Setting the Verb Raising Parameter in Lithuanian

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Abstract. The present article is concerned with the verb raising parameter in Lithuanian. As is known, Pollock (1989) postulates the verb raising parameter and examines the differences between verb raising language like French and a verb non-raising language like English. The verb raising parameter has become an essential part of analysis within the generative syntactic framework. However, due to its rich morphological system and free word order, Lithuanian has remained virtually unexplored. The present article explores the behaviour of the Lithuanian verb in light of the test environments proposed by Pollock: the position of the verb in negative sentences, yes/no questions, relative to the so-called low adverbs, and floating quantifiers. The preliminary conclusions are further verified in anagrammaticity preference test, with a particular focus on the placement of manner adverbs, which are regarded to stand the closest to the verb. It is shown that the verb does not raise from its base position in the affirmative sentences and may optionally raise in yes/no questions. The adverb placement relative to the verb is further specified in light of the negative particle ne-.

Keywords: generative syntax, verb raising parameter, Lithuanian, adverb placement, negation.

Introduction

Since the 1980s, free word-order languages have become a field of interest to many generative scholars and have been studied from a number of perspectives: e.g., in terms of what their characteristic property of being “free” comprises (Zwicky, 1986), the range and functions of the scrambling phenomenon (Sabel and Saito, 2005) and the treatment of free word-order languages as having an underlying fixed word order and being discourse-configurational in the sense that their word order is stipulated by the discourse, thereby postulating a special focus position in a sentence (Kiss, 1995). Since the 1980s, the generative syntactic framework has been successfully applied to a number of free word-order languages, such as Hungarian (e.g., Kiss, 1995, 1998, 2007, 2009; Pusklas, 1997, 2000; Kenesei, 1984, 2006), Finnish (Vilkuna, 1989), and Russian (Bailyn, 1995, 2001; Sekerina, 1997; Svenonius, 2004; Dyakonova, 2009).

Meanwhile Lithuanian, a free word-order language, notable for its rich and archaic morphological and agreement systems, has received virtually no research attention and is understudied from the generative perspective. The few known works available are by Rutkowski (2007) and Grinsel (2010) dealing with the Lithuanian genitival phrases and Lithuanian modal comparatives, respectively. Nevertheless, in Lithuania, research has also been exploring the possibilities for closer interaction with contemporary approaches to language study, e.g., by introducing terminology widely employed elsewhere to Lithuanian linguistics (Smetona and Usonienė, 2012) as well as codifying the range of the terms already in use (Ramoniénë et al., 2012).

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 Weibelhuth, 1992). Assuming that Lithuanian is underlyingly an SVO language (Geniušienė, 2007), the present article aims to examine the verb raising parameter in Lithuanian. Since the seminal work by Pollock (1989), the verb raising parameter has been reformulated in a variety of approaches, but remained an essential component of early language analysis within the generative syntactic framework used to account for consistent word order differences in languages under analysis.

The article is structured as follows. First Pollock’s procedure of setting the verb raising parameter is introduced and the tests are applied to Lithuanian. Second, the findings are further supported by data from The Corpus of the Contemporary Lithuanian Language. Then a diagnostics developed for testing the verb raising parameter among native Lithuanian speakers is presented and the collected data are analyzed. The conclusions summarize the results of the study.

Pollock’s Analysis for French and English

On the basis of earlier research by Emonds (1976) and Jackendoff (1972), Pollock postulated that the different behaviours languages may exhibit, manifest primarily in the appearance preceding or following a number of diagnostic adverbs, are due to the inherent relationship holding between the verb and the I node.

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):

\[ (1) \quad [\text{IP NP I ([Neg not/pas])} \ [\text{VP (Adv) V . . . } ] ] \]

He argues that the verb-raising rule to I (InflP) fully applies to French and partly to English. Consequently he splits the I (InflP) 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 adverbs like often, always, etc., 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 (2)):
In questions, whereas French shows inversion, English fills in the C position with the auxiliary:

(3)

a) Embrasse Jean souvent Mary?
   b) Does John often kiss Mary?

The notable exception to the rule are English verbs have and be, which behave in the same way as their French counterparts, ëtre and avoir respectively, and raise to C in questions and to T in negations, as in:

(4)

a) Has he money?
   b) He hasn’t any money.
   c) He is ill.
   d) He is not ill.

