (1985, 272) also remarks it is often difficult to distinguish *teper'*-1 and *teper'*-2, but notes that in 'extreme' cases they are clearly distinguishable.

19 Of course, even in the case of two different meanings the addressee sometimes cannot see with certainty which lexeme the speaker has used. This differs, however, from an instance where one word may be seen both as an instance of lexeme 1 and of an instance of lexeme 2 at the same time.

20 We also found instances where *sejčas*-1 occurs with an imperfective future tense, even though such uses are not mentioned by Mel'čuk, for example: *Tak čto volej-nevolej imenno on sejčas budet vas otšaivat', ...* (Tat'jana Solomatina, Devjat' mesjacev, ili «Komediya ženskix položenij», 2010). 'So, willy-nilly, he will now (from now on) in fact defend you...'

later. This can be illustrated by the following examples from the RNC parallel corpus, where English uses *now* plus an indication of a near future (*going to*, *be nearly X*), and Russian *sejčas* and a future tense with *budet*:

- (50) You can think how good the new-caught fish smelled while they were frying and how the hungry children longed for them to be done and how very much hungrier still they had become before Mr Beaver said, “**Now we’re nearly ready.**” (Clive Staples Lewis, *The Chronicles of Narnia, The Lion, the Witch and the Wardrobe*, 1950)
Russian translation: Možete predstavit', kak vkusno paxla, žarjas', tol'ko čto vylovlennaja forel' i kak tekli sljunki u golodnyx rebjat, kotorye ot vsex ètix prigotovlenij počuvstvovali sebja ešče golodnee. No vot nakonec mister Bobr skazal: «**Sejčas budet gotovo**». (Klajv Stejplz L'juis, *Xroniki Narnii, Lev, koldun'ja i platjanoj škaf*, translated by G. A. Ostrovskaja, 1991)
- (51) Oni počemu-to mne vse vremja ne dajut pokoja. Mne kažetsja, čto **sejčas budet dožd'**. Ty čuvstvueš', kak svežeet? (M. A. Bulgakov, *Master i Margarita*, 1929–1940)
English translation: For some reason they never leave me in peace. I think it's **going to rain now**, too. Do you feel how cool it's getting?' (Mikhail Bulgakov, *Master and Margarita*, translated by Richard Pevear, Larissa Volokhonsky, 1979)

In some instances, it is even more difficult to say whether the timespan of 'now' overlaps with the moment of speech or whether it is situated immediately after it. Compare for example the following sentences with the phrase *ja sejčas idu*. In the first example the action of 'going' clearly takes place at the moment of speech, but in the second example the timespan of *sejčas* seems to refer to the moment of speech, immediately after which the action of going will take place. This is emphasized by the fact that the speaker (Raskol'nikov) has already stood up:

- (52) “Hey, Andy, what’s going on? How’s your day going?” “Don’t ask. **I’m on my way** to pick up Her lunch **right now.**” (Lauren Weisberger, *The Devil Wears Prada*, 2003)
Russian translation: – Privet, Èndi, kak dela? Čto u tebjja tvoritsja? – Lučše ne sprašivaj. **Ja sejčas idu** za ee obedom. (Loren Vajsberger, *D'javol nosit Prada*, translated by M. Majakov, T. Šabaeva, 2006)
- (53) Minuty dve prodolžalos' molčanie. On sidel potupivšis' i smotrel v zemlju; Dunečka stojala na drugom konce stola i s mučeniem smotrela na nego. Vdrug on vstal: – Pozdno, pora. **Ja sejčas idu** predavat' sebja. No

ja ne znaju, dlja čego ja idu predavat' sebja. (F. M. Dostoevskij, *Prestuplenie i nakazanie*, 1866)

English translation: Silence lasted for two minutes. He sat with his eyes fixed on the floor; Dounia stood at the other end of the table and looked at him with anguish. Suddenly he got up. "It's late, it's time to go! **I am going at once** to give myself up. But I don't know why I am going to give myself up." (Fedor Dostoevsky, *Crime and Punishment*, translated by Constance Garnett, 1914)

