

Time and Language

Book of abstracts

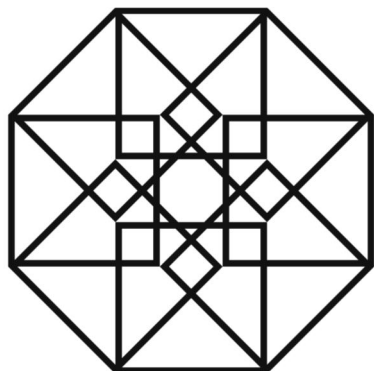
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Part I.

Keynotes

Expressing time in everyday language

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Time is abstract and difficult to describe in objective terms even though it is one of the most important dimensions of expression in everyday language. This presentation will discuss research on how time is tacitly conveyed and understood, in both literal and non-literal language. The focus will be on behavioral research that has investigated how time is expressed, especially in metaphor and grammatical aspect, and how it can influence reasoning across various contexts.

FRONT-BEHIND relations and perspective in space-motion metaphors for time

Kevin Moore

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This talk sketches out some central problems and solutions in how speakers of some languages use space/motion vocabulary to talk metaphorically about temporal concepts, with special attention to contrasts involving FRONT/BEHIND. At the core of the analysis is the distinction between metaphors that incorporate the perspective of 'Now' and thus presuppose an *ego-perspective* frame of reference, as opposed to a metaphor that presupposes a *field-based* frame of reference that is based on *sequence* independently of any 'Now'. Examples of ego-perspective expressions are given in (1), and a field based expression is given in (2).

1. **Ego-perspective:** a. We are approaching Autumn. (Metaphor name: Moving Ego)
b. Autumn is approaching. (Metaphor name: Ego-centered Moving Time)
2. **Field-based:** Autumn follows summer. (Metaphor name: SEQUENCE IS RELATIVE POSITION ON A PATH)

In order to understand the spatial and temporal concepts in the metaphors, we discuss *experiential motivations*. These are situations in which the relevant space-motion and temporal concepts are experienced together. For example, in the space-motion experience relevant to Moving Ego, the FRONT of Ego's body is oriented toward locations where she expects to arrive in the **Future**. By contrast, in the motivation of SEQUENCE IS RELATIVE POSITION ON A PATH, the entity that is IN FRONT arrives **earlier**.

I use ideas such as these to explain the contrasting temporal values of the two FRONT-BEHIND patterns in the table below. In the table, when the entity that is IN FRONT corresponds to the **earlier** time (and BEHIND='later'), the expression can be either deictic or nondeictic, but when FRONT corresponds to a **later** time (and BEHIND='earlier'), the expression tends to be deictic (IN FRONT=Future). The deictic/nondeictic contrast is shown in the rows of the table; whether IN FRONT corresponds to EARLIER or LATER is indicated in the columns. (*Before* and *after* are FRONT and BEHIND words respectively.)

EARLIER IN FRONT

Nondeictic: **Before** lunch.

(IN FRONT)

Deictic: **Before**, I used to eat cheese.

LATER BEHIND

After lunch.

(BEHIND)

(Japanese) ... *ato ni sitekudasai*

"**behind** DAT do:POLITE:IMPR"

'... please make it **later**'

EARLIER BEHIND

Nondeictic: [restricted]

Deictic: The past is **behind** us.

LATER IN FRONT

[restricted]

The future is **ahead**.

The contrasting deictic values of the two FRONT/BEHIND patterns is explained with reference to the contrast between the perspectival versus the non-perspectival experiential motivations of

temporal FRONT. Additionally, a hypothesis is offered that the 'later=BEHIND towards earlier=IN-FRONT' temporal "direction" involves a simple concept of a Time as 'when something could happen', whereas the 'earlier=BEHIND towards later=IN=FRONT' direction involves a notion of 'Now'.

Part II.

Section papers

The asymmetry of proximal and distal deixis in space-time metaphor

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The paper considers Russian deictic expressions *blizkij* 'close' vs. *dalekij* 'far' and *tut* 'here' vs. *tam* 'there' denoting proximity and distance respectively, in their spatial and temporal meanings. It demonstrates that 'space'- 'time' semantic shift and 'close'- 'far' opposition are organized in a non-linear way and display language specificity. The paper outlines semantic and pragmatic factors underlying the apparent asymmetry between spatial and temporal meanings of deictic markers, as well as between proximal and distal polysemy.

In their temporal meanings, they almost exclusively express distance from the time of the speaker, but not distance between two time points: *blizkaja razluka*, *Razluka blizka* 'close/impending parting', 'Parting is close', *dalekie gody* 'far/distant years', *Kak daleko eto vremja* 'How far/distant is that time' but not *otjezd blizko k Rozhdestvu* 'literally: Departure is close to Christmas', or **otjezd daleko ot Rozhdestva* 'literally: Departure is far from Christmas'. Still, distance between two time points is somewhat more possible for *blizkij* 'close' than for *dalekij* 'far': *blizkie daty* 'close dates', but not *dalekie daty*.

Also, while *dalekij* can refer both to the future and the past (*dalekoe proshloe/budushchee* 'distant past/future'), *blizkij* only refers to the future: *blizkoe budushchee* 'near future', but not **blizkoe proshloe*. On the other hand, *dalekij* tends to indicate past events: thus, nearly all corpus occurrences of *dalekij* with *god* 'year' refer to the past.

This association of 'far'- 'past' and 'close'- 'future' may be due to pragmatic differences between the past and the future: the past is only perceived as such when a sufficient amount of time has elapsed, hence its association with long distance; as for near future, it is more certain and tangible than distant future, and thus more privileged in communication.

Tut 'here' and *tam* 'there' also display asymmetry. *Tut* in temporal meanings denotes either the time of speech (*Ja tut sizhu rabotaju* 'I am working **right now**') or taxis, with an immediate sudden turn of events (*Otkrylas' dver', i tut pogas svet* 'The door opened and **then** the lights went out'). Both these meanings denote temporal proximity, either to the speaker's time or to another event.

Interestingly, *tam* does not refer to the distant past, but to the future: *Skoro vesna, a tam i leto* 'Soon it will be spring and **then** summer'. Yet since it involves obligatory taxis (*tam* refers to the second of the two consecutive events) and cannot denote immediacy (**On pridet i tam podarit tebe igrushku* 'literally: He will come and there give you a toy'), the idea of distance is preserved, even though it is not as apparent as in the temporal meaning of *dalekij*.

While the first pair of antonyms has parallels in other languages, since 'close' and/or 'far' are used in reference to time in English (*near future*, *distant past*), French (*avenir proche*, *passé lointain*), German (*nahe Zukunft*, *ferne Vergangenheit*), Polish (*bliska przyszłość*, *odległa przeszłość*) and some other European languages, the temporal meanings of 'here' and 'there' are more language specific.

Memory processes in verbalization: what is the image of time in our memories?

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The paper investigates the naive language ideas about the *memory* as an inner organ inside of human body and *memories about the time*, and the language means of memory processes representation on Russian examples (comparing with English ones). The main aim of the current research is to explore the images of time in our memories imbedded in language structures. Studying the "language of memory" was in the focus of many modern linguists' papers. [Slobin 1979; Wiezhibicka 1996; Apresjan 1995; Zalevskaya 1999, Kubryakova 2004]. Many researches on memory had interdisciplinary character, giving significant data for different fields – see [Hutton 2003, Bragina 2007]. The author is interested in the concepts of memory processes shown in language units: the processes of memorizing, reserving and reproducing the perceived samples. The research gives evidence that memory has different image forms in discourse: the collected data show the specific structure and inner building of this invisible organ. Different verbalization of memory processes shows the specifics of time perception reflected in memories. The starting lexicographical reference about the "memory" can be found in [Apresjan, Zholkovsky, Mel'cuk 1984], where memory was described as a special device inside the body of X, representing X's abilities to memorize, remember and recall Z to the mind. This thesis was supported in different later works, e.g. [Uryson 2003; Apresjan et al. 2003]. This paper widens the existing lexicographical limits, showing new and controversial discourse representations of this concept. The paper lists the types of metaphorical representation of memory and time according to the data collected from Russian and English text abstracts. Russian language gives verbal evidence of different types of "memory": memory as a limited water space, as a container, as a screen, as a dark and chaotic environment and so on. The modern discourse finds out some unique metaphors of memory (memory as a "computer" and memory as a "photographic or cinematographic tape"). The conventional language images of memory give birth to the individual (non-standard) metaphors in fiction and poetic discourse (e.g. memory as a "sponge"). The language data analysis made within the research gives us a reason to claim, that metaphorical concepts of memory in Russian are reproduced in a variety of models which interact, continually expand their number and include several lexeme meanings. Metaphorical representation of memory can model the language explication of all memorization process and time perception in our memories and define the language reflection of complicated processes inside our memory: processing, keeping and reproducing the information about the events passed in some period of time.

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Russian, Swedish, and Finnish adpositions meaning 'under' and 'over' in temporal constructions

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In language, there is a strong tendency for expressions that denote time also to denote space: TIME IS SPACE as the classic work on conceptual metaphor by Lakoff and Johnson (1980) has it. However metaphor hardly ever involves straightforward mapping; the relationship between the domains of time and space is more complex. Temporal constructions both differ from prototypical spatial uses and inherit features from spatial constructions (Kuznetsova et al. 2013). Thus it is only to be expected that similar or equivalent spatial constructions of different languages may have temporal counterparts that differ in their conceptualisations of time. Temporal usages of the Russian and Swedish prepositions and the Finnish postpositions meaning 'under' and 'over' are cases in point.

The prototypical spatial constructions construing a landmark 'under' an entity materialise in examples like: *čemodan pod krovat'ju* (INS) / *zapihnut' čemodan pod krovat'* (ACC) (Russian); *resväskan är under sängen / skjuta in resväskan under sängen* (Swedish); *matkalaukku on sängyn alla / työntää matkalaukku sängyn alle* (Finnish) ('the suitcase is under the bed / to push the suitcase under the bed').

In all three languages there are temporal constructions utilizing the adpositions *pod*, *under*, and *alla*. We will restrict us to the constructions where the adpositions occur together with lexicalised temporal concepts. Thus in Russian, *pod* + the accusative case can render expressions like *pod vyhodnye* ('close to / towards weekend'), termed proximate future construction by Kuznetsova et al. (2013). This construction is similar to a less prototypical spatial *pod*-construction that denotes a space near the lower end of a vertical object (ibid.). Similarly, in Finnish you can say *viikonlopun alla* and mean the same as in Russian. In Swedish you can say *under veckoslutet*, but then you mean 'during the weekend'.

All three languages have spatial constructions that involve movement from one end of a surface to the other or over an object: *idti čerez ulicu / prygnut' čerez zabor* (Russian); *gå över gatan / hoppa över staketet* (Swedish) *mennä kadun yli / hypätä aidan yli* (Finnish) ('to walk over the street' / 'to jump over the fence'). In all three languages, there are also temporal constructions using the same adpositions *čerez*, *över*, and *yli*. In Russian *čerez nedel'ju* could mean either 'one week later' or 'every two weeks' (both meanings having traits in common with the spatial meaning exemplified by 'over the fence'); *čerez vyhodnye* allows only the meaning 'every two weekends'. In Swedish however *över veckoslutet* and *över veckan* mean 'over the weekend/week' i.e. from beginning to end, throughout a period of time, a meaning that resembles the spatial meaning exemplified by 'over the street', and the same goes for Finnish *viikonlopun yli* and *viikon yli*.

In our paper, we explore the relationships between the 'under' and 'over' domains of time and space in the three languages. Using corpus and Internet data, we investigate what types of lexicalised temporal concepts are allowed in the temporal constructions under investigation.

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Swedish pseudocoordination and aspect

Kristian Blensenius

My talk will address the aspectual status of posture-verb pseudocoordinations in Swedish. Pseudocoordinations are multi-verb expressions consisting of two possibly finite verbs, V1 and V2. In the literature on Swedish (and on Mainland Scandinavian), pseudocoordinations with posture-verb V1s, e.g. 'sit', 'stand', and 'lie', are generally considered aspectual. Specifically, they are treated as equivalents to the English progressive *be + V-ing*:

- (1) Jag satt och läste i biblioteket.
I sat and read-PAST in the.library
'I was (sitting) reading in the library.'

However, as suggested in the translation in (1), V1 carries locative information as well. In (1), the reader must be in a sitting posture, or she should be able to be sitting while performing the event depicted by V2.

Now, posture-verb pseudocoordinations need not mark aspect at all. Instead, use of posture-verb pseudocoordinations may be motivated by the fact that different postures can have different connotations:

- (2) Han satt och tappade cigarette på mattan!
he sat and dropped the.cigarette on the.carpet
'Can you believe it, he dropped the cigarette on the carpet!'

In (2), there is possibly a clash between being in the rather comfortable position of sitting and messing things up by possibly damaging a carpet. In any case, there is no progressive aspect in (2), i.e., there is no slow-motion reading available of the achievement event of dropping the cigarette.

By showing a couple of tests for aspect, it will be shown that posture-verb pseudocoordinations, unlike e.g. *be + V-ing*, cannot alter the aspectual value of sentences. Instead, posture-verb pseudocoordinations combine with predicates that are already potentially progressive. In (1), the simple 'read' is atelic and therefore possible to interpret as progressive in a Swedish sentence. However, in (2), the simple predicate 'drop a cigarette' is an achievement and hence not possible to interpret as progressive in itself. A posture-verb pseudocoordination does not change this fact.

So, what do posture-verb pseudocoordinations do? Apart from providing different connotations associated with different postures, it is suggest that they delimit the location of the event described by V2, and also emphasize episodic interpretation with the "right" V2s.

