

# THE ROLE OF THE FINNIC SUBSTRATUM IN THE LOSS OF THE NEUTER GENDER IN THE BALTIC LANGUAGES<sup>1</sup>

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## Abstract

In the course of their development, many Indo-European languages modified the system of three grammatical genders – masculine, feminine and neuter – inherited from Proto-Indo-European, usually by eliminating neuter or merging feminine with masculine. The reasons and processes of such modifications in most cases are poorly understood. The Baltic languages are no exception to this tendency, having lost neuter gender before the time of historical record (Latvian and Lithuanian) or shortly after it started (Old Prussian). It is usually assumed that phonological factors played the crucial role in the Baltic neuter loss, causing minimally different masculine and neuter paradigms to merge. However, this account is unsatisfactory, since it can be shown that paradigm merge alone is insufficient for gender merge. In this paper, I propose that contact with genderless Finnic languages shares the responsibility for elimination of neuter in Baltic. This hypothesis is supported by the distribution of remnants of old neuter gender across Baltic languages (the further north - the less remnants), as well as the loss of the remaining gender categories in Baltic dialects (Tamian) spoken on the former Finnic territory.

## Introduction

The neuter gender was inherited by the Baltic languages from Late Proto-Indo-European (PIE) as part of the masculine-feminine-neuter gender system, but present-day Baltic languages have only masculine and feminine. This paper is intended to provide the new perspective on the process of the loss of the neuter gender in the Baltic languages.

The most prominent hypothesis about what happened in Baltic is neuter and masculine paradigm merger, since the vast majority of nouns reconstructed as neuter are masculine in modern Baltic. The reason for paradigm merger and further neuter loss that is usually mentioned is phonological: loss of insubstantial distinctions between the paradigms and reanalysis of neuter as masculine. However, phonological change could not have alone been responsible for the loss of neuter, because there are instances where phonological similarity of the paradigms is not a sufficient factor for gender loss. It is much more likely that there was an additional circumstance that influenced the course of events, and I will argue that interference from Finnic languages is partly responsible for the changes in the Baltic gender system.

In the course of this paper, a discussion of methodological issues (correlation of the categories of grammatical gender and declension class) will be followed by a survey of the gender systems in the three best attested Baltic languages – Latvian, Lithuanian and Old Prussian (OPr). Subsequently, the phonological hypothesis of neuter loss will be briefly introduced, and, finally, a language contact account will be developed.

## Previous work

Indo-Europeanists and Balticists have been discussing the topic at hand since the late 19<sup>th</sup> century (cf. the work of Meillet, Nieminen, Schmidt), but because their primary interest lies in reconstructing the

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Proto-Baltic neuter case endings and their correlation with those of Proto-Slavic and PIE, and not the causes and the process of the neuter loss, this important question has not received the attention it deserves. More recently, Priestly (1983) mentions Baltic when discussing gender ‘drifts’ in Indo-European (IE), and so does Matasović (2004) in his general overview of the category of gender in IE. A detailed new work by Petit (2011) brings together an impressive amount of research on reconstruction of the morphology of Baltic neuters, but the process of loss remains unaddressed yet again. More narrow neuter-related topics are sometimes developed in the works of Lithuanian and Latvian researchers. Overall though, the research done to date leaves much of our topic uncovered, and certainly no definitive explanation of the neuter loss in Baltic has been proposed.

## **The Baltic languages: background**

In historical terms, the Baltic languages are especially close to Slavic.<sup>2</sup> Though the details of the relation between Baltic and Slavic are not important for this paper, comparison of closely related Baltic and Slavic nominal systems sheds some light on the conditions of neuter loss; consequently, relevant developments from Slavic languages will feature in the discussion.

The Baltic sub-family is divided into West Baltic (WB) and East Baltic (EB). The two contemporary Baltic languages, Lithuanian and Latvian, belong to EB and are rather close in terms of word-stock, though for the most part not mutually intelligible due to phonological and morphological differences and semantic shifts; among the WB languages, all of which died out several centuries ago, Old Prussian (OPr) is attested best. All three major Baltic languages have undergone neuter loss, but its degree varies: older (first half of the 16<sup>th</sup> century) OPr texts preserve the inherited IE gender system virtually intact, later ones (second half of the 16<sup>th</sup> century) show its loss; Latvian exhibits no traces of neuter; Lithuanian occupies an exceedingly interesting middle-ground position, with some traces of former neuter retained. In both EB languages most changes that led to the present-day situation happened before the historical record, which for both begins in the 16<sup>th</sup> century, so I will consider evidence from contemporary languages. The OPr data comes from 15<sup>th</sup>-16<sup>th</sup> century documents.

