

Jurgis PAKERYŠ
 Vilnius University

ON THE DEVELOPMENT OF PAST HABITUAL FROM ITERATIVE IN LITHUANIAN

Abstract. Lithuanian has regular past habitual forms with the suffix *-dav-*, which can be explained as an originally iterative suffix *-dau-* restricted to the past tense (Fraenkel 1936). Dialectal and Old Lithuanian, in addition to *-dav-*, also feature habituais with the suffixes *-lav-* and *-dlav-*, which could have followed the same path of development (Fraenkel 1936), as evidenced by a number of diverse languages (Bybee et al. 1994). Using an electronic edition of *Lietuvių kalbos žodynas (The Dictionary of Lithuanian)* as the data source, a limited number of possible iteratives with *-dau-* and other related suffixes were found, which has led to two main conclusions. (1) Habituais were restricted to the past tense before the appearance of the first written Lithuanian texts (mid-16th c.) and the present and the infinitive stems went out of use. If this had not been the case, more corresponding verbal formations should have remained. (2) Iteratives with the habitual-to-be suffixes had to be productive to some extent in the dialects, which grammaticalized them as past habituais. If these formations had been productive in all dialects of Lithuanian, more iteratives should have been found in the areas that did not grammaticalize them as past habituais. It is also suggested that the form-frequency correspondence principle (Haspelmath 2008; 2014; 2017) should have operated in the formation of the Lithuanian habitual. Longer suffixes were chosen to mark habitual situations as a less frequent subtype of iterative situations and habitual forms were restricted to the past tense because habituality is one of the default (more frequent) readings of the present and hence the habituais in the past tend to be marked explicitly (Bybee et al. 1994).

Keywords: Lithuanian; morphology; habitual; iterative.

1. Introduction¹

Lithuanian has regular past habitual forms where suffix *-dav-* is added to the infinitival stem of the verb and is followed by further inflectional markers, as in the finite and non-finite constructions in (1):

¹ I would like to thank two anonymous reviewers for their remarks, which helped me improve the present version, and Cristina Aggazzotti for editing the English of my article. All possible shortcomings and misinterpretations are mine.

(1) Modern Lithuanian (constructed²)

a. Active past habitual

Ji *paprastai* *rašy-dav-o*
3SG.NOM.F usually write-HAB-PST.3
parkeriu
fountain.pen:INS.SG
‘She usually wrote with a fountain pen.’

b. Reportative habitual with a declinable participle

Ji *paprastai* *rašy-dav-us-i*
3SG.NOM.F usually write-HAB-PST.AP-NOM.SG.F
parkeriu
fountain.pen:INS.SG
‘Reportedly, she usually wrote with a fountain pen.’

c. Passive habitual

Laiškai *paprastai* *bū-dav-o*
letter:NOM.PL usually AUX-HAB-PST.3
rašomi *parkeriu*
write:PST.PP.NOM.PL.M fountain.pen:INS.SG
‘Letters usually were written with a fountain pen.’

d. Reportative habitual with an indeclinable participle (gerund)

Sako *jq* *paprastai* *rašy-dav-us*
say:PRS.3 3SG.ACC.F usually write-HAB-PST.AP
parkeriu
fountain.pen:INS.SG
‘She is said to have usually written with a fountain pen.’

A separate quantitative study is needed, but habitual participles seem to be rarely used in attributive constructions, as in (2a) below³, and usually occur in evidential, typically reportative, constructions where they stand in

² The examples were constructed for the sake of uniformity based on authentic sentences given in the grammars (see references below).

³ I would like to thank one of the anonymous reviewers for drawing my attention to the attributive use of habitual participles. This use is not described in Ulvydas 1971, 332–350 and Ambrazas 1997, 353–360.

nominative case and show agreement with the subject in number and gender, as in (1b) (Ulvydas 1971, 332, 364–365; Ambrasas 1997, 336–337). In passive constructions, the habitual suffix attaches to the auxiliary ‘be’, while the main verb assumes the passive form, as in (1c). The past habitual indeclinable participle (gerund) is rare and is used either in evidential (reportative) contexts, similarly to the declinable habitual participles, as in (1d)⁴, or in converbial constructions of anteriority, as in (2b):

(2) Modern Lithuanian

a. Attributive use of the habitual participle

<i>Chaki spalvos</i>	<i>drabužiais</i>	<i>vilkė-dav-ęs</i>	
khaki color:GEN.SG	clothes:INS.PL	wear-HAB-PST.AP.NOM.SG.M	
<i>Irwinas</i>	<i>išgarsėjo</i>	<i>bebaimiškai</i>	
Irwin:NOM.SG	become.famous:PST.3	fearlessly	
<i>elgdamasis</i>	<i>su</i>	<i>laukiniais</i>	<i>gyvūnais</i> ⁵
behave:CNV.CTP.NOM.SG.M.RFL	with	wild:INS.PL	animal:INS.PL

‘Irwin, who used to wear khaki clothing, became famous by [his] fearless acts with wild animals.’

b. Habitual indeclinable participle (gerund) marking anteriority

<i>Jai</i>	<i>kažkur</i>	<i>išei-dav-us,</i>	<i>berniukai [...]</i>
3SG.DAT.F	somewhere	go.out-HAB-AP	boy:NOM.PL
<i>imituo-dav-o</i>	<i>dujų</i>	<i>paleidimo</i>	<i>garsą</i> ⁶
imitate-HAB-PST.3	gas:GEN.PL	running:GEN.SG	sound:ACC.SG

‘After she would go out somewhere, the boys would imitate the sound of running gas.’

⁴ The examples of type (1d) can be found in Ulvydas (1971, 386, 392). Past habitual indeclinable participles seem to occur only in subordinate clauses when the matrix clause has a predicate of speech or perception *vel sim.* (Ulvydas 1971, 392). This construction is not evidential *per se*, because the channel of information is lexically specified in the matrix clause, but as mentioned above, the habitual forms occur only in evidential (typically reportative) contexts. The past habitual declinable participles, however, occur in true evidential constructions, as in (1b), where the matrix clause specifying the channel of information is optional. For example, (1b) can be extended by adding *Sako, kad ji...* ‘They say that she...’

⁵ News website “Lietuvos žinios”, <http://lzinios.lt/lzinios/print.php?id=103061>, 5 September, 2006.

⁶ Personal blog, <http://hada.blogas.lt>, 15 April, 2011.

The combination of habituality and past tense reference seen in Lithuanian is a well-known phenomenon recurring in diverse languages. Bybee et al. (1994, 154–155) list the following languages with past habituais: Tigre, Chacobo, Alawa, Temne, Tem, Maidu, Udmurt, Uigur and Buriat. More languages with past habituais from Dahl 1985, 100 will be mentioned below. The study by Thieroff (2000, 295–297) identified the following European languages with fully grammaticalized habituais: Czech, Irish, Lithuanian, English, Yiddish and Upper Sorbian. German and Swedish periphrastic constructions with *pfliegen* and *bruka* listed in Dahl 1985, 96 and Italian constructions discussed by Bertinetto (1996) are interpreted by Thieroff (2000, 296) as weakly grammaticalized and are not included in the survey. Czech, Irish and Lithuanian have a morphological expression of the habitual, while English, Yiddish and Upper Sorbian employ periphrastic constructions; in all these languages, habituais have past time reference, with the exception of Czech and some intricacies of the use of the habitual in Irish⁷.

With regard to the combination of habitual and past time reference, Bybee et al. (1994, 151, 154) suggest that habitual meaning can be interpreted as one of the default readings of the present forms and, as a result, habituality in the past needs to be marked explicitly. It should be noted that this is also expected following the form–frequency correspondence principle:

When two minimally different grammatical patterns (i.e. patterns that form an opposition) occur with significantly different frequencies, the less frequent pattern tends to be overtly coded (or coded with more coding material), while the more frequent pattern tends to be zero-coded (or coded with less coding material). (Haspelmath 2017; see also Haspelmath 2008; 2014)

⁷ In Irish, finite main verbs also combine habituality with the past time reference, but it is noted that Irish has a special habitual form of ‘be’, which is used in the present (*bím* ‘I am usually’ vs. non-habitual *táim* ‘I am’) and forms progressive constructions (see Thieroff 2000, 296 for further references and a note on the impersonal habitual form not reviewed in this footnote). Lithuanian is somewhat similar to Irish in that it also has a special habitual present stem of ‘be’ *būn-* and a rarely used 3rd person sg./pl. form *esti* (cf. *būn-u* ‘I am usually’, *būna, esti* ‘usually (s)he/it is/they are’ vs. *es-u* ‘I am’, *yra* ‘(s)he/he is/they are’). These habitual finite forms of ‘be’ are also used in periphrastic participial constructions, but it seems that the distribution of present habitual and non-habitual forms of ‘be’ is not always strict and needs to be investigated in more detail.

If the present habitual is more frequent (since it is one of the default readings of the present tense), then less frequent constructions (past habituals) are expected to be more explicitly marked.

As proposed by Dahl (1985, 100), past habituals can be further subdivided into the cases when (a) a given construction can be interpreted as a combination of habitual (HAB) and past tense markings (as in Akan, Czech, Guarani, German, Georgian, Swedish, and Hungarian), or (b) the construction is not analyzable as consisting of separate (independent) habitual and regular past tense markings and is labeled as HABPAST (as in Bandjalang, English, Seneca, Alawa, Oneida, Azerbaijani, and Bengali). Lithuanian belongs to type (b), HABPAST, because the marking of the habitual by *-dav-* (and other suffixes in Old Lithuanian and the dialects) is restricted to past tense. From a morphological point of view, the Lithuanian form is easily segmentable: the suffix *-dav-* stands for habituality, while the inflections following it are of the regular *o*-type preterite conjugation.