Pollock proceeds with examining the behaviour of non-finite clauses and adjoins them to the same paradigm, the only difference of further specification being the introduction of the feature [± finite] to characterize the finite clauses and non-finite clauses as [+ finite] and [-finite] respectively (ibid., p.372) with the English infinitival marker to generated at I (ibid., p.376). Pollock also introduces a functional projection AgrP which he takes to be the destination for the movement of the verbs in the two languages: both French and English auxiliaries be/être and have/avoir can optionally move in infinitival clauses, but the so-called short verb movement, i.e. movement to the position between the negation and the VP-adverb is available for all French verbs and only for the aforementioned auxiliaries in English. The verbs, according to Pollock, move to the newly introduced functional projection AgrP, which stands below IP and the negation, but above VP, and serves as a transitory point of the verbal movement in both French and English. Thus French verbs possessing the [-finite] feature can move to Tense while both finite and non-finite forms move to Tense (386). In subsequent research the agreement projection AgrP became a debated issue the argument being that agreement features are realized in T (Iatridou, 1990; Chomsky, 1995).

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, 2006). 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).

A simplified syntactic tree illustrating the verb raising parameter in French declarative sentences is presented below:

The objective of the present article is define the verb raising parameter for Lithuanian. To achieve this objective, we examine the behaviour of the Lithuanian verb in the environments set by Pollock (1989): the formation of yes/no questions, negation, floating quantifiers, finite and non-finite clauses, with particular focus on tests involving diagnostic adverbs, i.e. the so-called lower adverbs with a fixed place in the sentence, which thereby serve as anchors against which the distributional behaviour of other syntactic elements may be examined since the latter have been perceived as the most accurate indicators of the verb raising parameter in literature dealing with a rich morphology language (e.g., Kallestinova and Slabakova, 2007; Dyakonova, 2009). The preliminary findings will be supported by data from the Corpus of the Contemporary Lithuanian Language and further assessed in the native speakers’ grammaticality preference test. Finally, consideration of the behaviour of Lithuanian reflexive verbs will further specify the position of the verb relative to low adverbs.

An Application of Pollock’s Diagnostics

While characterized by a rich agreement system, Lithuanian is similar to English in that both languages have synthetic as well as analytic verb forms, the former formed by means of affixes and the latter by means of an auxiliary and one or more affixes. In this way it may be expected that at least in some respects the behaviour of the verb with respect to the tested environment in the two languages will be similar. However, taking into consideration the fact that Lithuanian word order is largely stipulated by the information structure, mention must be made of one more aspect: the sentences as presented below are assumed to be non-emotive, unless stated otherwise, and have neutral intonation. The information structure of Lithuanian from the generative perspective is yet to be examined and deserves a study of its own.

Negation

The examples with the negation not/ne- presented below for English and Lithuanian finite and non-finite clauses demonstrate that, in both languages, the negation precedes the lexical verb:
Lexical verbs:

- a) He does not read books.
  *He reads not books.

- b) Jis neskaito knygų.
  He ne-read-3P.PRES book-PL.GEN

- c) *Jis skaito ne knygų.
  He read-3P.PRES ne book-PL.GEN

Infinitival clauses:

- a) Not to go on a holiday is sad.
  To not go on a holiday is sad.
  *To go not on a holiday is sad.

- b) Vykti ne kelionėn liūdna.
  go-INF ne journey-ADV sad

Below is an example from the Corpus of the Contemporary Lithuanian Language (hereinafter CCL):

- Į šią šalį geriau nevykti
  In this-SG.ACC country-SG.ACC better ne-go-INF
  neturint būtinų darbui
  ne-have-PART obligatory-PL.GEN work-DAT documents-PL.GEN

It is better not to go to this country without the documents necessary for employment.

However, unlike English, where the lexical verb always follows the negation and never precedes it (Haegeman, 1995), Lithuanian allows the negation before auxiliaries and modals, e.g.:

- a) Jis nėra buvęs Argentinoje.
  John-NOM ne-be-3P.PRES be-M.PERF.PART Argentina-LOC

- b) Gali neiti į darbą ir rytoj.
  Can-2P.PRES ne-go-INF in work-SG.ACC and tomorrow

You do not have to go to work tomorrow either.