Mel'čuk (1985, 265) argues that in a sentence with *sejčas*-2 like *Sejčas idu (tol'ko čajju vyp'ju)* ('I am going right now; I just have to finish my tea.') the speaker never literally means that s/he is going at the moment of speaking, in the same way that one can also say *Siju sekundu idu (tol'ko knižku dočitaju)* ('I'll be there in a second; I just have to finish my book.') However, sentences (52) and (53) show that this is not necessarily the case. Instead, in some cases the difference between *sejčas*-1 and *sejčas*-2 is hardly relevant. It seems, therefore, that even in those cases where *sejčas* refers to the future, it always has a relevance at the moment of speech, which also explains why it is often used as an elliptical answer to a question to do something (Mel'čuk 1985, 265).²¹ In such cases the speaker uses *sejčas* to emphasize that the action will not be delayed, by using a form that both refers to the moment of speech and a time immediately after the moment of speech.

Furthermore, the close relation between *sejčas*-2 and the moment of speech also explains some data discussed by (Mel'čuk 1985, 265–266) that at first seem puzzling. Mel'čuk (1985, 265–266) argues that *sejčas*-2 cannot be used in directives such as (54) where *sejčas*-2 is a non-contrastive theme. In that case one has to use the specialized expression *sejčas že* ('right away', 'this instance') as in (55):

(54) **Sejčas (na)piši pis'mo!* (Mel'čuk 1985, 266).

Intended meaning: 'Write a letter this instance/immediately.'

(55) *Sejčas že (na)piši pis'mo!* (ibid.)

'Write a letter this instance/immediately!'

21 This is confirmed by the data from the Canonical Correspondence Analysis (ANACOR). The outcomes from this statistics showed that the feature "person" did not really contribute to the explanation of the data, even though the first person was relatively frequent with *sejčas*-2.

If *sejčas* is used in such contexts it is interpreted according to Mel'čuk as an instance of *sejčas-1*, for example:

- (56) A *sejčas* vstan' i uxodi! (Mel'čuk 1985, 262)
 'Right now get up and leave!'

The use of *sejčas-2* is, however, possible with directives if it is part of a contrastive rheme as in the following example, where *sejčas* has the last sentence accent:

- (57) Vy lučše platite štraf *sejčas*. [= immediately, and not later]. (Mel'čuk 1985, 266)
 'You better pay the fine now/immediately.'

Mel'čuk (1985, 265–266) provides an explanation in terms of the theme-rheme structure, namely that *sejčas-2* can only be a rheme if it is an explicit or implicit contrastive rheme (SEJČAS (= immediately)[a ne POTOM]). However, he does not explain *why* there are restrictions on the information structure of *sejčas-2* which are absent in the case of *sejčas-1*. In our view, we can provide an additional level of explanation if we accept that *sejčas-2* is essentially a variant of *sejčas-1*, which only occurs under the right circumstances, namely if at the moment of speech the urgency or relevancy of the future event is clear, even though the future tense makes clear that realization of the event will take place after the moment of speech.

How, then, does this explain (54)–(57)? In the case of a directive, the speaker is inherently focused on the immediate realization of the event, which means that *sejčas* will be interpreted as pertaining to the moment of speech ('now'). This is the basic interpretation of *sejčas*. In (55) *sejčas* can be used because the speaker first focuses on the 'now', and then names the correct action that needs to be performed. If the speaker wants to make explicit that the action needs to be performed right away, as such emphasizing that the addressee is not doing what s/he is supposed to do, *sejčas* is not suitable (as (54) shows) exactly because of the prominence of the moment of speech in the directive speech act, which immediately leads to an interpretation of *sejčas* as pertaining to the moment of speech. To stress that the addressee should not hesitate, one therefore needs to use specialized forms such as *sejčas že* as in (55).²² This character of a directive to immediately comply is however not

22 Mel'čuk (1985, 266) also notes that in the case of 'disguised' directives such as with *trebovat'* ('demand'), *sejčas* is not used (*My trebujem, čtoby on *sejčas napisal pis'mo*. Lit. 'We

present in (57), where the directive has the character of an advice to perform the action now (instead of later). Such constructions are as Mel'čuk (1985, 266) points out, associated with a theme-rheme structure, which have an implicit contrastive structure (see also Fortuin 2010). In our view, such cases can indeed be classified as instances of *sejčas-2* (as we have done in our corpus), but this categorization is purely academic, and for the speaker of the language there is no difference between *sejčas-1* and *sejčas-2* in such cases.

