NEGATIVE EVENTS: EVIDENCE FROM LITHUANIAN

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As a starting point of this article[1] I take the following observation by Stockwell, Schachter & Partee (1973: 250–251)

> "[T]here are certain cases where a negation of an event may, loosely speaking, itself be an event, e.g. *not paying taxes*, *not getting up early*, *not going to church*, *not eating dinner*, *not thinking clearly* (semantically, the "event" seems to be the breaking of a habitual or expected pattern of activity)."

The scare quotes in the quotation above seem to be due to the well-known philosophical debate regarding the possibility of "negative events" or "negative facts", see Horn (1989: 51–55) for a historical overview, which is concluded by the following statement:

> "The question of whether there are negative events cannot be answered directly, by invoking the evidence of natural language, especially in the absence of a consensus as to what counts as an event." (Horn 1989: 55)

This short paper aims at providing linguistic evidence for the existence of negative events, coming from the interaction of negation with perfect in Lithuanian, a Baltic language, which has not hitherto received enough attention from theoretical linguists (see Arkadiev, Holvoet & Wiemer, forthcoming). The argument will be both empirical and theoretical, invoking recent proposals concerning the semantics of the perfect (Nishiyama & Koenig 2010) crucially relying on the notion of event, which, as it seems, has become fairly uncontroversial in the last decades (see, inter alia, Ramchand & Svenonius 2014 for a recent proposal about the status and representation of events in grammar, and references therein).

Lithuanian has complex morphology with rich inflection in both nominals and verbs, the latter distinguishing four synthetic tenses (present, simple past, habitual past, future); there is also a Slavic-style system of deriving telic ("perfective") verbs from atelic ("imperfective") verbs primarily by means of prefixes. This system is hardly as productive and regular as the corresponding Slavic one and does not interact with tense in any significant way. For an overview of the verbal system of Lithuanian, see Ambrazas (ed.) (1997: 220–376), and Arkadiev (2011, 2012 and references therein) specifically on the question of aspect.

In addition to the synthetic tenses, Lithuanian has periphrastic constructions consisting of the auxiliary verb *būti* 'be' fully inflected for tense and person and the past active participle of the lexical verb inflected only for the agreement in number, gender and (nominative) case with the subject of the clause. These constructions are called "perfect" or "resultative" (see

Geniušienė & Nedjalkov 1988) and generally denote a state resulting from a previous event. This state may be the **target state** (Parsons 1990: 235) of the event denoted by the verb phrase, as in (1); in this case the construction expresses the resultative meaning proper, restricted to telic verbs denoting a change of state in their subject. Alternatively, the state denoted by the perfect construction may be more abstract and relate to the property of the subject arisen due to its mere participation in the event (cf. Parsons' **resultant state**), as in (2); in general this is the only interpretation of the perfect available with lexical verbs not denoting a change of state of the subject.

(1)   ***Es-u***   ***apsireng-us-i***   *nauj-a*   *suknel-e.*
       AUX-PRS.1SG   put.on.oneself-PST.PA-NOM.SG.F   new-INS.SG.F   dress-NOM.SG
       'I have put on my new dress.' (the speaker is wearing her dress at the moment of speech)

(2)   *Tai*   *turbūt*   *geriausi-as*   *anekdot-as,*
       that   perhaps   best-NOM.SG.M   joke-NOM.SG
       kok-į   ***es-u***   ***girdėj-ęs.***
       what-ACC.SG.M   AUX.PRS-1SG   hear-PST.PA.NOM.SG.M
       'This is perhaps the best joke I've (ever) heard.' (LKT)

The use of the perfect in Lithuanian is more restricted than the use of its English counterpart. First, the restrictions on the resultative proper use of the perfect are more stringent in Lithuanian, such a use being largely unattested with verbs denoting the change of state of a participant other than the syntactic subject. Second, Lithuanian does not have the so-called "universal" or "inclusive" use of the perfect (cf. e.g. Iatridou et al. 2001); it is not possible to express a durative situation lasting up to the reference time by means of the perfect in Lithuanian. Thus, only (4a) with a present tense form can serve as a felicitous translation for English (3).

