

## Accomplishment VPs: construction of telicity. A case study of Lithuanian\*

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### 1 The problem: same structures get different interpretations

This paper discusses how eventive verbs come to be associated with an endpoint (telic, from Greek *telos* ‘end’) interpretation in Lithuanian. The question is particularly interesting in the context of the contrast in (1) – (2). In (1), the event is interpreted as not having an endpoint<sup>1</sup>, while in (2) the event is interpreted as having an endpoint.

(1) Ieva **valgė tą obuolį**, bet jo nepabaigė. *Lithuanian*  
*Eve eatPast that appleAcc but heGen neg-finishPast*  
‘Eve was eating that apple but did not finish it.’<sup>2</sup>

(2) # Eve **ate that apple**, but did not finish it. *English*

At first glance, the syntactic make up of (1) and (2) is the same: the base predicate (not affixed) is in the past with an internal argument preceded by a demonstrative. The contrast in the pair arises when one attempts to cancel the endpoint of the event by means of coordinated clause ‘*but did not finish*’. The curious question is why, all things being equal, this contrast holds.

In the tradition of compositional treatments of aspect (cf. Verkuyl 1973, Krifka 1992, Tenny 1994, van Hout 1996, Ramchand & Svenonius 2002 to name a few), the verb and its arguments are claimed to be equally involved in the construction of aspectual interpretations. Accordingly, any change in the form in a minimal pair of propositions is expected to produce a contrast in interpretation. Therefore the fact that we get an *interpretational difference in the absence of an obvious formal difference* requires explanation.

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<sup>1</sup> For discussion of key terms see section 2.

<sup>2</sup> A caution about the English translation: the Lithuanian base verb (not affixed) is in imperfective form, one interpretation of which can be progressive. The English progressive form is the closest approximation of the meaning in Lithuanian. This does not affect the crucial point of the data: both English and Lithuanian use the base verbal form (i.e. not modified by affixes), yet the interpretation is different.

The paper is structured as follows. I first define terms of telicity and accomplishment (§ 2). Then I present the evidence that the internal argument is excluded from the construction of telicity in Lithuanian (§ 3.1). Third, I show that verbal prefixes are the source of telicity in Lithuanian (§ 3.2). Fourth, I propose the solution for the problem (§ 4). Finally, I conclude (§ 5).

## 2 The key terms: telic & accomplishment

Since aspectual terminology remains “unstable” and “confusing” (Tenny & Pustejovsky 2000, among many others), I identify the formal definitions of telicity and accomplishment assumed throughout the paper.

### 1.1 Telicity

The definition of telicity in this paper is based on Krifka (1998).

(3)

A predicate is telic if it is quantized and not cumulative.

$$\forall X \subseteq U_p [\text{QUA}_p(X) \leftrightarrow \forall x, y [X(x) \wedge (X)y \rightarrow \neg y <_p x]]$$

Example of a quantized predicate: eat two apples, run a mile

$$\forall X \subseteq U_p [\text{CUM}(X) \leftrightarrow \exists x, y [X(x) \wedge (X)y \rightarrow \neg x = y] \wedge \forall x, y [X(x) \wedge (X)y \rightarrow X(x \oplus_p y)]]$$

Example of a cumulative predicate: eat apples, run (Krifka 1998:3)

Based on the definition above, two events of running cumulatively add up to one event of running.<sup>3</sup> However, two events of *running a mile* do not add up to one event of running a mile: in each case it is a separate event and the two miles were covered as a result. In this case, the events can not add up cumulatively because they are quantized.

### 2.2 Verbal classification: accomplishment

The division of verbs into aspectual classes was introduced by Vendler (1967). Vendler’s four-way classification splits verbs into states, activities, achievements and accomplishments. States are non-dynamic, unlimited situations (e.g., *believe* or *be sad*). Activities are open-ended processes (e.g., *run*, *dance*). Achievements are point events which end as soon as they start (e.g., *notice*, *spot*, *find*). And, finally, accomplishments are processes which, according to Vendler, have a natural endpoint (e.g., *build a chair*).