As for the origin of the habitual in Lithuanian, it has been suggested that it developed from iteratives with the suffix (inf.) *-dau-ti*, (prs.) *-dau-ja* when their past tense stem *-dav-o* was grammaticalized as a marker of the past habitual (Fraenkel 1936, 100). Thus far, only one example of such iterative formation has been found, namely *saky-dau-ti* 'say repeatedly' ← *saky-ti* 'say' (Simonas Daukantas, 19th c.; Fraenkel 1936, 100), but it was met with skepticism in Stang 1942, 173, fn. 1, who otherwise supported the theory of the rise of the past habitual from the iterative; see also Stang 1966, 366, where *sakydauti* is presented without any critical remarks. Dialectal and Old Lithuanian also have past habituals with *-lav-* and *-dlav-* and the same path of grammaticalization is imaginable if one projects the existence of the corresponding iteratives in *-lau-ti*, *-luo-ti*, *-dlau-ti*, *-dluo-ti* (Fraenkel 1936, 100–101); note that the suffixes *-au-ti* and *-uo-ti* have the same past stem *-av-o*. Morphological past habituals are used in most parts of the Aukštaitian dialectal area, but they are (or were) less common in the southern subdialect of it (Zinkevičius 1966, 356). Žemaitian dialects use a number of periphrastic habitual constructions (Fraenkel 1936, 102–113; Zinkevičius 1966, 357–359; Eckert 1996a; 1996b) and morphological *-dav-* habituals are attested only in the southern and eastern parts of the Žemaitian dialects where they border with the Aukštaitian ones (Fraenkel 1936, 101–102; Zinkevičius 1966, 357).

In this study I examined the data of a thesaurus type dictionary of Lithuanian, an electronic version of *Lietuvių kalbos žodynas (The Dictionary of Lithuanian, LKŽ^e)*, to see if any iteratives with habitual-to-be suffixes *-dau-ti*, *-duo-ti*, *-lau-ti*, *-luo-ti*, *-dlau-ti*, *-dluo-ti* could be found. The article is structured as follows: in Section 2, the hypotheses of the origin of the past morphological habituais in Lithuanian are reviewed in more detail followed by a discussion of possibly iterative formations in *-dau-ti* (Section 3), *-duo-ti* (Section 4), *-(d)lau-ti* (Section 5) and *-(d)luo-ti* (Section 6). The main findings are summarized in the conclusions (Section 7).

2. The origin of morphological past habituais

Morphological habituais are known to originate from iteratives (Bybee et al. 1994, 158–159; Heine, Kuteva 2002, 183). It has been noted that the same constructions can be used to mark iterative and habitual situations without tense restrictions in Inuit, Atchin, Halia, Rukai, Yessan-Mayo, and Krongo. Based on certain semantic and formal aspects, it is natural to assume that the iterative use is the original one (Bybee et al. 158–159). Following Bybee et al. (1994, 170), we could envisage the following gradual development for Lithuanian: (i) ITERATIVE > (ii) FREQUENTATIVE > (iii) HABITUAL > (iv) PAST HABITUAL. In step (ii), the iterative was extended to mark frequentative situations⁸. In step (iii), the frequentative then developed habitual meaning, and in step (iv), the habitual was restricted to past contexts, where it needed to be explicitly marked (Bybee et al. 1994, 154).

As mentioned in Section 1, the idea of the development from the iterative to the habitual in Lithuanian was formulated by Fraenkel (1936, 100): *-dav-o* was historically a past tense form of the once used iteratives with the suffix *-dau-ti*; see also, with some nuances of interpretation, Stang 1942, 51, 172–173 and 1966, 365–366. The suffix variant without /d/,

⁸ Here, I follow Bybee et al. (1994, 127, 160, 165) to make a distinction between iterative (repetition of the event on a single, particular occasion) and frequentative (repetition of the event during a period of time). For the development of the iterative to the frequentative, the restriction of the repetition to a single occasion needs to be lifted (Bybee et al. 1994, 159), but it should also be acknowledged that the distinction between single and multiple occasions is not always straightforward (Bybee et al. 1994, 160, 165). The habitual can be interpreted as a meaning included in the frequentative (Bybee et al. 1994, 127), but stages (ii) and (iii) can also be distinguished to show the development of the habitual from the frequentative (Bybee et al. 1994, 166, 170).

namely *-au-ti*, is well attested in the lexicon of Lithuanian as a marker of iterativity, but it is no longer productive and is much less frequent compared to denominal formations in *-au-ti*, see Ulvydas 1971, 252–253 and Jakaitienė 1973, 44.

An alternative explanation of Lithuanian past habitual was proposed by Schleicher (1856, 97; followed by Bezzenberger 1877, 207–208), who interpreted the suffix *-dav-* as the originally past tense form of the verb *dúo-ti* (prs. *dúod-a*, pst. *dāv-ė*) ‘give’ (cf. Schmalstieg 2000, 298–299). In the context of the development of habituals from iteratives (this path is also easily applicable to habituals in *-lav-*, see below), the rise of the past habitual suffix from the verb *dúoti* ‘give’ seems much less probable.

The *-d-* in the suffix *-dau-ti* (and also in *-duo-ti*) was most likely originally inherited from the verbal bases and later resegmented as part of the suffix, similarly to the suffixes *-dė-ti*, *-dy-ti*, *-din-ti*, etc., where *-d-* reflects the historical present stem in **-d^he/o-* directly or indirectly (see Fraenkel 1936, 99 with further references and Stang 1942, 140–143; Skardžius 1943, 527, 536, 547; Endzelīns 1951, 831; Vaillant 1966, 174, 364; Smoczyński 1987; 1998; Ostrowski 2006, 84). The explanation that the *-d-* in East Baltic causative formations with the suffix **-dī-* might be of nominal origin (Leskien 1884, 447; also mentioned in Fraenkel 1936, 99) is less probable because nouns with *-d-* are non-productive, rare and historically seem to be best explained as original postverbal formations to verbs that already have *-d-* in their stems (Smoczyński 2017 s.v. *būdas*).

Otrębski (1956, 223) suggests that the suffix of the past habitual got its /d/ by analogy. For example, the iterative of *dė-ti* ‘put’ is *dė-d-inė-ti*, so the formation in *-au-ti* should also be with *-d-* (to avoid hiatus) and its past form would be *dė-d-av-o*, as in *dúo-ti* ‘give’ → *duo-d-inė-ti* and *dúo-dav-o*. Following the idea of the rise of *d-* forms from the present **-d^he/o-*, Ostrowski (2006, 84, fn. 66) derives *dúod-av-o* ‘used to give’ from prs. 3 *duod-a* ‘give(s)’ and proposes a later resegmentation of *-dav-o* (alongside inf. *dúo-ti*), while Smoczyński (2007, 77; 2017 s.v. *būdavo*) suggests that the past habitual form *būdavo* ‘it used to be’ of *būti* ‘be’ was originally a formation in *-au-ti* based on the present stem **būd-*, namely inf. **būdauti*, prs. **būdauja*, later resegmented as *-dav-*, i.e. pst. **būd-avo* as *bū-dav-o* (alongside inf. *bū-ti*). If the reconstruction of the present stem **būd-* is accepted (also suggested for Slavic *bŏdŏ*, see Smoczyński 2003 [1987], 45 and 2017 s.v. *būdamas*),

the proposed explanation of **būdauti* is possible, but the formation of this iterative (**būd-au-ti*) should have first contributed to the rise of the suffix *-dau-ti*, and then only later could that suffix have become the marker of the (past) habitual.

Old and dialectal Lithuanian also have past habituais in *-lav-* and *-dlav-*. The suffix *-lav-* is attested mostly in 16th–17th c. texts from Prussia; some forms are also known from the southeast periphery of Lithuania. The suffix *-dlav-* is only known from Old Lithuanian and is not attested in the dialects (Stang 1929, 149; Fraenkel 1936, 100–101; Stang 1942, 173; Otrębski 1956, 223–224; Jakulis 1966, 159–160; Zinkevičius 1966, 357; Palionis 1967, 135–136). Similarly to *-dav-*, the suffixes *-lav-* and *-dlav-* originally might have been used to derive the corresponding iteratives with *-lau-ti*, *-dlau-ti* or *-luo-ti*, *-dluo-ti* and were subsequently grammaticalized as markers of the past habitual (Fraenkel 1936, 100–101; Stang 1942, 173; Stang 1966, 365).

The origin of *-lau-ti* can be traced to a larger group of verbal suffixes containing /l/, such as *-lio-ti*, *-len-ti*, *-lin-ti*, which are explained as having arisen from the reinterpretation of verbs based on nouns and adjectives with the suffix *-l-*. For example, the derivational chain *pirš-ti* ‘matchmake’ → *pirš-l-ỹs* ‘matchmaker’ → *piršli-oti* ‘act as a matchmaker’⁹ can be reinterpreted as *pirš-ti* → *pirš-lío-ti* (Leskien 1884, 436–437; 1891, 470–471; see also Fraenkel 1936, 100–101). In this context, Leskien (1891, 471) mentions *méglaūtis* ‘romance’, but does not provide any comments. This verb might be derived from the unattested adjective **még-l-as/-us* ‘likable’ ← *még-ti* ‘like’ (cf. the abstract noun *mégl-ynė* ‘great thing’, which is evidently based on that adjective). However, if a direct relationship between *méglaūtis* and *még-ti* is established, the suffix *-lau-ti* can be segmented, i.e. *még-lau-tis*; consider also *mégl-in-tis* ‘romance’, which is evidently a factitive formation based on the above-mentioned adjective **még-l-as/-us* (cf. *méil-in-tis* ‘romance, etc.’ ← *méil-ūs* ‘sweet’). Bezzenberger (1877, 117–119) believes that *-lav-o* was originally the past tense stem of verbs in *-luo-ti* and that *l* developed from *dl*. The idea of *-luo-ti* verbs is certainly acceptable (cf. Fraenkel 1936, 101), but one should not assume *dl* > *l* because Lithuanian underwent the change *dl* > *gl* (Stang 1966, 107), not *dl* > *l*, so all forms containing the sequence

⁹ Leskien (1884, 436; 1891, 470–471) lists *piršlioti* (*-pirszl(i)oti*), but LKŽ^e includes only *piršliuoti* (also *piršliuoti*).

dl should be considered new, i.e. formed after the change *dl* > *gl*, see Stang 1942, 173; see also the criticism of Bezenberger's idea in Leskien 1891, 471. Otrębski (1956, 223) proposed an original phonetic solution (in my view unnecessary) to explain the rise of *-lav-o*. He suggested that the habitual suffix **-av-o* could be added to the verbs already containing the suffix *-au-ti*, such as *bad-áu-ti* 'hunger', followed by the development **-vavo* > *-lavo*, i.e. **badavavo* 'used to hunger' > *badalavo* with a later segmentation of *-lavo*.

