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Lithuanian Lexical
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Tree

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Considering *Well, Accurately, Completely.* Lithuanian Lexical Verb Placement on the Syntactic Tree

Būdo prieveiksmiai *gerai,
tvarkingai, visiškai* ir lietuvių kalbos
leksinio veiksmažodžio pozicija
sintaksiniam medyje

LINGUISTICS / KALBOTYRA

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Abstract



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The present article is concerned with the position of the Lithuanian lexical verb on the syntactic tree. As is known, Pollock (1989) postulates the verb raising parameter and examines the differences between a verb raising language like French and a verb non-raising language like English using the position of low adverbs relative to the lexical verb as a criterion. Adverb placement since then has come to be regarded as a powerful diagnostic tool. In addition, by exploring the relation between manner adverbs and stative and eventive verbs, Katz (2003) elaborates on the structure of the syntactic tree immediately above the verb phrase vP/VP and posits the Aspectual Phrase (AspP) as immediately dominating the vP/VP of eventive verbs. The present article examines the verb raising parameter in light of the distributional behaviour of threemanner adverbs: *gerai*, *tvarkingai* and *visiškai* and posits two objectives: to find additional support for the low placement of the Lithuanian lexical verb on the syntactic tree and to examine the area immediately above the verb phrase vP/VP. It is argued

that native Lithuanian prefixes are to be regarded as the lexically manifest head of the aspectual phrase AspP which is positioned above the verb phrase.

Keywords:

generative syntax, verb raising parameter, Lithuanian, adverb placement, manner adverbs, aspectual phrase.

Within the generative syntactic tradition, the placement and behavior of adverbs in the sentence attracted attention of and was thoroughly explored by, first, Jackendoff (1972) and then Emonds (1976). The idea of universality being fundamental in the generative tradition, coupled with the fact that the position of the adverb seems to be the most stable of all sentence material led to adverbs coming into the foreground as a diagnostic tool. Frequency and manner adverbs, most notably *often* and *completely*, were used by Pollock (1989) to define the verb placement in French and English and thus account for the positional differences of the syntactic material between the two languages. Following these analyses, in his seminal article, Cinque (1999) developed a scale of the positioning of adverbs relative to the lexical verb and divided them into high, or sentence adverbs, and low adverbs, found in (immediate) proximity to the lexical verb. Since then the diagnostics involving adverb placement has been regarded as a reliable test in determining the position of the verb on the syntactic tree.

For Lithuanian, Korostenskaja (2014) provided evidence favouring the low placement of the lexical verb replicating Pollock's tests and conducting a native speakers' acceptability judgment test. This study aims at furthering earlier findings by focusing adverb placement relative to the lexical verb, which has come to be regarded as the most reliable diagnostic tool in determining the position of the verb. The article thus examines corpus data for three low adverbs, *gerai* 'well', *tvarkingai* 'carefully' and *visiškai* 'completely', to ascertain the position of the Lithuanian verb and defines the term *adverb* as "adverbial modifiers which are morphologically derived from an adjectival base, or are formally identical to adjectives" (Geuder, 2002, p.1).

The article is structured as follows. First, the main components of the syntactic tree will be identified. Next, Cinque's classification will be briefly presented and Pollock's analysis regarding the placement of the lexical verb in French and English will be introduced. This approach will be supplemented with Katz's (2003) findings regarding the (non-)combinability of manner adverbs with stative verbs. Then the distributional behavior of the three adverbs is examined on the basis of the examples collected from the Corpus of the Contemporary Lithuanian Language (CCLL) from two perspectives: the relative adverb/verb order and the type of the predicate used with manner adverbs. The conclusions summarise the results and discuss implications for further analysis.

Sentence structure in generative syntax

Below the basic composition of a sentence will be presented. Due to scope constraints, only the aspects directly pertaining to the discussion will be highlighted. In the latest versions of generative analysis, the sentence, or, rather, the clause, is represented as a tree depicting its constituent parts as binary branch-

Introduction

Theoretical Background

ing nodes. The nodes can be either substantive, designating the content parts of the clause, such as the Noun Phrase (*NP*), the Verb Phrase (*VP*), the Adjective Phrase (*AdjP*), the Adverb Phrase (*AdvP*), or functional, containing the grammatically relevant information, such as the Determiner Phrase (*DP*), the Prepositional Phrase (*PP*), the little *v* phrase (*vP*) (referring to the causative element of the agentive verbs), the Aspect Phrase (*AspP*), etc. Each node obligatorily consists of a Head, and may optionally have an optional Specifier and/or Complement. The highest node (Root Node) in the clausal tree is the Complementiser Phrase *CP*. *CP* accounts for all types of clauses: finite and non-finite, primary and secondary. The physical manifestation of the complementiser therefore is optional and is determined by the type of the clause. Thus an affirmative simple sentence will consist of one clause and have a zero complementiser (marked as \emptyset). The *CP* node branches into the subject and the predicate, designated as the Determiner Phrase (*DP*) and the Tense Phrase (*TP*) respectively. The Tense Phrase contains the grammatically relevant information and stores auxiliaries, modals and, in the case of English, the indefinite particle *to*. In the so called null subject languages, i.e. those that allow omitting the subject, such as Italian, Spanish, and consequently, Lithuanian, the subject Determiner Phrase *DP* may be represented by an empty category marked as *pro* and referred to as the 'little *pro*' as opposed to the *PRO* ('big *pro*') category which is the implied subject in the non-finite embedded clauses. The detailed explanation of this phenomenon goes beyond the scope of the present study, but is thoroughly presented in the relevant literature (e.g., Carnie, 2013; Radford, 2009). For our purposes, suffice it to say that in generative analysis, a sentence like *Jonas nori eiti namo* is perceived as containing two complementiser phrases:

- 1) a) Jonas nori eiti namo.
 John want-3p.PRES go-INF home
 John wants to go home.
- b) [_{CP} Jonas nori [_{CP} PRO eiti namo]].

This phenomenon will be further illustrated in the relevant section below.

Pollock (1989) on the lexical verb placement in French and English

Pollock sets out by adopting a uniform D-structure for both French and English whereby the verb phrase is optionally modified by a preceding adverb (Pollock, 1989, p.366):

- 2) [IP NP I ([Neg not/pas]) [VP (Adv) V . . .]]