Formal and informal definitions of various kinds have proliferated since Vendler first introduced his system. The definition of accomplishment used for this paper is adapted from Rothstein (2004:21-22):

<sup>3</sup> The limits of breaking down or granularity of the event remain a problem for semantics (Landman 1991).

- (4) Accomplishments are telic predicates that have stages: [+telic], [+stages].

The telic part of the definition is as described above in (section 2.1). Stages refer to the gradual process of an event leading to some telic end. For example, verbs like *notice* or *love* do not have stages. *Notice* is instantaneous, point event and does not have any duration necessary for stages. *Love*, on the other hand, is not limited by any stages.

### 3 The proposal: sources of telicity differ across languages

The data in section 1 show that the presence of an internal argument does not necessarily trigger endpoint interpretations: (i) the internal argument can be used to attain telicity in English; (ii) while in Lithuanian the internal argument is irrelevant. In what follows, I present the evidence that the internal argument is excluded from the construction of telicity (§ 3.2), and argue that verbal prefixes are the main sources of telicity in Lithuanian (§ 3.3).

#### 3.1 No number effect

The number on the internal argument has no effect on the telicity of VP in Lithuanian. V + DP is only sensitive to the presence or absence of the prefixes.

When the predicate is base (lacks prefixes), the interpretation of the VP remains atelic whether the internal argument is singular as in (5) or plural as in (6).

- (5) Aš stačiau **namus** metus/\*per metus.  
*Isg buildPast houseAccpl year/in year*  
 ‘I was building (the) houses for a year/\*in a year.’

- (6) Aš stačiau **namą** metus/\*per metus.  
*Isg buildPast houseAccsg year/in year*  
 ‘I was building a house for a year/\*in a year.’

However, when the predicate is prefixed, the interpretation of the VP is telic whether the internal argument is singular as in (7) or plural as in (8).

- (7) Aš **pastačiau** **namus** \*metus/per metus.  
*Isg pref-buildPast houseAccpl year/in year*  
 ‘I built the houses \*for a year/in a year.’

- (8) Aš **pastačiau** **namą** \*metus/per metus.  
*Isg pref-buildPast houseAccsg year/in year*  
 ‘I built the house \*for a year/in a year.’

### 3.1.2 No mass noun effect

In English, the mass/count distinction has an impact the (a)telic interpretation of the VP. If the internal argument is mass, the interpretation of VP is atelic (9), while a count internal argument provides a telic interpretation for the VP (10).

- (9) Kathleen ate ice-cream for hours/\*in a minute. [-telic]  
 (10) Kathleen ate an apple in an hour/?for an hour. [± telic]<sup>4</sup>

Mass /count distinction does not have an impact on the (a)telic interpretations of VP in Lithuanian<sup>5</sup>. When the verb is not prefixed, coordination with an adverse clause does not give rise to a contradiction whether the internal argument is mass as in (14) or count as in (15).

- (11) Aš gėriau piena, bet nepabaigiau.  
*Isg drinkPast milkAccsg but neg-finishPast*  
 ‘I was drinking milk but did not finish it.’
- (12) Aš gėriau stiklinę pieno, bet nepabaigiau.  
*Isg drinkPast glassAcc milkGensg but neg-finishPast*  
 ‘I was drinking a glass milk but did not finish it.’

Speaker comment: It sounds kind of strange, I don’t know when you would need to say that.<sup>6</sup>

<sup>4</sup> Atelic interpretation may be available to some speakers (Smollet 2004).

<sup>5</sup> Lithuanian nouns are always marked with morphological number regardless of their count/mass nature.

*English: mass nouns*

Sand, chalk, water - # one sand,...

*Lithuanian: mass nouns’ fused inflections*

smėl-is, kreid-a, vand-uo - # vienas smėlis, ...  
 sand-Nomsgmasc chalk-Nomsgfem water-Nomsgmasc ‘one sand’

<sup>6</sup> The strangeness disappears if the context it set up right.

Aš gėriau stiklinę pieno, bet nepabaigiau;  
 Isg drinkPast glassAcc milkGensg but neg-finishPast

rijau tablete, bet neprarijau;  
 swallowPast pillAccsg, but neg- swallowPast

stojasi ant galvos, bet neatsistojau...  
 standselfPast on headGen but neg-pref-self-standPast [no contradiction]

When the verb is prefixed, coordination with an adverse clause gives rise to a contradiction whether the internal argument is mass as in (13) or count as in (14).