As for the origin of the suffix *-dlav-*, Bezenberger (1877, 119) suggested that these forms belonged to verbs with the infinitive **-dl-uo-ti*, which were formed from nouns containing the suffix *-dl-*. He believes that this suffix is reflected in Lithuanian formations with *-kl-* (Bezenberger 1877, 85), but this is again phonetically wrong: as mentioned above, *dl* > *gl*, while *tl* > *kl* (Fraenkel 1936, 101; Stang 1966, 107). Leskien (1891, 471) draws our attention to other iterative formations with *-dl-*, namely *-dlio-ti*: *dé-ti* 'put' → *dè-dlió-ti* 'put repeatedly', *dúo-ti* 'give' → *duo-dlió-ti* 'give repeatedly', *užgáu-ti* 'offend' → *užgau-dlió-ti* 'abuse'. These formations help us understand the rise of *-dlau-ti* because one sees that *-d-* either originally belonged to the present stem of the base (if *duod-lió-ti* ← present stem *dúod-a*, later resegmented as *duo-dlióti* alongside the infinitive *dúo-ti*), or to the iterative formation in *-dy-ti* (*gáud-yti* → *gaud-lió-ti*, later resegmented as *gau-dlió-ti* alongside the infinitive *gáu-ti*)¹⁰. If this is correct, *-dlau-ti* could have originally been the suffix *-lau-ti* added to bases ending in *-d-*, which was later resegmented as part of the suffix (*-dlau-ti*). Fraenkel (1936, 99) and Otrębski (1956, 224) qualify *-dlav-* as a "mixture"/ "contamination" of forms with /d/ and /l/, while Stang (1942, 173) suggests that habitual forms with /d/ got the additional /l/ to strengthen their expressivity; in a later study, Stang (1966, 365) describes *-dlav-* as a "compromise" form.

It is interesting to note that in all these cases, a longer variant of the suffix was chosen as a marker of habituality (*-dav-*, *-lav-* and *-dlav-* and not *-av-*). This development conforms to the prediction of the form-frequency correspondence principle mentioned in Section 1. Habitual situations were a particular (less frequent) type of iterative situation and a longer suffix was preferred. The principle of form-frequency correspondence should have

¹⁰ Besides the verbs mentioned above (*dè-dlió-ti*, *duo-dlió-ti*, (*už-*)*gau-dlió-ti*), compare also the following verbs from LKŽ^c: *im-dlio-ti* (← *iĩm-ti*), *skir-dlio-ti* (← *skir-ti*), *spé-dlio-ti* (← *spé-ti*), *stùm-dlio-ti* (← *stùm-ti*, but *stùmd-lió-ti* ← *stùmdy-ti* is also possible).

operated twice: (1) longer suffixes were chosen to mark habitual situations (here, a longer suffix equates to more explicit marking), and (2) habitual markers were more frequently used in the past tense and finally restricted to it because the unmarked habitual reading was more likely to occur in the present tense (cf. Bybee et al. 1994, 154; here, a less common reading gets explicit marking in the past).

The restriction of habitual formations to the past tense should be projected before the mid-16th c., which is when larger Lithuanian texts began to appear both in print and manuscript forms, because the number of iteratives (i.e. potential habituais) with the suffixes mentioned above is low (see Sections 3–5). For example, modern Czech has habituais formed with the suffix *-va-* and these forms occur in the past tense in approximately 2/3 of examples (64.1%), and in the present tense in the remaining 1/3 (34.3%) of the occurrences (Danaher 2003, 11). A similar situation could have likely existed in Lithuanian before the mid-16th c., but perhaps not too much earlier, as past habituais still have a low frequency in 16th–17th c. Lithuanian where some unmarked past forms and occasional forms of iteratives (mostly with the suffix *-inė-ti*) are also used in habitual contexts (see Jakulis 1966, 161–164). In Old Lithuanian, habituais with *-dav-*, *-lav-* and *-dlav-* were already restricted to the past (unlike in modern Czech), but the Lithuanian past habitual was still a young category with a rather low frequency of use at that time.

From a historical comparative perspective, the Lithuanian suffix *-au-* (that is, a basic type without any consonantal extensions) corresponds to the Old Prussian *-au-* and should be an inherited common-Baltic suffix that was lost in Latvian. The Baltic suffix *-au-* corresponds to Slavic (inf.) *-ova-ti*, (prs.) *-uj-ŋ* and can be regarded as a common Balto-Slavic derivational type (Stang 1942, 51, 171–174; Vaillant 1966, 353–354; Stang 1966, 365–366; Villanueva Svensson 2014). The original function of the suffix was denominal derivation (verbalization) and further developments seem to be restricted to individual (sub-)branches.

Old Prussian has such formations as *sen-gid-aut* ‘attain’, *neik-au-t* ‘walk’, which are interpreted as deverbal iterative/intensive derivatives (Trautmann 1910, 383, 425; Endzelīns 1943, 214, 246; Smoczyński 2005, 153, 249 (*neikaut* as *ueikaut*); Mažiulis 2013 s.vv.) and the iterative function of *-au-* could be either a common-Baltic or a later parallel development. Iteratives

should have arisen when deverbal nouns were used for denominal derivation and when these formations were interpreted as referring to repetitive actions, i.e. deverbal noun > denominal verb > iterative verb. (In the last step, we see a change from a verbalizing marker to an iterative marker.) For example, a triad like Lithuanian *meĩs-ti* ‘pray, implore’ (root *meĩd-*) → *mald-à* ‘prayer’ → *mald-áu-ti* ‘pray, plead’ could have been reinterpreted as *meĩs-ti* → *mald-áu-ti*.

For Slavic, the most frequently discussed secondary function of *-ova-ti* is the imperfective, but iterative formations are also mentioned. The imperfective function might have arisen through the assignment of denominals with *-ova-ti* to the imperfective class and the reinterpretation of this suffix as a marker of imperfectivity (Miklosich 1875, 486; Vaillant 1966, 350, 488–490; Wiemer, Seržant 2017, 263–264). Slavic iteratives with *-ova-ti* are somewhat less discussed in the literature and are only briefly mentioned by, for example, Vaillant (1966, 351); the example given is Serbo-Croatian *klĩk-ova-ti* (alongside *klĩc-a-ti* and perfective *klĩk-nu-ti*), which is compared to Lithuanian *klyk-au-ti* ‘cry, yell repeatedly’ ← *klyk-ti* ‘cry, yell’.

3. Iteratives in *-dau-ti*

In this section, I will first discuss the verbs with the suffix *-dau-ti* attested in early texts and dialects, which are the most reliably attested formations. Later, a number of verbs known from the dictionaries and the works of Simonas Daukantas will be discussed, but these formations seem to be less reliable for the reasons given below.

gerdauti ‘feast’. This verb is listed with two meanings in LKŽ^e: ‘make jokes’ and ‘drink, feast’. The first meaning is attested only in Konstantinas Sirvydas’s dictionary (starting with the edition of 1642) and is clearly derived from the noun *gerdas* ‘joke’, which, according to LKŽ^e, is again attested only in the works of Sirvydas. The verb *gerdauti* as ‘drink, feast’, on the other hand, is known only from “Maldos krikščioniškos”, a part of “Knyga nobažnystės krikščioniškos” (1653). I have checked the electronic edition of this text and found two tokens of *gerdauti* as ‘feast’ occurring in the same prayer on page 35¹¹. I also found an additional token of *gerdauti* with the meaning ‘be smart’ (KN SE 108,1)¹². First let us discuss ‘be smart’ and then return to ‘feast’.

¹¹ LKŽ^e indicates page 82.

¹² In Jakulis 1995, 62, two meanings are listed for this form with a question mark: ‘make jokes’ and ‘booze’.

For *gerdauti* ‘be smart’, I checked the source of the homily in one of the editions of the postil by Grzegorz z Żarnowca (1597) and in that text, Lithuanian *ánt išgiedinimá kas giardauia* (KN SE 108,1) corresponds to Polish *ku pohánbieniu tego co ieft mądrogo* ‘for shaming what is smart’ (PGŻ 222v, 30–31). Polish *być mądrym* means ‘be clever, smart, etc.’ and Lithuanian *gerdauti* functions here as a formation from *gerdas* ‘sound, news, hearsay’ with the meaning ‘bring news, be informed, know a lot’. The meaning ‘booze’, suggested cautiously by Jakulis (1995, 62), is certainly unnecessary. The noun *gerdas* ‘news’ is attested in a number of early Lithuanian texts, KN being one of them (one token: acc. pl. *giárdus* KN G 129,29). Old Prussian has a formally identical formation, *gerdaut* ‘say’, which is most probably also denominal (cf. Lithuanian *gerdas* above) but the corresponding noun is not attested in Old Prussian (Smoczyński 2005, 151; Mažiulis 2013 s.v. *gerdaut*).

Now let us go back to *gerdauti* ‘feast’, which in the Polish source of the prayer corresponds to (the now archaic) *godować* ‘feast, celebrate, rejoice’ (SłPXVIe¹³), see (3) and (4)¹⁴:

(3) a. 17th c. Lithuanian

<i>idánt</i>	<i>ṽž</i>	<i>ftalá</i>	<i>tawa</i>	<i>wertay</i>
that	behind	table:GEN.SG	POSS.2SG	deservingly
<i>galetume</i>		<i>giardauti</i>		
be.able:IRR.1PL		feast:INF		

KN M 35,15-16

b. 17th c. Polish

<i>že[=]by[=]fmy</i>	<i>zá</i>	<i>ftolem</i>	<i>twojim</i>
that=IRR=1PL	behind	table:INS.SG	POSS.2SG.INS.M
<i>godnie</i>	<i>mogli</i>	<i>godować</i>	
deservingly	be.able:LF.PL.M	feast:INF	

MP 58,32

‘that we could feast deservingly at your table’

¹³ <http://spxvi.edu.pl/indeks/haslo/53191>.