He argues that the verb-raising rule to *I* (which is the predecessor of the currently used *TP* notation), fully applies to French and partly to English. Consequently Pollock splits the *I* (*InfIP*) into a number of functional nodes, the inventory of which has been a matter of discussion, but *TP*, the Tense Phrase, has since then been used to replace the *I*. Pollock shows that, while in French low adverbs like *often*, *always*, *completely* obligatorily follow the verb, in English

the opposite holds: these adverbs precede the lexical verb, as in (*ibid.*, p.367 example (4), repeated below as (3)):

- 3) a) *John kisses often Mary.
 b) Jean embrasse souvent Marie.
 c) John often kisses Mary.

Pollock demonstrates that in French the verb raises to TP to pick up its tense inflection in declarative sentences while in questions the head T moves to the head C of the complementiser phrase CP, whereas English is shown to be a non-raising language with T lowering to V to give it its inflectional endings, except for copula verbs *HAVE*, *BE*, as well as modal verbs with the narrow scope, such as *need* (Radford, 2009). Subsequently this phenomenon was reformulated at taking place either before or after spell-out. Thus French has a strong V-feature and undergoes raising before spell-out, while English has a weak V-feature and raises after spell-out (Chomsky, 1993; 1995).

The opposition and comparison of the behaviour of finite and non-finite clauses was part of Pollock's (1989) seminal analysis of the lexical verb (VP) placement on the syntactic tree. Pollock examined French and English verb placement by conducting a series of diagnostic tests on the use of yes/no questions, quantifiers, non-finite clauses and adverb placement. He concluded that, while the French lexical verb undergoes raising to TP and CP, in English, the verb stays *in situ*, or, using subsequent analyses, undergoes raising after spell-out. Over time the adverb placement test came to be regarded as the most reliable one. Pollock's study gave rise to numerous discussions and further explorations of nominal and verbal properties, while his methodology was reapplied to other languages, Spanish, Russian and Icelandic in particular.

Cinque's high and low adverbs

Extending seminal adverb-related research by Jackendoff (1972), Emonds (1978) and Pollock (1989), Cinque (1999) postulates that adverb positions are fixed relative to other members of the sentence (for opposing views see Bobaljik, 1999; Nilsen, 2003; Edelstein, 2012; but cf. Manzini and Savoia, 2011). Cinque (1999) builds up a taxonomy of adverbs by dividing them into two large classes – *high*, or *sentence adverbs*, i.e. those which reside high on the syntactic tree and are detached from the verb, and *low*, or *pre-VP adverbs*, i.e. those that appear in close or immediate proximity to the left border of the lexical verb. The latter group, which is of primary interest in the present study, comprises primarily frequency and manner adverbs (and more tentatively, epistemic adverbs (Ionin and Wexler, 2001; Kallestinova and Slabakova, 2008)), of which manner adverbs are argued to reside the closest to the verb, at least in English and Russian (Kallestinova and Slabakova, 2008). Although adverb hierarchy has been primarily elaborated for Italian and French, Cinque provides ample evidence from other languages to suggest that it may hold cross-linguistically. He assigns all adverbs to the specifier position of one of 30 functional projections, which span from CP to VP. Then, depending on the particular adverb used, the lexical verb

is argued to move up the tree to the head of the relevant functional projection. Cinque advocates his functional projections by finding support in the morphological layout of functional morphemes across various languages, a phenomenon commonly known as Baker's Mirror Principle (Baker, 1985), according to which there holds a mirror-like relationship between morphological and syntactic structures. While adverbs are believed to be an appropriate means to signal the position of the verb, they still may move under certain conditions. Cinque distinguishes six factors which may interfere with the base order and which include, inter alia, focused position, scope considerations, and movement of the adverb phrase. Their mobility is accounted for on semantic grounds: adverbs occurring in two different positions without a change of meaning to the sentence manifest adverb movement of one of the adverbs relative to its unmoved pre-VP counterpart. The appearance of the same adverb in two different positions suggests that the adverbs are essentially homonyms. Adverbs are consequently regarded as a certain anchor on the syntactic tree relative to which the other elements of the clause may be examined (Carnie, 2013; Potsdam, 1998; Kallestinova and Slabakova, 2008; Dyakonova, 2009).

Katz' (2003) stative adverb gap

Building his analysis within the framework of Davidsonian semantics, Katz (2003) argues that, similarly to verbs, adverbs 'are predicates of eventualities' (ibid., p.458) and can therefore be described along the same lines as Vendler's classes: state, activity, accomplishment, and achievement verbs, the latter three collectively referred to as 'eventive' verbs (ibid., p.459). Considering adverb-verb selection, Katz notes that the majority of manner adverbs are not to be found with state verbs, which he refers to as the Stative Adverb Gap (SAG), but combine freely with eventive verbs. Whenever a manner adverb combines with a stative verb, it combines with an eventive verb, too, as illustrated in his examples (29a) and (30a) (ibid., p.467–468) repeated below as (4 a–b):

4) a) *Peter knew Maria well.*

b) *Peter played the song well.*

Katz argues that this is due to the presence or absence of the Davidsonian 'eventuality argument' *e*: state verbs merely do not have it, hence state VPs appear immediately below the Tense phrase; whereas the eventive verbs do, hence eventive VP is dominated by the Aspectual phrase, which can be of two kinds, perfective or progressive. Therefore eventive verbs like *kiss* and stative verbs like *like* will have different syntactic structures:

5) a) Sandy kissed Kim.

[_{TP} Sandy₁ [_T PAST [_{AspP} PERFECTIVE [_{VP} t₁kissKim]]]]

b) Sandy liked Kim.

[_{TP} Sandy₁ [_T PAST [_{VP} t₁like Kim]]]]

(Katz, 2003, pp.461–462).

Katz concludes that manner adverbs must adjoin to the aspectual projection above the VP. To support his claim, Katz follows Geuder (2002) in observing

that manner adverbs, surprisingly, do not specify the verb itself; rather, they provide additional information about the entire situation, which is evidence favouring the distinction of the eventuality argument and, consequently, the AspP. Consider example Katz's example (33b) repeated below as (6):

6) *Peter left the university temporarily.*

As Katz states, *temporarily* in the example above does not merely refer to the act of leaving; but rather characterizes the entire situation of Peter's non-attendance of the university. Given the fact that the adverb scopes over a greater domain than that of the verb, it is logical to conclude that the manner adverb then must adjoin at a higher functional projection than the verb group VP, hence AspP.

