Event Number Suffixes in Russian and Lithuanian*

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1. Introduction: problem and proposal

In Russian, verbs can combine with a suffix –nu-. The meaning of the newly derived verb is ‘to V once/in a moment’.

(1) a. liz-a-t’  
liz-SUF-INF
lick-TV-INF  
‘to lick/be licking’

b. liz-nu-t’  
liz-SUF-INF
‘to (have) lick(ed) once’

Traditionally, this suffix is analyzed as a semelfactive (Zalizniak & Shmelev 2000) which contributes to the aspecital properties of the clause. In particular, the use of this suffix signals that the event is bounded: it serves as a perfectivizer. As a result, perfective verbs with –nu- are incompatible with durational adverbials like dolgo ‘for a long time’ or unbounded iterative adverbials like snova i snova ‘again and again’ as illustrated in (2)-(3).

(2) a. liz-a-t’ snova i snova  
lick-TV-INF again and again  
‘to lick again and again’

b. *liz-nu-t’ snova i snova  
lick-SUF-INF again and again  
‘to (have) lick(ed) again’

(3) a. liz-a-t’ dolgo  
lick-TV-INF long  
‘to lick for a long time’

b. *liz-nu-t’ dolgo  
lick-SUF-INF long

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2 All other morphemes associated with perfectivity are prefixes.
In this paper we challenge the standard view according to which -nu- is treated as an aspectual suffix. Instead, we argue that this suffix is better analyzed as belonging to the category Number (specifically, Event Number), rather than Aspect. In particular, we argue that this suffix indicates that an event takes place exactly once. As such, it functions as a uniactional marker. This analysis leads us to expect a pluractional marker as well. We show that this is indeed the case: we propose that the suffix –yva-, which has traditionally been analyzed as an imperfectivizer (Comrie 1976, Zalizniak & Shmelev 2000) can be re-analyzed as Number – in this case, as pluractional marker.

In the following sections we provide evidence for the number properties of uniactional and pluractional suffixes. To make our case stronger, we build on both intra-linguistic data from Russian as well as cross-linguistic data from Lithuanian. Lithuanian suffixes –elė- and –inė- are the equivalents of Russian –nu- and –yva-. Lastly, we conclude that the aspectual effect of the suffixes falls out as a consequence of their number properties.

2. Uniactional markers

In his section, –nu-/–elė- are re-analyzed as uniactional markers.

First, –nu-/–elė- change the event number interpretation. Unaffixed verbs are unspecified for number. An unaffixed verb may be interpreted as denoting a repeating event (4)-(5) (in fact, many of the verbs that can combine with –nu- are inherently (lexically) pluractional, like jump, blink, cough, etc), but a verb containing one of these suffixes may only denote a single event (6)-(7).

(4) Marko Polo neterpelivo top-a-l.  
Marco Polo impatiently stomp-TV-PAST
‘Marco Polo stomped impatiently.’

(5) Markas Polo nekantriai tryp-ė.  
Marco Polo impatiently stomp-PAST
‘Marco Polo stomped impatiently.’

3 Uniactional is used here by analogy with pluractional.
Another diagnostics that distinguishes the interpretation of affixed and unaffixed verbs is counting events. Numeral adverbials are always felicitous in combination with verbs suffixed with –nu-/elė- (10) - (11), but for unaffixed verbs, compatibility with numeral adverbials vary. In particular, most lexically pluractional unaffixed verbs (the kind that combines with -nu-/elė- most often) are odd in combination with numeral adverbials (8)-(9).

(8) #?Marko Polo neterpelivo top-a-l tri raza⁴. Ru: V
Marco Polo impatiently stomp-TV-PAST three times

(9) #Markas Polo nekantriai tryp-ė tris kartus. Li: V
Marco Polo impatiently stomp-PAST three times

(10) Marko Polo neterpelivo top-nu-l tri raza. Ru: V-un-
Marco Polo impatiently stomp-SUF-PAST three times
‘Marco Polo did a stomp three times impatiently.’