¹⁴ I would like to sincerely thank Dainora Pociūtė for informing me of the possible source of prayers of KN M.

(4) a. 17th c. Lithuanian

<i>idánt</i> [...]	<i>fu</i>	<i>wifays</i>	<i>βwentays</i>
that	with	all:INS.PL.M	saint:INS.PL
<i>giardauti</i> [...]	<i>galetume</i>		
feast:INF	be.able:IRR.1PL		

KN M 35,21–25

b. 17th c. Polish

<i>że</i> [=]by[=]fmy [...]	<i>ze</i>	<i>wβyftkimi</i>	<i>Swiętymi</i>
that=IRR=1PL	with	all:INS.PL	saint:INS.PL
<i>godowác</i> [...]	<i>mogli</i>		
feast:INF	be.able:LF.M.PL		

MP 59,6–9

‘that we could feast with all saints’

As ‘feast, drink’, the verb *gerdauti* can be interpreted as the iterative or frequentative formation with the suffix *-dau-ti*: *gér-ti* ‘drink’ → *ger-dau-ti* ‘drink repeatedly, feast’, as compared to a parallel formation with the non-extended suffix *-au-ti*: *gér-áu-ti*¹⁵ ‘drink always, feast’ (LKŽ^e; attested in Mikalojus Daukša’s postil (1599) and in some dialects); see also *pra-si-gir-duo-ti* ‘sober up’ with the same root *ger-/gir-* ‘drink’ discussed in Section 4. However, one should not exclude the possibility that *gerdauti* ‘feast’ might be denominal: ‘feast’ < ‘have fun’ < ‘make jokes’ < *gerdas* ‘joke’ (cf. ALEW 1, 314 where both meanings are listed together: ‘scherzen; schmausen’) or maybe even ‘feast’ < ‘communicate, chat, exchange news’ < *gerdas* ‘sound, news’.

spjūdauti ‘spit repeatedly’. This verb has two attestations from Pagiriai in the Kėdainiai district. (Note that KN discussed above was also prepared and published in Kėdainiai). The formation is possibly iterative: *spjáu-ti* ‘spit’ → *spjū-dáu-ti*; the root apophony /au/ → /u:/ (lengthened zero grade) is found in a number of other deverbal formations with *-au-ti*, e.g., *džiaūg-tis* ‘be happy’ → *džiūg-au-ti* ‘rejoice’, *šaūk-ti* ‘shout’ → *šūk-au-ti* ‘shout repeatedly’ (Leskien 1884, 447; Jakaitienė 1973, 46). It should be noted that the stress is placed on the suffix (*spjūdauti*), which is a less frequent choice

¹⁵ When a word bears two accent marks, it means that it has two accentual variants.

for deverbatives; in the study by Jakaitienė (1973, 45, 47), only 23% of deverbatives had suffix stress. If an alternative interpretation is sought, one could consider a denominal derivation from the action nominal *spjũd-as* ‘spitting’ attested in a different region (Rimšė, Ignalina district); denominal derivation would be in line with the tendency for stress placement to be on the suffix of formations in *-au-ti*. Action nominal *spjũd-as* might also hint at the existence of its base **spjũ-d-yti* ← *spjáu-ti* (cf. on such formations Smoczyński 2017 s.v. *bũdas*); compare to *pjáu-ti* ‘cut, saw’ → *pjũ-dy-ti* ‘weary’, unless *spjũ-d-as* is derived with a “neo-suffix” *-d-* directly from *spjáu-ti* (with metatony and apophony *áu* → *ũ*). If reconstruction of **spjũd-yti* is accepted, *spjũd-áu-ti* could also be a secondary derivation based on it (cf. the case of *véd-áu-ti* ← *véd-y-ti* below).

švédauti ‘lisp, talk slowly (nonsense)’, one attestation from Anykščiai. When contrasted with *švé-n-áu-ti* ‘slowly talk nonsense, chat, talk like an elderly man’ segmentation *švé-d-áu-ti* is possible, but a primary verb with the root **švé-* (**švẽ-*?) is not attested, and only *švó-ti* ‘talk nonsense, chat, etc.’ is known with a different root apophony. Both **švé-ti* and *švó-ti* seem to be onomatopoeic (cf. also *švėkšti* (*-čia, -tė*), *švõ-kš-ti* (*-čia, -tė*) extended in *-kšt-* and with a circumflex intonation; LEW, 1038). In the case of *švén-áu-ti*, the derivational base could be the noun *švé-n-a* ‘the one who talks nonsense’ (← **švé-ti*), but for *švé-dau-ti*, direct derivation from **švé-ti* is imaginable.

védauti ‘cool, ventilate’. This verb is well-attested from a number of places, but it seems to be restricted to eastern Lithuania (cf. *vėduoti* ‘idem’ below which has a wider distribution). The formation can be interpreted as iterative-intensive *vė-dau-ti* ‘blow repeatedly’ if the base were *vė-ti* ‘blow’; there are more similar formations with other suffixes also containing *-d-* and the same root *vė-*: *vė-dén-ti* ‘cool, ventilate; flutter’, *vė-dy-ti*, *vė-dìn-ti* ‘cool, ventilate’. (These derivatives are interpreted as causatives in Smoczyński 2007, 727 and as iteratives in ALEW 1, 1205.) There is also a possibility that *véd-auti* is a secondary formation of *véd-yti* (Smoczyński 2007, 727); in this case, the base already contains /d/, to which the suffix *-au-ti* is added (*véd-áu-ti*). If *védauti* is not directly derived from *vė-ti*, formations of this type may have contributed to the rise of the suffix *-dau-ti*: the chain *véd-auti* ← *vė-dyti* ← *vė-ti* could have been reinterpreted as *vė-dau-ti* ← *vė-ti*.

The following two verbs are attested in dictionaries only and should be considered with caution.

ulbėdauti ‘emit certain sound (of black grouse)’ is known from two lexicographical sources, namely from the Lithuanian–German dictionary of Aleksandras Kuršaitis (1968–1973) and from the Lithuanian–Russian dictionary of Benjaminas Sereiskis (1933). Formally, this verb may look like a derivation from *ulbė-ti* ‘sing (of birds)’ with the suffix *-dau-ti*. However, the dictionary of Sereiskis gives the form *ulbedauti* (!) and equates it with *olbedauti*, which is translated into Russian as ‘tokovat’ (o teterëve)’ = ‘to emit certain sound (of black grouse)’ (Ser, 577, 1010). Kuršaitis must have taken *ulbedauti* from the dictionary of Sereiskis and made two corrections: <e> was changed to <ė> and the accent on the suffix was added. The vowel change does not seem necessary: LKŽ^e lists *olberdauti* (same meaning) and *olbedauti/ulbedauti* may be quite possible real forms. Further derivational history of these verbs is not clear to me: perhaps they are derived from rare nominal formations in *-eda*: **olbeda*, **ulbeda* ← *olb-ti*, *ul̃b-ti* ‘emit sound (of black grouse)’ (cf. *leb-eda* ‘wimpy person’ ← *lèb-ti*, *leb-é-ti* ‘wilt, become wimpy’, etc.) In sum, *ulbėdauti* seems to be a dictionary ghost-form and cannot be discussed in the context of formations in *-dau-ti*.

valgydauti ‘eat frequently, little by little’ is attested in one source only, namely the manuscript dictionary of Dominikas Sutkevičius (1848): “Walgidauju. Esito, Mansito. Jadam. Walgineju” (manuscript pages are not numbered)¹⁶. A similar entry is found in Sirvydas dictionary (edition of 1642, page 84), but *valgydauti* is absent: “Iádam / Efito, manfito. Dažnai emi/walgineiu”. Formally, *valgy-dau-ti* could be derived from *válgy-ti* ‘eat’ and the iterative meaning (perhaps with the diminutive shade) is possible, but as long as the textual source of *valgydauti* is not known, I would treat this form with caution for the time being.

Finally, the formations known only from the texts of Daukantas will be discussed. LKŽ^e lists two verbs: ***sakydauti*** ‘to say many times’ (2 examples, already noted in Fraenkel 1936, 100) and ***tarydauti*** ‘idem’ (1 example). In the supplementary database of LKŽ^{e17}, I have additionally found ***dalydauti***

¹⁶ I would like to sincerely thank Giedrius Subačius for providing me with a photocopy of the manuscript of the dictionary of Sutkevičius and some electronically searchable texts of Daukantas mentioned below.

¹⁷ <http://lkiis.lki.lt/antra-kartoteka>. I also checked some entries of LKŽ^e containing verbs of Daukantas in the card file of this dictionary and would like to sincerely thank Ritutė Šepetytė-Petrokienė for her kind help.

‘distribute’; Subačius (1993, 193) also lists *dalydauti* and mentions *turėdauti* ‘have many times’ among many neologisms coined by Daukantas. During a cursory search in some works of Daukantas, I found *ganydauti* ‘shepherd’ (DLLKŽ 2, 228) and *tolindauti* (Subačius 1993, 214); perhaps a detailed search would bring up more formations of this type.

Stang (1942, 173, fn. 1) was the first to note that the verb *sakydauti* could have been coined by Daukantas himself, especially since he was very keen on forming new words (Subačius 1993). The basis for these formations could have been past habituais in *-dav-o* and Daukantas probably occasionally backformed infinitive and present stems with *-dau-ti*, *-dau-ja*. It is also interesting to note that in a grammar of Latin prepared by Daukantas (*Prasma*, published in 1837), a survey of Lithuanian declension and conjugation is given, in which iterative formations in *-inė-ti*, *-y-ti* are clearly distinguished from the paradigms of the past habitual (see *Prasma* 47–48, 113 on iteratives vs. paradigms of the past habitual termed as “Imperfectum Consuetudinis” in Latin and “Ipratiniš laikas” in Lithuanian on p. 52–53, etc.).