(3)   ***I have been working*** *at the University for 2 years already.*

(4)   a.   *Universitet-e*   ***dirb-u***   *jau*   *dvej-us*   *met-us.*
            university-LOC.SG   work-PRS.1SG   already   two-ACC.PL.M   year-ACC.PL
            '=(3)'

       b.   *#Universitet-e*   ***es-u***   ***dirb-ęs***   *dvej-us*   *met-us.*
            university-LOC.SG   AUX.PRS-1SG   work-PST.PA.NOM.SG.M   two-ACC.PL.M   year-ACC.PL
            'I have worked at the university for two years [and now I don't work there].'

Let us now turn to the interaction of perfect with negation. Negation in Lithuanian is expressed by the prefix *ne-* attaching to the left of the word in its scope, and in clauses with synthetic tenses sentential negation attaches to the verb, as in (5b).

(5)   a.   *Miegoj-au.*
            sleep-PST.1SG
            'I was sleeping / slept.'

       b.   ***Ne-miegoj-au.***
            NEG-sleep-PST.1SG
            'I was not sleeping / didn't sleep.'

What is not trivial and constitutes the main empirical point of my article is the fact that the perfect sentence in (6a) has two negative counterparts: in (6b) negation attaches to the auxiliary, while in (6c) it shows up on the participle.

(6)   a.   *Es-u*   *miegoj-us-i.*
            AUX-PRS.1SG   sleep-PST.PA-NOM.SG.F
            'I [female] have slept.'

 b. ***Ne****-s-u*   *miegoj-us-i*.
   NEG-AUX-PRS.1SG sleep-PST.PA-NOM.SG.F
   'I have not slept.'

 c. *Es-u*   ***ne****-miegoj-us-i*.
   AUX-PRS.1SG NEG-sleep-PST.PA-NOM.SG.F
   'I have not slept.'

The two negative variants of the perfect at first glance and out of context seem to be truth-conditionally equivalent, however, they are clearly used in different situations, see naturally occurring examples (7) and (8).

(7) *Aš* *dar* *niekada* *anksčiau* ***ne****-s-u*   *miegoj-us-i*
  I.NOM yet never earlier NEG-AUX-PRS.1SG sleep-PST.PA-NOM.SG.F
  vien-a   *kambar-yje*.
  one-NOM.SG.F room-LOC.SG
  'I have never slept alone in a room before.'[2]

(8) *Aš* ***es-u*** ***ne****-miegoj-us-i* *pusantr-os* *par-os*.
  I.NOM AUX-PRS.1SG NEG-sleep-PST.PA-NOM.SG.F one.and.a.half-GEN.SG 24.hours-GEN.SG
  'I have not slept for 36 hours.'[3]

Examples like (7) with the negation on the auxiliary (henceforth "higher negation") are used when the speaker denies the relevance of the situation denoted by the verb phrase, e.g. asserting the lack of experience of participating in the relevant event. By contrast, examples like (8) with the negation attached to the participle of the lexical verb ("lower negation") are used to assert the result of not having participated in the event; thus, (8) denotes the state of the speaker resulting from her not having slept for 36 hours. Importantly, the two constructions differ with respect to the types of adverbials they co-occur with and their scope; higher negation freely admits adverbials of universal quantification like *niekada* 'never' or *gyvenime* 'in the lifetime' denoting the time span of the perfect state. However, such adverbials are rarely if at all attested in sentences with lower negation; here various durational adverbials are found, and what they take in their scope is not the perfect state but rather the negated event: in (8) it is "not sleeping" that lasted for 36 hours[4].

The "duality" of negation in the periphrastic perfect illustrated above is a fully systematic phenomenon in Lithuanian, amply attested in the existing corpora and recognized by native speakers. Below I give several further examples illustrating the sometimes subtle contrast between the higher and the lower negations.

(9) *Nei* *vien-o* *blog-o* *komentar-o* *apie* *j-uos*
  nor one-GEN.SG.M bad-GEN.SG.M comment-GEN.SG about 3-ACC.PL.M
  ne*-s-u*   *skaiči-us-i*.
  NEG-AUX.PRS-1SG read-PST.PA-NOM.SG.F
  'I have not read a single bad comment about them.'[5]

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[2] http://tinyurl.com/p6x5dzj, accessed 4 March 2015.
[3] http://tinyurl.com/nutcglj, accessed 4 March 2015.
[4] It has to be acknowledged that in (8) the temporal adverbial indicates not only the duration of the non-sleeping event, but also the duration of the perfect state as well; examples like (8) could be argued to constitute the only cases when Lithuanian perfect appears to have the "universal" meaning. However, such an interpretation is most likely to arise pragmatically: normally, for the resultant state of the non-occurrence of the event to hold, the event should not occur during the time span of this state. There are examples, however, when this pragmatic implication is overridden, see (19) below.
[5] http://tinyurl.com/mqxryty, accessed 4 March 2015.