As can be seen, in Lithuanian the negation can appear at the highest possible pre-verbal position, whether it be pre-VP or pre-T. While the negation in English is a mere statement that John has not to go to work tomorrow, the Lithuanian sentence implies a somewhat more complex situation characterised by certain contextually defined circumstances, given which John was not present. As can be seen, the only difference between the sentences has to do with the scope the negation takes in each clause: over the predicate group without including the subject, as in (a), and over the entire sentence, hence including the subject, as in (b). Notably, sentences with the Genitive subject are widely used in Lithuanian alongside their counterparts with the Nominative subject even when there is no negation, the difference being that of definiteness (Laužikas, personal communication, September 9, 2014; see Kagan, 2013, for the typology of Genitive). Given the fact that in the pair above the subject of each sentence is definite by default, it is the placement of the negation on the syntactic tree that accounts for the Genitive case of the subject. Therefore, at this stage the working conclusion may be made: while in sentence (10a) the negation has to be placed quite low, somewhere within the vP range, in sentence (10b) the negation has to be placed higher up on the syntactic tree, no lower than TP, to ensure that the subject falls within its scope. At this point we will leave open the question of whether the External Projection Principle, according to which each clause needs a subject, can be satisfied by a subject in a non-Nominative case positioned in the specifier position (i.e. to the left) of the Tense Phrase ([Spec TP]) (cf. Slioussar, 2011).

Yes/ No Questions

The next step is to see how yes/no questions are formed. For comparisons, examples from French, English and Lithuanian are provided in (11a, b, and c) respectively:

- a) Embrasse John souvent Marie?
  b) Does John often kiss Mary?
  c) Ar Jonas dažnai bučiuoja Mariją?

As can be seen, in yes/no questions, the French lexical verb is inverted and, due to the fact that it appears above the external argument, it takes the complementiser position(C) on the syntactic tree. In both English and Lithuanian, however, the lexical verb does not change its position, with English additionally demonstrating the Do-support transformation in place, which inserts the auxiliary at C level, exactly where French has its lexical verb and Lithuanian the question particle ar (cf. Carnie, 2013, p.217). The last pair of sentences suggests that, while in English
questions the auxiliary undergoes raising to C, in Lithuanian the lexical verb does not raise.

**Diagnostic Adverbs**

Following Cinque’s (1999) classification of adverbs into two main groups, high and low adverbs, frequency and manner adverbs are argued to stand the lowest on the adverb scale and hence the closest to the verb. A systematic appearance of a manner adverb followed by the verb in the sentence would be suggestive of the verb staying in situ and not raising to T. Adverbs *often/ dažnai* and *visiškai/completely* are two examples of frequency and manner adverbs respectively and will be used in the diagnostics below.

The Lithuanian examples provide the counterparts for sentences (2 a-c) for convenience repeated below. They contain a diagnostic VP-adverb *often/ dažnai* and are used to test the strength of the V-feature of I (Infl), or, applying the split-I categories, T (or the more controversial Agr). The idea was first expressed in Lasnik (1995) and then reformulated by Arikawa (2008) as follows: “If a tensed main verb precedes a VP-adverb, the V-features [V] of T and Agr are strong. If a VP adverb precedes V, they are weak” (Arikawa, 2008, p.55).

(12)

French:
- a) John embrasse souvent Marie.
- b) *John souvent embrasse Marie.

English:
- a) John often kisses Mary.
- b) *John kisses often Mary.

Lithuanian:
- a) Jonas dažnai bučiuoja Mariją.
- b) ? Jonas bučiuoja dažnai Mariją (non-emotive).

As can be seen, in the affirmative one-verb predicate sentence, the placement of the diagnostic adverb *often/ dažnai* is the same in English and Lithuanian: between the external argument and the verb; however, in French the verb obligatorily precedes the diagnostic adverb. Interestingly, *dažnai* often precedes the auxiliary in Lithuanian. The examples below are from the CCL:

(13)

a) iš pokalbio dažnai galime spėti, kad From conversation often can-1P.PL.PRES. guess-INF that ryšys svarbus. connection important

b) Atsitiktinis darbas, kurį dažnai būna random work which often be-3P.PRES.FREQ priverstas dirbti paprastas padienis <...> forced-PASS.PART work simple dayman

A random job, which a common dayman is often forced to work.