Non-metrical distinctions in past and future “tense” marking in isiNdebele (South Africa)

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Bantu languages are known for having tense and aspect systems that include multiple past and future tenses (see e.g. Dahl 1985, Nurse 2008). Many of these systems mark temporal gradations; for example, a system may distinguish hodiernal ('today') vs. hesternal ('yesterday') vs. pre-hesternal pasts. As noted by Nurse (2008:93), graded systems may or may not involve flexibility of temporal reference, and the degree of flexibility found in particular languages is frequently underresearched and underdescribed.

isiNdebele, a Nguni language of South Africa, has a binary system for the expression of past perfectives, illustrated in (1).

- (1) (a) *Izolo u-fund-e I #wa-fund-a i ncwadi*
yesterday **3SG-read-RECPST / 3SG.REMPST-read-FV** book
'Yesterday he read (near past / #remote past) a book'
- (b) *Iveke ephilileko u-fund-e I wa-fund-a i ncwadi*
week last **3SG-read-RECPST / 3SG.REMPST-read-FV** book
'Last week he read (near past / remote past) a book'
- (c) *Eminyakeni emihlanu edlulileko #u-fund-e I wa-fund-a*
i ncwadi
years five last/ago **3SG-read-RECPST / 3SG.REMPST-read-FV** book
'Five years ago, he read (#near past / remote past) a book'

The isiNdebele past tense system exhibits a high degree of flexibility based on (at least) temporal “distance” from the time of utterance, discourse relevance, and conversational priming. This flexibility is likely related to the fact that the near past marker also functions as a perfect (and as a present stative with change-of-state verbs). Perhaps also for this reason, speakers prefer to use the near past when they are uncertain of when an event occurred. This use stands in contrast to what Cable (2013) reports for Gĩkũyũ and Bochnak and Klecha (to appear) report for Luganda; speakers of these languages prefer remote past marking when discussing events of unknown location in time.

isiNdebele has three major means of marking future reference (shown in (2)), making it somewhat unusual in that it appears to have more morphologically “basic” ways of marking future than past.

- (2) (a) *Ngi -zo-(ku-)fi k-a kusasa*
 (b) *Ngi -yo-(ku-)fi k-a kusasa*
 (c) *Ngi -za-(ku-)fi k-a kusasa*
 1SG-FUT-(INF)-arrive-FV tomorrow
 'I will arrive tomorrow'

These markers seem to be derived from the lexical verbs *ukuza* 'to come' and *ukuya* 'to go' (plus the infinitive marker). In some contexts, the deictic spatial meanings are still evident, but all three forms can be used in most cases without regard to the spatial location of the event. Speakers generally interpret *-yo-* futures as somewhat more temporally distant than *-zo-* futures, but there do not seem to be any temporal restrictions on the use of either. Speakers disagree as to which of the futures convey more certainty on the part of the speaker, suggesting that something more than epistemic modality is at play. Particularly surprising is that for many (though not all) speakers, although situations marked with future *-yo-* seem more distant in time, they are seen as more likely than *-zo-* futures to come to fruition. Most interesting of all are the *-za-* futures, which in everyday discourse always convey doubt, warning, counterexpectation, or contrast with previous discourse or with the speaker's desires. isiNdebele's multiplicity of future forms — more than are found in neighbouring Nguni varieties—and their range of possible interpretations suggests grammaticalization in progress.

In this talk, I describe the past- and future- marking systems of isiNdebele and suggest cognitive pathways towards the evolution of a system with multiple pasts and futures without strict metrical distinctions in temporal reference. Drawing in part on Botne and Kershner's (2008) model of associative and dissociative "domains" in temporal (/spatial/reality) reference, I discuss metaphorical interactions between time, motion through space, intentionality, expectation, and desire.

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The Finnish verbs of remaining and their temporal orientation

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Finnish traditionally distinguishes between two verbs of remaining, i.e. denoting the continuation of a spatial or more abstract relationship: the verb *jäädä* ('to remain, stay'), which governs a locative argument in a directional case, and its static near-synonym *pysyä* ('to stay, remain'). The verb *jäädä* is idiosyncratic in that it requires its locative argument to be marked with a directional local case, implicating motion (or change). This contradiction of non-motion with (a path of) motion has received attention both in Finnish and international linguistic literature (e.g. Huumo 2007; Fong 2003). According to Huumo (2007: 87), the dynamic meaning of *jäädä* is based on the contrast between a projected course of events (whereby the entity acted upon by the subject leaves its current location) and the actual scenario (which the same entity fictively steps into while rejecting the projected course of events). I believe that this contrast between projection and reality gives to *jäädä* an inclination towards negativity (e.g. *jäädä toiseksi/suppeaksi/kesken* 'to remain second/limited/incomplete'), and vice versa the absence of contrast makes *pysyä* more natural in more positively oriented contexts (e.g. *pysyä ykkösenä/kärryillä/rauhallisena* 'to remain first/to follow (an idea, a situation)/to stay calm').

The objective of this paper is to address the question as to how the verb dynamics described above affect the temporal orientation of *jäädä* and *pysyä*. It has been pointed out (see Metslang 1994: 175) that due to the perfectivity ascribed to change-of-state predicates, such predicates typically place a situation into the future when used in the present tense. This observation holds some truth as far as *jäädä* is concerned. I propose that since the idea of incompleteness belongs to the semantic core of *jäädä*, it places it in a favourable position to appear with the present passive participle -TAVA (*Asia jää käsiteltäväksi* 'The question still has to be dealt with'), mainly used in Finnish to express needed or possible completion of a situation that has remained incomplete and in that sense goal-oriented. The dynamicity of the verb fundamentally supports this idea. Conversely, the stativity of *pysyä* seems to locate it in a more present-oriented reality.

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On reference point, its connection with the deictic center, and temporal adverbials

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In my talk I am going to present an attempt at a new interpretation and elaboration of the notion of **reference point**, including its role in the semantics of aspect.

The notion of reference point ("point of reference", R) was introduced by H. Reichenbach [Reichenbach 1947]. It was adopted by many theorists, but has always been notorious for its lack of clear definitions (cf. [Klein 1994: 25–26]).

In Elena V. Paducheva's works [Paducheva 1989; Paducheva 1996/2011a: 268–269, 285–287, 293–296; Paducheva 2011b: 112, 135–137, 148–152] the reference point was identified with the temporal position of the "Observer" — i.e. with the temporal part of the deictic center (primary or secondary). In my approach I am continuing and trying to further develop this line of analysis.

Let us examine the traditional components of a prototypical deictic center, i.e. **the speech act**. It includes a temporal center ('now₀'), a spatial center ('here₀'), and a subjectivity center ('ego₀'). What is called "subjectivity center" here corresponds to the subject of speech, perception, and judgment/thought/awareness (we are leaving out the opposition of speaker vs. addressee for now). Cf. examples (1)–(3).

It can be argued that in some contexts (most notably in narratives) a "replica" of this deictic center appears in discourse — a **secondary deictic center** with its own temporal ('now₁'), spatial ('here₁') and subjectivity ('ego₁' ≈ the Observer) components. For instance, in the case of the narrative, a person who is perceiving a narrative text (i.e. the reader/hearer/etc.) is at least partially "playing in" the narrative, thus imagining its events "from the inside" — i.e. from the position of a secondary, narrative deictic center. Cf. (4)–(6) (the examples are inspired by [Paducheva 2011c]).

The **reference point** in the proposed approach is thus identified with the temporal component of the **currently active** deictic center (**the current 'now'**), be it the primary, canonical deictic center (→ 'now₀') (cf. (2)) or one of the secondary deictic centers (→ 'now_{1,2...}') (cf. (5)).

Several **tests** are proposed that may be applied to indicate the position of the reference point a given clause in a given discourse, most of them concerning insertion of certain temporal adverbials. One of the most reliable tests is the possibility of insertion of 'still' expressions (Russian *uže*, English *still*, etc.) — such insertion is possible only with synchronous reference point. Cf. (7)–(8) from Russian.

In addition to the distinction between primary (= moment of speech) and secondary (≠ moment of speech) reference points/deictic centers, I propose a distinction between **main** vs. **auxiliary** reference points. Such distinction seems to have formal manifestation in Russian (and, probably, in other languages) in the choice of temporal adverbials of the type *sej čas/v nastojaščij/dannyj moment, dva časa nazad* vs. adverbials of the type *togda/v tot moment, za dva časa do ètogo*. Cf. two illustrations in the examples (9)–(10) from Russian.

Examples

(1) *My uncle lives here*

(includes the component 'hereo' = 'close to the speech act').

(2) *John' s working at the moment (I' ve just called him)*

(includes the component 'nowo' = 'at the time of speech act').

(3) *It' s cold and dull*

(includes the component 'egoo' = 'the speaker of the speech act').

(4) *...A month later John moved to the city and got a job. Only here he finally felt a sense of relief*

('here₁' = 'in the current location of the protagonist, in the city').

(5) *...John looked out of the window. Now/at the moment the sky was cloudy and it was snowing*

('now₁' = 'in the current moment of the narrative/protagonist').

(6) *...I wasn' t at home. John and Mary were sitting in the kitchen. It was cold and dull*

(in this case 'ego₁' is identified with the current protagonists, John and Mary, not with 'I').

(7) RUSSIAN: *Segodnja v polden' ključi (eščě) ležali na stole.*

'Today at noon the keys **were (still)** on the table'

(→ synchronous secondary reference point).

(7') RUSSIAN: *Segodnja ključi vsě utro (???eščě) ležali na stole.*

'Today the keys **were** on the table all morning'

(→ retrospective primary reference point, "limitative" interpretation).

(8) RUSSIAN: – *Petja, ty budeš sup? – Net, spasibo, ja (*eščě) el.*

'— Petja, do you want some soup? — No, thanks, I've [already] eaten'

(→ retrospective primary reference point, experiential interpretation).

(9a) RUSSIAN: *Smotri, (ok sejčas) uže svetaet.*

'Look, it's already **dawning (now)**'

(the **main** primary reference point ('nowo') is used).

(9b) RUSSIAN: [Narrative:] *...Petja vygljanul v okno. (okSejčas) uže svetalo i bylo očen' krasivo...*

'Petja looked out of the window. It **was** already **dawning (now)** and it was very beautiful'

(the **main** secondary reference point (the "narrative now"; 'now₁') is used).

(9c) RUSSIAN: *Segodnja utrom na nebe merciala zvezda. (*Sejčas / okTogda / okV tot moment) uže svetalo i bylo očen' krasivo.*

'This morning a star was shimmering in the sky. It **was** already **dawning (at that time)** and it was very beautiful'

(an **auxiliary** secondary reference point ('now₁') is added to the main primary reference point ('nowo'), which is still present in the discourse).

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FORWARD TO THE PAST? - Space and Time in Khanty Language and Gesture.

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The fact that languages consistently conceptualize time through space is part of fairly uncontroversial typological universals. Within this metaphorical extension from space to time, languages normally code the speaker as facing the flow of time and approaching events, thus future is conceptualized (universally) as in front (Núñez, Sweetser, 2006). In the majority of the cases, the events are viewed as approaching the speaker-observer, thus future events are «in front», while the past events are «behind».

Co-gesturing is a universal phenomenon, which adheres to the same principles of conceptualization and metaphorization as the spoken language (McNeill, 1992; Sweetser, 1998; Smith 2003; Núñez, 2006). Moreover, it was repeatedly noted that co-gesturing does not merely duplicate, but rather supplements the spoken language, and as such can be a valuable empirical resource for the study of cognitive processing of abstract notions, perhaps, even as leading data register (Kendon 1982; McNeill, 1992; Iverson & Thelen, 1999; Mayberry & Jaques, 2000; Kita & Essegbey, 2001; Núñez & Sweetser, 2001; Goldin-Meadow, 2003). Spatial co-gesturing is directly iconic as it operates in the spatial domain: speaker's body serves as a reference point in space in relation to other objects/bodies; either at the moment of speech, or construing a situation different from the moment of speech (cf. (Haviland, 1993; Levinson, 2003)).

Eastern Khanty consistently demonstrates the metaphoric extension «space» - «time», both in the domain of lexical means (postpositions, adverbs, case system) (cf. examples (1-3)), and in the domain of co-gesturing (cf. picture (1-2) and (3-4)). Following the methodology for the analysis of co-gesturing in Ayamara (Núñez & Sweetser, 2006), video recordings of Eastern Khanty speech events were used in the study. One consultant was selected for the pilot phase, who consistently displayed co-gesturing across genres and registers, and in code-switching. Spontaneous spatial and temporal co-gesturing was registered in the data within the spoken language contexts, and later cross-checked in elicitation, blind to the exact controlled parameters, study objective and hypothesis.

Overall, co-gesturing is quite frequent, with spatial gestures (cf. (Pic.1) and (Pic.2)) dominating over temporal, and when temporal, gestures prevaillingly refer to the plain of the Past (cf. (Pic.3) and (Pic.4)). In temporal gesturing, prevailing majority are within the sagittal plain (<front-back>). In sagittal gestures, the majority manifest the type <Past=In front> (cf. (Pic.3-Pic.4) and (Pic.5-Pic.6)), while the minority are of the type <Future=Behind> (cf. (Pic.7)-(Pic.8)). The types <Past=Behind> and <Future=In front> are not registered. Temporal gesturing co-occurring with an adverb *il'/* 'fore, front', both for spatial and temporal domains, is signified by hand motion forward from the corpus (also registered in code switching, co-occurring with the Russian lexemes *remäl* 'time' or *lvperedl* 'forward' (cf. (Pic.5) and (Pic.6)). Both, the spoken lexical means (adverb *il'/*) and the gestured 'forward', are used for coding absolute (with a deictic center in "now") and relative (without a deictic center) temporal relations. Similarly to Ayamara observations (Núñez & Sweetser, 2006: 438-439), Eastern Khanty demonstrates the use of a dynamic conceptual metaphor, preferring specifically the construal «Known=Visible» thus «Past=In front» to the construal «Path covered=Known» thus

«Past=Behind». The preference is likely associated with the salience within the system of the evidential status of the information. In Eastern Khanty, the key TAM opposition is between Future-Present and Past (Tereskin 1961; Gulya 1966; Filchenko 2007), that is a typical irrealis-realis dichotomy (Filchenko 2007: 254). Availability in the Eastern Khanty system of 4 Past Tense forms combining the temporal and evidential senses (Remote Definite Past, Remote Indefinite Past, Proximal Definite Past, Proximal Indefinite Past) testifies to the importance (manifest in the obligatory grammatical coding) of the temporal-evidential status of information, which maybe seen as an evidence of the visual conceptualization of knowledge (Núñez & Sweatser, 2006: 440-441).