(10) *Nors   yra   keli-os   knyg-os,   kuri-ų   dar*
 though   be.PRS.3   several-NOM.PL.F book-NOM.PL   which-GEN.PL   yet
 es-u   ne-skaiči-us-i.
 AUX.PRS-1SG   NEG-read-PST.PA-NOM.SG.F
 'Though there are several books [by that author] which I have not yet read.'[6]

In (9) the existence of any event of reading is denied, highlighted by the use of the universal quantifier *nei vienas* 'not a single'; though the situation in (10) is superficially similar, here the speaker uses the lower negation to assert her being in the state of not having read some books and imply that not having read them is a fact important for the current discourse. From the data at hand it appears that this kind of discursive highlighting of the negative event by overtly marking it as such is one of the primary uses of the construction with the lower negation in Lithuanian.

In the following examples with the verb *mokytis* 'study' we observe a similar contrast: in (11) with the higher negation it is denied that the subject has an experience of purposefully studying a craft, while in (12) the fact 'did not study in the 3rd grade' is asserted and its consequences are discussed.

(11) *Ši-o   amat-o   j-is   **nėra**   specialiai **mok-ęs-is**...*
 DEM-GEN.SG.M craft-GEN.SG 3-NOM.SG.M NEG+AUX.PRS.3 specially   learn-PST.PA.NOM.SG.M-RFL
 'He has not specially studied this craft...' (LKT)

(12) *Teko su juo atskirai padirbėti ir labai daug, visus metus, kad galėtų baigti ketvirtą,*
 *nes **buv-o   ne-si-mok-ęs**   treči-oje   klas-ėje.*
 since AUX-PST.3   NEG-RFL-learn-PST.PA.NOM.SG.M third-LOC.SG.F   grade-LOC.SG
 'We had to work with him separately and for a long time, for the whole year, in order for him to be able to finish the fourth grade, since he had not studied in the third grade.' (LKT)

Of course, in many cases there is very little if any truth-conditional difference between the upper and the lower negations, and both constructions can sometimes be used in the same contexts, like in (13) and (14).

(13) *Taurag-ės   rajon-o   savivaldyb-ė   dar **nėra**   grąžin-us-i***
 Tauragė-GEN.SG district-GEN.SG municipality-NOM.SG yet   NEG.AUX.3 return-PST.PA-NOM.SG.F
 2 milijon-ų   lit-ų   iš   pasiskolint-ų   6 milijon-ų   lit-ų.
 2 million-GEN.PL litas-GEN.PL from borrowed-GEN.PL 6 million-GEN.PL litas-GEN.PL
 'The municipality of the Tauragė district has not yet returned 2 million litas from the 6 million loan.'[7]

(14) *Tačiau ministr-ė   dar **yra**   ne-grąžin-us-i***
 however minister-NOM.SG yet   AUX.PRS.3 NEG-return-PST.PA-NOM.SG.F
 218 tūkst. lit-ų   paskol-os.
 218 thousand litas-GEN.PL   loan-GEN.SG
 'However the minister has not yet returned the 218 thousand litas loan.'[8]

The difference between the two constructions of the negated perfect in Lithuanian can be informally summarized as follows: the higher negation involves the denial of the result of an event (and normally implies the non-occurrence of the event itself), while the lower negation makes an assertion about the state resulting from the non-occurrence of an event. In other words, the morphosyntactic position of negation iconically reflects the mutual scope of negation and perfect:

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[6] http://tinyurl.com/lyvn7s7, accessed 4 March 2015.
[7] http://tinyurl.com/kt6ckwv, accessed 7 March 2015
[8] http://tinyurl.com/lgerbys, accessed 7 March 2015
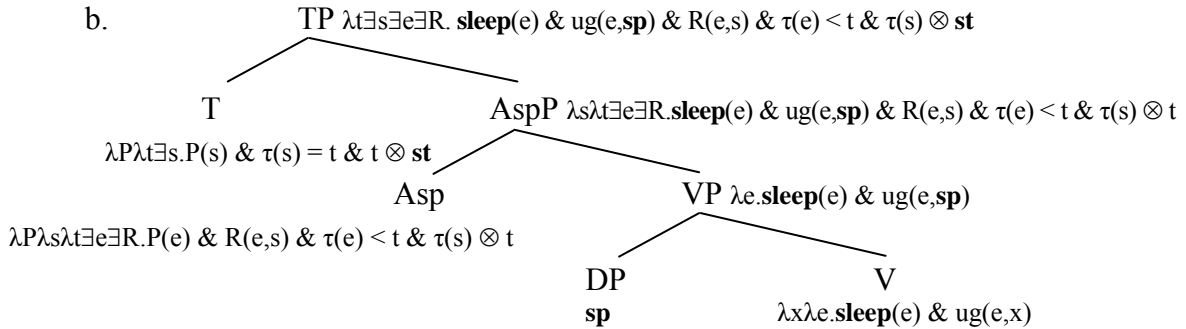
higher negation: NEG > PERF
lower negation: PERF > NEG

Below I will attempt to present a tentative compositional account of the difference between the higher and the lower negations in the Lithuanian perfect. I analyze the meaning of the Lithuanian perfect in line with the proposal by Nishiyama & Koenig (2010) that the perfect introduces an unspecified state whose identity is supplied by the context. However, since the Lithuanian perfect is arguably more restricted with respect to the possible interpretations of the perfect state than the English perfect, I hypothesize that the Lithuanian perfect introduces a contextually specified relation R between the event and the state (akin to the "free relation" invoked in the semantic description of genitive modifiers by Partee & Borshev 1998). Besides that, the fact that the Lithuanian perfect does not have a "universal" reading is captured by specifying that the event denoted by the verb phrase is located before the reference time, see (15).

(15) $[[\text{PERF}_{\text{Lith}}]] = \lambda P \lambda s \lambda t \exists e \exists R. P(e) \ \& \ R(e,s) \ \& \ \tau(e) < t \ \& \ \tau(s) \otimes t$
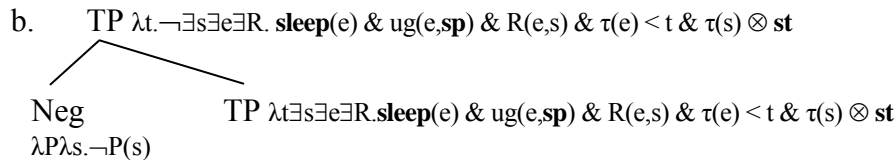
Under such an analysis, the interpretation of the affirmative sentence with the perfect such as (6a) repeated here as (16a), will look like (16b) (**sp** is 'speaker' and **st** is 'speech time', "ug" is "undergoer").

(16) a. *Es-u   miegoj-us-i.*
           AUX-PRS.1SG   sleep-PST.PA-NOM.SG.F
           'I [female] have slept.'

b. TP $\lambda t \exists s \exists e \exists R.$ **sleep**(e) & ug(e,**sp**) & R(e,s) & $\tau(e) < t$ & $\tau(s) \otimes$ **st**

T $\lambda P \lambda t \exists s. P(s) \ \& \ \tau(s) = t \ \& \ t \otimes$ **st**

AspP $\lambda s \lambda t \exists e \exists R.$**sleep**(e) & ug(e,**sp**) & R(e,s) & $\tau(e) < t$ & $\tau(s) \otimes t$

Asp $\lambda P \lambda s \lambda t \exists e \exists R. P(e) \ \& \ R(e,s) \ \& \ \tau(e) < t \ \& \ \tau(s) \otimes t$

VP $\lambda e.$**sleep**(e) & ug(e,**sp**)

DP **sp**

V $\lambda x \lambda e.$**sleep**(e) & ug(e,x)

The corresponding sentence with the higher negation, i.e. (6b) repeated here as (17a), is represented in (17b); for simplicity of exposition I assume that the higher negation adjoins to T and negates the whole proposition; a more sophisticated analysis, e.g. along the lines of Kratzer (1989) is also feasible.