As can be seen, Lithuanian examples follow the matrix English sentences with the diagnostic adverb *visiškai* preceding the lexical verb. Therefore, the conclusion summarizing data from the three languages can be made: while the V-features [V] of T (or Agr) are strong in French, which is why the French verb moves to TP, they are weak in English and Lithuanian, hence the TP cannot attract the verb, which consequently stays within the VP. This fact may serve as additional evidence supporting the idea that, as English, the Lithuanian verb does not raise to T. If so, the respective Lithuanian sentence structure with low manner adverbs can be presented as in (15):

(15) `[TP DP [VP Adv [VP V DP]]]`

Nevertheless, the manner adverb *visiškai* is worth a special mention in Lithuanian. Compare the sentences 16 (a) and (b) from the CCL below:

(16)

a) <...> žmonių gyvenimo būde visiškai People-GEN.PL life-SG.GEN way-SG.LOC completely neturi atsispindėti jų nuomonė have-3P.PRES reflect-INF they-PL.GEN opinion-SG.NOM pačių nuoseklią ne-have-3P.PRES self-PL.GEN completely PL.GENopinion-SG.NOM

In people’s way of life, their own opinion does not have to be reflected at all.

b) Dalis jų turėjo būti Part they-PL.GEN have-3P.PAST be-INF visiškai apginkluoti tik kaitais 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.

The ability of lower adverbs to appear at higher positions has been noted by Pollock (1989) himself, e.g., with *always* able to adjoin at TP. This position is far more restricted in English and is absent in French due to, as Pollock suggests, scope considerations. The idea that, at least in some languages, adverbs may be allowed at TP, has also been expressed in Holmberg and Platzack (1995) for Scandinavian. In Spanish, this also is a widely attested phenomenon (Ayoun, 2005; Zagona, 2002), and so it is in Russian (Slioussar, 2011; Dyakonova, 2009), where sentences with adverbs producing narrow focus scope, i.e., scope over the object, are argued to have non-neutral reading, which brings one to the issue of Information Structure (Slioussar, 2011). While the latter question will be left open for further study, the fact that in Lithuanian the negation may have scope over the subject, and lower adverbs are regularly found before the auxiliary/modal verb, also speak in favour of Lithuanian being able to adjoin negation and adverbs somewhat higher than regular adjunction in English.

**Floating Quantifiers**

Following analysis proposed by Kayne (1975), Pollock states that subject quantifiers float to the same position as (diagnostic) adverbs. Therefore, the fact that the quantifier follows the verb suggests that the verb has raised to TP; the quantifier preceding verb suggests that the verb does not move to TP. English and Lithuanian are similar in the ways they allow floating quantifiers:

(17)

**English:**

a) All my friends love cinema.

b) My friends all love cinema.

c) *My friends love all cinema.

The Lithuanian examples (a) and (b) below are from CCL:

(18)

*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.

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We all find time for what is most significant to our nature.

While other positions in a sentence for quantifier placement may be possible for Lithuanian, they are stipulated by the movement due to information structure and will not be examined in the present study. Summarising this section, floating quantifiers as appearing in non-emotive sentences suggest that the Lithuanian verb remains in situ.

**Experiment: Grammaticality Preference Test**

In order to examine how native speakers of Lithuanian react to the different positioning of higher and lower adverbs relative to the verb and additionally verify the preliminary conclusions for the verb raising parameter in Lithuanian, a grammaticality preference test was conducted. The grammaticality preference test was compiled, stored and distributed via www.kwiksurveys.com, an online survey creation website. The test was comprised of 24 situations of two main types: 18 stimuli in each of which an aspect related to the verb movement parameter was tested, and 6 filter sentences designed in order to make sure that automatic or careless answers do not interfere with the quality responses to the stimuli. The filter sentences were a priori ungrammatical sentences which combined a verb in the perfective aspect with the frequency adverb, as in:

(19)

Kaimynai retai atsvente Neighbours-PL.NOM seldom PERF.ASP-celebrate-3P.PAST

The neighbours rarely celebrated birthdays quietly.

As a result, 85 responses were received. The participants were aged from 18 to 66 and over and were L-1 Lithuanian speakers located at the time of taking the test in Lithuania, Norway, Sweden, Germany, Belgium, Romania, and the USA. From the 85 responses returned, 24 responses turned out to be incomplete and 3 responses failed to block the a priori ungrammatical sentences which had been distributed throughout the survey as a filter. These responses were eliminated from further analysis with the remaining 58 responses passing the two filters and consequently, admitted to the data examination stage. The reactions to the stimuli were formulated along a 4-point Likert scale and had ratings “sounds good”, “sounds somewhat strange, but I can say so”, “sounds strange” and “sounds bad”, which were later given numeric values, with 4 being grammatical and 1 ungrammatical.