The proposed approach

For Lithuanian, Korostenskaja (2014) replicated Pollock's (1989) tests and examined native speakers' responses to analogous structures arguing that the Lithuanian lexical verb is placed low on the syntactic tree. Following research by Svenonius (2004) and Dyakonova (2009), she also raised the question of the place of attachment of the adverb to the verb. The present article seeks to examine corpus data for the low placement of the verb by looking at the distributional behaviour of three manner adverbs as found in the Contemporary Corpus of the Lithuanian Language. The adverbs are *gerai* 'well', *tvarkingai* 'accurately', and *visiškai* 'completely'. Below the rationale behind choosing these particular adverbs is briefly presented.

Gerai, unlike the other two adverbs, combines both with eventive and stative verbs:

7) a) Tomas gerai žino atsakymą.

Tom well know-3p.PRES answer-m.sg.ACC

'Tom knows the answer well'.

b) Tomas gerai parašė kontrolinį.

Tom well pref-write-3p.PAST test-m.sg.ACC

'Tom wrote the test well'.

Tvarkingai belongs to the so-called *event adverbs* (Katz, 2003, p.464), which are expected to be used with eventive verbs only. *Visiškai* 'completely' is traditionally regarded as being (among) the lowest adverb(s) on the adverb scale, and consequently does not allow any interference between itself and the word it modifies. Thus while other adverbs may disallow order permutations relative to the modified verb, *visiškai* modifies the word it stands in immediate proximity to. Compare the following examples in which the diagnostic high adverb *tyčia* 'deliberately' (Radford, 2009, p.351) is used in pre- and post-position orders relative to adverbs *gerai* 'well' and *visiškai* 'completely':

8) a) Tomas tyčia gerai uždarė duris.

Tom deliberately well pref-do-3p.PAST door- f.sg.ACC

'Tom deliberately closed the door well'.

b) *Tomas gerai tyčia uždarė duris. (in non-emotive contexts)

Tom well deliberately pref-do-3p.PAST door-f.sg.ACC

'Tom deliberately closed the door well'.

c) Tomas tyčia visiškai uždarė duris.

Tom deliberately completely pref-do-3p.PAST door-f.sg.ACC

'Tom deliberately closed the door completely'.

d) Tomas visiškai tyčia uždarė duris.

Tom completely deliberately pref-do-3p.PAST door-f.sg.ACC

'Tom deliberately closed the door well'.

As can be seen, unlike examples (a–b), where in non-emotive contexts *gerai* preceding *tyčia* is ruled out. In examples c–d, however, both sentences are grammatical but have different meanings: in (c) the deliberate act is that of closing the door completely; while in (d) *visiškai* 'completely' only scopes over *tyčia*, hence the deliberateness of the action rather than the action itself.

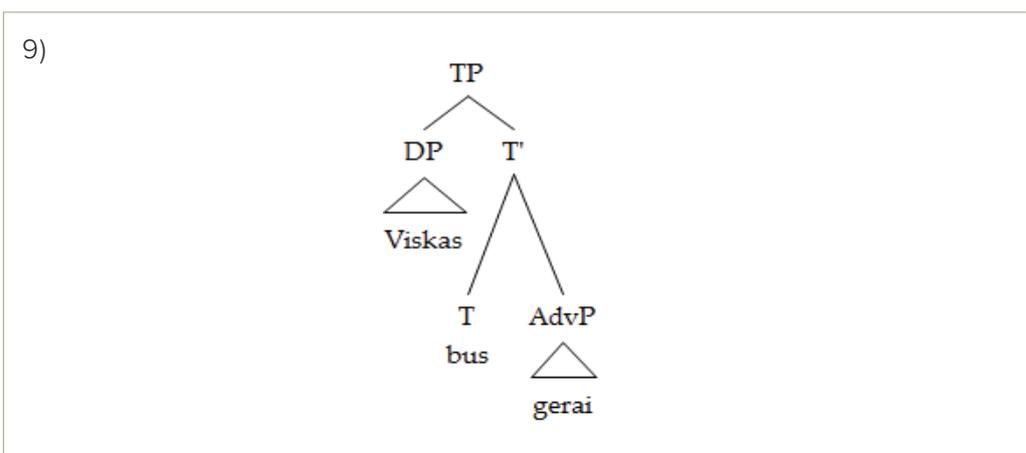
The fundamental premise is adopted, i.e., in neutral (non-focused) contexts, adverbs have fixed positions. The working hypothesis is that, if manner adverbs, which are regarded to be positioned the closest to the left VP-boundary, are more frequently used in pre-verbal position in neutral contexts, the Lithuanian lexical verb is indeed placed low on the syntactic tree and therefore behaves like English in this respect. Another goal is to see whether the eventuality component is present in the verbs modified by the selected manner adverbs. If the verbs prove to be eventive, it will be possible to combine both facts to establish the relative order of the relevant projections on the syntactic tree.

The corpus study

The Contemporary Corpus of the Lithuanian Languages (CCLL) is comprised of five large subcorpora, each devoted to a particular language type: fiction, non-fiction, administrative literature, journalistic prose, and spoken language. In processing the data, both quantitative and qualitative methods were applied. First the database featuring the environment in which the relevant items are encountered was compiled. For the purposes of the study, 500 instances in each register were collected with the maximum possible number of examples per adverb being 2500. This was not always the case, however, since the registers did not always contain as many as 500 instances. In the latter case, as many instances of a particular register were collected as were available. As regards *gerai* in particular, the administrative language subcorpus stored instances in which the adverb was almost exclusively used in appositive structures to express agreement and hence did not qualify for the present selection. Consequently, data on *gerai* were collected from the remaining four subcorpora. In this way, the original compilation contained 2000 instances of *gerai*, 760 instances of *tvarkingai* and 2251 instances of *visiškai* with the total corpus size of 25143, 12238, and 37373 words respectively. The collected instances were then processed manually. The first criterion applied was ascertaining that the relevant items collected belonged to the class of adverbs. Thus homonymic instances in which the relevant form represented a different part of speech,