In general, past habitual forms with *-dav-* are not used in the territory of north Žemaitian where Daukantas was born and learned his native dialect; instead, periphrastic forms with *liuobėti* are used in this area (Fraenkel 1936, 101 with further references; Zinkevičius 1966, 356–357). The same can be said of Motiejus Valančius, who was also born in the north Žemaitian territory. Despite this, Daukantas and Valančius use past habitual forms with *-dav-o*, but, according to Fraenkel (1936, 101–102), they do so rarely and sometimes inconsistently, i.e. the past habitual *-dav-o* co-occurs with simple past forms. I suspect that past habitual forms with *-dav-o* were not native to Daukantas and Valančius and were only learned from written sources and perhaps other dialects. Daukantas, an enthusiastic coiner of new words, occasionally formed present and infinitive stems with *-dau-* based on the past habitual in *-dav-*. Had these forms been authentic (archaic), one would expect at least some of them to be attested in other sources.

In summary, the formations in *-dau-ti* are rare and alternative explanations of their derivational history are possible. The iterative formation *ger-dau-ti* ‘feast, drink’ ← *gér-ti* ‘drink’ is possible and supported by the parallel with the non-extended suffix *-au-ti* (*gér-áu-ti* ← *gér-ti*), but this verb could be also denominal. The verb *spjū-dáu-ti* ‘spit repeatedly’ can be derived from *spjáu-ti* ‘spit’, unless it is a secondary formation in *-au-ti* from **spjūd-yti*. The

verb *švédauti* ‘list, talk slowly’ might be deverbal, but the expected base **švé-ti* is not attested. The derivation of *védauti* ‘cool, ventilate’ directly from *vé-ti* is possible, but not necessary, because *véd-au-ti* can be also interpreted as a secondary derivation from *véd-yti*. However, verbs like *védauti* could have certainly contributed to the formation of the suffix *-dau-ti* if the speakers related them directly to non-suffixed verbs like *vé-ti* and resegmented *-dau-ti*. (The same can be said of *spjūd-áu-ti* if it is derived from **spjūd-yti* and later related directly to *spjáu-ti*). The dictionary form *ulbédauti* is in fact *ulbedauti*, and the textual source of *valgydauti* is currently unknown. The verbs of Daukantas with the suffix *-dau-ti* should be addressed with caution because he was a keen coiner of new words and none of his formations in *-dau-ti* are confirmed by other sources.

4. Iteratives in *-duo-ti*

Iteratives with *-uo-ti* are not numerous and in the study by Jakaitienė (1973, 36) they comprise only 10% of all derivations with this suffix. Examples include *blės-úo-ti* ‘burn unevenly’ ← *blės-ti* ‘flag, go out’, *svyr-úo-ti* ‘rock (itr.)’ ← *svir-ti* ‘droop, slope’, *šok-úo-ti* ‘jump (repeatedly)’ ← *šók-ti* ‘jump’, etc. (see also Ulvydas 1971, 249). Jakaitienė (1973, 36–37) lists a number of variants of *-uo-ti* with certain extensions (*-uliuo-ti*, *-uriuo-ti*, etc.), but formations in *-duo-ti* are not attested in her study (cf. Ulvydas 1971, 250–252).

**girduoti*; only *pra-si-girduoti* ‘sober up’ is attested in the 17th c. dictionary *Clavis Germanico-Lithvana* and in the so-called Krause dictionary (18th c.). Non-prefixed and non-reflexive **girduoti* could have meant ‘drink repeatedly/habitually’ (cf. the relation between iterative *gėrióti* ‘drink little by little’ (← *gér-ti* ‘drink’) and *iš-si-gėrióti* ‘sober up’). Following this pattern, we can assume that **gird-uo-ti* was directly derived from *gér-ti* with the suffix *-duo-ti* (root apophony *ger* → *gir*), similarly to *gér-ti* → *gir-dinė-ti* ‘drink periodically’. One could also imagine a derivation from *gird-yti* ‘make drink’ where *-d-* is already part of the base, but it is transitive, while **girduoti* should have been intransitive (if we follow the parallel of *gėrióti*, *iš-si-gėrióti*).

kildúoti ‘go up (repeatedly), move (itr.); lift (repeatedly), rock (tr.)’. The intransitive variant of this verb is derivable from *kìl-ti* ‘rise’, while the transitive one could be based on *kėl-ti* ‘raise’ (root apophony *kel* → *kil*). This formation is attested in the dictionary of Antanas Juška and in eastern Lithuania (Molėtai and Rokiškis districts); the non-extended suffix *-uo-ti* is

used in *kil-úo-ti/kyl-úo-ti* ‘wake, rouse’ ← *kél-ti* ‘raise’. As for the origin of /d/ in *kildúoti* (tr.), one should also consider the possible relation to *kild-ý-ti* ‘raise’, a causative derived from *kil-ti* ‘rise’ (i.e. *kil-dý-ti*). This is imaginable for the transitive *kild-úo-ti* (iterative of the causative), but intransitive *kild-úo-ti* should be an independent derivation from *kil-ti* with the suffix *-duo-ti*.

kvildúoti ‘rock (itr.), be unstable’. Two attestations in the dictionary of Juška, possibly derived from *kvil-ti* ‘dislocate (about a leg)’. It should be noted that in some cases the initial /k/ seems to be added, see (*k*)*vèdúoti* and *vildúoti* ‘rock (itr.)’ below.

panardúoti ‘walk hardly, falling down’. Two attestations from the Ignalina and Švenčionys districts, including the prefixed *nu-panardúoti*. This formation is evidently based on the adverb (cf. *panárd-omis* ‘(go) headlong’, a number of attestations from the Ignalina district among others) and it is not a case of derivation in *-duo-ti* (cf. *nér-ti* ‘dive’ → iterative *nár-dy-ti*). Had it been deverbal, one would expect a prefixed formation **nu-nardúoti* and not the attested *nu-panardúoti*.

slapduoti ‘lurk’. One attestation from the so-called Krause dictionary (18th c.); the original entry is “Lauren Tykoti. Slapdoti” (German verb followed by two correspondences in Lithuanian)¹⁸. Perhaps *slapduoti* (*Slapdoti*) can be interpreted as *slaptuoti*, where <d> is written instead of <t>¹⁹, and derived from adjective *slāpt-as* ‘secret’ (cf. also adverb *slapt-à* ‘secretly’ and noun *slapt-à* ‘secret; secret place, etc.’).

svarduoti ‘rock (itr.)’. Only two attestations from the text and materials of Antanas Vireliūnas and a non-identified text; possibly a remodelling of *svárd-è-ti* ‘rock (itr.)’; cf. *svárd-yti* ‘hang’ and *svar-úo-ti* ‘rock; press (tr.)’, but note that these formations are transitive. (For *svarduoti* to be interpreted as a secondary formation, we need intransitive **svárd-yti*.) I use the term “remodelling” hence forth to refer to cases when a certain morphological operation occurs but we do not see a change of in meaning. For example, in the pair *bild-é-ti/bild-úo-ti* ‘rumble’ the suffix alternates, but it does not affect the meaning of the verb.

¹⁸ I would like to sincerely thank Vilma Zubaitienė for checking the copy of the dictionary and providing me with this entry.

¹⁹ Smoczyński (2000, 38, 44, 72, 195, 199, etc.) has noted a number of cases in Old Prussian and Old Lithuanian (*Lexicon Lithuanicum*, a 17th c. German-Lithuanian dictionary) when voiced consonants , <d>, <g> were written instead of unvoiced <p>, <t>, <k> and *vice versa*.

svėrdúoti ‘rock (itr.)’. All attestations are from the Kupiškis district. Similarly to *svirdúoti* above, it is either an independent formation in *-duo-ti* from *svìr-ti* ‘droop, slope (itr.)’ (which would imply apophony *svìr* → *svėr*) or a remodeling of *svėrd-ė-ti*, *svėrd-i*, etc. ‘rock (itr.)’. Transitive *svėrdúoti* is unattested; if it existed, it might have had a link to transitive *svėrdýti* (cf. *svirdúoti* below).

svirdúoti ‘rock (itr.)’. This verb has only one attestation from Pasvalys; reflexive (anticausative) *svirdúoti-s* ‘slope (itr.)’ from Panevėžys is evidence for the transitive use of the verb. A derivation in non-extended suffix *-uo-ti* is *svyr-úo-ti* ‘rock (itr.)’ ← *svìr-ti* ‘droop, slope (itr.)’. As in the case of *kildúoti* above, transitive *svird-úoti* might be a secondary iterative formation to *svird-yti* (causative to *svìr-ti* ‘droop, slope (itr.)’, i.e. *svìr-dyti*, or to *svird-ė-ti* ‘rock (itr.)’, i.e. *svird-yti*). However, intransitive *svìr-dúo-ti* could be an independent formation from *svìr-ti*, unless it is a certain remodelling (renewal) of *svird-ė-ti*.

trindúoti ‘idle’. One attestation from the Kupiškis district. Derived either directly from *trìn-ti* ‘rub’ (cf. reflexive *trìn-ti-s* ‘idle’) or from *trind-yti* ‘rub (intensively?)’ (← *trìn-ti*).

vėdúoti ‘ventilate, wave’. Many attestations, both from Aukštaitian dialects (more) and from Žemaitian ones (fewer). This verb is either a direct derivation from *vė-ti* ‘blow’ (suffix *-duo-ti*) or a secondary formation (suffix *-uo-ti*) from *vėd-yti* (see a discussion of *vėdauti* above). Secondary formations in *-uo-ti* from the bases with suffix *-y-ti* in the infinitive are, for example, *gvild-úo-ti* ‘shell (nuts, etc.)’ alongside *gvild-ý-ti* ‘idem’, *lyd-úo-ti* ‘solder’ alongside *lyd-y-ti* ‘smelt’. LKŽ^e also lists a form with initial /k/, *kvėdúoti* ‘ventilate; wave (clothes)’, and Fraenkel (LEW, 325) explains it as a contamination of *vėd-* ‘ventilate’ with *kvėp-* ‘breathe, etc.’, but it does not seem to be a real “contamination”: there are more cases when /k/ is added before /v/ at the beginning of the word so perhaps this phenomenon is best understood as an occasional addition of /k/ before /v/ (cf. also *(k)vaipýti*, *(k)vėtauti*, *(k)vėtúoti*, and perhaps *(k)vildúoti*).

vildúoti ‘swing (itr.)’. Mostly Žemaitian attestations, etymologically might be related to *vėl-ti* ‘rumple, etc.’ as ‘turn, make circular motion’ and if this comparison is correct, the suffix *-duo-ti* can be segmented (cf. also *kveldúoti* ‘flutter (about clothes)’ (one attestation from the text of Jonas Marcinkevičius), with full grade apophony of the root, and *kvildúoti* ‘rock

(itr.), be unstable' (above), both with a possible additional /k/, similar to (*k*)*vėduoti* above).