The most pessimistic opinion on the Baltic case was summarized elegantly and concisely by Stang (1966:179) in his volume on comparative Baltic grammars: “Letto-Lithuanian [i.e., East Baltic] has lost neuter. This happened in prehistoric times, and there is no possibility of reconstructing the course of this development”.<sup>3</sup> The time lapse, indeed, is an obstacle, but I hope to show in this paper that Stang’s pessimism is not fully justified.

## **1. Gender and declension class: methodological issues**

First of all, a methodological distinction between gender and declension class as grammatical categories for nouns needs to be drawn, in order to recognize how these categories interact in languages that have both.

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<sup>2</sup> The nature of this relation - genetic, contact or both - is unclear; for a recent overview of the problem, see, for example, Wiemer (2007).

<sup>3</sup> Translation of sources in languages other than English is mine unless stated otherwise.

Grammatical gender, in languages that have it, is an inherent category lexically specified for every noun. In many languages the gender of a given noun can be determined only from its agreement patterns: cf. Hockett's (1958:231) definition of genders as "classes of nouns reflected in the behaviors of associated words". Declension class, in turn, is an inflectional paradigm the noun belongs to (in languages that have a case system). In many cases, the number of distinct declension classes in a language is not immediately obvious. (Haspelmath, 2002:115-117).

I will argue that, for the present purposes, it can be assumed that in Baltic 'neuter gender' is largely interchangeable with 'neuter declension', because (most) Baltic neuters belonged to a separate declension class.<sup>4</sup> It does not necessarily mean that the loss of these categories – neuter gender and its corresponding declensional class - was simultaneous (and it probably was not, as some Slovenian data below will show), but this question is beyond the scope of this paper. In most IE languages (Romance, Germanic, Celtic) there is no reliable correlation between gender and declension class (i.e. declension class is not predictable from gender, and vice versa), while Slavic developed a partial correlation between them (cf. Corbett's work on Russian), and Baltic even more so.

Russian is a particularly interesting case. According to the traditional approach, Russian has three genders and three declension classes (cf. Russian Academy of Sciences Grammars 1952, 1980),<sup>5</sup> but the gender-declension distribution is far from a one-to-one mapping:

Table 1. Declensional distribution of Russian nouns<sup>6</sup>

Declension	Gender and inflection pattern	IE classification
1 <sup>st</sup>	masculines in $-\emptyset$ ; neuters in $-o/-e$	$o$ - and $jo$ -stems, also former $u$ -stems and some consonantal stems
2 <sup>nd</sup>	feminines and masculines in $-a$	$\bar{a}$ - and $j\bar{a}$ -stems
3 <sup>rd</sup>	feminines in $-\emptyset$	mainly $i$ -stems and former $\bar{u}$ -stems

(based on Borkovskij & Kuznecov, 1965:190-8; Corbett, 1982)

In practice, this means that in Russian it is often impossible to tell the gender of a noun by its declension class alone, and the examples of agreement patterns are needed as an indicator. For example, both *mama* 'mother' and *papa* 'father' in Russian belong to Declension 2 and follow the same declension pattern, but their agreement patterns give away the distinction in gender:

(1)	2 <sup>nd</sup> declension, feminine	2 <sup>nd</sup> declension, masculine
	Nominative <i>moj-a mam-a</i> 'my mother'	<i>moj-<math>\emptyset</math> pap-a</i> 'my father'
	Genitive <i>moj-ej mam-y</i>	<i>moj-ego pap-y</i>
	Dative <i>moj-ej mam-e</i>	<i>moj-emu pap-e</i>

<sup>4</sup> There is no one-to-one correlation between any gender and declension class in most other IE languages.

<sup>5</sup> See also Zaliznjak (1967) for an influential hypothesis that there are two noun declensions and over 700 distinct elementary nominal classes in Russian.

<sup>6</sup> There is also a small unproductive class of heteroclitic nouns, consisting of the  $i$ -stem masculine noun *put* 'way' and ten neuter  $n$ -stems in  $-mja$  (*vremja* 'time', *bremja* 'burden', etc.); their categorical affiliation varies in different analyses.

Accusative	<i>moj-u mam-u</i>	<i>moj-ego pap-u</i>
Instrumental	<i>moj-ej mam-oj</i>	<i>moj-im pap-oj</i>
Locative	<i>(o) moj-ej mam-e</i>	<i>(o) moj-om pap-e</i>

The phonological make-up of any one noun is not a reliable cue in Russian either: cf. *gost'* 'guest' (masculine, 1<sup>st</sup>) and *kost'* 'bone' (feminine, 3<sup>rd</sup>). Thus, agreement patterns and not the declensional class of the noun constitute a reliable indicator of the gender of nouns in Russian. This conclusion will be especially important for the analysis of neuters in OPr, the data for which comes from written sources only.