The study is its early stages and awaits further methodological and empirical development. The prospects of the project include a more exhaustive inventory of the spatial and temporal coding means, both lexical and gestural, as well as the aspects of their individual and coordinated distribution. Naturally, extension of the empirical data, both genetically and areally is anticipated.

1) Khanty, Vas. (Filchenko 2007: 103):

- a) *ämp qat-nə aməs-wəl*
dog house-LOC sit-PRS.3SG
'dog sits in the/a house'
- b) *toχoj-nə ... men-s-əw*
spring-LOC go-PST2-1PL
'Once in spring..., in spring we went ...'

2) Khanty, Vas.:

- a) *köt-äm pirt-a nirimtä-s-im*
hand-1SG back-ILL pull-PST2-1SG/SG
'I pulled my hand back' (Filchenko 2007: 204)
- b) *jöχ mən-m-äl pir-nə ...*
3SG go-PP-3SG back-LOC
'After he went away... ' (Gulya 1966)

3) Khanty, Vas.: (Filchenko 2007: 179):

- a) *il'ə-pä äjri-nä jaχəntə-s-əm*
fore-ALL canoe-COM paddle-1PST2-SG
'I am paddling forward in my canoe'
- b) *köröχ il'-ən jöχ-nämə ran'it' werä-χən*
eagle fore-LOC 3SG-RFL wound do-PST0.3SG
'Earlier, the eagle got himself wounded'

Pic 1.



il'-ə-pä
fore-EP-ILL
'forward'
'I am moving on forward in my canoe'

Pic 2.



il'-ə-pä
fore-EP-ILL
'forward'

Pic 3.



il'-län-nə
fore-time-LOC
'long time ago'

Pic 4.



il'-län-nə
fore-time-LOC
'in the old days, before'
'not long ago there were more people in the village'
'awhile ago there was a school in the village'

Pic 5.



il'-remä-nə
fore-«time»-LOC
'long time ago, before'
'long time ago there lived warriors here'

Pic 6.



(Russ.) *раньше*
'earlier'
'after that'

Pic 7.



pir-nə
back-LOC
'after that, later'

Pic 8.



pir-nə saχi
back-LOC along

Iamitives and beyond: Towards the typology of phasal polarity

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The term “iamitive” has been coined in [Dahl & Wälchli 2013] for grammatical markers roughly equivalent in function to the English adverb *already*. Despite its fairly short history, use of this label has already suffered from inconsistency and confusion the linguistic terminology is so notorious for, cf. treatments in [Olsson 2013; Vander Klok & Matthewson 2015; Brill 2016].

There also seems to be no consensus as to the relations between iamitive and perfect. In [Dahl & Velupillai 2005], grams representing the former are lumped together with those stemming from grammaticalization of the verb ‘to finish’, the resulting class outnumbering European-style perfects formed with the help of ‘be’- and ‘have’-auxiliaries. While [Olsson 2013] posits the iamitive as a universal gram type in its own right, [Dahl 2015] challenges this proposal, pointing out that with respect to their distributional properties, identified iamitive markers in the languages of the world do not form a coherent cluster that would allow separating them from other perfect-like grams; in particular, iamitives studied in [Olsson 2013] fall into two distinct types, the “Philippine” and the “Indonesian”, the latter displaying more proximity to European-style perfects than to the former.

We suggest that it is advantageous from the theoretical point of view to treat iamitive as a gram type distinct from perfect. Part of the confusion is due to the fact that both have been viewed through the lens of ‘current relevance’, the latter notion being somewhat vague. While the classic definition of perfect on the basis of current relevance [Dahl & Hedin 2000; Dahl & Velupillai 2005] captures the essence of the category, it is inaccurate in the sense that it doesn’t specify reference and truth conditions of a perfect-marked form.

Following the perfect state approach (cf. [Schaden 2013] for bibliography, critical overview and alternative formalisms), we assume that perfect introduces an underspecified state that holds at reference time and bears a certain relation to the eventuality denoted by the predicate. Iamitive, on the other hand, simply adds the presupposition that the eventuality denoted by the predicate did not hold at some inferable point prior to the reference time. Unlike perfect, it does not introduce any new subevents into the assertion and, in fact, doesn’t shift reference.

By the same logic, we believe it potentially misleading to lump iamitives together with “perfects” derived from the verb ‘to finish’ [Dahl & Velupillai 2005; Dahl 2015]. While this practice is supported by the generally accepted etymology for Mandarin sentence-final *le*, one of the better known iamitive grams (cf. [Xiao & McEnery 2004: 92] and references therein), verbs meaning ‘to finish’ often grammaticalize into terminative or completive markers. Both these types of meanings are orthogonal to the standard contribution of iamitive, which in itself does not affect the right endpoint of the situation nor its incremental theme.

Rather, iamitive represents phasal polarity [Van Baar 1997], which should be recognized as a separate subdomain of aspect, concerned with presuppositions of the situation being true or false at certain points along the time axis. This subdomain minimally

includes four meanings: 'already', 'still', 'not any more', 'not yet' (cf. [Veselinova 2015] on the latter), which, as crosslinguistic data show, do not necessarily form a unified grammatical category in a given language.

As empirical arguments for disentangling phasal polarity meanings from perfect, we present own data from Adyghe, where morphological Continuative ('still') interacts with Preterite (which in this context receives perfect reading), and Paraguayan Guaraní, where lamitive suffix can combine in a compositional manner with Completive suffix (derived from the verb 'to finish').

We conclude by proposing preliminary notes for the formal and semantic typology of phasal polarity. On the semantic side, the most crucial parameters of cross-linguistic variation are (a) whether phasal polarity markers are generalized beyond temporal-aspectual domain (cf. Krifka's [2000] analysis of *still* and *already* in terms of ordering of focus alternatives); and (b) whether use of phasal polarity markers is affected by speaker's expectations, cf. [Olsson 2013: §4.3].

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Conceptualization of space, time and numbers examined through case markers in Malayalam

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This paper looks at conceptualisation of space, time and numbers studied through the distribution of oblique case markers in Malayalam. First, the distribution of Locative, Ablative and Lative Case markers in Malayalam is analysed. At first look, it is evident that these Cases are manifested morphologically in at least two ways each, and within each pair of these markers, the members are seen to lack interchangeability and carry different semantic notions in them. Further inquiry shows that the two different sets of Case markers for each of these Cases have different semantic encodings in spatial expressions and also occur in complementary distribution in certain constructions related to time and numbers.

By investigating the motivation for employing two sets of Case markers, the feature by virtue of which these two sets differ from each other is hypothesised to be 'contact', i.e., one set of markers imply contact while the other set does not imply contact in spatial constructions (both sets are used in such sentences). 'Contact' need not always imply physical contact; in temporal and numeral constructions, it is less lucid as to what exactly is the semantic content that distinguishes the two sets as only one set is used, but the semantic information is something similar to that of physical contact; at times 'contact' can be understood as 'inclusion' (as opposed to 'exclusion'). For the sake of simplicity, the term 'contact' will be used till the exact nature of the semantic encoding is deconstructed. The aim of this paper is to further this hypothesis and examine the parallels between spatial, temporal and numeral notions with respect to how they semantically encode the concept of 'contact' in language. The distinction in LOC, ABL and LAT Cases between Case markers that imply [+contact] and those which imply [contact] shows that worldview cognition about 'contact' in unidimensional concepts like physical trajectory, time and number line is reflected in these Case markings.

There are in principle three hypotheses with respect to time and language a) temporal expressions are metaphorical extensions of spatial expressions b) the reverse of (a), c) The two are independent. Various experiments in cognitive science suggest that our mental representations of things we can never see or touch may be built, in part, out of representations of physical experiences in perception and motor action and this forms the basis for hypothesis (a): the idea of "spacetime metaphor" that was popular. However recent findings in neuro and cognitive science show that time is a distinct and real experience and this approach (hypothesis c) has shaped recent study about time and language (Evans 2004). In this paper, attempts are made to deconstruct the disjunction and overlapping between the rudimentary semantic notions encoded in spatial expressions and temporal expressions. Time is analysed as an autonomous concept that shares certain conceptual features with space thereby motivating parallels in linguistic expressions about the domains of space and time but nevertheless differ with respect to certain other conceptual features, giving rise to constructions that are exclusive to either of the domains.

Data:

Table (1) LOC, ABL and LAT Case markers

Case	[+contact]	[-contact]
LOC	-il	-kkal
ABL	-il <u>nin̄n̄ə</u>	<u>mūtal/ tōttə</u>
LAT	-ilekjə	uare

Spatial expressions

kiŋnatt-il ue am un̄də well-LOC[+contact] water be.PRES 'There is water in the well'	avan avaldə ka:l-kkal ue:nu 3.M.sg 3.F.sgGEN leg-LOC[-contact] fall.PST 'He fell at her feet'
ua:til-il cētal un̄də doorLOC[+contact] termites be.PRES 'There are termites on the door'	avan ua:til-kkal nilkūnu 3.M.sg door-LOC[-contact] stand.PRES 'He is standing at the door'
na:n ui:t̄t-il nin̄n̄ə nādānu 1.sg.NOM houseLOC ABL[+contact] walk.PST 'I walked from the house'	na:n ui:dū tōttə/mūtal nādānu 1.sg.NOM house.NOM ABL[contact] walk.PST 'I walked from the house'
na:n ui:t̄t-ile:-kjə nādānu 1.sg.NOM houseLAT[+contact] walk.PST 'I walked to the house'	na:n ui:də uare nādānu 1.sg.NOM house LAT[-contact] walk.PST 'I walked till the house'

Temporal expressions

* aŋjə maŋi-y-il nin̄n̄ə kādā tūrakkum five o'clock-LOC ABL[+contact] shop open.FUT 'Shop will open from five o'clock'	aŋjə maŋi tōttə/ mūtal kādā tūrakkum five o'clock ABL[-contact] shop open.FUT 'Shop will open from five o'clock'
* e:ɣə maŋi-ile:-kjə kādā tūrakkum seven o'clock LAT[+contact] shop open.FUT 'Shop will open till seven o'clock'	e:ɣə maŋi uare kādā tūrakkum seven o'clock LAT[-contact] shop open.FUT 'Shop will open till seven o'clock'

Numeral expressions

<p>na:n onnil ninne enji 1.sg oneLOC ABL[+contact] count.PST 'I counted from one'</p>	<p>na:n onnu mutal/ totte enji 1.sg one ABL[-contact] count.PST 'I counted from one'</p>
<p>*na:n nu:r-ile:kje enji 1.sg hundredLAT[+contact] count.PST 'I counted till hundred'</p>	<p>na:n nu:re vare enji 1.sg hundred LAT[-contact] count.PST 'I counted till hundred'</p>
<p>pat-il ninne a nje kurakje ten-LOC ABL[+contact] five subtract.IMP 'Subtract five from ten'</p>	<p>*patte totte/mutal nje kurakje ten ABL[-contact] five subtract.IMP 'Subtract five from ten'</p>
<p>ranq-ilekje nje ku:tte twoLAT[+contact] five add.IMP 'Add five to two'</p>	<p>*ranq vare nje ku:tte two LAT[-contact] five add.IMP 'Add five to two'</p>

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When time comes across: Finnish VASTAAN gram and "two-Mover Constraint" (Moore 2014) in motion metaphors of time

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Metaphors of time can be considered as one of the hotspots in current Cognitive Linguistics. Within couple of decades more or less intensive research has been done to expose which kind of systematic mappings between space and time exist building conventionalized metaphorical patterns in language generally and in individual languages particularly (see Bender & Beller 2014 for an excellent review).

Along with possibilities, it is also essential to figure out the limits of analogies. In respect of temporal metaphors, Moore's (2014a: 376) so called "two-Mover Constraint" comes into question:

Both [temporal] entities [TEs] move in the same direction, and *in-front* is understood as 'earlier than'. I.e. the linguistic expression in question instantiates SEQUENCE IS RELATIVE POSITION ON A PATH (see below).

Representative examples compatible to the constraint are those which construe TEs in sequences analogically as physical entities in order on a path, e.g. *Spring follows winter*, *Winter is ahead of spring*, *A reception follows the talks*. As the previous examples (i) map onto successive TEs to the absolute frame of reference, and (ii) TEs move to the same direction in this frame, and (iii) they are arguments of the same predicator, they apply fully conditions of the constraint (ibid.). In Moore's (see e.g. 2014b: Ch. 6) terminology these represent field-based moving time metaphors with neutral perspective, i.e. without ego's viewpoint.

Now, in this paper I will test and study the "two-Mover constraint" with Finnish *vastaan* gram ('in opposition to, towards'). Proper counterexamples of the constraint would be expressions like **Kevät tulee talvea vastaan* 'Spring comes across winter', which are ungrammatical (as in English, too) even though somehow understandable. However, (1) is an apparent counterexample (also Moore 2014a: Ch. 4):

- (1) *Toinen tärkeä viikonloppu [- -] tulee vastaan jo vuoden päästä keväällä [- -].* (www)
'Another important weekend comes across [us] already after a year in spring.'

Example (1) brakes conditions (i) and (ii), but there are still, metaphorically, two possible movers (TE and ego) moving against each other. Thus, my main objective is to figure out which kind of meanings and interpretations time coming across induces. Main research questions are as follows: 1) what might be the physical motional base behind temporal *vastaan*, 2) how temporal *vastaan* might be an apparent counterexample to the "two-Mover Constraint", and 3) what objections might be stated against the constraint itself? I will use data from internet.