- (13) #Aš išgėriau piena, bet nepabaigiau.  
*Isg pref-drinkPast milkAccsg but neg-finishPast*  
 ‘I drank up the milk, but did not finish it.’
- (14) #Aš išgėriau stiklinę pieno, bet nepabaigiau.  
*Isg pref-drinkPast glassAccsg milkGensg but neg-finishPast*  
 ‘I drank up a glass of milk, but did not finish it.’

### 3.1.3 Case interaction with predicate

It has been argued that the choice of case has an impact on the telicity of interpretation (cf. Kiparsky 1998, Kratzer 2004). For example, in Finnish, Partitive case of the internal argument gives an atelic interpretation (15), while Accusative case gives a telic interpretation (16).

- (15) Matti ost-i maito-a (tunni-n)  
*MattiNomsg buy-Pst3sg milksg Part (hour Acc)*  
 ‘Matti bought milk (for an hour).’
- (16) Matti ost-i maitdo-n (tunni-ssa)  
*MattiNomsg buy-Pst3sg milksg Acc (hour Iness)*  
 ‘Matti bought milk (in an hour). (Kiparsky 1998)

Lithuanian does not have a dedicated Partitive. The Genitive case is used for the relevant cases. However, regardless of the choice in case, the telicity of the VP is not affected. When the predicate is not prefixed, the interpretation is atelic, as (17)–(18) show.

- (17) Aš gėriau kava, bet nepabaigiau.  
*Isg drinkPast coffeeAccsg but neg-finishPast*  
 ‘I was drinking coffee but did not finish it.’
- (18) Aš gėriau kavos, bet nepabaigiau.  
*Isg drinkPast coffeeGensg but neg-finishPast*  
 ‘I was having some coffee but did not finish it.’

When the predicate is prefixed, the interpretation is telic, as (19)–(20) show.

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‘I was having a glass of milk, but did not finish it, I was swallowing a pill, but did not swallow it, I was about to do a headstand, but failed...’ Context: Hangover lamentation.

- (19) #Aš išgėriau kavą, bet nepabaigiau.  
*Isg pref-drinkPast coffeeAccsg but neg-finishPast*  
 ‘I drank up the coffee but did not finish it.’
- (20) #Aš išgėriau kavos, bet nepabaigiau.  
*Isg pref-drinkPast coffeeGensg but neg-finishPast*  
 ‘I drank some of the coffee but did not finish it.’

In sum, in this section I have shown that number, mass/count distinction does not affect the (a)telic interpretation of accomplishment VP in Lithuanian. Since the internal argument has been excluded from the attainment of an endpoint interpretation, the only remaining option is the verb itself<sup>7</sup>. I will show that in Lithuanian, verbal prefixation is the means to attain telicity.

### 3.2 Evidence for P as the source of telicity in Lithuanian

Through tests of negation (§ 3.2.1), temporal adverbs (§ 3.2.2) and coordination with adverse clauses (§ 3.2.3) I show that prefixes are the source of telicity in Lithuanian.

#### 3.2.1 Negation

Under negation the event of base V is canceled as in (21).

- (21) Aš nevalgiau sausainių.  
*Isg neg-eatPast cookiesGenpl*  
 ‘I was not eating the cookies.’ *progressive*  
 ‘I used not to eat the cookies.’ *habitual*  
 $\neg p$

In the case of the prefixed V, negation cancels telicity.<sup>8</sup>

- (22) Aš nesuvalgiau sausainių.  
*Isg neg-pref-eatPast cookiesGenpl*  
 ‘I did not eat up the cookies.’  
 $\neg$  telic p

#### 3.2.2 Temporal adverbials

Certain adverbials select for certain constructions: ‘for x time’ picks out atelic VPs, while ‘in x time’ picks out the telic VPs.

<sup>7</sup> That is, at VP level. There may be other sources outside VP.

<sup>8</sup> There is another nuance: a telic predicate under negation may also have an interpretation of ‘counter expectation,  $\neg p$ ’, but this is beyond the scope of this paper.