As mentioned above, the main component of the grammaticality preference test was constructed through 18 stimuli situations. These consisted of a description of a situation and a question to which two to four test sentences were provided. The diagnostics is based on previous analyses conducted for other languages, Spanish and Russian in particular (Ayoun, 2005; Iomin and Wexler, 2002, Kallestinova and Slobakova, 2007). The diagnostic situations were all concluded with a question to ensure that the tested answer provided has an unfocused predicate group. The test answers were examining the following: adverb placement relative to the type of the verb, adverb placement relative to the focus scope it conveyed, the relative orde-
ring of higher and lower adverbs (epistemic vs frequency and manner adverbs), word order in yes/no questions, and adverb placement relative to the verb form (perfective or imperfective).

To illustrate, the stimulus situation below contains the manner adverb \textit{lėtai ‘slowly’}, which has the narrow focus scope in the sentence. The stimulus is provided with two answers differing in the adverb placement.

\begin{itemize}
  \item [(20)] 
  \begin{multicols}{2}
  \textit{Visi susirinkom žaisti futbolą ir laukiam tik Jono. O jis sėdi prie langų ir kažką lėtai valgo. Ką gi jis ten taip lėtai valgo?}
  \end{multicols}
  \begin{multicols}{2}
  \textit{We all gathered to play football and are only waiting for John. But he is sitting by the window and is eating something slowly. What is he eating so slowly?}
  \end{multicols}
  \begin{itemize}
    \item a) Jonas \textit{lėtai valgo sriubą.}
    \begin{itemize}
      \item Jonas slowly eat-3P.PRES soup-SG.ACC
      \end{itemize}
    Jonas is slowly eating soup.
    \item b) Jonas \textit{valgo lėtai sriubą.}
    \begin{itemize}
      \item Jonas eat-3P.PRES slowly soup-SG.ACC
      \end{itemize}
    Jonas is eating slowly soup.
  \end{itemize}
\end{itemize}

Results and Discussion

The results of the survey have been grouped according to a specified parameter and are accompanied by figures. In all figures presented below, the highest possible mean is 4. The results of items examining the position of verbs relative to low adverbs are summarized in Figure 1.

\begin{itemize}
  \item [(21)] 
  \begin{itemize}
    \item [(21)]
    \begin{multicols}{2}
      \textit{Rytoj nėra paskaitos, o tavo bičiulė Marija apie tai nežino. Ar galėtum jai pranešti?}
    \end{multicols}
    \begin{itemize}
      \item a) \textit{Aš būtinai paskambinsiu Marijai.}
      \begin{itemize}
        \item I necessarily PREF-call-1P.FUT Marija-F.DAT
      \end{itemize}
      I will necessarily call Mary.
    \item b) \textit{Aš paskambinsiu būtinai Marijai.}
      \begin{itemize}
        \item I PREF-call-1P.FUT necessarily Marija-F.DAT
      \end{itemize}
      I will necessarily call Mary.
    \end{itemize}
  \end{itemize}
\end{itemize}

Analysis of responses demonstrates that in all cases, the adverb>verb order figures as the preferred order in non-emotive sentences. Interestingly, the verb>adverb order in non-emotive contexts is not completely ruled out and has the mean value of about 2 for all types of adverbs. This is indicative of the fact that, while the adverb>verb order is the preferred one, the alternative verb>adverb order is still acceptable to native speakers and consequently may be said to have a deviant status in Lithuanian.

Figure 3 summarizes the results of manner and frequency adverbs used with auxiliaries and lexical verbs.
An example of a stimulus situation and test items is provided below:

\[
(22) \text{Šiandien posėdžio metu direktorius pristatė apklausos apie pasitikėjimą darbo vietoje rezultatus. Ką gi galima pasakyti apie marketingo skyrių?}
\]

During today’s meeting, the director presented the results of the survey on the trust level in the workplace. What can be said about the marketing department?

a) Marketingo skyriaus vadovas visiškai
   Marketing-GEN department-GEN head-NOM
   Gali pasitikėti savo pavaldiniais
   can-3P.PRES PREF-SI-believe-INF his subordinates-
   PL.INSTR

   Head of Marketing Department can completely rely on his subordinates.

b) Marketingo skyriaus vadovas gali
   Marketing-GEN department-GEN head-NOM can-
   3P.PRES
   Visiškai pasitikėti savo pavaldiniais
   Completely PREF-SI-believe-INF his subordinates-
   PL.INSTR

   Head of Marketing Department can completely rely on his subordinates.

c) Marketingo skyriaus vadovas gali
   Marketing-GEN department-GEN head-NOM can-
   3P.PRES
   Pasitikėti visiškai savo pavaldiniais.
   PREF-SI-believe-INF completely his subordinates-
   PL.INSTR

   Head of Marketing Department can completely rely on his subordinates.