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Imperfective suffix for the bi-aspectual borrowed verbs in Russian

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This presentation aims to analyze the imperfective suffix *-yva-* for the bi-aspectual borrowed verbs in Russian. We start with 200 bi-aspectual borrowed verbs and analyze their suffixed and prefixed forms. The main focus is made on the suffixation, because the Russian aspectology and word-formation have paid much more attention to prefixation due to its higher frequency (Čertkova and Čang 1998, Remčukova 2016 and many others), but little has been described on this issue. The empirical data are taken from the Russian mass media database “Integrum”.

Studies on the affixation of borrowed verbs in Russian, language with a rich derivational system and a highly grammaticalized aspect category, reveal lexico-grammatical tendencies and the speaker’s involvedness in the word-formation process due to a dynamic nature of the affixation. Borrowed verbs are internationalisms with the suffixes *-irova-* (88,5% of 200 verbs) or *-ova-* (11 %). In terms of aspectual pairing, bi-aspectual borrowed verbs tend to a) remain bi-aspectual (*likvidirovat’_{bi}* ‘liquidate’), b) perfectivized by prefixation (*patentovat’_{bi}* → *zapatentovat’_{pf}* ‘patent’), c) imperfectivized by suffixation (*organizovat’_{bi}* → *organizov-yva-t’_{ipf}* ‘organize’).

Prefixation derives a new perfective lexeme which further obtains its imperfective counterpart by means of the secondary imperfective suffixation with *-yva-* (*čitat’_{ipf}* ‘read’ → *pere-čitat’_{pf}* → *pere-čit-yva-t’_{ipf}* ‘reread’). The same holds for the borrowed verbs (*pere-organizovat’_{pf}* → *pere-organizov-yva-t’_{ipf}* ‘reorganize’). This operation is necessary to denote an iterative or durative situation by the imperfective verb. However, the imperfective suffixation is technically available only when the stress falls on the last *a* of the suffix *-ova-*, which excludes the possibility to imperfectivize verbs with the suffix *-irova-* (the stress always falls on *i*).

Our data show that while all the 200 verbs get at least one of all the 20 prefixes, the imperfective suffix is observed only among the verbs with the suffix *-ova-* (21 of all the possible 22 verbs). Most of them, however, seem to avoid the imperfective suffixation, thus preferring to remain bi-aspectual or to be perfectivized by prefixation (quantitative data being processed). When the verbs are prefixed, the secondary imperfective suffix is attested (*pere-attestov-yva-t’* ‘re attest’).

As to verbs with *-irova-*, our corpus attests occasionally derived imperfective forms (*likvidirov-yva-t’* ‘liquidate’), but does not witness examples of the secondary imperfective suffixation (**doilljustrirovyvat’* ‘finish to illustrate’). This formal restriction apparently leaves prefixed verbs with *-irova-* perfective. However, they may function as imperfective, often in coordination with other imperfective native verbs with the same prefix: (...) *nedo-ponimali_{ipf}*, *nedo-ocenivali_{ipf}*, *nedo-prognozirovali*(...) ‘they didn’t enough understand_{ipf}, evaluate_{ipf} and predict’, *Stat’ju* (...) *do-pisyvaem_{ipf}* i *do-illjustriruem*. ‘We are finishing to write_{ipf} and illustrate the article’, or in metalinguistic comments: (...) *každyj do-dumyval_{ipf}* (*do-konceptualiziroval*) *ee kak mog* ‘everyone thought out_{ipf} (conceptualized) it as far as he could’. Prefixes in these cases serve not only to perfectivize the verb, but also to assign such quantitative and temporal meanings like reflexive (*pere-*), diminutive (*po-*) or terminative (*do-*). The absence of the

technical means for imperfectivization violates the syntactic rule that phasal verbs connect only with the imperfective verb: (...) *načali pereprivatizirovat'* 'they started to reprivatize'. The aspectual distinction in the verbal paradigm may be neutralized. For example, the present active participle is formed from the imperfective verb, but: *pritorgovyvuščij_{pf} investor ili priinvestirujuščij trejder* 'investor also capable of trading/trader also capable of investing'. Thus verbs with the suffix *-irova* remain bi-aspectual even after the prefixation and, in this sense, they take a marginal place in the Russian aspectual system.

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Why Monday is not “in front of” Tuesday?

On the semantics of English and Finnish adposition used in SEQUENCE IS RELATIVE POSITION ON A PATH motion metaphors of time.

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My presentation analyzes English and Finnish adpositions conventionally used in motion metaphors of time, such as *Christmas is ahead of us*, *We have left the worst behind us* (MOVING EGO, ME), *We open a new store ahead of Christmas* (SEQUENCE IS RELATIVE POSITION ON A PATH, SRP; Moore 2014), as well as structurally and semantically related but non-metaphorical temporal expressions such as *New Year's is after Christmas*, (“pseudo-SRP”; cf. Moore 2014). Projective adpositions and constructions that might be expected to be used in the metaphors but are not are likewise considered, e.g., **Monday is in front of Tuesday*, **Tuesday is behind Monday* (SRP). Particular attention is paid to spatial-motion uses of the adpositions. It is argued that the English *ahead of*, which has a wide range of uses in the metaphors, systematically triggers the **motion-asperspective** frame of reference (cf. Svorou 1994, Tenbrink 2011) where ‘front’ is adjacent to the direction where the moving Ground is headed. In contrast, *in front of* has a strong association with the **standard** (intrinsic or relative) frames of reference, and this feature constrains its use in the metaphors. *Behind* is a multi-functional preposition used in scenarios of stationariness and motion alike, while *after*, in its spatial use, is a dedicated two-mover expression with the functional meaning of ‘pursuit’ (*The cat is running after the mouse*; cf. Tyler and Evans 2003). These English prepositions are then compared with their Finnish counterparts *edessä* ‘in front of’, *edellä* ‘ahead of [two-mover]’, *takana* ‘behind [standard]’, *jäljessä* ‘behind [two-mover]’ and *perässä* ‘after [spatial, two-mover]’. As the result of the comparison it is argued that adpositional constructions used in SRP metaphors grammatically trigger the motion-as-perspective frame of reference and designate a stable two-mover arrangement where the order of the movers is not subject to change.

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Comparing parts of day in different languages – a corpus-based semantic typology

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There hardly exists a language lacking expressions for different parts of the day. However, how exactly the day is divided into parts, varies in intriguing ways. This presentation describes a project started at the University of Tampere, aimed at forming a semantic typology of what are the most frequent expressions used in referring to different parts of the day in Finnish, Russian, Swedish, English, German, French and Spanish.

Charles Fillmore (1975) uses the term positional expression for describing the named members of certain repeating temporal sequences such as the week (consisting of the positional expressions Monday, Tuesday etc.). Developing this terminology further, we suggest that certain sequences can be referred to by different sets of positional expressions. For the day, we separate the following four sets of positional expressions: 1. The actual time units, such as the English words morning, noon, afternoon etc. 2. Expressions constructed on the basis of certain meals, e.g. after lunch, before tea and others. 3. Expressions based on the amount of light or directly on the position of the sun, e.g. at dawn, till dusk in English. 4. The exact numeric times (at five o'clock, at 12:35 pm).

Our first objective is to compare the use of these four sets in the seven languages included in the study. In some of the studied languages the first set seems to contain more expressions than in others: as noted by L.S. Barhudarov (1969), Russian, for instance, lacks a straightforward equivalent for the English afternoon. These kind of differences might be accounted for by the hypothesis that the languages with less expressions in set 1 would use the other three sets more frequently.

On the other hand, the differences in the sizes and members of set 1 might be due to the fact that the scopes of the core expressions for parts of day vary in different languages. Olaf Jäkel (2011), for instance, notes, that the English word morning has a wider denotational range than the German Morgen. These kind of remarks give rise to our second objective, which consists of comparing the extents of the different expressions in set 1.

The research data for the study is gathered by compiling for each of the examined languages a corpus of travel blogs. This particular text type has been chosen based on the assumption, that because of the diary-like nature of travel reports, the writers refer to different parts of the day frequently. In addition, travel blogs form a relatively coherent genre that is actively used in all of the studied languages.

The project started as a comparison of Finnish and Russian, for which the corpora have already been compiled and used for the actual analysis. The current focus of the project is at compiling the corpora for the other five languages involved. The quantitative, internet-based approach adopted makes adding further languages to the project fairly straightforward, and new contributors working with, for instance, languages outside the Indo-European language family are welcomed.

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Preterit and imperfect of the verb “to be” in Tocharian: Contextual analysis against “fine semantics”

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Tocharian languages (A and B), known by the manuscripts of 5th-8th cc. AD, have two past tenses, traditionally named as “imperfect” (Ipf) and “preterit” (Pt). According to W. Thomas (1957) they correlate as an imperfective and a perfective action in the past. This opinion is shared by Ch. Batke (1999), M. Malzahn (2010) and I. Seržant (2015). Another interpretation of Pt and Ipf is suggested by G.-J. Pinault (2008: 569), who assumes that they describe a “principal” and a “secondary” action in the past respectively. However as it was shown in (Itkin 2014), several Tocharian A forms accounted for being imperfects should be reinterpreted as preterits due to formal and syntactical causes, and vice versa. Thus, the intended semantics can be attributed only for the forms which are already known to be Ipf or Pt. According to Itkin (2014: 28), “the rules for choosing between the imperfect and the preterit should be considered unknown”.

The grammaticalized forms of the verb A *nas-* / B *nes-* “to be” represent a special case in the problem of Tocharian Ipf and Pt. Both its Ipf and Pt occur as a copula with different parts of speech. It is claimed that Ipf (the AB stem *ṣ-*) describes a lasting state in the past, while Pt (the AB stem *tāk-*) has an ingressive meaning (Thomas 1957, Batke 1999). Nevertheless, Malzahn points out (2010: 639) that Pt *tāk-* “shows the same semantics as *nes-/nas-* „be” [...], on the other hand, it also can have the meaning „become””. At the same time, possible differences in lexical or grammatical compatibility of Ipf and Pt haven’t been considered at all, while in fact such differences can be found at least in constructions with non-finite verbal forms:

1. With gerundives (verbal adjectives meaning obligation or possibility) the Ipf of “to be” is normally used. In Tocharian B no exceptions from this rule are attested, in Tocharian A only verbs of perception comprise an exception: *lāk-/pälk-* «to see», *klyos-* «to hear» and *kälp-* in the meaning «to find, to percept» (while the gerundive of *kälp-* in its more common meaning «to receive» can occur with Ipf as well).
2. With past participles (PP) a complementary distribution between Ipf and Pt of the verb “to be” can be observed at least for Tocharian A. The Pt occurs in the following cases:
 - with PP of the verbs *käm-* «to come» and *kän-* «to happen », which don’t have finite Pt forms (where a synthetic Pt is expected by general rules);
 - in the classical passive construction with an explicit or implicit agentive complement, cf.: (h)[ai] *ṣokyo nu kakätwu tākā yamtrācāreṃ kăṣṣinā* “I have been terribly ridiculed by the master mechanic!”In all other cases Ipf forms are used.

In contrast to hypothetical semantic differences, which are elusive and hard to verify on the material of ancient texts, contextual differences like those described above are directly observable. They can be proved or rejected if more manuscripts are published and seem to show a better correspondence to the real state of things.

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How learnable is Russian aspect?

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We present two studies of corpus data that can model the learnability of Russian aspect for L1 and L2 learners. In Russian, all verbs are either perfective or imperfective, and the use and meaning of aspect is a topic of long-standing debate (cf. Janda 2004 and Janda et al. 2013). It is unclear how children acquire this grammatical distinction in L1 (Stoll 2001), and it is clear that L2 learners struggle with this grammatical distinction (Martelle 2011).

A challenge for L1 learners is that while Russian employs abundant morphological markers for aspect, this marking is not regular enough to reliably identify verbs as perfective or imperfective. Simplex verbs are usually imperfective (like *pisat'* 'write'), but can be perfective (like *dat'* 'give'). Prefixed verbs that do not have a secondary suffix are usually perfective (like *na---pisat'* 'write'), but can be imperfective (like *pre---obladat'* 'prevail'). Furthermore, sometimes one and the same verb has both perfective and imperfective interpretations, such as biaspectual verbs (like *annulirovat'* 'annul') and some prefixed motion verbs (like *s---xodit'* which can be a perfective verb meaning 'go someplace and come back' or an imperfective verb meaning 'go down').

We ask to what extent it is possible to sort Russian verbs according to their aspect by relying only on the distribution of grammatical forms, using a method we call "grammatical profiling" (cf. Janda & Lyashevskaya 2011). What we do is to collect the grammatical profile (distribution of forms in past tense, present tense, infinitive, imperative, etc.) for each verb in a corpus and then see how a multiple correspondence analysis sorts out the verb for the mathematically constructed factor ("Factor 1") that accounts for the largest portion of the variance in the data. We find that Factor 1, with some deviations, captures the imperfective vs. perfective distinction. In other words, given only the distributions of forms, when the statistical analysis sorts verbs into "+" vs. "---" values of Factor 1, it turns out that this distributions largely corresponds to the perfective vs. imperfective distinction. This suggests that it might be possible to deduce the aspect of a verb from the statistical distribution of its forms, and Goldberg (2006) has shown that learners are indeed sensitive to such distributions.

For L2, we look at the distribution of contexts that are offered in textbooks to guide students of Russian in choosing perfective vs. imperfective (Reynolds 2016: 100---104). We see that while these guidelines are quite reliable (95---98% of such contexts indeed have the predicted aspect in a corpus), they are unfortunately also rather rare (only 2---3% of verbs in a corpus occur in the contexts specified by the textbooks), so they are not very useful for L2 learners. The problem is that many verbs occur in contexts where either aspect can appear and selection is based on speaker construal. We intend to compare the performance of native speakers, machine learning, and L2 learners in predicting the aspect of verbs in corpus examples.