We will now move on to the question whether there is always a clear difference between *sejčas-1* and *sejčas-3*. Again, in most cases it is easy to distinguish these types, since the past tense form makes clear that *sejčas* cannot refer to an event which takes place at the moment of speech. However, in the case of a perfective past tense, the difference between *sejčas-1* and *sejčas-3* is sometimes not very discrete and therefore difficult to determine. There are, however, some contextual linguistic clues that may play a part in the interpretation of *sejčas* in such cases. More specifically, a contrastive context may trigger a reading of *sejčas-1* instead of *sejčas-3*. This can be illustrated in (58) with the verb *rešit'* which expresses an event:

- (58) V prošlom nomere my doprosili vybyvšuju Svetlanu Lobodu, a *sejčas rešili* poznamomit' tebjja s novoj «tabletkoj» «VIA Gra» – Al'binoj Džanabaevoj. (supplement to “Argumenty i fakty”, 2004.11.10)
 ‘In our last number we interrogated Svetlana Loboda who stepped out, but *now* we **decided** to introduce you to a new “pill” of [the band] “VIA Gra”: Al'bina Džanabaeva.’

Because of the contrastive context (‘in the last number’ *versus* ‘in this number’), *sejčas* is interpreted as an instance of *sejčas-1* and focuses on a situation with a somewhat larger timespan, including both the moment of speech

demand that he writes a letter now’). This is confirmed by the data from the RNC where we find *prjamo sejčas* (‘right away’) in similar cases. In our view, this only points to the fact that for *sejčas-2* to be used the immediate realization of the event needs to be connected directly to the moment of speech. This is not the case in such performative or performative-like sentences where *sejčas* occurs in the subordinate clause. Such contexts trigger a *sejčas-1* reading, which is not in accordance with the communicative intention of the speaker. If the speaker wants to communicate that the event should be realized immediately, a specialized form is therefore used. Perhaps, as Mel'čuk (1985, 277) suggests, English is more liberal in this respect, and allows for *now* in similar cases, illustrating this with the sentence *We demand to release them now*. Whether this is actually the case, and if so, what the explanation is for this, is a matter for further research.

and the event that took place before the moment of speech. In (58) the focus is therefore on the fact that on the moment of speech someone will be presented. Such cases differ from instances with *rešit'*, such as the following where *sejčas* can more easily be interpreted as an instance of *sejčas-3*:

- (59) – Znaeš, čto ja *sejčas* rešil? – skazal on veselym golosom, položiv ruku na plečo maman. (L. N. Tolstoj, *Detstvo*, 1852)
 “Do you know what I have *just* decided to do?” he asked gaily as he laid a hand upon Mamma’s shoulder.’ (Leo Tolstoy, *Childhood*, translated by C. J. Hogarth, 1910–1935)

In the following example, again with the verb *rešit'*, *sejčas* does not point to a moment *just before* the moment of speech (cf. *tol'ko čto*) but to a somewhat larger time frame:

- (60) [Sveta talks on the phone to Pasha] U menja sidit ženščina, major milicii, ona sledovatel', zanimaetsja delom Nasti. Kak èto kakoj? Nasti Kusakinoj, tvoej laborantki. Nu ne znaju počemu, *sejčas* rešili rassledovaniem zanimat'sja. Ty možeš' s nej pogovorit'? Prjamo *sejčas*. Aga, xorošo. (Dar'ja Doncova, *Uxa iz zolotoj rybki*, 2004)
 ‘There is a woman with me here, the head of the regional council, she is a detective, investigating the case of Nastya. What Nastya? Nastya Kusakina, your laboratory assistant. Well, I don’t know why, they decided to deal with this investigation *right now*. Can you talk to her? Right now. Okay, fine.’