(11) Markas Polo nekantriai tryp-elė-jo tris kartus. Li: V-elė-
Marco Polo impatiently stomp-SUF-PAST three times
‘Marco Polo did a stomp three times impatiently.’

For some verbs that can combine with - nu-/elė- and are compatible with numeral adverbials, the meaning difference between the unaffixed verb and its counterpart with - nu-/elė- is illustrated in the Russian

⁴ This example can be felicitous under a generic reading, e.g. following a clause ‘Every time when Marco Polo got angry…’
examples below. In (12), there are exactly three rocking motions, likely one after another. In (13), there are three occasions when rocking took place; they can be close or far apart in time; each occasion can involve one or many rocking motions.

(12) Marko Polo tri raza kač-nu-l kolybel’.  
Marko Polo three times rock-SUF-PAST cradle  
‘Marko Polo rocked the cradle three times’

(13) Marko Polo tri raza kač-a-l kolybel’.  
Marko Polo three times rock-TV-PAST cradle  
‘Marko Polo rocked the cradle three times’

In verbs with -nu-/-elė-, single instances of an event are counted; in the case of unaffixed verbs, it is possible, but not necessarily the case.

Prefixes po- (Ru)/pa- (Li) ‘for a while’ provide another diagnostics. Verbs with -nu-/-elė- are incompatible with the prefixes (14)-(15), while the unaffixed counterparts can occur with them (16)-(17).

(14) *Marko Polo neterpelivo po-top-nu-l.  
Ru: po-V-un-
Marco Polo impatiently PREF-stomp-SUF-PAST

(15) *Markas Polo nekantriai pa-tryp- elė-jo.  
Li: pa-V-elė-
Marco Polo impatiently PREF-stomp-PAST

(16) Marko Polo neterpelivo po-top-a-l.  
Ru: po-V  
Marco Polo impatiently PREF-stomp-TV-PAST
‘Marko Polo stomped impatiently for some time.’

(17) Markas Polo nekantriai pa-tryp-ė.  
Li: pa-V
Marco Polo impatiently PREF-stomp-PAST  
‘Marco Polo stomped impatiently for some time.’

In sum, we have shown that -nu-/-elė- are used when a verb describes a single event, or a set of single events within which the events can be counted, i.e. the uniactional suffix is some kind of Number rather than Aspect. On one hand, the attachment of the suffixes encodes a single instance of event and these single instances can be counted (4)-
On the other hand, the suffixed verbs do not allow prefixation of \(po-(\text{Ru})/pa-(\text{Li})\) ‘for a while’, i.e. the single event interpretation can not be canceled. The aspectual qualities of verbs with \(-nu-/elė\) – the fact that they can not co-occur with iterative or durative adverbials(2)-(3) - fall out from their Number properties.

### 3. Number as a Head vs. Number as a Modifier

We assume a cross-linguistic variation in Number: it can be realized as a head or as a modifier. In particular, we follow Wiltschko (2004, 2007) in assuming that Number marking can function as an obligatory functional head or as an optional modifier (see also Cusic 1981, Corbett 2000, Progovac 2005). We argue that in Russian and Lithuanian verbal Number functions as a modifier while nominal Number functions as a head. This accounts for the difference in their syntactic behavior.

The use of nominal Number in Russian and Lithuanian is obligatory which indicates that it functions as a syntactic head, assuming the view of morphosyntax as a single level of structural operations (Arad 2003, Halle & Marantz, 1993). That nominal number is indeed obligatory is illustrated below. First, there are no number-neutral forms: any noun (even mass nouns) is marked for either singular or plural\(^5\), and bare noun roots are not allowed (18)-(21).

(18) Marko Polo videl pol-\(e/\) pol’-\(a/\) *pol. Ru
Marko Polo see-PAST field-ACC.SG field-ACC.PL field
‘Marko Polo saw a field/fields.’