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Latvian origin verbal prefixes as perfectivity markers in Livonian

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This paper discusses how perfectivity is manifested in spoken Courland Livonian language by means of Latvian origin verbal prefixes and to what extent the use of these verbal prefixes to express perfectivity in Livonian is similar to that of Latvian. I will argue that the frequency of the occurrences of the verbal prefixes seems to correspond with the capability of the prefix to form perfective verbs. This paper offers a contribution to a part of Livonian grammar that has been relatively little-known, morphosyntax.

In Latvian, there are 12 verbal prefixes (*aiz-*, *ap-*, *at-*, *ie-*, *iz-*, *ne-*, *no-*, *pa-*, *pār-*, *pie-*, *sa-*, and *uz-*); all of them, except the negative *ne-*, are used as perfectivity marker and have also been loaned to Livonian. The verbal prefixes are the primary way to express perfectivity in Latvian as perfective verbs are derived from imperfective verbs with prefixation. The prefix often simultaneously expresses perfectivity and also alters the lexical meaning of the verb spatially, temporally, or quantitatively. (Endzelin 1920: 739; LVG § 1182, § 1187, § 1188.)

In this paper I analyze the use of the Latvian origin verbal prefixes in Livonian based on data that is derived from unpublished recordings and published written material representing spoken Livonian. The analysis shows that in Livonian verbal prefixes may mark perfectivity, they may carry additional lexical meaning, or they may also be used for emphasizing or defining the meaning of the verb. Unlike in Latvian, only a part of verbal prefixes are used as perfective markers in Livonian. This applies particularly to the most frequently used prefixes (*no-* ~ *nuo-*, *iz-*, *sa-*, *uz-*, *ie-*, *ap-*), while infrequent prefixes usually only alter the lexical meaning of the verb. Example (1) is a typical case of the perfective use of a verbal prefix:

- (1) *un sie sār-stō sīe-stō tegīž iz-te-i pastāli*
and it.GEN leg-ELA it-ELA again ASP-make-PST.3SG pastāl.PART.PL
'And the leg of the shoe was made into a *pastāl*-shoes' (PK)

The use of the verbal prefixes in Livonian generally corresponds with the Latvian use: They can be attached to various types of verbs and often they both express perfectivity and alter the lexical meaning of the verb as their Latvian equivalents. One prefix, *no-* ~ *nuo-*, however, seems to be developing a use divergent from Latvian use: It acts as a perfective marker also in cases, which do not have a counterpart in Latvian. This is probably a result from the high frequency of the prefix *no-* ~ *nuo-*. This prefix might even be considered as a default perfectivizing prefix in Livonian, whereas in Latvian the prefix does not seem to have the same function.

The perfective use of the verbal prefixes in Livonian is not in any way near the extent than in the case of Latvian. Nevertheless, they have a remarkable role in expressing perfectivity in Livonian in addition to the object case alternation and different types of

adverbials. The use of verbal prefixes also distinguishes Livonian from its closest cognate languages, other Finnic languages, which employ primarily two aforementioned ways as a main means to express perfectivity.

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Modal Resultatives

A third use, the Military Imperative construction, consists of *pa'al* in second person and an explicit temporal upper-bound. It communicates commands with a resultative meaning:

3.

4. shloshim shniyot *hikaftem* et ha-ma"ahal!
thirty seconds *encircle.PST.2.PL.M ACC DEF-encampment*
„Be in a state of having run around the encampment in 30 seconds!“

Theoretical Issues

The three constructions present a conundrum. Although they employ past tense morphology, they refer to future events exclusively. Nonetheless, this choice is motivated, I argue: Hebrew, a *non-habere* language (Tobin 1997: 1856), lacks the auxiliary *to have*. Speakers have therefore recruited past tense inflections to convey future anteriority, i.e., Future Perfect. I propose that these constructions have grammaticalized through a sequence of gradual changes to the core meaning of *pa'al*. Initially, *pa'al*'s „absolute past“ meaning eroded through its use as a *relative past* marker. Such uses were accompanied by inferences of immediacy¹ and anteriority. Future anteriors enabled future resultative uses.² Finally, certain resultative constructions acquired modal (imperative) meanings as well:

5. Absolute past → Relative past → Future anterior → Future resultative → Modal resultative

The *layering hypothesis* predicts that older forms and meanings may very well persist alongside newer forms and meanings synchronically (Hopper and Traugott 2003: 124). Indeed, every reconstructed stage in (5) is contemporarily productive in Hebrew.

Interestingly, Bybee et al (1994: 81-87) and Hengeveld (2011: 17) propose a unidirectional grammaticalization path: resultative → anterior → tense. Note, however, that Hebrew's anterior constructions must have evolved in the opposite direction. I therefore propose a bidirectional grammaticalization path whereby tense markers can become anteriors as well.

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¹ E often "leads up to" (Declerck 2006: 125), or "abuts" (De Swart 2007: 2278) R.

² Both involve an event and a subsequent reference point (Hengeveld 2011: 13).

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The concept TIME in the Middle English poem Sir Gawain and the Green Knight

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The concept TIME can be considered as one of the essential concepts for English. That's why we assume that studying this issue is crucial for English historical linguistics as it helps to get an idea of formation of this concept and to understand more clearly some processes in the history of English.

Middle English (ME) period is of great importance for the development of the concept TIME. Thus, in this period the word *tīme* became more frequent than the word *tīde* which had been the most frequent temporal noun in Old English. The reasons for that frequency shift can be the following: 1) influence of other languages; 2) usage of *tīme* in authoritative texts; 3) dialectic usage. For instance, in *Wycliffe's Bible* the word *tīde* is used only 12 times and *tīme* is used more than 2,000 times.

The aim of this research is to examine different ways of expressing the concept TIME in ME. To do it we have chosen the poem *Sir Gawain and the Green Knight* as it is a great example of ME poetry and provides us with a clear understanding of the concept TIME in this period.

To analyse the text we suggest an idea of temporal field. Temporal field of a text is a set of parts: lexical part (temporal words), syntactical part (tenses), narrative part (inner timeline of a text) and conceptual part (cultural ideas of **time** in a text). In *Sir Gawain and the Green Knight* we can examine them all.

The lexical part of the poem consists mostly of names of holydays. There are also abstract temporal nouns, nouns naming parts of a day and seasons.

As for the syntactical part, few tenses are used. The key ones are the Present Simple and the Past Simple; there are also perfect, passive and future forms.

The narrative part is a typical medieval one. The poem starts with the story about "the beginning of the history" (destroying of Troy) and goes on in a cyclic way mentioning the annual cycle (*A 3ere 3ernes ful 3erne, and 3eldez neuer lyke*).

One of the most important things about the conceptual part is a description of night. In ME night can be characterized in different ways and we can find it in the poem. First, night is the time when Christ was born (*þat syre, þat on þat self nyzt // Of a burde watz borne*). Second, night is the time for feasts (*daunsyng on nyztes*). Last, night can be considered as something negative (*'Here myzt aboute mydnyzt // Pe dele his matynnes telle!*).

The analysis of the temporal field of the poem gives us a vivid example of the concept TIME in ME. Thus, Old English dichotomies "day—night" and "winter— summer" still existed

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in ME. We can also see that the linear, Christian understanding of **time** coexists with the cyclic, heathen idea of **time**. It was typical of that period.

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Temporal opined words: a preliminary study

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Current research in natural language processing is beginning to take into account various temporal relations (e.g. TempEval campaigns). One of the fields where time plays a crucial role is opinion mining. In a majority of recent opinion mining works (Chambers et al., 2007; Liu, 2012; Tu et al., 2015) temporal expressions are commonly defined as expressions in texts which may point opinions to the specific time. Furthermore, time is part of a quintuple opinion model (Liu, 2012) which is considered as a standard in the field. Temporal opinion mining techniques are also used to detect the changes of opinions over time, i.e. analyzing temporal trends (Burnett and Bjørkelund, 2012; El-Halees, 2014). All of the abovementioned research, however, focuses on traditional ways of expressing time, mostly dates (both precise and relative). Nevertheless, this point of opinion mining research is insufficient for detecting implicit opined temporal relations.

While this type of temporal relations is not frequent, it tends to cover specific opinion cases that occur in certain situations. The said situations fall under two categories, namely attitude towards a period of time and reference to suitable or unsuitable time for something to happen. These categories are expressed through different lexical means. The words of the first category are usually (at least, for Russian and English) formed by means of prefixation. The second category is represented by lexical blends. Prefixes used to form words of the first category modify the lexical meaning since they act as negative polarity donors. Examples for this category include English "unweekend" ('workdays') ("un" + "weekend") and Russian «nedomesiac» ('bad month'). It should be noted that while this derivational process seems highly uncommon in English texts, it is quite common in Russian texts. It's worth pointing out that the longer period of time is the more frequent is its usage. However, this is true only till the season words as after these words frequency drops abruptly. Words of the second category are made up by blending parts of two words, one of which denotes a temporal relation, like English "Neverland" or Russian «nikogdabr» ('never-month') or «temnatsat» ('dusk'). While opined lexical blends tend to incorporate temporal word as first part of the blend certain contradictions occur. In the word «nikogdabr» ('never-month') both elements denote a temporal relation. In some contexts, it can be viewed as a word-play regarding a certain month thus making the second element (br' <bre) the source of the temporal meaning.

From an opinion mining perspective none of these words can be considered as an opinion target since they tend to act as part of a predicate group. As we tried to show in this preliminary study, temporal opined words exist and have to be taken into consideration when mining Internet texts for various opinions.

Notes on Tense in the Mongolic Languages

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The Mongolic languages family is comprised of seven languages: Mongolian, Buryat, Dagur, Eastern Yugur, Dongxiang, Bonan and Monguor. These languages are spoken in China, Mongolia and Russia. In this paper I examine the framework of the tense system in Mongolic languages in order to deepen our understanding of verbal inflectional morphology in these languages.

As we know, all Mongolic languages have tense categories. In the Mongolian language, the present and future tenses combine. Thus, there are only two tenses: past and non-past.

In Mongolian, the non-past tense is expressed with *-na*⁴. In contrast to the non-past tense, the past tense is more complicated and may be expressed with several different markers: *-san*⁴, *-laa*⁴, *-b*, *-dʒee/-tʃee*, *-aa*⁴. But in fact, the situation is different across the dialects. Among these, *-san*⁴ is originally a verbal noun suffix and most frequently used in Central dialects such as Khalkha, Chakhar and Ordos. *-laa*⁴ expresses either the recent past tense or imminent future tense. *-b* and *-dʒee/-tʃee* occur less frequently in spoken language, and are mainly used in writing or folktales. *-aa*⁴ is usually used in negative sentences. On the other hand, Khorchin and Kharchin dialects lack *-san*⁴, and most often employ *-dʒee/-tʃee*.

In other Mongolic languages, depending on the language, the situation may be more complicated. In Buryat, Dagur, Dongxiang and Monguor, like Mongolian, the present and future tenses are combined. So there are only two tenses: past and non-past. But in Eastern Yugur and Baonan, there is a system of three tenses: past, present and future.

As in Mongolian, the past tense in other Mongolic languages is also more complicated, using a variety of markers. For example, in Buryat and Eastern Yugur express the past tense with *-aa*⁴. The Dagur language expresses the past tense with *-sən* or *-laa*. In addition, the non-past is expressed by *-n* and *-bəi*. Interestingly, the latter suffix corresponds to the past tense marker *-b* in Mongolian. Besides the present-future tense marker *-na*, these languages also have other markers. Thus, Monguor, Baonan and Dongxiang have *-m* (or *-mu*), and Eastern Yugur has *-nam*⁴ and *-m*. In Eastern Yugur, the future tenses are expressed by *-gu* or *-la*. The latter expresses either the recent past tense or imminent future tense in Mongolian.

We can summarize that in Mongolian, the non-past is simple and straight forward, but that the past tense is more complicated and may be expressed using several different markers. That been said, the situation varies across dialects. Some past tense markers such as *-b*, *-dʒee/-tʃee* are frequently used in literary language and folklore, but the rarely observed in the spoken language. However, in other Mongolic languages, such as Dongxiang, Baonan and Monguor, from cognate with the Mongolian past tense markers *-b*, *-dʒee/-tʃee* are still in use. In addition, the Middle Mongolian present tense marker *-mui* or *-mu*, retained by these Mongolic languages, but in the Modern Mongolian language this markers has disappeared.

Evidential as a grammatical marker in Samoyedic languages

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Evidentiality is a semantic notion that indicates speaker's grounds, or evidence, for making the statement. Evidentiality based on a sensory source of evidence is considered **direct**. Otherwise, the evidence can be obtained from the speaker's inference on the basis of available physical evidence or from hearsay, --- this kind of evidence is called **indirect**. (de Haan 2005: 314.)

Some languages have a dedicated evidential marker, which refers to the source of the evidence, usually called according to this source, e.g. *quotative*, *inferential*, or *auditive*. If the marker of evidentiality can express several sources, is called just *evidential*. In my presentation I will suggest such label, *evidential* for several grammatical markers which are now called confusingly by different names in Northern Samoyedic languages (<Samoyedic< Uralic).

In all the Northern Samoyedic languages there are sensory evidentials called Auditive. They are of the same origin in different Northern Samoyedic and they are used in the same manner.

In addition to this **direct** evidential mood, there are markers that express **indirect** evidentiality. In both Nenets languages this marker is (almost) identical to the suffix of the perfective participle, *-me(-ie)/we---* in Tundra Nenets and *-mi* in Forest Nenets. In Tundra Nenets, this marker was called *narrative* by Collinder (1957: 441) and Salminen (1997), *perfect* by Labanauskas (1974), *evidential* by Burkova (2010) and *inferential* by Nikolaeva (2014: 93ff). Labanauskas, Burkova and Nikolaeva presented examples of both inferential and quotative use of the forms with *----me/we---* in Tundra Nenets. In Forest Nenets the form is usually considered to be perfective participle used as a modal (Verbov 1973: 99, Koshkareva 2005).

In Enets languages there are finite verb forms with the marker *-b'i/--p'i*, which is called *perfect* by researchers of Enets languages (Labanauskas 1982: 129, Sorokina 1980, Siegl 2011, Khanina & Shluinsky 2014). Historically the origin of this Enets marker is the perfective participle.