In sum, the results of the survey of possible iteratives with *-duo-ti* proved to be slightly more fruitful than the results from the analysis of *-dau-ti*. Some of the formations might be based on non-suffixed (primary) verbs, such as **gir-duo-ti* (*pra-si-gir-duo-ti* 'sober up') ← *gér-ti* 'drink'; *kil-dúo-ti* 'rise (repeatedly)' ← *kil-ti* 'rise', *kvil-dúo-ti* 'rock (itr.)' ← *kvil-ti* 'dislocate' (?), *svir-dúo-ti* 'rock (itr.)' ← *svir-ti* 'droop, slope (itr.)', *trin-dúo-ti* 'idle' ← *trin-ti(s)* 'idle' or even *vil-dúo-ti* 'swing (itr.)' if the relation to *vél-ti* 'rumple' ('turn') is accepted. A case like *svirdúoti* 'rock (itr.)' can also be interpreted as a remodelling (i.e. change of the suffix) of *svird-é-ti* (cf. also *sverd-úo-ti*, *svard-úo-ti* alongside *svérd-é-ti* and *svárd-é-ti*), while *svirdúoti-s* points to a transitive verb that could be a secondary formation based on *svird-y-ti* (cf. also *trind-úo-ti* alongside *trind-y-ti*, *véd-úo-ti* alongside *véd-y-ti*, see also *vėdauti* in the previous section). Triads like these, including two suffixed verbs and one non-suffixed (primary) verb, may have played an important role in the formation of the suffix *-duo-ti*, similarly to *-dau-ti*, i.e. *svir-ti* → *svir-dé-ti* → *svird-úo-ti* could be reanalyzed as *svir-ti* → *svir-dúo-ti* (suffix *-duo-ti* is resegmented).

We should also note that suffixes *-au-ti* and *-uo-ti* have the same past stem *-av(o)*, which causes some verbs to move from the class with the suffix *-au-ti* to a more productive one with *-uo-ti*. This could be the reason why verbs with the suffix *-au-* are unattested in Latvian: they were gradually absorbed into the class with suffix *-uo-* (Endelīns 1951, 812; Stang 1966, 364).

5. Iteratives in *-(d)lau-ti*

mėglautis 'romance'. Attested in the materials collected by Antanas Juška and Jonas Basanavičius, and in the text of Sofija Kymantaitė-Čiurlionienė. As mentioned in Section 2, historically this verb is probably derived from the unattested adjective **mėg-l-as/-us* 'likable' (← *mėg-ti* 'like') but if a direct relationship between *mėglautis* and *mėg-ti* is established, one may segment the suffix *-lau-ti* (*mėg-lau-tis*).

rėklauti 'shout repeatedly'. One attestation from Pelesa (Lithuanian dialect in Belarus) and one from the Rokiškis district. Possibly a derivation with a suffix *-lau-ti* from *rėk-ti* 'shout'; note the acute metatony *rėk-* → *rėk-* which is typical for deverbatives and even for some denominatives in *-au-ti* (Jakaitienė 1973, 46; Derksen 1996, 344). A parallel formation

rėk-au-ti with the non-extended suffix *-au-ti* is widely attested, including in standard Lithuanian. One may also consider the possibility of a denominal derivation from *rėk-l-a* ‘the one who always cries, shouts’ (attestation from the Kretinga district and Juška’s dictionary), but the accent on the root (*rėklauti*) is more characteristic of deverbal formations (Jakaitienė 1971, 41, 47). The attestation of *rėklauti* from Pelesa correlates with the fact that dialectal habituais with *-lav-* are known from the southeast area of Aukštaitian (Zinkevičius 1966, 357).

žvinglauti ‘laugh repeatedly’. Three attestations: Dovilai (district of Klaipėda), text by Ieva Simonaitytė (who also is from Klaipėda district) and from the dictionary compiled by Niedermann and associates (NdŽ, 1932–1968). This verb might be derived with the suffix *-lau-ti* from *žvėng-ti* ‘laugh’ (< ‘neigh’), root apophony *žvėng-* → *žving-* (like *veřk-ti* ‘cry’ → *oirk-au-ti* ‘cry (intensively)’); compare this to the parallel formation *žving-au-ti* with the non-extended suffix *-au-ti* and see *žving-luo-ti* (with a different meaning) discussed below in Section 6. The attestations of *žvinglauti* from Klaipėda district (formerly a territory of Prussia) might not be a coincidence, as past habituais in *-lav-* in Old Lithuanian texts mostly come from Prussia.

As for possible formations in *-dlau-ti*, the search in LKŽ^e brings the verbs *vėdlauti/vedlauti/vėdlauti* ‘look for a wife, marry; accompany the bride; transport, take to’, but they are most easily explainable as denominal formations with *-au-ti* from the agent nouns like *ved-l-ỹs* ‘the one who leads’, *vėd-l-ỹs* ‘groom, matchmaker, groomsman’²⁰ (Smoczyński 2017 s.v. *vesti*) ← *vės-ti, vėd-a* ‘lead’; see also *vėdluoti/vedluoti* below. However, we should not exclude the possibility of a deverbal derivation in *-lau-ti* at least for some cases. For example, one could note that the accent on the root (as in *vėdlauti* from Priekulė, Klaipėda district) is not characteristic of denominals in *-au-ti*. As mentioned in Section 2, verbal suffixes containing /l/ arose via resegmentation of *-l-* from nominal formations and the chain *vės-ti (vėd-a) → ved-l-ỹs → vedl-áu-ti* could be also reinterpreted as *vės-ti (vėd-a) → ved-láu-ti*.

Another verb ending in *-dlau-ti* is *vėdlauti*, which is listed in a separate dictionary entry as a homonym (homograph) with the meanings ‘ruffle,

²⁰ One would expect palatalized /l'/ before the suffix, but this is not a strict principle in the formations with *-au-ti*, for example, *liežuvo-áu-ti* ‘gossip’ is derived from *liežuvo-is, liežuvi-o* ‘tongue’.

rumple, tear; (try to) overcome’ attested four times in the Šakiai district (close to the former border of Prussia; incorporated into it in 1795). One option would be to explain this verb as denominal (←*vėdlỹs*) if the primary meaning *‘the one who leads’ of the noun is reconstructed (cf. *vedlỹs*) and the meaning development of the verb is interpreted as ‘lead’ > ‘move’ > ‘rumple’ > ‘overcome’; one should note, however, that the accent on the root is not typical of denominals in *-au-ti*. Another possibility would be to treat *vėdlauti* either as a formation in *-lau-ti* from *vėd-yti* ‘ventilate, cool’ or even in *-dlau-ti* directly from *vė-ti* ‘blow’; see Leskien 1891, 47) on the relation between *užgau-dlió-ti* ‘abuse’ and *užgáu-ti* ‘offend’, which originally had to be *gaud-lió-ti* (suffix *-lio-ti*) ← *gáud-yti* (← *gáu-ti*); in both cases, we have to assume that *vėdlauti* initially had the meaning *‘ventilate; move hands actively’ > ‘rumple, tear’ > ‘overcome’. A similar development is attested in *vėt-yti*, which can be based on the adjectival formation **vė-t-as* of *vė-ti*, cf. *stat-y-ti* ← *stāt-as* (Smoczyński 2007, 744), and which has developed the meanings ‘toss, beat’. It is worth noting that a related formation in *-au-ti* is also attested: *vėt-au-ti* ‘wave (hands)’. (It is probably a secondary derivation based on *vėt-y-ti*, cf. *vėt-úo-ti* ‘flutter (clothes, etc.).)

In summary, formations in *-lau-ti* are rare, but *rėklauti* and *žvìnglauti* seem to be quite convincing. The interpretation of *vėdlauti* is not finalized: the suffix is either *-lau-ti*, or *-dlau-ti* (but the latter is less likely since no other non-ambiguous examples were found).

6. Iteratives in *-(d)luo-ti*

švilpluoti ‘pipe, whistle (in certain periods)’. Attested only once in the Bible translation by Chyliński (1656–1660, 1 Corinthians 14:7) and most easily derivable from *švilp-ti* ‘whistle’, unless deverbal instrument noun **švilp-l-as* is reconstructed as a possible base (on rare instrument nouns in *-l-as*, see Ambrazas 1993, 190). Formation with the non-extended suffix *-uo-ti* is *švilp-úo-ti*.

žįsluoti ‘chew slowly’. One attestation in the dictionary of Juška, possibly derived from *žįs-ti* ‘suck(le)’ (anteconsonantal allomorph of the base root is selected, i.e. inf. *žįs-ti*, prs. *žįnd-a*, pst. *žįnd-o*); an alternative would be to assume a denominal derivation from an action nominal like *žįsla* ‘sucking’ (accentual properties of this noun are not indicated). Other deverbal or denominal formations containing /l/ and different suffixes are *žįslėti* (*-ėja*) and *žįsl(i)oti* (*-oja*) with the same meaning.

žvinglúoti ‘jingle’. Recorded once in a song from Vaškai (Pasvalys district), possibly derived from *žving-ė-ti*, *žving-a* ‘jingle’; the difference in meaning is not clear.