e.g. *tvarkingai* turning out to be not a manner adverb, but a Dative feminine singular form of the adjective ‘*tvarkinga*’, were eliminated. Another major filter applied was ascertaining that there were no repeating instances. Whenever repeating instances were identified (e.g., in cases when the same construction was to be found in several registers, e.g., publicist and administrative), they were excluded from subsequent count and analysis. The recurrent constructions were preserved, however, in cases when other environment observable in the corpus was different. The manual processing stage also revealed the need to apply a finer grained filtering of data and eliminate instances which fell under either of the categories listed below:

a) copula-adverb instances, e.g., ‘...yra gerai’ were excluded. The reasoning behind this is that, as has already been stated, copulas and auxiliaries are to be found at the TP rather than the VP level. Due to the fact that such instances could not reveal the position of the lexical verb, they were redundant. To illustrate the difference, a simplified tree for the simple clause *Viskas bus gerai* ‘Everything will be fine’ is presented below:

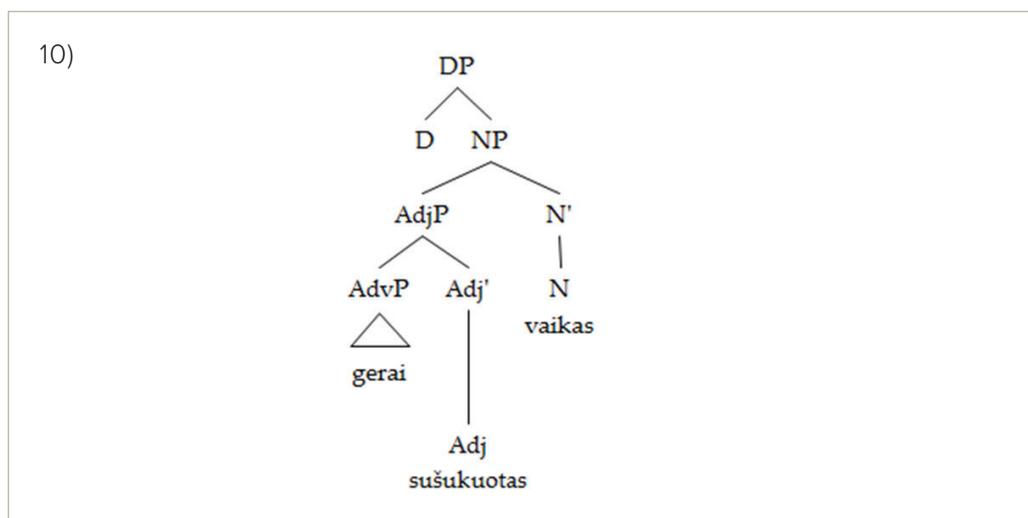


b) whenever identifiable, e.g., through punctuation, instances of adverbs appearing in focus positions were excluded. This is a relevant methodological consideration, especially given the freedom of Lithuanian word order. Nevertheless, it is believed that the diversity of word orders may conveniently fall into one of the many categories (such as scrambling, stylistic fronting, focus position, etc.) within the framework of the UG accounting for the deviations from the underlyingly uniform word order. The present approach proceeds from Baker’s idea that non-configurational languages may underlyingly have “a perfectly configurational structure” (Baker, 2001, p.418; see also Webelhuth, 1992) with all other permutations deriving due to Merge and Move operations. It is consequently assumed that Lithuanian is an SVO language (Geniušienė, 2007; cf. Ambrazas et.al., 2006) and, following Pollock (1989), Cinque (1999) and others, that the position of the adverb is at the left VP-boundary.

It must be mentioned in this respect that, on the other hand, instances in which

the relevant adverb did not appear in immediate proximity to the lexical verb, but was part of a coordinating structure joined by a coordinating conjunction *ir/arba/bet* 'and/or/but' were included into further analysis on the grounds that coordinating structures are regarded as equipotent constituents, hence the fact that the other item was at the left VP-boundary served as a proof that the preceding coordinating item enjoys the same status.

c) only combinations where the adverb was part of a verb phrase were considered. Hence participial forms with a modifying adverb which served as an attribute to the noun and consequently on formal grounds could be interpreted as part of the noun phrase (Carnie, 2013), were excluded from the present analysis in order to preserve and prioritise the verbal component. It is to be noted, however, that in all instances of this type, the expected Adverb-Participle pattern was observable. Thus, a phrase like *gerai sušukuotas vaikas* 'a well-combed child' was not taken to the analysis stage since, although formed from a verb, in this particular grammatical structure, *sušukuotas* 'combed' functions as an adjective as illustrated in the tree below:



The same applied to participial forms found in postposition to the noun, e.g.:

- 11) pirkliai, gerai pažįstantys upių kelius
 merchants-pl.NOM well know-PTCPL.pl.NOM rivers-pl.GEN ways-pl.ACC
 'merchants well-acquainted with riverways'.

It should be emphasized, however, that in all these instances, manually withdrawn from analysis to sustain methodological clarity and consistency, not a single instance was identified that would have a non-adverb>participle order. The participial forms which did not form the noun phrase, e.g., in the case when the participle was used without the noun thereby structurally prioritising its verbal component, were included into analysis.