In Nganasan there are two forms expressing indirect evidentiality, *---HATU* and *---HAMHU*, called, respectively, *inferential* and *renarrative* by Helimski (1997).

I will explore contemporary uses and the history of these forms of indirect evidentiality in Northern Samoyedic languages and will show that, according to their use, the forms in Nenets and Enets languages can be called EVIDENTIAL. They contain both inferential and hearsay meanings, which are split into two forms in Nganasan. Moreover, Northern Samoyedic Evidential forms a close typological parallel with Evidential in Turkish (Slobin & Aksu 1982: 185---200).

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Difficulties faced by L1 Speakers of Hungarian in Learning the Present Perfect Tense

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L1 speakers of Hungarian usually face difficulties acquiring the values of the present perfect tense, often considering it one of the most difficult tenses in English. Due to the differences between the tense systems in the two languages they have a hard time understanding the uses of the present perfect and are also often confused by the fact that while some values of this tense are translated with the present other values are translated with the past in Hungarian.

This study presents the outcome of a survey filled out by students, L1 speakers of Hungarian who are also Hungarian-Romanian bilinguals. The questionnaires containing sentences in English, Hungarian, and Romanian serve as a corpus, reflecting the degree to which students are familiar with and can identify the uses of the present perfect. Since the questionnaire also contains sentences in Romanian, the question as to whether the knowledge of Romanian is helpful in this respect, will also be dealt with.

The paper will give an insight into the tense systems in English, Hungarian and Romanian, focusing especially on the values of the present perfect and the way they are expressed in these languages. Additionally, it tries to come up with a plausible way of teaching the values of the present perfect tense to L1 speakers of Hungarian.

Asymmetries: Time and Space in Russian Prepositional Phrases

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While Russian temporal adverbials testify to a strong metaphorical connection between the domains of time and space, the present paper explores some important asymmetries between the two domains. Based on a detailed case study of temporal adverbials with the preposition *v* 'in(to)', the following hypothesis is advanced:

- (1) The Constraint Hypothesis:
Case government is more constrained in the domain of time than in the domain of space.

In spatial adverbials, the preposition *v* 'in(to)' governs the locative or accusative case. The locative expresses stative location as in (2a), while the accusative is used to describe movement into a location as in (2b):

- (2) a. On *v* **Finljandii**_{Loc}. 'He is in Finland.'
- b. On edet *v* **Finljandiju**_{Acc}. 'He is going to Finland.'

If time were a mere mirror image of the spatial domain, we would expect temporal adverbials to show the same contrast between the locative and accusative cases as the spatial adverbials in (2). To be sure, both cases are attested in temporal adverbials, but they are in complementary distribution. The choice of case does not depend on the distinction between stative location and movement, but is instead motivated by the temporal properties of the governed noun. In particular, nouns that represent extended and bounded periods of time are in the locative, whereas the accusative is used for nouns that do not fulfill these criteria. Thus, in (3a) *avgust* 'August', which represents an extended and bounded time span, is in the locative, while the shorter time span *sreda* 'Wednesday' in (3b) and the unbounded time span *vremja* 'time' in (3c) are in the accusative:

- (2) a. On edet *v* **Finljandiju**_{Acc} ***v avguste***_{Loc}. 'He is going to Finland in August.'
- b. On edet *v* **Finljandiju**_{Acc} ***v sredu***_{Acc}. 'He is going to Finland on Wednesday.'
- c. On edet *v* **Finljandiju**_{Acc} ***v to vremja***_{Acc}. 'He is going to Finland at that time.'

While in spatial adverbials the same noun (e.g. *Finljandija* 'Finland' in (2a-b)) can occur in both cases, temporal adverbials display a more constrained usage of the cases, insofar as a given noun normally occurs with only one of the cases as shown in (3). Although the present paper does not call into question the extensive evidence for metaphorical mappings from space to time, detailed investigations of empirical data reveal important asymmetries between the two domains. Time is not just a mirror image of space.

Aspect, semantic mapping, and cross-linguistic descriptive categories

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Traditionally tense and aspect are seen as separate linguistic categories, however this distinction is well-known to be difficult to uphold when confronted with linguistic data. Although newer research tends to acknowledge the fact that tense and aspect are difficult to separate in practice, very few have actually examined whether tense and aspect ought to be described as separate categories at all (but see Croft & Poole 2008). This paper takes a typological stance on this matter, empirically examining the status of aspect as a crosslinguistic descriptive category.

A common way of conducting cross-linguistic studies is by setting up a number of "comparative concepts" (Haspelmath 2010): conceptual generalizations like 'time', 'past', 'present' and 'future', designed by the linguist to describe conceptual values. When identifying descriptive categories, linguists tend to stay content with conceptual generalizations. In fact, Haspelmath (2010) stresses the subjective character of comparative concepts, describing them as "constructs" (Haspelmath 2010: 666) that "cannot be right or wrong", but only "more or less productive, in that they allow the formulation of more or less interesting subdivisions and generalizations" (Haspelmath 2010: 678). According to this view, there is not only no guarantee that conceptual generalizations actually describe coherent areas of crosslinguistic, semantic substance, it is not even possible to constrain or evaluate them. This paper advocates a more optimistic and less subjective approach to crosslinguistic descriptive categories.

Based on Boye (2010, 2012), we first argue that there are at least three ways in which crosslinguistic conceptual generalizations can be relevant for the description of language-specific structural phenomena, and thus (pace Haspelmath) that language-specific structure can be used to evaluate conceptual generalizations. One way has to do with semantic mapping: it is argued that a conceptual generalization –e.g. 'time' – is relevant for crosslinguistic structural description if, in a semantic map, each of the comparative concepts – e.g. 'past', 'present', 'future' – covered by the generalization is linked by a connecting line to at least one other concept covered by the generalization. Thus, semanticmap continuity is proposed as a criterion for upgrading pure conceptual generalizations to crosslinguistic descriptive categories in the sense of conceptual generalizations that are significant for the description phenomena found in geographically and genetically distinct languages.

Following the same practice as van der Auwera & Plungian (1998) in their analysis of modality, a semantic map of aspect is constructed based on data from 76 languages extracted from Bybee & al. (1994). It is demonstrated that aspect does not show semantic-map continuity and can thus not be regarded as a crosslinguistic descriptive category. The paper ends by stating possible reasons for the results and discussing theoretical and practical consequences for further studies.

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Negation, intention and temporality. Notions on the Finnish Progressive Construction

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Finnish has a conventionalized construction of the form *copula + MA-infinitive inessive*. The construction is known as the Progressive Construction, and typically expresses progressive aspect:

- (1) *Pekka on parhaillaan syömä-ssä.*
Pekka COP right now eat-MA-INF -INE
'Pekka is eating/ having lunch at the moment'

The construction has a range of polysemous meanings besides simple progressivity. Depending on its context, coexisting syntactic elements and verb semantics, it can also express, for example, locativity or refer to future events.

Progressive constructions across languages tend to interact with verbal aspect: If the verb is punctual or telic, the construction implies not progressivity but rather an immediate or a near future event. However, while the emphasis of the research concerning the futurate implications of OLLA + VmAssA has been mainly on aspect, it seems that the use of OLLA + V-mAssA is currently going through a change that involves more variables than merely aspect. As a key role in the development of the novel quasi-progressive OLLA + V-mAssA construction appears to be the language users' intentions:

- (2) *Olen lentämässä todennäköisesti Chileen.*
COP fly-MA-INF-INE probably to Chile
'I will fly to Chile, probably.'

The quasi-progressive OLLA + V-mAssA differs from its genuinely progressive 'vanilla' cousin in various contexts. For example, the quasi-progressive OLLA + V-mAssA does not necessarily require a telic verb in order to get a futurate reading. Another such context is negation, which alters the temporal interpretation of the quasi-progressive OLLA + V-mAssA. In an affirmative clause the Quasi-Progressive orientates towards the future event, but in a negative clause the temporal location of the forthcoming action becomes less important, since the future with the events in question ceases to exist. Negation focuses the attention on the present intention, which is valid already at the moment of speech:

- (3) *Edestakaista lentoa en ole ostamassa,*
round-trip flight NEG COP buy-MA-INF-INE
[*sillä en ole tulossa takaisin ainakaan vuoteen, enkä tiedä mistä*] 'I'll not buy a round trip, since I'll not come back in a year and don't know from where that might be'

Also, negation influences the default aspectual interpretation of the construction: When an imperfective verb appears in the quasi-progressive OLLA + V-mAssA construction, it is more likely to do so in a negative clause than in an affirmative clause:

- (4) *Siis ei kukaan varmaan leppäkerttua oo syömässä*
thus NEG no one probably ladybug COP eat-MA-INF -INE
[*mut oisko se eettisesti sallittavaa?*] 'I guess no one will eat a lady bug, but
would it be ethically acceptable?'

The effect of negation on temporal interpretation and verb semantic preferences in the Finnish Quasi-Progressive Construction show how constructional change, epistemicity and interaction are linked to each other in an inseparable manner.

Tense and Aspect in English: Speaker Perspective in Futurity

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This presentation looks at the role of speaker perspective in the choice of tense and aspect in English, with a focus on futurity. Students of a second language often see grammar as a matter of applying absolute rules when creating utterances. This is no less true where the choice of verb tense and aspect is concerned. This presentation reflects the view that not only are temporality and context crucial, but that speaker perspective is also an essential component of meaning. This can include the speaker's attitude towards a given situation, e.g.:

<i>I haven't seen 'Titanic'.</i>	vs	<i>I didn't see 'Titanic'.</i>
<i>I told John about Mary.</i>	vs	<i>I was telling Jim about Mary.</i>

Tense can be defined as “a grammatical category whose main function is to locate ‘eventualities’ (events or states) in time”, in relation to a time of utterance (de Brabanter et al., 2014, p. 2). The deictic nature of tense distinguishes it from aspect, which conveys information internal to a given event (Wagner, 2012, p. 459), e.g. whether it is in progress or completed.

Yet there has long been some degree of equivocation as to whether temporal location and deictic reference are indeed the only roles of tense. The semantics of the English tense system does not impose an inflexible viewpoint on the speaker, as the selection of tense is not “given in nature” and instead is chosen according to one’s viewpoint (Binnick, 1991, p. 128). The system has a dynamism wrought by what Brisard (2004, p. 28) refers to as “psychological notions of perspectivisation”, which exist beyond the domain of tense rules. In this sense, Fleischman (1982, p. 20-21) laments the fact that in discussions of time and tense, “all too often ... the focus is exclusively on a sequence of eventualities in real time, while the crucial role of speaker’s perspective is neglected”.

The relevance of perspective is most salient in expressions of futurity. Since only beliefs, rather than knowledge, can be expressed about the future, speakers can merely make predictions or express intentions about future eventualities (Kiefer, 2009, p. 204), rather than speaking in terms of absolute certainty. So utterances about future plans can illustrate the strength of the speaker’s conviction that these will constitute reality at a future time. Speakers can in fact *treat* the future as though it is known, regardless of their epistemological justification for doing so (Fleischman, 1982, p. 20).

Given that there are at least ten ways of expressing futurity verbally in English, ESL learners are faced with a complex task in encoding and decoding utterances appropriately. Part of this complexity involves the fact that the selection of a future structure goes beyond merely temporal issues, as the one point in time can be referenced via a range of verbal possibilities. For example, the following five utterances all refer to the same temporal location, i.e. tomorrow, yet each conveys different information about the speaker’s perspective regarding the event:

I meet him tomorrow.
I'll meet him tomorrow.
I'm meeting him tomorrow.
I'm going to meet him tomorrow.
I'll be meeting him tomorrow.

Two main questions will be discussed in regard to perspective and futurity: (1) What issues govern the choice of a structure? (2) What linguistic factors enable this range of meanings to be encoded?

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Relative past perfect clauses in narrative contexts

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In the Finnish tense system, the past perfect – or pluperfect – is regarded as one of the four grammaticalised tenses. Its functions are often interpreted through the prism of temporality indicating that some past action has taken place before another past action (e.g. *Hän oli jo lähtenyt, kun tulimme.* ‘She had already left when we arrived’). In this paper, the focus is on discursive functions of past perfect clauses in narrative contexts. The past perfect clauses are seen as polyphonic and multicontextual constructions that combine different situations and voices of both the narrator and story participants.

The analysis applies the concepts of absolute and relative tenses, and employs the constructs of absolute and relative past perfect clauses. Traditionally, tenses are classified either absolute or relative or even combined absolute-relative tense (as English pluperfect in Comrie 1985: 125). In this paper, the absoluteness or relativeness – i. e. the direct or indirect relation of tense into the so-called moment of speaking or, time of utterance – is interpreted within a text context. The initial premise is that past perfect clauses indicate the presence of narrative discourse. Moreover, the relative past perfect clauses construct a secondary point of narration or perception, and echo the speech or thought of others.

Furthermore, relative past perfect clauses are separated into two categories. The first category consists of *reporting past perfect clauses*, which represent a person’s speech or thought indirectly. The second category, *focalising past perfect clauses*, is found particularly in fiction. Unlike reporting, focalising past perfect clauses indicate a shift from external narration to internal perception.

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Past participle used as the marker of conditional mood in Võro language

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In Võro language, which is spoken in Southeast-Estonia by 87,000 speakers, there are three different markers of conditional mood: *-(s)siq*, *-s*, and *-nuq* (1).

- (1) a. *kae-siq*
b. *kae-s*
c. *kae-nuq*
watch-COND
'I/you/he/she/we/you/they would watch'

In the presentation, I concentrate on the *nuq*-marker, which originates from the active past participle (it has the same form in present-day language). The data is collected from the Estonian Dialect Corpus and from the book "Kuiis vanal Võromaal eleti" ('How one lived in the old Võromaa'). Both sources contain similar types of texts from the same period. The data consist of 372 instances of conditional mood.