Since auxiliaries and modal verbs are regarded to take the same position on the syntactic tree, Aux in the figure has been chosen to represent both the auxiliary būti ‘be’ and the modal galėti ‘can’. As can be seen, the order with the adverb placed between the auxiliary and the lexical verb is nearly unanimously the most natural order for the manner adverbs, which is in line with the relevant research for English. The scores are slightly lower for frequency adverbs, which stand a little higher on the adverb hierarchy and therefore the speakers apparently allow them greater freedom in a sentence. Interestingly, the respondents were fairly lenient to adverb position either preceding or following the verb group: the means for the adverb-initial position are at about 2.6 (out of the maximum 4) for the manner adverbs and even more for frequency adverbs. A greater contrast can be observed in the position with the adverb following the verb group: here the means for manner and frequency adverbs are 1.7 and 2.3 respectively. Thus while the frequency adverb, due to its higher position in adverb hierarchy and supposedly greater mobility in the sentence, is allowed in all positions, albeit with somewhat greater reluctance for initial and final positions relative to the verb group, manner adverbs are expected to stay in the maximum proximity preceding the lexical verb or at least the verb group. Therefore, the results of this figure suggest that the lexical verb does not raise out of its position and stays in vP, the auxiliary and modals do raise to T, while adverb positions on the edges of the verb group have a deviant status.

Speaking about the modal verb gali in particular, the respondents expect the epistemic adverb to precede the modal (100 %), while 93 % place the manner adverb completely following the modal and before the lexical verb. This fact suggests that, as in English or Russian, there may be a pre-TP position available for adverb placement in Lithuanian.

Figure 4 demonstrates the results of the perception of the grammaticality of the placement of adverbs preceding or following the verb relative to the focus scope conveyed. It is believed that adverbs with the narrow scope can interfere in the order of the constituents and move to the marked position of the structural focus, associated with the edge of the verb phrase (Göbbel, 2007; Erteschik-Shir and Strahov, 2004). In order to see whether the respondents associate either of the positions with the particular focus, the grammaticality preference test under analysis contained three situations with the narrow focus and three situations with the wide focus. The Lithuanian adverb lėtai (En slowly) in example (20) above is used in the narrow scope. The following example illustrates the use of adverb in the wide scope (and is also a reinterpretation of one of Pollock’s original tests):

\[
(23) \text{Kas pasidarė Jonui Negi taip įsimylėjęs? Atrodo, dėl Eglės viską padarys.}
\]
What happened to John? Is he really so much in love? It seems that he will do anything for Eglė.

a) Jis visiškai prarado protą.
He completely lost his mind.

b) Jis prarado visiškai protą.
He completely lost his mind.

The data demonstrate that, in non-emotive sentences, the adverb>verb order is the order unanimously preferred by the respondents regardless of the adverb scope. As can be seen from the figure, the acceptability mean value for the verb>adverb is 2, which points to the fact that the respondents do not rule out the reverse order as ungrammatical and rather perceive it as deviant.

Figure 5 illustrates the respondents’ preferences for the verb-subject inversion in general questions. The acceptance of their inverted word order would be suggestive of the verb moving out of its position and raising on the syntactic tree in interrogative sentences. An example is presented below:

(24) Mūsų laikais daug kas sako, kad yra matęs vaiduoklį. O kaip Tomas?
A lot of people nowadays say they have seen a ghost. And how about Tom?

a) Ar yra Tomas matęs vaiduoklį?
C[+Q] be-3P.PRES Tomas-NOM see-M.SG.PART.ghost-SG.ACC
Has Tom seen a ghost?

b) Ar Tomas yra matęs vaiduoklį?
C[+Q] Tomas-NOM be-3P.PRES see-M.SG.PART.ghost-SG.ACC
Has Tom seen a ghost?