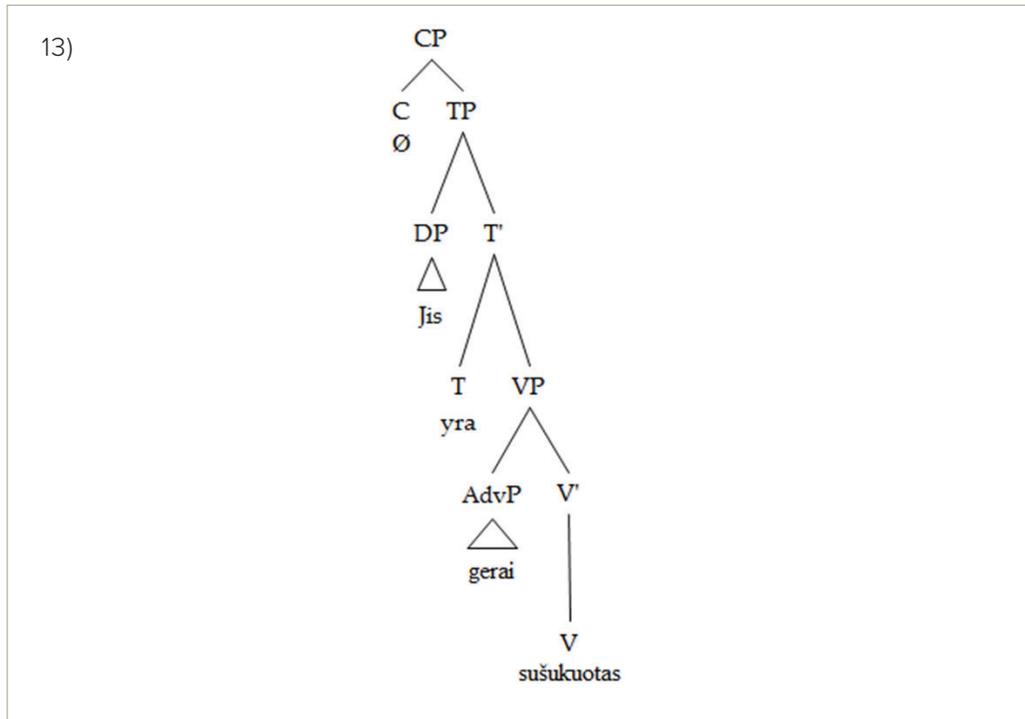
Respectively, a sentence like 12) below

- 12) Jis yra gerai sušukuotas

He be-3p.PRES well pref-comb-m.sg.PTCPL

'He is well-combed'.

does meet the selectional criteria and will be considered in further analysis. The simplified tree is as follows:



Likewise, instances in which the relevant adverb modified an adjective were excluded from analysis.

d) Incomplete instances were excluded from analysis. These were characterised by the absence of either of the following:

1) a physically manifest auxiliary whose presence was otherwise implied by the grammatical structure of the predicate group, as in 14) below:

14) <...> jei ant rašomojo stalo viskas tvarkingai sudėta;

If on writing-m.sg.GEN table-m.sg.GEN all-m.sg.NOM accurately pref-put-PTCPL.PASS.IMPERS.

'If everything is carefully placed on the writing table'.

2) a physically present lexical verb within the context provided, which, while suggesting the position of the verb, on formal grounds nevertheless rendered the instance uninterpretable, as in 15) below:

15) PIRMININKAS. Jūs viską tvarkingai, pagal protokolą, kaip numato Reglamentu 28 strai[psnis]...

CHAIRMAN. You everything accurately, according protocol-m.sg.ACC, as fore-sees Regulations-m.sg.GEN arti[cle]-mNOM...

'You everything carefully, according to the minutes, as foreseen in Article 28 of the Regulations...'

After the filtering stage had been completed, the final number of instances that passed the three filters amounted to 967 instances of *gerai*, 569 instances of *tvarkingai* and 968 instances of *visiškai*.

Then the manner adverb *visiškai* was considered. Compare the sentences 16 (a) and (b) from the CCLL below:

(16) a) <...> žmonių gyvenimo būde ... visiškai neturi atsispindėti
 jų pačių nuomonė
 People-GEN.PL life-SG.GEN way-SG.LOC completely
 ne-have-3P.PRES reflect-INF they-PL.GEN self-PL.GEN opinion-SG.NOM
'In people's way of life, their own opinion does not have to be reflected at all'.

b) Dalis jų turėjo būti
 visiškai apginkluoti tik kitais metais.
 Part they-PL.GEN have-3P.PAST be-INF
 completely armed-NOM.PL.PASS.PART only other year

'Some of them were to be completely armed the following year only'.

As can be seen from the examples above, the adverb *visiškai/completely* can appear in both pre-Aux (pre-modal) and pre-verb position, but with a difference in the meaning conveyed, evoked by scope relations. Thus when the adverb appears before the lexical verb, it has the meaning of “completely”, but when it appears before the modal, which is regarded to occupy the same place as the auxiliary on the syntactic tree, it conveys the meaning of “at all”. While closer analysis of this fact goes beyond the scope of the present paper, on the basis of these examples, it may be suggested that, at least in some cases, the adverb *visiškai* behaves like a polarity item, with the environment stipulated not only by the presence or absence of the negation, but also the placement of the adverb relative to the verb and ultimately, the issue of V- and TP- adjunction. Preliminarily it may be stated that the meaning of *visiškai* is affected by a) point of adjunction, and 2) focus structure. For the present purposes, all negative sentences with the adverb *visiškai* were manually checked for meaning and those sentences in which the adverb had the meaning of “at all”, were excluded, with the number of relevant instances reduced from 968 to 653.

Thus, whenever the meaning ‘completely’ was encountered in the negative sentence, the sentence was retained. The example below illustrates one such case:

17) Mintis apie laisvės ir proto giminybę niekada visiškai neišnyko iš Vakarų filosofijos akiračio.

Thought-pl.NOM about freedom-f.sg.GEN and mind-m.sg.GEN kinship-f.sg.ACC
 never completely ne-disappear-3p.PAST from West-pl.GEN philosophy-f.sg.GEN
 horizon-m.sg.GEN

'The thought about the kinship of freedom and mind never fully disappeared

from the horizons of Western philosophy'.

The remaining instances were classified according to the position of the adverb to the verb and, when relevant, the auxiliary. Bearing in mind Pollock's analysis of finite and non-finite clauses, and the fact that non-finite verb forms may be evoked by composite structures where the "trigger", i.e. the element inducing non-finite verb form, may itself be of both verbal and non-verbal nature, the following orders were identified:

- a) Adverb>finite verb;
- b) finite verb>adverb;
- c) adverb >non-finite verb;
- d) non-finite verb>adverb;
- c) Auxiliary> adverb >non-finite verb;
- d) Adverb>auxiliary>non-finite verb;
- e) auxiliary>non-finite verb>adverb;
- e) non-finite verb>adverb>auxiliary;
- f) non-finite verb>auxiliary>adverb;
- g) additional member of the predicate group (x)>non-finite form >adverb;
- h) adverb> additional member of the predicate group(x)>non-finite form;
- i) non-finite verb >additional member of the predicate group (x)>adverb.