(17) a. **Ne-s-u**   *miegoj-us-i.*
           NEG-AUX-PRS.1SG   sleep-PST.PA-NOM.SG.F
           'I have not slept'

b. TP $\lambda t. \neg \exists s \exists e \exists R.$ **sleep**(e) & ug(e,**sp**) & R(e,s) & $\tau(e) < t$ & $\tau(s) \otimes$ **st**

Neg $\lambda P \lambda s. \neg P(s)$

TP $\lambda t \exists s \exists e \exists R.$**sleep**(e) & ug(e,**sp**) & R(e,s) & $\tau(e) < t$ & $\tau(s) \otimes$ **st**

The representation of constructions with lower negation such as (6c) repeated below as (18a) is also fairly straightforward. To account for the intuition that in such sentences the perfect has scope over negation, the negative morpheme has to attach below Asp, as in the tentative representation in (18b).

(18) a. *Es-u*   **ne**-*miegoj-us-i.*
        AUX-PRS.1SG   NEG-sleep-PST.PA-NOM.SG.F
        'I have not slept.'

b.

$$\text{AspP } \lambda s \lambda t \exists e \exists R. \neg(\textbf{sleep}(e) \ \& \ ug(e,\textbf{sp})) \ \& \ R(e,s) \ \& \ \tau(e) < t \ \& \ \tau(s) \otimes t$$

Asp   VP $\lambda e. \neg(\textbf{sleep}(e) \ \& \ ug(e,\textbf{sp}))$

$\lambda P \lambda s \lambda t \exists e \exists R.P(e) \ \& \ R(e,s) \ \& \ \tau(e) < t \ \& \ \tau(s) \otimes t$

             Neg   VP $\lambda e.\textbf{sleep}(e) \ \& \ ug(e,\textbf{sp})$

            $\lambda P \lambda e. \neg P(e)$

                  DP   V

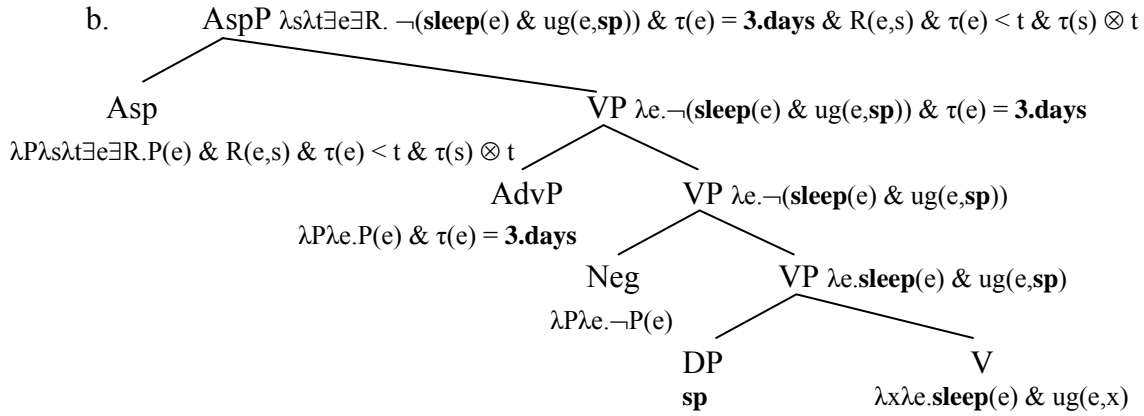   **sp** $\lambda x \lambda e.\textbf{sleep}(e) \ \& \ ug(e,x)$
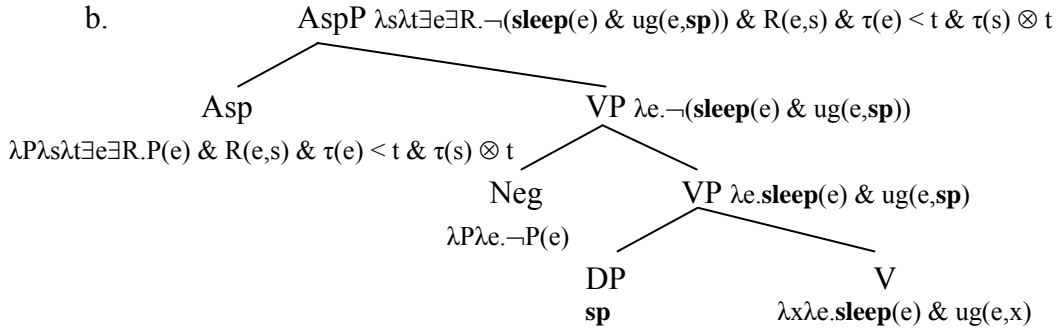
An objection can be raised against the representation in (18b), since the purely logical negation does not in fact yield the adequate semantic interpretation. Indeed, the negated VP in (18b) denotes the set of events complementary to the set of sleeping events, which is evidently too broad an extension. What sentences like (18a) and other similar examples discussed above express is not the result of **any** possible event outside of the extension of the non-negated VP, but rather the result of the non-occurrence of a **contextually expected** event from the extension of the VP (cf. the above quotation from Stockwell, Schachter & Partee 1973 regarding the "breaking of a habitual or expected pattern of activity", or Higginbotham 2000: 73–74). Therefore, the lower negation cannot be the logical negation pure and simple and should rather instantiate an operator yielding negative events of the type discussed in Higginbotham (2000: 74–75)[9]. I will not, however, pursue this option here, since, first, the fleshing out of all formal details of the analysis is not my goal here, and, second, because the issue of the correct representation of the meaning of linguistic negation and its largely pragmatically determined "flavours" is much broader than the rather modest scope of the present study.