During the search in LKŽ^e, no reliable examples of iteratives with the suffix *-dluo-ti* were found. The verb *vėdlúoti/vedlúoti* ‘accompany the bride; transport, take to, go away quickly’ is denominal, see the discussion of *vėdláuti/vedláuti* in Section 5 above. However, there is one meaning listed in the dictionary entry of *vėdlúoti*, namely ‘flutter (itr.)’ which might reflect a formation in *-luo-ti* based on *vėd-yti* ‘ventilate, cool’ or directly on *vė-ti* ‘blow’ (cf. *vėdúoti* above). The action nominal *gaudliavimas* (unclear meaning according to LKŽ^e; one attestation from the text of Vydūnas) formally may point to *gaudliauti* or *gaudliuoti*. I believe that *gaudliuoti* should be preferred because it would reflect a fluctuation between the suffixes *-uo-ti* and *-o-ti*, which occurs in some Lithuanian dialects of Prussia. Also, *gaudlioti* should be interpreted as the original form (for a discussion, see Section 2). As for semantics, *gaudliavimas* probably means ‘deceiving’ (cf. *gaudlioti* ‘deceive’).

In sum, the data on *-luo-ti* are also scarce: three formations might reflect this type (*švilpluoti*, *žįslúoti*, *žvinglúoti*) and one is less clear — *vėdlúoti* ‘flutter’ might be a formation in *-luo-ti*, as no other non-ambiguous formations in *-dluo-ti* were found.

7. Conclusions

This study supports the idea of the development of Lithuanian habituals with *-dav-o* and *-lav-o* from iteratives (Fraenkel 1936) and shows that possible iteratives with the corresponding suffixes *-dau-ti*, *-lau-ti*, *-duo-ti* and *-luo-ti* are attested, but rare. Further study of Old Lithuanian texts and dialectal data should reveal some additional formations of these types, but the general picture will most likely not change significantly.

The development of Lithuanian habituals should have followed the path ITERATIVE > FREQUENTATIVE > HABITUAL > PAST HABITUAL (cf. Bybee et al. 1994, 170). However, habituals were restricted to the past tense before the appearance of the first written Lithuanian texts (mid-16th c.) and the present and infinitive stems were pushed out of use. If that had not been the case, one would expect more formations to have remained, especially based on the intermediate situation in Czech, in which habituals in *-va-* are still used both in the present and the past tenses, but notably twice as frequently in the past tense (Danaher 2003).

Iterative formations with the habitual-to-be suffixes had to have been, to some extent, productive in the dialects that grammaticalized them as past habituais; had these suffixes been productive in all dialects of Lithuanian, more formations should have remained in the areas that did not grammaticalize them as past habituais. However, productivity and type-frequency should not be overestimated because the form-frequency correspondence principle should have played a role (Haspelmath 2008; 2014; 2017). According to this principle, longer but generally rarer suffixes, such as *-dav-*, *-lav-*, *-dlav-* (and not a shorter one, i.e. *-av-*), were preferred as markers of the habitual because habitual situations were a particular (less frequent) type of iterative situations and had to be more explicitly marked; here, more explicit equates to a longer suffix. The same principle should have led to the restriction of habituais to the past tense because habituality is one of the default readings of the present, and past habituais show a tendency to be marked explicitly (Bybee et al. 1994); here, explicit equates to formally marked. If that had been the case, the scarcity of surviving formations with the habitual-to-be suffixes is understandable: perhaps they were never very productive and frequent. In the dialects that grammaticalized them as past habituais, the corresponding iteratives mostly went out of use, while in other dialects, they were not frequent and never really got productive.

As for specific suffixes, data on *-dau-ti* are limited and the examples found in the texts of Daukantas should be addressed with caution, since he was an avid neologism coiner. The examples of possible formations in *-duo-ti* are somewhat more numerous and their existence suggests that they might have also played a role in the formation of past habituais in *-dav-o* because the past stem of both *-dau-ti* and *-duo-ti* is the same (cf. also *-lau-ti* and *-luo-ti* below). It should be noted that some formations ending in *-dau-ti* and *-duo-ti* could have actually been based on the complex verbs already containing *-d-* in their suffixes (cf. *vė-ti* → *vėd-yti* → *vėd-au-ti*), but were later reanalyzed as having directly derived from the non-suffixed verbs (*vė-ti* → *vė-dau-ti*), which gave rise to the new suffixes *-dau-ti* and *-duo-ti*. The numbers of formations in *-lau-ti* and *-luo-ti* are also low, but both of them could have contributed to the formation of past habituais because their past stem is also the same (*-lav-o*, cf. the pair *-dau-ti/-duo-ti* above). No non-ambiguous formations in *-dlau-ti* and *-dluo-ti* were found, unless the derivations *vėdlauti/vėdlúoti* are interpreted as having a direct relation to *vė-ti*.

APIE LIETUVIŲ KALBOS BŪTOJO DAŽNINIO LAIKO ITERATYVINĘ KILMĘ

Santrauka

Lietuvių kalbos būtojo dažninio (habitualinio) laiko afiksas *-dav-* kilmės požiūriu gali būti laikomas iteratyvine priesaga *-dau-*, kuri ilgainiui buvo imta vartoti tik būtajame laike (Fraenkel 1936). Tarmėse ir senuosiuose tekstuose šalia *-dav-* vartojamos ir priesagos *-lav-* ir *-dlav-*, kurios taip pat galėjo išriedėti iš atitinkamų iteratyvinių afiksų (Fraenkel 1936) – taip habitualinių lyčių yra atsiradę ir įvairiose kitose kalbose (Bybee et al. 1994). Naudojantis elektroniniu *Lietuvių kalbos žodynu* pavyko rasti šiek tiek galimų priesagos *-dau-* ir kitų afiksų iteratyvinių vedinių, kurie leidžia daryti tokias pagrindines išvadas. (1) Dažninės priesagos imtos vartoti tik būtajame laike prieš pasirodant pirmiesiems lietuvių rašytiniams tekstams (iki XVI a. vid.), o atitinkami esamojo laiko ir bendraties kamienai jau buvo pasitraukę iš vartosenos; jei taip nebūtų buvę, senuosiuose tekstuose ir tarmėse turėjo išlikti daugiau kalbamųjų priesagų vedinių. (2) Iteratyvai su būsimosiomis dažninėmis priesagomis turėjo būti pasiekę tam tikrą produktyvumo laipsnį būtent tose tarmėse (ar jų dalyse), kurios juos sugramatino kaip būt. d. l. rodiklius. Jei tie iteratyvai būtų buvę produktyvūs visame lietuvių kalbos plote, jų turėjo išlikti daugiau ten, kur kalbamosios priesagos nevirto būt. d. l. afiksais.

Straipsnyje taip pat keliama mintis, kad susidarant lietuvių kalbos būtajam dažniniam laikui turėjo veikti formos ir dažnio principas (Haspelmath 2008; 2014; 2017). Dėl jo ilgesni afiksai (su *-d-*, *-l-* ir *-dl-*) buvo pasirinkti žymėti dažninėms (įprastinėms) situacijoms, mat jos yra retesnis iteratyvinių situacijų potipis ir turėtų būti stipriau pažymimos, o pāčios dažninės formos ilgainiui imtos vartoti tik būtajame laike, nes habitualumas yra viena iš galimų (dažnesnių) nežymėtų esamojo laiko formų reikšmių, todėl būtajame laike habitualumą (kaip retesnę reikšmę) įvairiose kalbose linkstama tam tikru būdu specialiai pažymėti (Bybee et al. 1994).

SYMBOLS AND ABBREVIATIONS

←, → – direction of derivation; 1, 2, 3 – 1st, 2nd, 3rd person; ACC – accusative; AP – active participle; AUX – auxiliary; CNV – converb; CTP – contemporaneity; DAT – dative; F – feminine; GEN – genitive; HAB – habitual; INF – infinitive; INS – instrumental; IRR – irrealis (subjunctive); ITR – intransitive; LF – *l*-form (in Polish); M – masculine; NOM – nominative; PL – plural; POSS – possessive pronoun; PP – passive participle; PRS – present; PST – past; SG – singular; TR – transitive

SOURCES

DLKŽ – Simonas Daukantas, *Didysis lenkų–lietuvių kalbų žodynas* 1–3, parengė Giedrius Subačius, Vilnius: Mokslo ir enciklopedijų leidykla, 1993–1996.

KN G – *KNIGA Nobazniftes Krikščionifzkos* [...]. KIEDAYNISE[:] [...] IOCHIMAS IVRGIS RHETAS, [...] 1653 (<http://seniejirastai.lki.lt/db.php?source=21>).

KN M – *MALDOS KRIKSCIONISZKOS* [...]. KIEDAYNISE[:] [...] JOCHIMAS JURGIS RHETAS, [...]1653 (<http://seniejirastai.lki.lt/db.php?source=24>).

KN SE – *SUMMA Abá Trumpas ifzguldimas EWANIELIV SZWENTU* [...]. KIEDAYNISE[:] [...] IOCHIMAS IVRGIS RHETAS, [...] 1653 (<http://seniejirastai.lki.lt/db.php?source=23>).

LKŽ^e – Gertrūda Naktinienė (ed.), *Lietuvių kalbos žodynas* 1–20, (1941–2002): electronic edition, Vilnius: Lietuvių kalbos institutas, 2005 (<http://www.lkz.lt>).

MP – *Modlitwy publiczne* [...] We Gdansku[:] Andrzej Hünefeld[,] [...] 1646 (copy of the Wróblewski Library of the Lithuanian Academy of Sciences, L-17/193/2).

NdŽ – Max Niedermann, Alfred Senn, Franz Brender, Antanas Salys, *Lietuvių rašomosios kalbos žodynas. Lietuviškai-vokiška dalis*, Heidelberg: Carl Winter, 1926–1968.

PGŽ – *Poftilla* [...]. *Nápifána Przez* [...] *K. Grzegorzá z Zárnowcá* [...] [Wilno: Karcán], 1597 (<http://fbc.pionier.net.pl/id/oai:www.dbc.wroc.pl:5044>).