(19) Markas Polo suvalgė obuol-\(į/\) obuol-ius/ *obuol. Li
Marko Polo PREF-eat-PAST apple-ACC.SG apple-ACC.PL apple
‘Marko Polo ate the apple/apples.’

Second, Number\(_{\text{head}}\) marking applies redundantly, i.e. when a numeral is present, a noun still has to have a number marker.

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\(^5\) Nominal number in Russian and Lithuanian is fused with Gender and Case.
(20) Marko Polo videl sem’ pol-еj. Ru
Marko Polo see-PAST seven field-GEN.PL
‘Marko Polo saw seven fields.’

(21) Markas Polo suvalgė tris obuol-ius. Li
Marko Polo PREF-eat-PAST three apple-ACC.PL
‘Marko Polo ate three *apple/apples.’

There are no semantic restrictions for Number<sub>head</sub>. All nouns in Russian and Lithuanian are marked for number, irrespective of their semantics: whether the nominal is count or mass, number suffix is always present.

Number<sub>head</sub> on the subject requires agreement with the predicate:

(22) a. Ja risuj-u Marko Polo. Ru
ISG.NOM draw-ISG Marko Polo
‘I am drawing Marco Polo’.

b. *My risuj-u Marko Polo. Ru
1PL.NOM draw-ISG Marko Polo

In contrast, number marking on verbs behaves differently. We suggest that this difference is due to the difference in the properties of Number. Verbal, or event number in Russian and Lithuanian, is an instance of an optional Number<sub>modifier</sub>, unlike the obligatory nominal Number<sub>head</sub>. While the uniactional suffix is needed to convey the additional meaning, it is not syntactically obligatory, and its absence does not cause ungrammaticality. Recall that both unaffixed verbs (4)-(5) and verbs with –nu/-elė- (6)-(7) are well-formed, while nominals without number marking would be ungrammatical (18)-(19).

Number<sub>modifier</sub> is sensitive to the semantics inherent to the verb. The suffix –nu/-elė- does not combine with certain verbs<sup>6</sup>. Lithuanian examples are parallel, but excluded due to lack of space.

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<sup>6</sup> The nature of these restrictions is subject to further research. The preliminary look at the data indicates that the suffixes select for stems the semantics of which lend itself to counting of discrete events, e.g., instances of motion (jump) are easier to discern and count if compared to instances of mental activity (read) that are hard to define in terms of
Unlike nominal Number\textsubscript{head}, verbal Number\textsubscript{modifier} does not trigger subject-predicate agreement, i.e. –nu/-elė- occur with both singular and plural subjects, which is not discussed here for the lack of space.

Further evidence that –nu/-elė- are unaional markers, and thus an instance of Number\textsubscript{modifier} is based on the existence of a plurational marker to which we turn in the next section.

4. –yva/-inė- revisited: the plurational marker

Another suffix that is usually treated as aspectual – even in recent accounts (Filip 2000 for Czech, Ramchand 2004 for Russian) - is –yva-(Ru) and its counterpart –inė- (Li)\(^7\) (Ambrazas 1997). When the suffixes attach to prefixed or simple perfective verbs (shown without the suffixes in (27)-(28)), the verb becomes imperfective, as illustrated in (29)-(30). This is shown on the basis of durative adverbial diagnostic. Hence, traditionally, it is called the imperfective suffix (Comrie 1976, Zalizniak & Shmelev 2000).

\(^7\) These suffixes have several allomorphs; we are giving the most frequently occurring allomorph for each language.
However, there is evidence against the suffixes being aspectual. First, in certain cases they are added for its cumulativizing effect rather than for aspect change. Certain prefixes (e.g. Russian accumulative na- ‘a lot’) select for a cumulative verb stem. While prefixes that don’t require a cumulative stem can combine with unaffixed perfective verbs directly, as in (31b), prefixes like na- cannot, as (31c) shows. In such cases, -yva- must be added, as in (31d), without any aspectual contribution, but to make the semantics of the stem more congruent with the semantics of the prefix (see Sherkina-Lieber (to appear) for more details).