The interpretation occurs because of our knowledge of the world: it is just not very likely that the decision to investigate the criminal matter was taken *just before* the moment of speech. Instead we understand that the main focus of *sejčas* is on the present situation, where the police are already investigating at the moment of speech. Note, however, that there is always an inherent and close relation between *sejčas-3* and *sejčas-1* because the completion of an event *just before* the moment of speech also entails the completion of the event *at* the moment of speech. Therefore, a sentence like (61) can be interpreted in two ways:

- (61) V drugix pis'max on pišet: (...) «Prišla Agaf'ja Mixajlovna, boltala i *sejčas* ušla». (T. L. Suxotina-Tolstaja, *Detstvo Tani Tolstoj v Jasnoj poljane*, 1910–1950)
 ‘Agaf'ja Mixajlovna arrived, had a chat and **left just now**.’ (*sejčas-3*)
 ‘Agaf'ja Mixajlovna arrived, had a chat and **has now left**.’ (*sejčas-1*)

Note that according to some native speakers we consulted sentences such as (61) are becoming obsolete and they would prefer *tol'ko sejčas* in this context. This suggests that the use of *sejčas-3* has changed or is changing in modern Russian.

The data discussed until now show that *sejčas-1*, *sejčas-2* and *sejčas-3* have an inherent deictic meaning in common and that even in the case of *sejčas-2* and *sejčas-3* the moment of speech plays an important role. It is this deictic meaning which is a very important property of *sejčas*. This property also explains why *sejčas-2* is not used in example (62) with [*stoit tol'ko X, (i) Y*] ('Necessary only X, and Y (is the case)') even though *sejčas* can indicate immediacy like its near synonym *srazu že*. This is because the construction with *stoit* prefers an expression of immediate consequence in the second clause ('only X, and immediately Y'), but the reference point for *sejčas* in the second clause is not the moment of speech but a reference point which lies in a hypothetical world, and which is provided by the first clause:

- (62) Da, *stoit tol'ko umeret'*, oni tebjja srazu že/ *sejčas že* (?*sejčas*) uprjačut!
(Dž. D. Sèlindžer, *Nad propast'ju vo rži*, translated by R. Rajt-Kovalèva, 1965)

Original: Boy, when you're dead, they really fix you up. (J. D. Salinger, *The Catcher in the Rye*, 1951) (literal translation of the Russian sentence: 'Yes, you only have to die, they will immediately fix you up!')

The same inherent deictic nature of *sejčas* also explains why *sejčas-3* does not occur in typical (third person) narrative style discourse where the author must be seen as a narrator rather than an actual "speaker", and where there is no third person subject that can provide a reference point. Note, for example, that in sentences like the following, one cannot easily change *tol'ko čto* 'just' for *sejčas-3*:

- (63) Solnce tol'ko čto (?*sejčas*) selo, nebo eščè ne uspelo potemnet'; ... (Alena Bravo, *Komendantskij čas dlja lastoček* || "*Sibirskie ogni*", 2012)
'The sun had *just* set, the sky had not fully managed to darken yet: ...'

Even though *sejčas-3* and *tol'ko čto* are near-synonyms, the latter expression differs from *sejčas-3* because it has no deictic meaning and does not indicate a moment in time coinciding with some recent event. Instead, it expresses that the event expressed by the verb happened just before some reference point.²³

23 In this case the use of *sejčas* instead of *tol'ko čto* could in principle be interpreted as an instance of *sejčas-4* ('The sun had just set now...'). In such a case, the author places

To conclude this section, the data we discussed suggest that *sejčas* can best be seen as a polysemous complex with three closely related deictic submeanings which in some contexts show overlap, namely *sejčas*-1, *sejčas*-2, and *sejčas*-3, whereas it would be possible to say that *teper'* has one general meaning, for which it is not necessary to posit different submeanings. As such, we can maintain the definitions provided by Mel'čuk for *sejčas* and *teper'* and present them as general meanings (allowing for different submeanings) in the following way:

- A. *Sejčas* refers to a timespan which coincides with the reference point (deictic centre), or which is very close to the reference point (deictic centre), either closely preceding it or closely following it. The reference point is either the moment of speech or a reference point provided in the narrative past tense discourse, which “moves” the speaker and hearer to this moment in the narration (maintaining the idea of “actuality”, which is the result of the (near) coincidence of the “timespan of now” and the moment of speech).
- B. *Teper'* refers to a timespan which coincides with a reference point and which is presented by the speaker as having a relation with something preceding the timespan (as such comparing two situations and/or presenting the timespan indicated by *teper'* as a new episode or change). The reference point is either the moment of speech or reference point provided by the narrative past tense discourse that the narrator describes.