The aim of the presentation is to present an usage-based overview of the *nuq*-marker and concentrate on the question, whether the *nuq*-form (originally it expressed a past state or event) is used as the conditional marker of the present or past tense? Both of these opposite standpoints have been presented in the previous discussion. Keem (1997) interpreted the *nuq*-forms as expressing the past conditional mood (2), but according to Pajusalu, Muižniece (1997) and Muižniece, Metslang, Pajusalu (1999) the *nuq*-form is used as the conditional marker of the present tense (3). Also the Võro-Estonian dictionary (VES) regards the *nuq*-form as the form of the present tense. However, none of these sources contain a fine-grained analysis of actual data.

- (2) Ma ost-nuq ka hobõsõ, aq olõ-s säänes-t rahha.
I buy-COND also horse.GEN but be-NEG this.kind.of-PRT money.PRT
'I would have also bought a horse, but I didn't have enough money'

- (3) Sa või-nuq minno uutaq
you may-COND I.PRT wait.INF
'You could wait for me'

In the data, there are examples of the usages in both tenses. The presentation demonstrates, whether there are constructions in which *-nuq* tends to be used as either present or past tense conditional marker. If it can be both, is it used also to describe generic state of affairs, as in these cases the temporal opposition is not relevant?

Preliminary results indicate that Võro conditional markers also show areal variation. It has been observed earlier (Pajusalu, Muižniece 1997, Juhkason et al. 2012) that the *nuq*-

conditional is frequent in the regions displaying contacts with the Russian language (in Russian, the conditional mood is also formed using the past tense form). Still, the development from the past participle to conditional has taken place also in Latvian (Muižniece, Metslang, Pajusalu 1999; Vaba 2011). Hence one can suppose that the *nuq*-conditional could be more frequent in the areas close to the Latvian border as well. The questions I aim to answer in the presentation are: Are there any areal differences in the usage of the *nuq*-conditional? And if there are, are these differences induced by language contacts? Is there a correlation between the usage of the *nuq*-form as the present or past conditional and the contact language?

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Secondary Imperfectivization in Croatian from an Actionality Perspective

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Secondary imperfectivization is understood here as a derivational process typical of Slavic languages whereby an imperfective verb is derived by means of a suffix from a perfective verb, which is in turn derived from an underived imperfective verb (cf. Manova 2007, among others). This derivation is illustrated in (1):

(1) *pisati* 'to write' (ipf1) > *pre-pisati* 'copy' (pf) > *pre-pis-iva-ti* 'copy' (ipf2)

The verb *prepisivati* is therefore called a secondary imperfective (IPF2). In Croatian, IPF2's cannot be formed from a prefixed perfective that has the same meaning as its basic imperfective verb (e.g. Šarić 2011). This is illustrated in (2):

(2) *piti* 'to drink' (ipf1) > *po-piti* 'to drink' (ipf) > **po-pi-ja-ti* (ipf2)

The derivation of IPF2's across Slavic has been described mainly from the morphological point of view (e.g. Schuyt 1990). However, not much interest has been devoted to the semantics of this relationship (for a recent study on Russian see Soboleva 2014), unlike derivation by means of prefixes, which have been studied extensively from the semantic point of view. In this paper, we accordingly propose to shift the perspective to IPF2's and their semantic relationship with the verbs they are derived from, the prefixed perfectives.

IPF2's are of much interest from at least two points of view. One is historical, since it is assumed that the rise of IPF2's was instrumental in the rise of Slavic-type aspect (Wiemer 2001: 37–38). The other is theoretical, since it is often assumed that secondary imperfectivization is more inflection like than prefixation (cf. for an opposing view Manova 2007).

In this research we present an analysis of 200 most frequent Croatian IPF2's taken from the internet corpus *hrWac* 2.0 (Ljubešić & Klubička 2014). The collected IPF2's will be analyzed in terms of their actional properties according to the following assumption: if IPF2's are more semantically regular, they will exhibit the actional properties typical of true aspectual pairs in Croatian (Polančec 2015), most notably a) its endpoint and ongoing accomplishment; b) achievement and its iterative form; c) achievement and its build-up phase (Radden & Dirven 2007: 188–189). These three are illustrated in (3a-c):

(3a) *pre-gledati* 'to finish examining' (pf) > *pre-gled-ava-ti* 'to be examining' (ipf2)

(3b) *po-gledati* 'to glance, look at (once)' (pf) > *po-gled-ava-ti* 'glance repeatedly' (ipf2)

(3c) *iz-glasati* 'vote' (pf) > *iz-glas-ava-ti* 'to vote' (ipf2)

In (3c) the act of voting, which is momentaneous, is represented by the perfective *izglasati*, whereas the IPF2 *izglasavati* does not relate to the act of voting itself, but rather to the events conceptually related to the act of voting.

Unlike these examples, in (4) we show an example in which the IPF2 exhibits some semantic peculiarities:

(4) *osigurati* 'to secure, make sure' (pf) > *osigur-ava-ti* 'to ensure (continually)' (ipf2)

Along with a semantic shift, the IPF2 *osiguravati* exhibits actional properties of a state predicate, which is not the case with the examples (3a-c). It is still unclear how common such examples are. The example (4) also demonstrates that the claims by some authors that secondary imperfectivization never changes verb's lexical meaning (e.g. Łazarczyk 2010: 31) do not hold up when subject to closer scrutiny, at least in Croatian.

With these preliminaries in mind, we set two goals for this research: first, to determine which of the expected actional changes, as in (3a-c), are the most frequent; secondly, to determine to what extent IPF2's exhibit semantic changes unrelated to the changes in actional properties.

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Time expressions in Pitjantjatjara, Yankunytjatjara and Ngaanyatjarra

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This study looks at time lexical expressions in Pitjantjatjara, Yankunytjatjara and Ngaanyatjarra (PYN), three dialects of Australia’s Western Desert language group that are closely related and have similar grammatical structures. We look at the phenomena using a Role and Reference Grammar (RRG) framework, which is a monostratal theory involving linkage between semantic and syntactic representations. RRG divides the clause into the nucleus, core and periphery with operators modifying these different levels. Tense modifies the clause, describing the event as a whole; aspect modifies the nucleus, describing the internal temporal structure of the event (Pavey 2010: 208). Adverbs such as ‘continuously’ and prepositional phrases like ‘in March’ are at the core periphery.

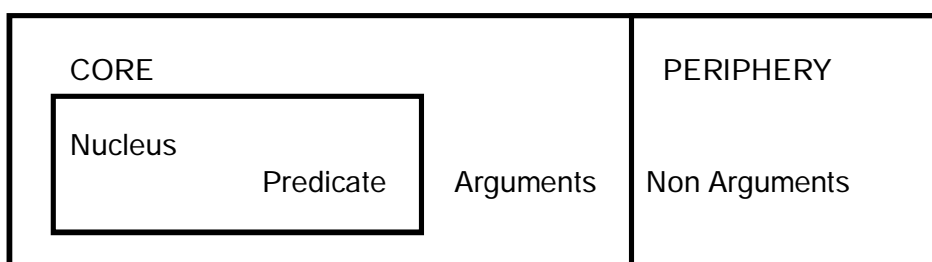


Figure 1: Layered structure of the clause

Van Valin & LaPolla (1997: 162) show that time expressions take the lexical representation as an argument:

- (1) ‘Sam baked a cake yesterday’
yesterday ([do’ (Sam, Ø)]) CAUSE [BECOME **baked**’ (cake)]

We use this framework to characterise time expressions in these dialects. In common with Australian languages in general (Blake 1987: 3), PYN has three basic word classes- verbs and nouns that inflect; and non-inflecting particles. This expands to roughly ten more narrowly defined classes if we follow Dixon’s (2011: 271) divisions. Tense and aspect are marked as suffixes on verb stems. Cases fall into three categories: core such as ergative and accusative; peripheral local and peripheral syntactical. Case marking is on the noun phrase; nouns and adjectives are marked similarly and are grouped as nominals. A further group of spatial and time adverbs receive limited subsets of these case markings.

Time adverbs or qualifiers in Western Desert occur sentence initially or preverbally (Goddard 1983: 129) unless in emphasis (Douglas 1957: 89). There is a distinction between location in historic time (*iriti* ‘a long time ago’, *ngula* ‘later’) and diurnal or seasonal time. Time adverbs differ from temporal/aspectual adverbs such as *piyuku* ‘again’ and *ngulakutju* ‘too late’

(Goddard 1983: 131). Dixon (2011: 283) discusses time qualifiers as either referring to a point in time or indicating duration. The former may take inflections, such as Ngaanyatjarra *mungangka* 'at night' (Glass 2006: 67-69) with the locative *-ngka*. The latter are not inflected, such as *rawa* 'continually/ for a long time' (Goddard 1996: 153-154). However this can enter into verbalising derivations such as *rawaringanyi* 'spend a long time doing'. Goddard (1996: 100) illustrates three examples in P/Y with the time adverb *ngula* 'later, in the future.'

- (2) *Munu ngula ngayulu nyuntunya ngapartji yu-nganyi.*
 And.SS later 1SG.NOM 2SG.ACC in.return give-PRES
 'And later I'll give you something in return.'

With the peripheral purposive/genitive marker *-ku*, the form becomes *ngulaku* 'till later'.

- (3) *Ngula-ku wanti.*
 Later-PURP leave.IMP
 'Leave (it) till later.'

An intransitive verb *ngularinganyi* 'become later' is derived with the inchoative suffix *-ri*,

- (4) *Ka ngula-ri-ngkula-mpa paluru tjana kuli-ra*
 And.DS later-INCH-SER-INT 3PL.NOM PL think-SER
 'And as time passed they were thinking...'

Glass (2006: 69) shows how Ngaanyatjarra *kuwarri* for example can be interpreted depending on the tense of the verbs.

- (5) *Kuwarri=rna pitja-ngu*
 Just.now=1SG.NOM come-PST
 'I came just now.'

- (6) *Kuwarri=rna-nta paka-lku pu-ngku*
 Any.minute.now=1SG.NOM-2SG.ACC get.up-FUT hit-FUT
 'Any minute now I'll get up and hit you.'

We see in the study that the different time expressions in PYN fall within the nominal grouping as nouns, active adverbs of manner or time adverbs. Each of these licenses different levels of case, depending on whether they represent a point in time or the duration of activity. This analysis shows the level at which they operate in the clause. Aside from case they participate in regular verbal inchoative derivations that are characteristic of nominals in these dialects.

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Some aspects of the particle KA in Lau

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In Lau (Southeastern Solomon group) there are multiple strategies available to express temporal, aspectual, and modal meaning. None of these three notional categories are obligatorily grammaticalised; only aspectual and modal information are morphologically encoded, while temporal references are largely expressed by means of lexical items or lexical composite expressions. Aspectual information is mainly conveyed by means of pre- and post-verbal aspectual markers, and modality is in part covered by particles operating at clause level.

The focus of this presentation is on the particle KA that is found only pre-verbally. The particle is cliticised to the subject marker (SM), and its phonological realisation depends on the person and number of the grammatical subject. Current analysis of KA suggests that the particle signals that the state of affairs expressed by the clause in which it occurs (event 2) follows in sequence from the preceding state of affairs (event 1). Thus, the sequential marker KA (SEQ) is not considered as marking an internal temporal structure (cf. Comrie 1976), but rather as marking a temporal relationship at the clause level. Examples (1), (2), and (3) show typical sequences of situations with dynamic, intransitive and transitive, and stative verbs respectively.

- (1) [fali]_{event1} [ø=ka lea na]_{event2}
walk 3SG=SEQ go PF
He walked [and] he went
(140908-Manu-PK_09:51.0)
- (2) [Nia ngali-a si fanga]_{event1}
3SG take-3.OBJ some food

[nia ø=ka alu-a la gala wai nia]_{event2}
3SG 3SG=SEQ put-3.OBJ IN small basket 3SG.P
He took some food [and] put it in his small basket
(090806-Giant01NK_05:54.2)
- (3) [Daaro too]_{event1} le [wela ba ø=ka baita na]_{event2}
3DU stay until child TDV SEQ be.big PF
They stayed [there] until the child grew up (i.e. reached adulthood)
(090806-Giant01NK_05:24.9)

However, there are situations where the presence of KA does not fit well with the notion of a sequence of events. These include, for example, events which are connected with the disjunctive *or* in (4), events that express simultaneous situations in (5), or events that describe scene settings in (6).

- (4) (...) **da=ka** fale-a fanga uri-a
 3PLSM=? give-3.OBJ food PURP-3.OBJ
 langi **da=ka** fale-a ta doo uri-a
 or 3PLSM=? give-3.OBJ some thing PURP-3.OBJ
 (...) they will give food for it (i.e. the dolphin's meat) or they will give something
 else for it
 (100526-Dophins-MA_04:42.1)
- (5) Kada nia fali nia **ka** foa
 while 3SG walk 3SG ? pray
While he walked he prayed (100526_01-Elicitation_MA)
- (6) Toto te mae=dani uta **ka** aru (...)
 time one CLF=day rain ? fall
One rainy day (lit. One day the rain was falling)
 (141203-GiantBrothers-JI_01:02.0)

Although the central function of KA is ascertained, these findings raise some questions. Firstly, could comparative research inform us about the function(s) of KA and, conceivably, provide us with a unitary account of the particle? Secondly, to what extent is the particle moving toward being grammaticalized? While the findings should be interpreted as preliminary, they nonetheless contribute to the interpretation of the Lau TAM system.

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Time seen through glasses of the metaphor

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It is hard to imagine that it could be assigned to the *time* a determined form, but it is even more difficult to admit that the intelligence could operate with notions from imagination that it would not have any access. Therefore, when we talk about time, we assign it several expressions: "time flies", "time is money", "a waste of time", "kill time", "only time will tell", hence, these references to reality it is made throughout the language. However, this combination of linguistic concepts attests the metaphorization of time, language being an externalization of thought.