(31) a. da-t’ sovet
give-INF advice
‘to give PERF advice’
b. pere-dat’ sovet
across-give-INF advice
‘to pass PERF a piece of advice’
c. *na-da-t’ sovetov
ACM-give-INF advicePL
‘to [give.a.lot.of] PERF advice’
d. na-da-v-a-t’ sovetov
ACM-give-SUF-INF advicePL
‘to [give.a.lot.of] PERF advice’

Second, -yva-/-inė- can attach to unaffixed verbs, i.e. verbs that are
already imperfective. The resulting meaning is generic, and there is no perfective/imperfective switch, as the use of the adverbial shows. Note that other types of imperfective verbs (both Prefix+V+yva- and unaffixed verbs) can express genericity too, but adding –yva- to unaffixed verbs restricts their interpretation to generic. This combination is rare and somewhat obsolete in Russian, but productive in Lithuanian.

(32) Ja del-a-l s nimi gribnye nabegi. Ru: V
I do-TV-PAST with them mushroom forays
‘I did mushroom forays with them.’

(33) Ja del-yva-l s nimi gribnye nabegi Ru: V-yva-
I do-SUF-PAST with them mushroom forays
‘I would do/used to do mushroom forays with them.’
(N. Nekrasov, Krestyanskiye deti, 1861)

(34) Aš kasdien raš-iau. Li: V
1SG everyday write-PAST
‘I wrote every day.’

(35) Aš kasdien raš-inė-jau Li: V-inė-
1SG everyday write-SUF-PAST
‘I wrote from time to time/on and off every day.’

Filip & Carlson (1997) show that genericity is not a type of aspect, but rather its own category that cross-classifies with aspect. They point out that in Slavic languages, genericity can be expressed by either imperfective or perfective verb forms. Thus, there is one more non-aspectual use of –yva-/inė-

The discussion of the data above shows that a solely aspecual contribution of the suffixes is at least questionable, while the effect on the verbal meaning is that the verb becomes easily compatible with

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8 Filip & Carlson (1997) treat their Czech equivalent, generic –va-, as homonymous with the imperfective –va-. We adopt approaches like The Principle of Strong Monosemy (Cowper 1995) and the One Form, One Meaning Principle (Johns 1992), which basically say that if two meanings of a form can be unified, this is not homonymy. In this light, we believe that neither –yva- nor –inė- are homonymous. Note that Filip & Carlson point out that there is a historical connection between the two meanings.
interpretations where the event occurs multiple times (as in the cases of iterativity (multiplicity of events)\(^9\) and genericity (a regularity of an event))\(^10\) or where the event spreads over multiple times (as in the cases of ongoing events and cumulativization in order to combine with prefixes). Therefore we suggest that suffixes –\textit{yva-/-inė-} are the pluractional counterparts of the uniactional suffixes –\textit{nu-/-elė-}. If so, we predict that –\textit{nu-/-elė-} and –\textit{yva-/-inė-} are in complementary distribution due to their semantic meaning (an event can not be singular and plural at the same time).\(^11\) This prediction is borne out, as illustrated in the Russian examples below. Lithuanian data is consistent with the pattern and omitted for reasons of space.

\begin{itemize}
  \item[(36)]
  \begin{enumerate}
    \item a. Marko Polo svist-\textit{e}-l. \hspace{1cm} \textbf{Ru: V}
      Marco Polo whistle-TV-PAST
      ‘Marco Polo whistle-\textit{ed}.’
    \item b. Marko Polo svist-\textit{nu}-l. \hspace{1cm} \textbf{Ru: V-un-}
      Marco Polo whistle-SUF-PAST
      ‘Marco Polo whistle-\textit{ed} once.’
    \item c. Marko Polo \textit{po}-svist-\textit{e}-l. \hspace{1cm} \textbf{Ru: pref-V}
      Marco Polo PREF-whistle-TV-PAST
      ‘Marco Polo whistle for a while’.
    \item d. Marko Polo \textit{po}-svist-\textit{yva}-l. \hspace{1cm} \textbf{Ru: pref-V-\textit{yva}-}
      Marco Polo PREF-whistle-SUF-PAST
      ‘Marco Polo whistle-\textit{ed} from time to time’
  \end{enumerate}
\end{itemize}