As can be seen, virtually all respondents reacted positively to the SVO word order in yes/no questions, regardless of whether the verb was lexical or modal/auxiliary. However, the inverted order with its mean value just above 3 for both auxiliaries and lexical verbs suggests that the respondents are fairly lenient to the change of order. This is somewhat unexpected in light of the classical generative treatment of general questions, according to which in a language, the presence of the complementiser in yes/no questions stands in complementary distribution with the subject-verb inversion (Carnie, 2013). In the present analysis, a conclusion can be made that, although the direct word order and hence the unmoved verb is the preferred pattern in Lithuanian in yes/no questions, the verb can nevertheless undergo optional movement to C. The lower acceptability values may be suggestive of the fact that the respondents do realize the fact that the inverted verb and the interrogative complementiser ar compete for the same position on the syntactic tree.

Figure 6 summarizes the reactions to adverb order relative to the perfective or imperfective form of the verb. As can be seen, the respondents do not relate the type of the verb form to the position of the adverb and the maximum acceptability score (mean value=4) is given to the adverb>verb order irrespective of whether it is perfective or imperfective. Again, the order with the adverb following the verb is perceived as more deviant by the respondents.

Although the results of this figure support the idea that the verb does not raise to T, it needs to be recognized that the figure leaves open the question as to the position of the verb relative to other nodes on the syntactic tree. Thus, for example, following the idea expressed in Katz (2000), adverbs adjoin to verbs on the semantic grounds and therefore, time-related adverbs will “adjoin either to Aspect P or to stative VPs” (2000, p.144). This idea was also further developed by Svenonius (2004) and Dyakonova (2009) with reference to the Russian verb with Dyakonova postulating that manner adverbs are generated at AspP. Given the findings of the grammaticality preference test presented above, it is believed that Katz’s approach merits special attention when considering the layout of constituents on the syntactic tree for Lithuanian as well.

A Note on Lithuanian Negation
While a closer examination of Lithuanian prefixes and their potential hierarchy in light of Svenonius (2004) deserves a study of its own, one phenomenon, viz. verbal negation, will be briefly discussed below as it complements the discussion regarding the relative area for low adverb adjunction.
As is known, Lithuanian prefixes may express either lexical, or aspectual meaning, or both. Therefore, for the current purposes we can mark the node for the prefix as XP in order to avoid further specification as to which meaning exactly is conveyed. For the current purposes we assume lexical-aspectual prefixes to reside within the vP. Contrarily, the negative clitic ne-, by virtue of its independent status as a constituent, is to be placed above the vP. This produces an interesting dilemma regarding the placement of the clitic on the syntactic tree relative to other constituents.

Let us now consider the following sentences: sentence (25a) illustrates the separability of the negative clitic from the verb, and (25 b) shows what part exactly is deleted.

(25)

a) Tomas stat-o-si nam-q, o Jonas-
ne.
   Tomas build-3P.PRES-si house-SG.ACC, and Jonas ne.
   'Tomas is building a house and Jonas is not.'

b) Tomas stat-o-si namq, o Jonas
   Tomas build-3P.PRES-si house-SG.ACC, and Jonas
   ne-[si-stat-o] nam-o],
   ne-[Sl-build-3P.PRES house-SG.GEN].
   'Tomas is building a house, and Jonas is not building a house.'

Consider also sentence 26 with the verb form having both the negative and the aspectual prefix:

(26)

Jonas ne-pa-si-stat-ē nam-o.
   Jonas ne-PREF-SI-build-3P.PAST house-SG.GEN
   'John did not build the house.'

According to the ellipsis test, the elided part in (25b) as compared to (26) forms a constituent (Carnie, 2013). The fact that in (25b) ne may appear on its own with the component [sistato namo] deleted, suggests that each of the relevant elements is a constituent, i.e., they each have their own branches on a syntactic tree. However, the element -sistato is only possible when preceded by a prefix and cannot form an independent constituent. Following the VP-internal subject hypothesis and assuming for the current purposes that –si- as a physically manifest trace of the moved VP-internally generated subject, we can state that the element -sistato is an intermediate projection of the vP. It cannot be a maximal projection by virtue of the fact that it can never appear as an independent constituent. From this we can make the conclusion that, if the verb does not have a lexical/aspectual prefix, the negative clitic ne- undergoes lowering and gets incorporated into the verbal material below vP. This is evidenced by the orthography: while ne in Lithuanian is spelled together with the verb, it can appear on its own in coordination tests, which points to its independence as a constituent. Consequently, the lowering and incorporation of the negative clitic results in the preservation of the VP-internal subject order since the lexical root cannot raise to the v position of the vP, contrary to prefixless cases.