This paper deals with the idea of *time* regarded as a metaphor in the human perception. The first part of the communication presents the definition of *time* and *metaphor*, by explaining briefly the interdependencies that exist between these concepts. The second section focuses on an analytical comparison of time from three different perspectives: Aristotle, Kant and Heidegger. The article emphasizes the paradigm of *time metaphorization* as a phenomenon of a constant concern for the human being that existed, it exists and it will probably exist in this area.

Key words: time, metaphor, language comparison, Aristotle, Kant, Heidegger.

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Children conceptualizing grammar and time: Acquisition of temporal adverbials in Finnish

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This presentation concerns a research on development of temporal adverbials in the context of first language acquisition. The main research question of the study presented is ‘what the developing temporal adverbials show up about the relationship between children’s grammatical schema and cognition of time?’ The research is a part of the dissertation study examining how Finnish-speaking children from two to eight years of age develop in conceptualizing time and expressing temporal gestalts by means of language, embodiment and imaginary.

Research data consist of ca. 700 spontaneous constructions with temporal references produced by twelve Finnish-speaking children. The data has been collected as diary samples and audio recordings during years 2013–2016. The basic amount of data has been collected at the researcher’s house where three of the children live and the others have been visiting.

From the grammatical perspective, the data show that children are capable of producing temporal adverbials productively at the age of two years (like a girl child 2;7: *Aamulla Milla meni nukkumaan*; ‘In the morning, Milla went to sleep’). However, from the pragma-semantic perspective, the productivity is only apparent: Contents of early temporal adverbials are typically inappropriate regarding the usage-event. Early use of temporal adverbials seems to be based on regurgitating the constructions that are high in frequency in the linguistic environment of the children. This kind of usage does not reflect maturity in children’s conceptualizations of time. In other words, the domain of adverbials in children’s grammatical schema seems to develop much earlier than the related domains in the cognition of time.

By the age of five years, children start to problematize the phenomenon of time and constructing their time-related cognition in various ways: By asking questions (like a boy child 5;7: *Onko myöhemmin jossain vaiheessa?*; ‘Is later at some point?’), by formulating self-centered and constructive complex constructions (like a boy child 5;7: *Kun mä olin kolme --*; ‘When I was three --’, or a boy child 6;6: *Yks kerta ku...tai syyslomalla --*; ‘Once when...or on autumn holiday --’) and by combining the utterances produced to bodily gestures and imaginary. On the level of speech performance, constructing conceptualizations causes a temporary regression into fluency of time-related speech from five to six years of age. At the age of seven, children seem to reach the fluency of using temporal adverbials again. However, even then the linguistic choices are often nonconventional (like a boy child 7;8: *Vartin alle kymmenen*; ‘Quarter under ten (o’clock)’).

The main theoretical framework of this study is cognitive linguistics: usage-based theory of language acquisition (e.g. Tomasello 2009), cognitive grammar (e.g. Langacker 2008) and cognitive approach to time in language (e.g. Evans 2013). The study also utilizes the existing knowledge about the nature of temporal adverbials in Finnish (Huomo 1997; ISK § 980) and the literature about early development in constructing temporality in other languages.

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The Formal Representation of Time in the Semantic Analyzer [Analyzer Title]

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By semantic analyzer we denote a program that produces semantically unambiguous structures for natural language expressions and sentences. Obviously, such a system can not do without the model of time and time relations in the world.

Since the semantic structures produced by our system are graphs designed to meet the OWL standard, semantic structures representing the time are the graphs of the same kind. The nodes of this graph are individuals of different classes. The ontology divides individuals into classes in such a way that individuals of the same class share same properties. Properties can be either object properties or data properties.

We borrow some basic suggestions of our model from the interval temporal logic, developed by James F. Allen and represented f.e. in (Allen and Ferguson, 1994)

These basic suggestions are as follows:

a) The core element for time modeling is time period - a continuous interval on the time line that begins somewhere and ends somewhere;

b) Time periods are ordered with time relations: *meets* is an elementary one. All the intuitive relations that could hold between time periods (like *starts*, *during* and *before*) can be derived from it.

Time period in this sense is represented by class *TimeInterval* in our ontology.

As we are interested in linking time descriptions possible in the natural language to the objects allowed by this logic, we must add to our model the following statements.

1. Any time entity (the «piece» of time detected in text or speech) can be related to universal time line.

Not all time entities strictly correspond to one time interval: expressions like *on Mondays* or *twice a year* which convey information about frequencies pose a problem. We treat them with the help of sets consisting of proper time intervals. The interval can be located on the universal time line via an additional concept *DateTimeDescription*.

2. Any event refers to one or several time intervals.

3. Any time interval may have some duration.

So far we have not mentioned the notion of time point. Time points exist in the model implicitly, they serve to deduce temporal relations in (Allen and Ferguson, 1994), but have no use in the treatment of time entities. This objection is justified by the fact that even the events denoted by punctual verbs, are not «punctual». In some contexts they can be viewed as durative. The phrase *my observations during the explosion* is not impossible and can be clearly understood.

The structures generated by our system have much in common with the decisions adopted in TimeML Markup Language (http://www.timeml.org/publications/timeMLdocs/timeml_1.2.1.html), but there are some sensitive differences.

- In case of date, we do not stop after producing *DateTimeDescription*. Its parts (hour, day, month) are also viewed as separate time intervals, linked by the *during* relation.

- Temporal relations can be established only between time intervals, but not between events.
- The notion of subjective time is introduced to describe examples like: *I've been waiting a long time.*

Degrees of Temporal Remoteness in Panoan: Contributions to the Typology of Tense

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The Panoan family comprises ca. 30 languages from Peru, Brazil, and Bolivia. Panoan languages grammatically distinguish various degrees of temporal distance from the deictic center; i.e., they possess metrical tense (Chung & Timberlake 1985) or degrees of remoteness distinctions (Comrie 1985, Dahl 1985). This presentation analyzes the complex tense systems found in Panoan, concentrating on morphologically expressed categories. In so doing, it seeks to expand our knowledge of languages with metrical tense and test hypotheses (in Comrie 1985, Dahl 1985, Bybee et alia 1994, Botne 2012) regarding the internal organization of the systems, the ways tense interacts with other grammatical categories, and the possible sources of markers. Although metrical tense systems are attested in approximately 25% of the world's languages (Dahl 2008, Botne 2012:536), those with four or more degrees of remoteness are unusual (Comrie 1985:87; Frawley 1992:363). For example, of 222 languages examined in Dahl & Velupillai's (2011) study on past tense, only 2 have such prolific systems: Chakobo and Yagua; the former belongs to the Panoan family. Discussing the Panoan tense systems is particularly relevant, considering this family is one of the larger clusters of elaborated systems of remoteness distinctions in the world, outside Niger-Congo languages (Dahl, p. c., March 2013). Despite this, Panoan languages are largely absent from older and recent treatments of metrical tense.

(Most) Panoan tense systems are asymmetrical, with more distinctions in the past than the future. The further an interval lies from the present, the less precise its cut-off point, and the more extensive the temporal space it covers (Frawley 1992). As expected, tense interacts with aspect-modality (in Shipibo-Konibo, *-rabi* marks distant past and imperfective aspect whereas *-jantan* marks distant past and perfective (Valenzuela 2003)) and evidentiality (in Matsigenka, all past tense markers simultaneously code evidentiality (Fleck 2007)). However, tense also interacts with number (in Kashinawa, plural marking is achieved through suffixation of *-kan* in the immediate past, but *-bu* in other past tenses), person (in Amawaka, the immediate past marker is *-xo* when the subject is 3rd person, but *-ki* with 1st/2nd person subjects), and negation (in Matís, a negated verb cannot take past tense marking directly, but requires an auxiliary to which the past suffix attaches. Also, different negation markers are used with past vs. non-past tenses (Ferreira 2005:147-148)). We adopt a diachronic approach in accounting for some of these interactions.

Comparative analysis indicates that Proto-Panoan might have exhibited degrees of temporal remoteness. However, even closely related languages may differ significantly in the categories they encode and/or their formal expression. On the other hand, there is evidence suggesting the borrowing of markers. While some tense morphemes clearly originate from temporal adverbs and adverb-like verbal suffixes, others may have arisen through the grammaticalization of motion verbs and associated-motion verbal suffixes (cf. Bybee et alia 1994). In some instances, the marking of tense diachronically involves nominalized

constructions. Finally, markers denoting temporally nonadjacent regions may share the same gram (cf. Botne 2012).

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Traveling Through Narrative Time: Tense and Temporal Deixis in News Stories

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Cognitive approaches to narratives are concerned with the question of how people mentally represent narrative worlds (e.g., Herman, 2009). An essential part of this representation involves the progression of time. In processing fictional narratives, readers shift their deictic center to the narrative world such that temporal expressions (*later, yesterday*) are interpreted in relation to the narrative world's here-and-now rather than the reader's here-and-now in the real world (Segal, 1995).

Time representations in newspaper narratives, by contrast, have correlates in the real world and serve to legitimize the narrative reconstruction. Correlates are mapped onto a time line which runs from the here-and-now of the narrative world in which the news events took place to later moments in time and finally to the here-and-now of the journalistic narrating in the present. Previous research has suggested that processing news narratives requires readers to shift back and forth on this time line (Authors, 2016). In the present paper we employ a cognitive linguistic model of mental spaces and conceptual blending (Fauconnier, 1985; Turner & Fauconnier, 2002) to examine how shifts between Narrative Space and Present Space are represented with the ultimate goal to explain how readers mentally travel through narrative time.

Results reveal interesting patterns in the use of tense and deixis. The temporal adverb *yesterday*, for instance, may signal a move *forward* in time rather than *backwards*. Similarly, shifts from present to past tense may signal a move *forward* in time rather than *backwards*. Consider the following excerpt of a Dutch news narrative (*De Telegraaf*, 2012):

- (1) Already in a first interrogation, V. blurts out his atrocities.
- (2) Yesterday in court, V. persisted: "I loved her".

The present tense in (1) refers to the day the news event (murder) took place. Here, readers should blend their deictic center with the deictic center of news actor *V.* in the Narrative Space in order to process the progression of time, while *yesterday* in (2) refers to a time *after* this event rather than *before*; specifically, it refers to the day before the real here-and-now journalistic narrating of events. Here, readers should blend their deictic center with the deictic center of the narrator/journalist in the Present Space.

Shifting from present to past tense thus signals a shift from the Narrative Space to the Present Space, moving readers forward in time. Remarkably, tenses may be switched between spaces without losing meaning:

- (1a) Already in a first interrogation, V. blurted out his atrocities.
- (2a) Yesterday in court, V. persists: "I loved her".

Combining text analysis, corpus analysis and experimental research, we show that both types of time representation are found in Dutch news narratives, but function differently. Present tense such as in (1) blends the temporal deixis of news actor, narrator/journalist and reader in the Narrative Space, while present tense such as in (1a) blends only the temporal deixis of narrator/journalist and reader. The first enhances identification and narrative engagement with the news events, while the latter enhances legitimization of the narrative construction of these events.

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FRONT and BEHIND in Estonian time expressions

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According to Moore (2014: 111) time expressions that are structured by SEQUENCE IS RELATIVE POSITION ON A PATH do not have any particular tendency to be deictically anchored. That is the case also in Estonian where time expressions whose main verb denotes temporal movement in a sequence are typically not deictically anchored (*sügis järgneb suvele* 'autumn follows summer').

In Estonian, front and back relations can be used in deictically anchored Moving Ego based expressions (*kaks aastat tagasi* 'two years ago; lit. two years **behind**'; *teda ootab ees suur tulevik* 'he has a great future ahead of him, lit. a great future is waiting for him **in front**') but also in sequence based Moving Time expressions that are deictically anchored (*kahe aasta eest* 'two years ago; lit. **from front**'; *kahe aasta pärast* 'after two years; lit. **from the rear of**'). However, in some circumstances *pärast* 'after' can lose its deictic anchor and express the position of an event only relative to the sequence of events (*pärast sööki läksime koju* 'after lunch we went home'). The main grammatical difference between those uses is that deictically anchored *pärast* is a postposition (having a complement in genitive) whereas only sequence based *pärast* is a preposition (complement in partitive).

My focus in this presentation is the difference between prepositional, postpositional and adverbial usages of temporal *pärast*. The main research question is how SEQUENCE IS RELATIVE POSITION ON A PATH based time expressions can or can not be deictically anchored depending on the grammatical constructions and lexical collocations they are used in/with. Namely, how the perspective taking (deictic, deictically shifted or non-deictic viewpoint) influences the lexico-grammatical form that can be chosen to express time in Estonian.

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All the time, day and night: Lexical expressions of time in Estonian dialects

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In narrative texts, time is one of the most important factors which determines the course of the events and thus functions in a way as a frame for the narration. It is therefore to be expected that among the most frequent words in the Corpus of Estonian Dialects there are several words referring to time (fx *aeg* 'time', *aasta* 'year', *päev* 'day'), several forms and expressions also showing tendency to become grammaticalized or lexicalized. In Estonian dialects, usage of lexical expressions of time reveals considerable variation, whereas in Modern Standard Estonian variation is restricted.

The presentation will examine the variation of time expressions across dialects, using constructional approach to grammaticalization and lexicalization as a framework. The data are obtained from the Corpus of Estonian Dialects, which consists of traditional recorded dialect interviews, i. e. spoken spontaneous language. One of the central interests in this study is related to the spatial dimension: how the time expressions vary geographically and how the different patterns are distributed (fx which morphocytactic means are chosen to express time of action in different dialects). Second, the study seeks to examine the role of grammatical and semantic environment in variation. It appears that the choice of the form may depend on the modifying form, but also the meaning must be taken into account (fx whether the word *päev* 'day' refers to a specific day or to general (day)time). Also, the study seeks to detect analogies in time expressions, assuming that related words (such as *hommik* 'morning' and *õhtu* 'evening') tend to be used in similar construction. Lastly, it is unclear how does genre and topic affect the choice of the speech form. Though this presentation cannot provide any definitive answers, some findings can contribute to further research in this area.