Finally, passive voice instances were treated as their respective active counterparts.

The difference between structures containing auxiliaries (which are followed by an infinitival, hence non-finite, form) as opposed to structures containing non-finite verb forms *per se* deserves special mention. Within the generative approach, these are argued to have different structures. Consider, for example, the following pair of sentences:

18) a) <...>jie galės visiškai pasišvęsti Viešpačiui...

They can-FUT completely pref-si-celebrate-INF Lord

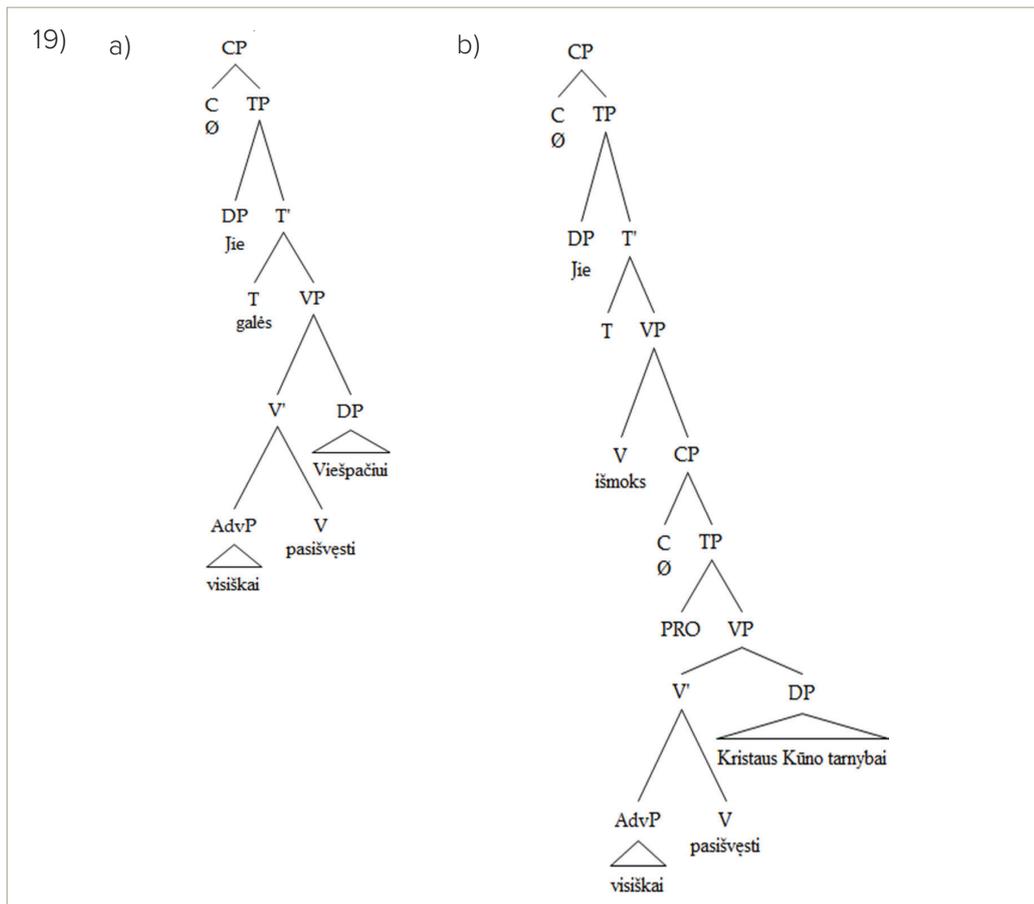
'They will be able to completely dedicate themselves to the Lord'.

b) <...>Jie...išmoks visiškai pasišvęsti Kristaus Kūno tarnybai...

They pref-learn-FUT completely pref-si-celebrate-INF Christ-GEN Body-m.sg.GEN service-f.sg.DAT

They will learn how to completely dedicate themselves to the service in the body of Christ...

As has been mentioned before, modals and auxiliaries are positioned at the TP level, while lexical verbs, illustrated here by the verb *išmoks*, are placed at the VP level. Within the generative tradition, the infinitival construction like the one under analysis, is to be interpreted as another CP taking the position of the object of the preceding VP and taking a null pronominal subject marked as PRO. With this in mind, the relevant simplified tree structures for the examples above will look as follows:



Discussion

In this section, we discuss the findings for each adverb analysed. Since the main issue is whether the lexical verb regularly precedes the adverb, in other words, whether the lexical verb can raise past the low adverb, the main criterion is whether the adverb precedes or follows the verb. For this purpose the data contained in the tables that follow are divided into two large groups: two-component combinations, containing the verb and the adverb, and three-component combinations. Each class is further subdivided according to the lexical verb form: either the finite form (marked as V), or the non-finite form (marked as NF). Three-component combinations are classified according to the type of the third component into: a) those involving an auxiliary (marked as AUX in the table) and b) those involving a particular lexical item (a noun, e.g., *noras* 'wish', an adjective, e.g. *svarbu* 'important', *būtina* 'necessary', or another lexical verb, such as like *pradėti* 'begin', *padėti* 'help'; *stengtis* 'try', *išmokti* 'learn') which induces the non-finite form of the relevant lexical verb. In all the tables, the number of instances encountered as well as the relevant percentages within the subclass (e.g., Adv, V), or relative to the entire collection of items are provided. The number in parenthesis stands for the number of occurrences within the relevant subgroup. Since we are primarily interested in how regularly the adverb precedes the lexical verb, i.e., whether the lexical verb remains in its base position,

the columns containing the uninterrupted adverb>verb order are shaded grey. The data for the three adverbs are summarised in Tables 1-3 (see Appendix). Special mention should be made of verb>adverb combinations containing the adverb *gerai*. Out of 192 instances with the order verb>adverb, 107 instances contained forms of the copula *būti* BE as their verbal component and hence were not relevant for the discussion. Therefore, Table 1 accounts for the remaining 85 instances with the verb>adverb order contained the lexical verb as their verbal component.

As regards the overall distribution of the adverbs in question relative to the verb, the position with the adverb preceding the lexical verb is the prevailing one for all the three adverbs. The percentage for the uninterrupted adverb>verb order across all types shaded grey is 89.3 % for *gerai* (864 instances), 75.6 % for *tvarkingai* (430 instances) and 94.6 % for *visiškai* (618 instances). This suggests that the verb does not usually raise past manner adverbs.