\(^9\) One referee points out that iterativity is often considered to be an effect of aspect. We suggest that iterativity can also be viewed as a side effect of number properties, namely a way of attaining interpretation of multiple instances of events.

\(^10\) This is how iterativity and genericity are defined in Filip & Carlson (1997).

\(^11\) One referee points out that this would be true if one of the affixes were to be defined as bounded and one as not bounded. In favor of our analysis, the bounded/unbounded view of suffixes would in principle allow stacking of these suffixes because nothing would prevent secondary (im)perfectivization. Furthermore, the suffixes also provide the counting of events meaning and this generalization would have to be stipulated under bounded/unbounded definition of these suffixes.
e. *Marko Polo po-svist-yva-nul.     Ru: pref-V-yva-nu-
Marco Polo PREF-whistle-SUF-SUF-PAST

f. *Marko Polo po-svist-nu-va-nul.     Ru: pref-V-nu-yva-
Marco Polo PREF-whistle-SUF-SUF-PAST

Our second prediction is that if the uniactional and the pluractional morphemes nest in the same syntactic slot, then they share the same properties. The uses of the respective suffixes support our prediction.

The use of –yva/-inė- is optional in the same way as of –nu/-elė-: the suffix changes the meaning, but the sentence can be grammatical without it.

Like the uniactional marker, the pluractional marker is also sensitive to the semantics of the verbs and is incompatible with certain verb roots.

(37) Marko Polo l’ub-i-l                poeziju.     Ru: V
Marco Polo love-TV-PAST poetry\textsubscript{Acc.Sg}
‘Marco Polo liked poetry’

(38) Markas Polo mėg-o        poeziją.     Li: V
Marco Polo like-PAST poetry\textsubscript{AccSG}
‘Marco Polo liked poetry.’

(39) *Marko Polo l’ub(l)-iva-l           poeziju.     Ru: V-yva-
Marco Polo love-SUF-PAST poetry\textsubscript{AccSG}

(40) *Markas Polo mėg-inė-jo            poeziją.     Li: V-inė-
Marco Polo like-SUF-PAST poetry\textsubscript{AccSG}

Thus, we have shown that the suffixes -yva/-inė- exhibit properties similar to those of -nu/-elė-, i.e. the set of suffixes belongs to the same Number\textsubscript{modifier} class.\textsuperscript{12}

\textsuperscript{12} There is also a difference in distribution of uniactional and pluractional suffixes that we address only briefly as it does not bear on the main line of reasoning. The Russian suffix –nu- selects only unaffixed verbs. The Lithuanian suffix –elė- favors unaffixed verbs. Most bare predicates are interpreted as unbounded, and allow a pluractional interpretation, while uniactionality needs to be marked overtly. The suffixes -yva- and -inė- favor prefixed verbs. Prefixed predicates without -yva/-inė- are interpreted as
In the next section we address how our classification of these suffixes as Number predicts their aspectual effects.

5. The aspectual effect of uniactional and pluractional markers

Under our proposal -nu/-elė and -yva/-inė are classified as Number_{modifier}. Assuming this approach, the aspectual effect of the suffixes falls out as a result of their semantic Number properties, akin to the effect of Number_{head} in nominals within verbal phrases.

The aspectual effect of nominal number is well known. In English, when the internal argument of a verb in simple past is a singular count noun, the predicate is interpreted as telic; when the internal argument is bare plural, the predicate is atelic (Van Hout et al. 2005, inter alia) as the adverbial tests in (41) show. However, nominal number morphemes are never considered aspectual morphemes.