In Lithuanian, unprefixed predicates co-occur with adverbs that do not set a discrete time limit:

- (23) Aš valgiau sausainius \*per penkias minutes/ penkias minutes.  
*Isg eatPast cookiesAccpl in five minuteAccpl five minutesAccpl*  
 ‘I was eating (the) cookies \*in five minutes/for five minutes.’

Prefixed predicates co-occur with adverbs that set a time limit:

- (24) Aš suvalgiau sausainius per penkias minutes/\*penkias minutes.  
*Isg pref-eatPast cookiesAccpl in five minutesAccpl five minutesAccpl*  
 ‘I ate up the cookies in five minutes/\*for five minutes.’

### 3.2.3 Contradiction test

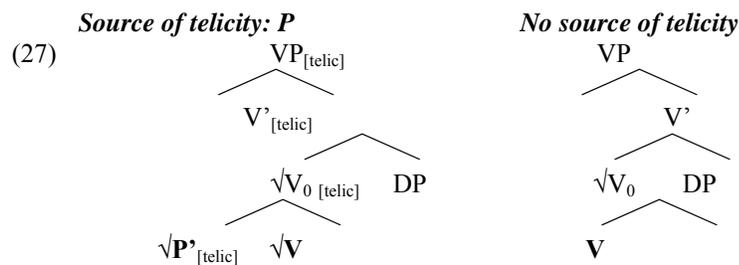
Adverse clauses coordinate with atelic constructions without creating a contradiction.

- (25) Jonas gėrė alų, bet paliko ir tau.  
*JohnNom drinkPast beerAcc but leavePast and youDat*  
 ‘John drank the beer, but left some for you.’

Prefixed predicates result in a contradictory proposition:

- (26) #Jonas išgėrė alų, bet paliko ir tau.  
*JohnNom prefdrinkPast beerAcc but leavePast and youDat*  
 Intended: ‘John drank up the beer, but left some for you.’

In sum, I have shown in this section that prefixes are the source of telicity in Lithuanian. The next immediate question is why do prefixes impact the telicity while DPs do not. I propose that this is a result of the first merge: *prefixes and verbs merge as roots* as illustrated below.



The next section provides evidence for the significance of the merge level. To that end, I look at the status of prepositions versus prefixes in Lithuanian.

#### 4 Prefixes & prepositions

If the merge level is indeed the relevant factor, then PPs should not affect the telicity of VP. As expected, the behaviour PPs in Lithuanian is consistent with the proposal. In (28) the VP remains atelic even in the presence of the goal PP 'to school'.

- (28) Jonas ėjo į mokyklą, bet nenuėjo.  
*JonasNomsg goPast to schoolAccsg but neg-pref-goPast*  
 'John was going/walking to school, but did not arrive.'

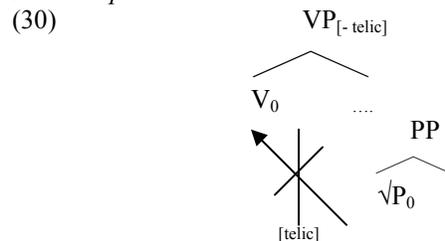
I argue that P in Lithuanian is subject to the strict locality constraint:

(29) **The strict locality constraint**

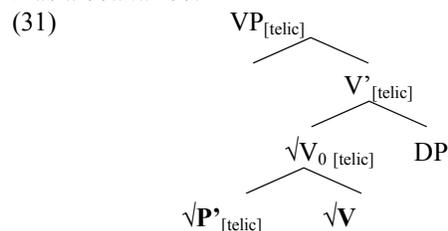
$VP_{[telic]}$  iff  $P'_{[telic]}$  and V are in a sisterhood relationship

The locality constraint reflects the two incarnations of P in Lithuanian: (i) preposition, which is an independent root as in (30); (ii) prefix, which is a bound root as in (31) (cf. Wiltschko 2005, Arad 2003).

*P as independent root*



*P as a bound root*



Crucially, the locality constraint condition is met only when  $P_{[telic]}$  has the status of a bound root.