Below two simplified trees for the behaviour of the negative marker are provided: in tree a) ne- does not lower due to the presence of the lexical-aspectual prefix in the verb; in tree b) ne- undergoes lowering due to the absence of a lexical/aspectual prefix and is thereby incorporated into the verb structure:

(27)

\( \begin{align*}
   & (a) \quad \text{Ne does not lower because of the presence of a prefix} \\
   & (b) \quad \text{Ne lowers because of the absence of a prefix}
\end{align*} \)

Therefore, for the current purposes the following conclusion can be made: the negative clitic gets incorporated, following Baker’s terminology (Baker, 1988), into the vP structure when the lexical verb is a prefixless reflexive verb; it remains stacked above the vP in other cases, which is ultimately reflected in the orthography whereby the negative clitic is spelled together with the verb. Therefore, in sentences containing the manner adverb and a prefixed lexical verb in the negative, the negative phrase is placed above the vP, hence the adverb would have to merge above it. In combinations with the prefixless reflexive verb, the negative prefix is generated above the vP, but undergoes lowering and subsequent incorporation, with the adverb stacking above. This order would produce sentences like (28) with the simplified sentence structure presented in (29):

(28)

Jonas visiškai nesitarko kambario.
Jonas completely ne-SI-manage-3P.PRES room-
SG.GEN
John does not clean his room at all.

(29)

\( \begin{align*}
   & (a) \\
   & \text{TP} \\
   & \text{Jonas} \\
   & \text{Adv} \text{visiškai} \\
   & \text{NegP -} \\
   & \text{XP} \\
   & \text{u} \\
   & \text{tvarko} \\
   & \text{DP kambario}
\end{align*} \)
Conclusions

The present article presented the theoretical methodology for establishing the verb raising parameter in a language, first developed by Pollock (1989), and examined the verb raising parameter in Lithuanian, a free word-order language, virtually unexplored from the generative syntactic perspective. In the generative syntactic framework, defining the verb raising parameter at early stages of analysis is essential since it allows one to account for the fundamental and consistent word order differences in languages under analysis assuming that all languages share a number of innate properties collectively referred to as the Universal Grammar. First, Pollock’s core tests examining the relation between the lexical verb and the node were applied to Lithuanian. These included the formation of yes/no questions, negation in finite and non-finite clauses, the position of the verb relative to floating quantifiers, and most importantly, diagnostic adverbs. The analysis of the results demonstrated that, while in Lithuanian, adverbs have greater freedom in the sentence than English adverbs, generally the adverb-verb order is the one preferred, which suggests that the verb does not undergo raising or, using more recent terminology, raises after spell-out. Word order preferences were further supported with data from the Corpus of the Contemporary Lithuanian Language. In addition, to get further substantiation and native speakers’ commentary on the patterns preferred, a grammaticality preference test was designed and posted in the internet. The test comprised 18 stimuli situations, each of which was followed by two to four tested sentences. As a result, 85 responses were collected, of which 58 passed two filters and were admitted to the results analysis stage. The results suggest that the Lithuanian verb does not move out of its position in vP spell-out and can optionally raise to C in yes/no questions. These findings may further be verified with a more exhaustive analysis of corpus data. Finally, on the basis of the analysis of the negative prefix ne- and Lithuanian reflexive verbs, it was also shown that, in defining the precise site of adverb adjunction on the syntactic tree, the left periphery of the verbal phrase deserves attention of its own. Currently, it is proposed that the manner adverb, which is regarded to be the lowest in the adverb hierarchy, may attach to the negative phrase NegP in negative sentences, which was shown to be able to lower down and get incorporated into the structure of the vP.

References

Veiksmazodžio iškėlimo parametra nustatymas lietuvių kalboje

Santrauka

Straipsnyje analizuojamas lietuvių veiksmazodžio pozicijos keitimo sakinio sintaksiniame medyje kriterijus taikant generatyvinės sintaksės metodologiją. Kaip žinio, vienas pamatinių kalbų skirtumų yra tai, ar veiksmazodis keičia poziciją į vadinamąją laiko frazę (minimalistinės sintaksės interpretacija, veiksmažodis juda prieš ištarimą ar po jo. Veiksmažodžio pozicijos keitimo klausimas prancūzų ir anglų kalbose labai įvairus, o.Manometriški mečiauti su sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūrai, kur būtų galima atlikti veiksmo (neigiamos frazės (NegP) pozicijos, kuri, kaip rodo paaiškinimas sako esant struktūra
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