Prasma – PRASMA ŁOTINŪ KALBOS, PARASZĘ K. W. MYLE [= Simonas Daukantas]. PETRAPILIE[:] [...] K. Hinze, 1837 (<http://www.epaveldas.lt/object/recordDescription/LNB/C1R0000045861>).

Ser – Benjaminas Sereiskis, *Lietuviškai-rusiškas žodynas*, Kaunas: A. Lapinas ir G. Volfas, 1933.

S1PXVIe – *Słownik polszczyzny XVI wieku*, M. R. Mayenowa, F. Peplowski, K. Mrowcewicz, P. Potoniec (eds.), Wrocław: Ossolineum, Warszawa: IBL PAN (<http://spxvi.edu.pl>).

REFERENCES

ALEW 1 – Wolfgang Hock (ed.), *Altlitauisches etymologisches Wörterbuch* 1, Hamburg: Baar, 2015.

Ambrazas, Saulius 1993, *Daiktavardžių darybos raida: lietuvių kalbos veiksmažodiniai veidiniai*, Vilnius: Mokslo ir enciklopedijų leidykla.

Ambrazas, Vytautas (ed.) 1997, *Lithuanian grammar*, Vilnius: Baltos lankos.

Bertinetto, Pier Marco 1996, Le perifrasi abituali in italiano ed in inglese, *Studi Orientali e Linguistici* 6, 117–133.

Bezenberger, Adalbert 1877, *Beiträge zur Geschichte der litauischen Sprache auf Grund litauischer Texte des XVI. und XVII. Jahrhunderts*, Göttingen: Robert Peppmüller.

Bybee, Joan L., Revere Perkins, William Pagliuca 1994, *The evolution of grammar: Tense, aspect and modality in the languages of the world*, Chicago: The University of Chicago Press.

Dahl, Östen 1985, *Tense and aspect systems*, Oxford: Blackwell.

Danaher, David 2003, *The semantics and discourse function of habitual-iterative verbs in contemporary Czech*, München: Lincom.

Derksen, Rick 1996, *Metatony in Baltic*, Amsterdam, Atlanta (GA): Rodopi.

Eckert, Rainer 1996a, Zum Präteritum Frequentativum im Litauischen und einer Entsprechung desselben im Lettischen, *Sborník prací Filozofické fakulty brněnské univerzity* 45(A44), 39–46.

Eckert, Rainer 1996b, The analytic frequentative past in Samogitian and its typological correspondences, *Res Balticae* 2, 51–63.

Endzelīns, Jānis 1943, *Senprūšu valoda*, Rīga: Universitātes apgāds.

Endzelīns, Jānis 1951, *Latviešu valodas gramatika*, Rīga: Latvijas valsts izdevniecība.

Fraenkel, Ernst 1936, Das litauische Imperfekt und seine Umschreibung im Žemaitischen, *Zeitschrift für vergleichende Sprachforschung auf dem Gebiete der Indogermanischen Sprachen* 63(1–2), 99–113.

Haspelmath, Martin 2008, Frequency vs. iconicity in explaining grammatical asymmetries, *Cognitive Linguistics* 19(1), 1–33.

Haspelmath, Martin 2014, On system pressure competing with economic motivation, in Brian MacWhinney, Andrej L. Malchukov, Edith A. Moravcsik (eds.), *Competing motivations in grammar and usage*, Oxford: Oxford University Press, 197–208.

Haspelmath, Martin 2017, Universals of causative and anticausative verb formation and the spontaneity scale, *Lingua Posnaniensis* 58(2), in press (<https://doi.org/10.5281/zenodo.807021>).

Heine, Bernd, Tania Kuteva 2002, *World lexicon of grammaticalization*, Cambridge: Cambridge University Press.

Jakaitienė, Evalda 1973, *Veiksmazodžių daryba: priesagų vediniai*, Vilnius: Vilniaus universitetas.

Jakulis, Antanas 1966, Būdingesnieji būtojo dažninio ir būsimojo laikų vartojimo atvejai XVI–XVII a. lietuvių raštuose, *Baltistica* 2(2), 159–169.

Jakulis, Antanas 1995, „Knygos Nobažnystės“ leksika 1, sudarė ir redagavo Dalia Jakulytė, Klaipėda: Sauliaus Jokužio leidykla.

Leskien, August 1884, Der Ablaut der Wurzelsilben im Litauischen, *Abhandlungen der Philosophisch-Historischen Klasse der Königlich Sächsischen Gesellschaft der Wissenschaften* 9(4), 263–454.

Leskien, August 1891, Die Bildung der Nomina im Litauischen, *Abhandlungen der Königlich Sächsischen Gesellschaft der Wissenschaften* 12, 153–618.

LEW – Ernst Fraenkel, *Litauisches Etymologisches Wörterbuch*, Heidelberg: Carl Winter, 1962–1965.

- Mažiulis, Vytautas 2013, *Prūsų kalbos etimologijos žodynas*, 2 leid., Vilnius: Mokslo ir enciklopedijų leidybos centras (<http://www.prusistika.flf.vu.lt/zodynas/paieska>).
- Miklosich, Franz 1875, *Vergleichende Grammatik der slavischen Sprachen 2: Stammbildungslehre*, Wien: Wilhelm Braumüller.
- Ostrowski, Norbert 2006, *Studia z historii czasownika litewskiego. Iterativa. Denominativa*, Poznań: Wydawnictwo Naukowe UAM.
- Otrębski, Jan 1956, *Gramatyka języka litewskiego 3: Nauka o formach*, Warszawa: Państwowe Wydawnictwo Naukowe.
- Palionis, Jonas 1967, *Lietuvių literatūrinė kalba XVI–XVII a.*, Vilnius: Mintis.
- Schleicher, August 1856, *Handbuch der litauischen Sprache 1: Litauische Grammatik*, Prag: J. G. Calve'sche Verlagsbuchhandlung.
- Schmalstieg, William 2000, *The historical morphology of the Baltic verb*, Washington: Institute for the Study of Man.
- Skardžius, Pranas 1943, *Lietuvių kalbos žodžių daryba*, Vilnius: Lietuvos mokslų akademija (= Idem, *Rinktiniai raštai 1*, parengė Albertas Rosinas, Vilnius: Mokslo ir enciklopedijų leidykla).
- Smoczyński Wojciech 2017, *Słownik etymologiczny języka litewskiego*, wydanie drugie (working manuscript, version of 24 November, 2017, <https://rromanes.org/pub/alii/Smoczyński%20W.%20Słownik%20etymologiczny%20języka%20litewskiego.pdf>).
- Smoczyński, Wojciech 1987, On the Balto-Slavic present stems in *-dō*, *Münchener Studien zur Sprachwissenschaft* 48, 197–212 (= Smoczyński 2003, 42–51).
- Smoczyński, Wojciech 1998, Problematyka etymologiczna sufiksów *-dyti* i *-styti*, in Regina Venckutė (red.), *Jono Kazlausko diena: istorinės gramatikos dalykai. Tarptautinės konferencijos programa ir tezės. 1998 m. lapkričio 6 d.*, Vilnius: Vilniaus universitetas, 29–32 (= Smoczyński 2001, 414–417).
- Smoczyński, Wojciech 2000, *Das deutsche Lehngut im Altpreußischen*, Kraków: Universitas.
- Smoczyński, Wojciech 2001, *Język litewski w perspektywie porównawczej*, Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego.
- Smoczyński, Wojciech 2003, *Studia balto-słowiańskie 2*, Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego.
- Smoczyński, Wojciech 2005, *Lexikon der altpreußischen Verben*, Innsbruck: Institut für Sprachen und Literaturen der Universität Innsbruck.
- Smoczyński, Wojciech 2007, *Słownik etymologiczny języka litewskiego*, Wilno: Wydawnictwo Uniwersytetu Wileńskiego.
- Stang, Christian S. 1929, *Die Sprache des litauischen Katechismus von Mažvydas*, Oslo: Jacob Dybwad.
- Stang, Christian S. 1942, *Das slavische und baltische Verbum*, Oslo: Jacob Dybwad.
- Stang, Christian S. 1966, *Vergleichende Grammatik der baltischen Sprachen*, Oslo, Bergen, Tromsø: Universitetsforlaget.

Subačius, Giedrius 1993, Simono Daukanto Didžiojo lenkų–lietuvių kalbų žodyno naujadarai: individuali žodžių daryba, *Lietuvių atgimimo istorijos studijos 4: Liaudis virsta tauta*, Vilnius: Baltoji varnelė, 135–216.

Thieroff, Rolf 2000, On the areal distribution of tense-aspect categories in Europe, in Östen Dahl (ed.), *Tense and aspect in the languages of Europe*, Berlin: Mouton de Gruyter, 227–264.

Trautmann, Reinhold 1910, *Die altpreussischen Sprachdenkmäler*, Göttingen: Vandenhoeck & Ruprecht.

Ulvydas, Kazys (ed.) 1971, *Lietuvių kalbos gramatika 2*, Vilnius: Mintis.

Vaillant, André 1966, *Grammaire comparée des langues slaves 3: Le verbe*, Paris: Klincksieck.

Villanueva Svensson, Miguel 2014, The origins of the denominative type Lith. *-áuti*, *-áuja*, OCS *-ovati*, *-ujǫ*, *Baltistica* 49(2), 251–264.

Wiemer, Björn, Ilja Seržant 2017, Diachrony and typology of Slavic aspect: What does morphology tell us?, in Walter Bisang, Andrej Malchukov (eds.), *Unity and diversity in grammaticalization scenarios*, Berlin: Language Science Press, 239–307 (<http://langsci-press.org/catalog/book/152>).

Zinkevičius, Zigmas 1966, *Lietuvių dialektologija*, Vilnius: Mintis.

Jurgis PAKERYS
Department of Baltic Studies
Vilnius University
Universiteto 5
LT-01513 Vilnius
Lithuania
[\[jurgis.pakerys@flf.vu.lt\]](mailto:jurgis.pakerys@flf.vu.lt)