However formally represented, the crucial point of the current analysis is that the perfect in Lithuanian can scope over negation, which, given that what the perfect applies to is an event description, implies that negation can operate on "positive" events and yield "negative" events. This not only aligns well with the informal intuition about examples like (8), (10), (12) and (14), but finds support in the already mentioned fact that perfects with the lower negation can combine with temporal adverbials indicating the duration of the negative event itself, as in (8) or especially (19a) below, since adverbials of duration take scope over events, and not, for instance, propositions (see e. g. Krifka 1989). The simplified semantic representation of the AspP of (19a) is given in (19b).

(19) a. *O*   *armij-oje*   **es-u**   **ne-miegoj-ęs**   *tr-is*   *par-as*.
        and   army-LOC.SG   AUX.PRS-1SG   NEG-sleep-PST.PA.NOM.SG.M   three-ACC.PL   day-ACC.PL
        'When I was in the army I [once] did not sleep for three days.'[10]

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[9] Another potential solution would be the one along the lines of Champollion (2010).
[10] http://tinyurl.com/pxb28nh, accessed 9 March 2015.

b. AspP $\lambda s\lambda t\exists e\exists R. \neg(\textbf{sleep}(e) \ \& \ \text{ug}(e,\textbf{sp})) \ \& \ \tau(e) = \textbf{3.days} \ \& \ R(e,s) \ \& \ \tau(e) < t \ \& \ \tau(s) \otimes t$

    Asp   VP $\lambda e.\neg(\textbf{sleep}(e) \ \& \ \text{ug}(e,\textbf{sp})) \ \& \ \tau(e) = \textbf{3.days}$

$\lambda P\lambda s\lambda t\exists e\exists R.P(e) \ \& \ R(e,s) \ \& \ \tau(e) < t \ \& \ \tau(s) \otimes t$

                                   AdvP   VP $\lambda e.\neg(\textbf{sleep}(e) \ \& \ \text{ug}(e,\textbf{sp}))$

                            $\lambda P\lambda e.P(e) \ \& \ \tau(e) = \textbf{3.days}$

                                      Neg   VP $\lambda e.\textbf{sleep}(e) \ \& \ \text{ug}(e,\textbf{sp})$

                                $\lambda P\lambda e.\neg P(e)$

                                      DP   V

                                     sp $\lambda x\lambda e.\textbf{sleep}(e) \ \& \ \text{ug}(e,x)$

Given that the Lithuanian clause contains two sites for the attachment and interpretation of negation, it is not surprising that examples of double negation with the perfect are also attested, cf. (20) and (21), denying the existence of negative event of non-helping or non-coming, respectively, cf. a very schematic semantic representation in (22).