(41)  
(a) She ate an apple #?for an hour/in an hour
(b) She ate apples for an hour/#in an hour.
(c) She ate a bag of apples #for an hour/in an hour.

The aspectual effect of number is derived through quantization. Singular count nouns are quantized; plural and mass nouns are cumulative. A measure phrase applied to a mass noun yields a quantized individual (e.g. coffee vs. a cup of coffee). A quantized internal argument makes a predicate telic (Krifka 1998).

The aspectual effect of verbal number is derived in the same way. Most unaffixed verbs in Russian (42) and Lithuanian (43) are like mass nouns – cumulative and thus atelic. The suffix -nu/-elė does to verbs what measure phrases do to nouns: cutting out a bounded portion of an event or individual, respectively, and thus making it quantized. A quantized verb is telic (under Krifka’s definition of telicity) and therefore perfective, and incompatible with durative adverbials (42)-(43).

bounded, and allow a uniactional interpretation, while a pluractional interpretation is not allowed by most of them. Hence, the pluractionality needs to be marked overtly.

13 The nominal effect does not hold cross-linguistically, see Armoškaite 2006. In particular, it does not hold in Lithuanian and Russian. Whether the internal argument is cumulative or quantized, it does not always influence the aspectual interpretation of the predicate.
(42)  
  a. Marko Polo [pryg-a-l]_{IMPERF} dolgo.  
     Marko Polo  jump-TV-PAST  long time
     ‘Marco Polo jumped for a long time.’
  
  b. #Marko Polo [pryg-nu-l]_{PERF} dolgo.  
     Marko Polo  jump-SUF-PAST-SG  long time

(43)  
  a. Marko Polo [tryp-č]_{IMPERF} ilgai.  
     Marko Polo  stomp-PAST  long time
     ‘Marco Polo stomped for a long time.’
  
  b. #Marko Polo [trypt-el-jo]_{PERF} ilgai.  
     Marko PoloSG  stomp -SUF-PAST-SG  long time

Thus, the aspectual effect of –nu/-elė- can be derived from its Number semantics, and this morpheme does not have to be labeled aspectual. If –nu/-elė- is analyzed as event number - a uniactional marker - the perfectivizing effect falls out. However, if this suffix is analyzed as a sub-type of perfective aspect, the ‘V once’ effect has to be motivated independently.

The aspectual effect of the plural marking on events by the suffixes -yva/-inė- is similar to that of plural marking on nouns and can be derived in a similar fashion. In both cases, the result is cumulativity. Krifka (1998:207) points out that “It is obvious that quantized predicates are telic... But not every telic predicate is quantized; quantization is a stricter notion... Cumulative predicates, on the other hand, are typically atelic.” Thus, a cumulative predicate may or may not be telic which is the description of the imperfective; e.g. Filip (1999) showed that Slavic imperfective verbs can be telic or atelic. We will not go over the detailed derivation of the aspectual effects of the pluralactional marker due to space constraints.

6. Conclusions and consequences

We have proposed that the verbal suffixes –nu- (Russian)/-elė- (Lithuanian) and –yva- (Russian)/-inė- (Lithuanian) should be analyzed as uniactional and pluractional markers, respectively. We showed that
the properties of the suffixes are attributed to their Number status, and the aspectual effect is derived.

We have further proposed to treat verbal suffixes as Number\textsubscript{modifier}. Verbal prefixes are also viewed as modifiers by Filip (2000:41-42; cf. Progovac 2005). If none of the morphemes that were previously called aspectual are in fact aspectual Heads, we question the status of AspP a syntactic category in Russian and Lithuanian. We do not consider simply replacing AspP with NumP. As a future research program, we hypothesize that aspectual interpretations fall out as a result of a constellation of various linguistic phenomena, such as: language specific qualities of DP, instantiation of Number, modifying affixes, verbal root specification and so on.

References