4 Conclusion

In this article we focused on two Russian lexical units/adverbs that can both mean ‘now’, namely *teper'* and *sejčas*. Our analysis aimed to get more insight into the semantics of these forms, and test existing qualitative analyses by providing a quantitative and qualitative corpus-based analysis. As the basis for our quantitative analysis served 600 randomly selected tokens of *teper'* and *sejčas* from the Russian National Corpus and the larger context in which these tokens occurred. Each token was tagged for two types of parameters (mor-

himself at a reference point in the narrative and describes what happens at that moment in time, inviting the reader to see the events as if they happen right before their eyes. In this case, however, this use would also be rather marked because of the absence of other contextual clues that usually co-occur with such an invitation, for example references to a third person subject that acts as the subject of conceptualization.

phosyntactic and semantic-pragmatic), which each were based on properties of the context in which the tokens occurred.

In our quantitative analysis we tested the hypothesis put forward by Mel'čuk that *teper'* typically refers to a period (cf. nowadays), whereas *sejčas* typically refers to a moment (cf. right now). This hypothesis was falsified, even though it was concluded that the timespan *teper'* refers to is more likely to be interpreted as a period than the timespan *sejčas* refers to.

Our quantitative analysis showed that the main difference between *teper'* and *sejčas*, especially in those contexts where they mean 'now', is that only *teper'* is associated with the feature of "juxtaposition" in the majority of cases. Even though there are also still relatively many instances where the feature of "juxtaposition" could not be found in the context, we have argued that this should not be seen as falsification for the hypothesis put forward by Mel'čuk 1985 that this "juxtaposition" is an inherent property of *teper'*. It should be noted that it turned out rather difficult to tag or identify in an objective way subtle semantic properties reflected in the context. Of course, in language different forms may express such subtle differences in meaning, but these differences are not necessarily reflected in objectifiable differences in the contexts in which these forms occur. In many instances one may use a different form with a slightly different meaning in exactly the same context. As such, it is to some extent to be expected that one will never find extremely strong associations between forms and such subtle semantic properties that are said to correspond to these forms. Both with respect to the feature "juxtaposition" and with respect to the feature "right now", we have stressed that it is important that the semantic analysis distinguishes *meaning* from (context-dependent) *interpretation*.

Finally, we concluded our analysis with a discussion of some of the relevant semantic differences between the two adverbs, which all boil down to one main difference: *teper'* involves a juxtaposition with something preceding it, whereas *sejčas* does not, whereas this form has a clear deictic meaning. As such, our analysis fully corroborates the analysis given by Mel'čuk (1985).

Our analysis has shown both the strong points of working with statistical approaches to the study of near-synonymous forms, and the weaker points. A strong point is that in principle such an approach makes it possible to provide more objective corroboration or falsification of linguistic hypotheses. A weaker point is that it is sometimes difficult to determine in an objective way how particular semantic features have to be analyzed in the process of tagging (analyzing) the data. Furthermore, as our analysis clearly showed, differences in meaning do not necessarily have to be reflected in the context in which these meanings are used. We would suggest that further research might

take this into account in two ways. First by explicitly stating in how many cases there is disagreement between the people tagging the data, and by tagging the data in a blind fashion, such that both the linguistic form and the purpose of the research is masked from the participant. Second, it seems that the type of research which solely focuses on the context in which forms are used (“argumentum ad contextum”) by itself is insufficient for semantic analysis and must be supplemented with qualitative research, as we have tried to do. Further research might focus on such qualitative and quantitative research with native speakers of Russian, in order to test what the difference in meaning is of *teper'* and *sejčas* in the same context, and what the difference is between the various senses of *sejčas* and their near synonyms (*srazu*, *tol'ko čto*, etc.).

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