(20) *Niekada*   ***ne-s-u***   ***ne-padėj-ęs***   *žmog-ui*
      never   NEG-AUX-PRS.1SG   NEG-help-PST.PA.NOM.SG.M   person-DAT.SG
      vien dėl to, kad jis yra vienos ar kitos partijos narys.
      'It has never been the case that I didn't help a person just because he was a member of a particular party.' (LKT)

(21) *Ir dar niekada* **ne-buv-o**   **ne-atėj-ęs**   *ar*   *pavėlav-ęs.*
      and yet   never   NEG-AUX-PST.3   NEG-come-PST.PA.NOM.SG.M   or   be.late-PST.PA.NOM.SG.M
      'And it has never been the case that he didn't come or was late.' (LKT)

(22) $\neg\exists s\exists e.\neg P(e) \ \& \ R(e,s)$

I hope that the above discussion has demonstrated the relevance of negative events for the morphosyntax-semantics interface of Lithuanian, and has shown that a compositional analysis is both necessary and feasible for an adequate account of these data. I would like to conclude my article by pointing out that parallel phenomena exist in English as well, though they have not received enough attention in the literature. It has been observed in McCawley (1999: 179) that the English perfect can interact with negation in basically the same two ways as has been shown above for Lithuanian, cf. (23) and (24) and the quotation from McCawley.

(23) *John hasn't received any encouragement.*

(24) *John has* [*not returned my calls*] *many times.*

     "In [(23)], one says that (in the relevant past interval that stretches up to the present) there is no event of John receiving some encouragement; in [(24)], one says that there are many past events of John not returning my calls." (McCawley 1999: 179)

Thus, according to McCawley, in English the perfect can have scope over negation, in contradiction to, e.g., Jansen (1983: 84), who claimed that "negation always has wider scope than the perfect". McCawley's observation is corroborated by Zanuttini (1996: 189–190), De Swart & Molendijk (1999: 19) and de Swart (2012: 773–776); for example, Zanuttini (1996) gives the following pair of examples notable for the clear formal (word order) distinction between the "higher" and the "lower" negations:

(25) a.   *Mary **hasn't** always **paid** taxes.* (NEG > PERF > always)

      b.   *Mary **has** always **not paid** taxes.* (PERF > always > NOT) (Zanuttini 1996: 189)

In (26) and (27) non-constructed examples with such "split" negated Perfect are given:

(26) *They really love nursery and **have** sometimes **not wanted** to come home!*[11]

(27) *I **have** often **not slept** or **eaten** for 2 days at a time.*[12]

It must be noted, however, that such examples of "split Perfect" are quite rare in modern English: according to BNC (100 mil. words), the string *have/has sometimes/often/always not* occurs 10 times, while the string *has/have not* occurs about 11 000 times.[13]

Finally, as Zanuttini (1996: 189–190) observes, in Italian both the "higher" (25a) and the "lower" (25b) interpretations of negation can only be expressed by a construction with the negation modifying the auxiliary (28a); attaching the negation to the participle of the lexical verb is ungrammatical, cf. (28b).

(28) a. *Maria **non ha** sempre **pagato** le tasse.*
          '=25a, 25b' (Zanuttini 1996: 190)

      b. **Maria **ha** sempre **non pagato** le tasse.*
          intended '=25a'

In sum, though from a purely logical stand the "lower" scope of negation with respect to the perfect, serving as an important piece of evidence for the existence and grammatical relevance of negative events, can well be universal, languages differ in whether they have morphosyntactic means to overtly distinguish between these two semantic construals, as well as in the extent to which they employ such means (see Arkadiev 2013 and Arkadiev forthcoming for more cross-linguistic data). Lithuanian presents a clear example of a language where the difference in semantic scope is reflected in the morphosyntax in the most iconic way.

Abbreviations

ACC — accusative; AUX — auxiliary; DAT — dative; DEM — demonstrative; F — feminine; GEN — genitive; INS — instrumental; LOC — locative; M — masculine; NEG — negation; NOM — nominative; PA — active participle; PL — plural; PRS — present; PST — past; RFL — reflexive; SG — singular.

Sources

BNC — British National Corpus, http://www.natcorp.ox.ac.uk/
LKT — The Corpus of Modern Lithuanian, www.tekstynas.vdu.lt

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[11] http://tinyurl.com/mvvyvou, accessed 11 March 2015.
[12] http://tinyurl.com/oxntpop, accessed 11 March 2015.
[13] As a side note it is worth observing that examples like (26) and (27) are not even mentioned in a 800-page long study of the English verb phrase by Declerck (2006).

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