As regards the verb>adverb order, while not entirely ruled out, it is used far less often than structures with the verb following the adverb. Thus, there are 97 instances of *gerai*, 135 instances of *tvarkingai* and as few as 19 instances of *visiškai*, hence 10 %, 23.7 % and 2.9 % respectively. The fact that the occurrence of *gerai* in post-position to the adverb is relatively low and even lower than that of *tvarkingai* is interesting as *gerai* then does not seem to possess the feature [+heavy] posited by Ernst (2002) for its English counterpart. The appearance of *tvarkingai* in post-position in nearly 24 % of the examples may be due to the additional meaning it conveys choosing between “manner and resultative readings” (Edelstein, 2012, p.131; cf. Larson, 2004). While the semantics of pre- and post-verbal modification goes beyond the scope of this study, one possible reason for the adverb’s freedom in selecting the place of adjunction (or, *conjunction*, in Larson’s (2004) and Katz’s (2003) terms) is the adverb’s rich semantics relative to its current counterparts.

It should also be noted that, whenever there is a word order different from the canonical– (Aux) Adv V, it is not so much the relative placement of the adverb and the verb, but the position of the auxiliary and the underspecified element marked as X that causes diversity.

A question may arise: since auxiliary verbs are to be located under TP rather than VP, why do manner adverbs, albeit rarely, still precede them? There have been at least two main solutions proposed. First, there is an idea expressed that the ordering has been changed due to the *scrambling* phenomenon (which in languages with free word order can induce significant changes to the layout of constituents without changing the meaning of the sentence) (Anagnostopoulou&Fox, 2007) or focus considerations (Kallestinova&Slabakova, 2008; cf. Larson, 2004). Katz himself argues that “the relative order of adverbials follows from principles of semantic composition” (2003, p.464). A thorough discussion of this issue goes beyond the scope of this article.

To summarize the findings so far: manner adverbs regularly precede the lexical verb, which points to the fact that the Lithuanian verb resides low on the syntactic tree. Manual processing of entries has also revealed that the majority of

verbs used with the manner adverbs in question are eventive. Therefore the second question of the exact place of adjunction of the manner adverb to the verb needs to be addressed.

Finalising AspP

In her analysis of the Russian verb, Dyakonova (2009) notes that the relationship between Aspect and the argument is twofold. On the one hand, there is a dependency between the aspectual/eventive properties of the verb and the argument the verb takes. For example, in Lithuanian, the prefix *pri-*, referring to the saturation of an action, requires that the verb argument be used in the Genitive and have an indefinite reading:

- 20) a) *Prisirinko svečių*iai.*
 Pref-si-gather-3p.PAST guest-pl.GEN/*ACC
 ‘(A lot of) guests gathered.’
 b) *Susirinko svečiai.*
 Pref-si-gather-3p.PAST guest-pl.ACC
 ‘The quests gathered.’

On the other hand, relevant changes in the aspectual properties of the stative verb can fix the ungrammaticality arising when used with manner adverbs. Consider Katz’s example (3) repeated here as (21 a) as well as its ungrammatical equivalent in Lithuanian (b) and corrective aspectual adjustments – adding a perfective prefix to the verb- in (c):

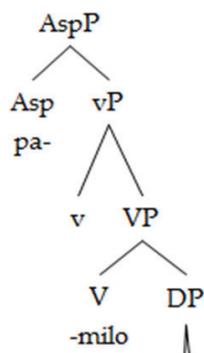
- 21) a) **John loved Mary quickly.*
 b) **Jonas greitai mylėjo Mariją.*
 John quickly love-3p.PAST Mary-ACC
 ‘John quickly loved Mary.’
 c) *Jonas greitai pamilo Mariją.*
 John quickly pref-love-3p.PAST Mary-ACC
 ‘John quickly came to love Mary.’

In Lithuanian, all prefixed verbs convey an idea of an action attaining a certain state (Ambrasas et.al., 2006). With all the diversity of resultative prefixes in Lithuanian, there is also one prefix contributing progressive reading, albeit confined to the indicative non-finite verb forms or the subjunctive - *be-*:

- 22) *Be-si-tęs-iant-is*
 be-SI-continue-Pr.Ptcpl-m.NOM
 ‘still continuing’

On the basis of these morphosyntactic properties of the Lithuanian verb it would be natural to assume that the prefix fills an aspectual head on the syntactic tree and hence is immediately above the verb group, as demonstrated for the verb form *pamilo*, ‘fell in love’, from example (21 c) in (23) as follows:

23)



This fact ultimately leads to the idea that the Lithuanian prefixed verb is to be regarded as a complex morphosyntactic unit which extends beyond the limits of the vP while manner adverbs do adjoin to AspP on the syntactic tree.

The present article has shown that low manner adverbs generally precede lexical verbs in Lithuanian. Variations in the ordering are relatively scarce and suggest that the verb raising past these adverbs is of a degraded status and takes place only under certain conditions, such as focus position in the sentence. Following Cinque's (1999) analysis, the results demonstrate that pre-verbal manner adverbs mark the VP-left boundary. On the other hand, manner adverbs impose aspectual restrictions on the type of the verb they modify and in most cases the verb has to be eventive, which suggests that the Aspect phrase has to be present on the syntactic tree. Given the morphosyntactic properties of the Lithuanian verb, it has been argued that manner adverbs adjoin to the Aspect Phrase located immediately above the verb.

Conclusions

Abbreviations

ACC – Accusative	INSTR – Instrumental	PRES – present
ADV – adverb	LOC – Locative	PTCPL – participle
AdvP – adverb phrase	M – masculine	Q – question
AspP – aspect phrase	N – noun	SI – reflexive marker
AUX – auxiliary	NegP – negative phrase	SG – singular
CP – complementiser phrase	NF – non-finite	SUPERL – superlative
C – complementiser	Nom – Nominative	TP – tense phrase
DAT – Dative	P – person	t – trace
DP – determiner phrase	PART – partitive	V – verb
F – feminine	PAST – past	v – light verb
GEN – Genitive	PASS – passive	VP – verb phrase
IMPERS – impersonal	PERF – perfective	vP – light verb phrase
INF – infinitive	PL – plural	x – an additional unspecified member of the predicate group
INFL – inflection	PREF – prefix	

Appendix

Tables 1–3 below account for the distribution of the three adverbs relative to the lexical verb. The number in parenthesis refers to the total number of qualifying instances within the relevant group.