The locality constraint predicts that characteristics of the two incarnations of P in Lithuanian will differ. This is indeed the case. The two incarnations of P differ in their lexical, phonological and syntactic characteristics. In terms of

their lexical content, prepositions are compositional while prefixes are non-compositional as (32) sums up.

(32) **Lexical content: preposition (independent root) vs. prefix (bound root)**

Preposition	Prefix
apie 'about, around'	ap(i) -
?atgal 'back'	at(i) -
į 'in, to'	į-
iš 'from'	iš-
po 'under'	pa-
?	par-
per 'over, through'	per-
prie 'at'	pri-
su 'with'	su-
nuo 'from'	nu-
už 'behind'	už-

Phonologically, prepositions can be focused:

- (33) Jonas sėdi Už stalo, ne PO stalu.  
*JohnNomsg sitPres behind tableGensg not under tableDatsg*  
 'John sits AT the table, not UNDER the table.'

Syntactically, prepositions always take an argument:

- (34) Aš galvojau apie klaidą.  
*Isg thinkPast about mistakeAccsg*  
 'I thought through the mistake.'

- (35) \*Aš galvojau apie.  
*Isg thinkPast about*

Prefixes, in contrast, can not be focused unless the whole predicate is focused:

- (36) \*Adomas SUvalgė obuolį.  
*AdamNomsg pref-eat appleAccsg*  
 Intended: 'Adam ate UP the apple.'

- (37) Adomas SUVALGĖ obuolį.  
*AdamNomsg pref-eat appleAccsg*  
 'Adam ATE UP the apple.'

The syntactic valency of prefixes is not predictable. The same verb *gyventi* 'to live' with different prefixes may require different number of arguments.

- (38) Karalius užgyveno daug turto.  
*kingNomsg pref-live much wealthGensg*

‘The king made a fortune during his life.’

(39) \*Karalius užgyveno.  
kingNomsg pref-live

(40) Karalius išgyveno.  
kingNomsg pref-live  
‘The king survived.’

## 5 Conclusions & further questions

I have shown that the internal argument can be excluded from the construction of (a)telicity and that verbal prefixes are the source of telicity in Lithuanian. I have proposed that the special status of prefix-verb relationship is a result of the merge at the root level and subject to strict locality constraint. The locality constraint is met when  $P_{[telic]}$  has the status of a bound root (cf. Wiltschko 2005, Arad 2003).

(41) **The locality constraint**  
 $VP_{[telic]}$  iff  $P'_{[telic]}$  and V are in a sisterhood relationship

This proposal explains the facts of Lithuanian. However, it does not explain the data presented in (1), where the syntactic constructions are identical yet the (a)telic interpretations differ, as summed up below.

(42) **The contrast in interpretation**

Language	Construal	Interpretation
Lithuanian	V+Dem+NP	- telic
English	V+Dem+NP	+ telic

Since nothing in the VPs differs, yet we know that Lithuanian verbs are sensitive to the merge with prefixes, while English verbs are sensitive to the characteristics of the internal argument (such as number and the like), I conclude that the *verbal root specification differs* in the two languages. I suggest the following typology of verbal roots:

(43) **Telicity of verbal roots**

Verbal root $\sqrt{V}$	Language	Source of telicity
Underspecified: $\sqrt{V}_{[\mu]}$	English	internal argument , particle...
Specified: $\sqrt{V}_{[+telic]}$	Salish? <sup>9</sup>	not applicable
Specified: $\sqrt{V}_{[-telic]}$	Lithuanian	prefix, suffix

I propose that means of constructing telicity are sensitive to the specification of the  $\sqrt{V}$ . Therefore there is *no one, universal* syntactic element for the construction of telicity. The case study of Lithuanian verbal prefixes can be interpreted in this light. Namely, since the V root is already specified as [-telic], only a root level head to head merge can override the specification, hence the role of  $\sqrt{P}$ , source of [telic].

This short paper merely leads to further questions that the proposal raises. Next, I would probe what are further implications of the root specification and whether there is a correlation between the proliferation of the morphosyntactic elements and a certain kind of root specification.

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<sup>9</sup> Cf. Davis & Demirdache 2000.

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