Table 1.
Distribution of
gerai.

Adverb	<i>Gerai</i> (967)											
	2-componential				3-componential							
Structure												
Components	Adv, V (740)		Adv, V _{NF} (83)		AUX, Adv, V _{NF} (116)			Adv, X, V _{NF} (28)				
Order	Adv V	V Adv	Adv V _{NF}	V _{NF} Adv	Aux Adv V _{NF}	Adv Aux V _{NF}	AUX V _{NF} Adv	X Adv V _{NF}	Adv X V _{NF}	V _{NF} X Adv	Adv X V _{NF}	X V _{NF} Adv
Number of instances	655	85	78	5	106	5	5	25	0	0	1	2
Ratio within the subgroup	88.51	11.49	93.98	6.02	91.38	4.31	4.31	89.29	0	0	3.57	7.14
Ratio relative to all instances	6.774	8.79	8.07	0.52	10.96	0.52	0.52	2.59	0	0	0.1	0.21

Table 2.
Distribution of
tvarkingai.

Adverb	<i>Tvarkingai</i> (569)											
	2-componential				3-componential							
Structure												
Components	Adv, V (241)		Adv, V _{NF} (175)		AUX, Adv, V _{NF} (101)			Adv, X, V _{NF} (52)				
Order	Adv V	V Adv	Adv V _{NF}	V _{NF} Adv	Aux Adv V _{NF}	Adv Aux V _{NF}	AUX V _{NF} Adv	X Adv V _{NF}	Adv V _{NF} X	V _{NF} X Adv	Adv X V _{NF}	X V _{NF} Adv
Number of instances	190	51	137	38	65	3	33	38	1	1	0	12
Ratio within the subgroup	78.84	21.16	78.29	21.71	64.36	2.97	32.67	73.08	1.92	1.92	0	23.08
Ratio relative to all instances	33.39	8.96	24.08	6.68	11.42	0.53	5.8	6.68	0.18	0.18	0	2.11

Adverb	Visiškai (653)													
Structure	2-componential				3-componential									
Components	Adv, V (549)		Adv, V _{NF} (140)		AUX, Adv, V _{NF} (164)					Adv, X, V _{NF} (86)				
Order	Adv V	V Adv	Adv V _{NF}	V _{NF} Adv	Aux Adv V _{NF}	V _{NF} Adv Aux	Adv Aux V _{NF}	Adv NF Aux	AUX V _{NF} Adv	X Adv V _{NF}	Adv V _{NF} X	V _{NF} X Adv	Adv X V _{NF}	X V _{NF} Adv
Number of instances	346	12	85	0	127	2	9	1	4	60	1	1	4	1
Ratio within the structure	96.65	3.35	100	0	88.81	1.4	6.29	0.7	2.8	89.55	1.49	1.49	5.97	1.49
Ratio relative to all instances	52.99	1.84	13.02	0	19.45	0.31	1.38	0.15	0.61	9.19	0.15	0.15	0.61	0.15

Table 3.
Distribution of
visiškai.

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Data Source:

Dabartinės lietuvių kalbos tekstynas – The Corpus of the Contemporary Lithuanian Language [Online]. Available at: <http://tekstynas.vdu.lt/tekstynas/>.

Santrauka

Julija Korostenskienė. Būdorieveiksmiai *gerai*, *tvarkingai*, *visiškai* ir lietuvių kalbos leksinio veiksmažodžio pozicija sintaksiniame medyje

Straipsnyje analizuojama lietuvių veiksmažodžio pozicija sintaksiniame medyje pasitelkiant būdorieveiksmių išdėstymo diagnostinę priemonę (angl. *diagnostic test*). Dėl savo žemos pozicijosrieveiksmių hierarchijoje būdorieveiksmiai yra laikomi leksinio veiksmažodžio pozicijos sintaksiniame medyje rodikliu. Tyrimui buvo panaudoti trys lietuvių kalbos būdorieveiksmiai – *gerai*, *tvarkingai* ir *visiškai*, iš kurių kiekvienas turi savo būdingų bruožų. *Gerai* gali pasirodyti tiek su būkle, tiek su veiksmą nusakančiais veiksmažodžiais (*stative vs eventive verbs*), *tvarkingai* gali pasirodyti tik su veiksmą nusakančiais veiksmažodžiais, o *visiškai* priklauso taip vad. laipsniorieveiksmių grupei (angl. *degree adverbs*) ir tradiciškai yra laikomas žemiausiairieveiksmių hierarchijoje išsidėstančiurieveiksmiu. Straipsnyje taip pat pasitelkiamas Katz'o (2003) pastebėjimas, jog dauguma būdorieveiksmių gali pasirodyti tik su veiksmo veiks-

mažodžiais, todėl jie turėtų jungtis ne prie veiksmažodžio frazės vP/VP, o aukščiau, prie veiklo frazės AspP. Remiantis kiekybine bei kokybine *Dabartinės lietuvių kalbos tekstyno* analize patvirtinama vyraujanti būdo prievaiskių pozicija prieš veiksmažodį. Pastebima, jog būdo veiksmažodžiai gali pasirodyti ir prieš būklės veiksmažodžius, bet tik tuomet, kai pastarieji turi rezultatyvumą nusakantį priešdėlį. Straipsnio išvada – Katz'o (2003) pastebėjimas atitinka lietuvių kalbos gramatinius principus, tačiau veiklo frazė AspP dažnai turi leksinį pavidalą, t.y. pasireiškia per veiksmažodžio priešdėlį. Todėl veiksmažodžio grupę vP/VP galima apibūdinti kaip a) užimantį žemą poziciją sintaksiniame medyje ir b) turintį aukščiau savęs veiklo frazę AspP. Apibendinant galima teigti, kad lietuvių kalbos veiksmažodis yra turintis sudėtinę struktūrą morfosintaksinis vienetas, kurio pasireiškimas sintaksiniame medyje išeina už vP/VP ribų.

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