In Baltic languages, the PIE declension system changed significantly (though there are some important similarities with Slavic), and the correlation between gender and declension class is stronger. Of the three languages, the Latvian nominal system has the strongest gender-declension class correlation: of the six declension classes, the first three contain masculines, and the other three are reserved for feminines:

Table 2. Declensional distribution of Latvian nouns

Decl.	Gender and inflection pattern	IE classification
1 <sup>st</sup>	masculines in <i>-s/-š</i> (oblique cases show the thematic <i>-a-</i> )	<i>o-</i> and <i>jo-</i> stems and nouns that were attracted to the declension
2 <sup>nd</sup>	masculines in <i>-is</i>	<i>ijo-</i> stems
3 <sup>rd</sup>	masculines in <i>-us</i>	<i>u-</i> stems; closed class
4 <sup>th</sup>	feminines in <i>-a</i>	<i>ā-</i> and <i>jā-</i> stems
5 <sup>th</sup>	feminines in <i>-e</i>	<i>ijā-</i> stems
6 <sup>th</sup>	feminines in <i>-s</i> (oblique cases show the thematic <i>-i-</i> )	<i>i-</i> stems and nouns that were attracted to the declension; closed class

(based on Nau, 1998:10-12; Fennel, 1977)

Lithuanian has a five-declension system, which somewhat resembles that of Russian:

Table 3. Declensional distribution of Lithuanian nouns

Decl.	Gender and inflection pattern	IE classification
1 <sup>st</sup>	masculines in <i>-as, -is, -ys</i>	<i>o-/jo-/ijo-</i> stems
2 <sup>nd</sup>	feminines and masculines in <i>-a</i> and <i>-ė</i>	<i>ā-/jā-</i> stems
3 <sup>rd</sup>	feminines and masculines in <i>-is</i> (two gender-based sub-declensions: cf. dative singular <i>-iui</i> (masc.) vs. <i>-iai</i> (fem.))	mainly <i>i-</i> stems and consonantal stems; also nouns that were attracted to the declension

4 <sup>th</sup>	masculines in <i>-us</i>	<i>u</i> -stems
5 <sup>th</sup>	masculines and feminines in <i>-uo</i> , <i>-é</i> (a small unproductive mixed class; two gender-based sub-declensions)	consonant stems

(based on Ambrazas, 1997:107-9)

The Old Prussian declension system is similar to Lithuanian. Schmalstieg (1974:42-43) distinguishes five major classes:<sup>7</sup>

Table 4. Declensional distribution of Old Prussian nouns

Declension	IE classification
1 <sup>st</sup>	etymological <i>o</i> - and <i>jo</i> -stems
2 <sup>nd</sup>	etymological <i>ā</i> - and <i>jā</i> -stems
3 <sup>rd</sup>	etymological <i>i</i> -stems
4 <sup>th</sup>	etymological <i>u</i> -stems
5 <sup>th</sup>	consonant stems

There are two important conclusions to be drawn from the above. Firstly, in all languages examined, Declension 1, a big and productive class, is reserved for IE *o*-/*jo*-stems. Most importantly, in Russian it contains the absolute majority of masculines and all neuters (apart from *-mja* nouns). In Latvian and Lithuanian Declension 1 is for masculines only, while for Old Prussian it can only be said safely that Declension 1 is for *o*-/*jo*-stems. Consequently, it can be inferred that the majority of Baltic neuters inherited from IE must have belonged to the *o*-/*jo*-stems, as they do in Russian and other Slavic languages.

Furthermore, it is debatable whether Russian masculines and neuters should be lumped into one declension class – the only reason for this is that historically they both belong to *o*-/*jo*-stems. Synchronically speaking, “if we compare the declensional types *zakon* [masculine *o*-stem] and *vino* [neuter *o*-stem], we find different forms in the nominative singular – a most significant distinction” (Corbett, 1982:206). Therefore, it seems reasonable to assign masculine and neuter *o*-/*jo*-stems to different declensions/sub-declensions (1<sup>st</sup>a/b) in Russian. Indo-Europeanists reconstructing Proto-Baltic reach a similar conclusion about Baltic: neuters constituted a separate declension class, which, too, was minimally different from the major masculine *o*-/*jo*-stem declension, with the distinction manifested only in nominative singular.<sup>8</sup> Moreover, as you can see from Table 5, neuter nominative singular, the only form that differentiated the masculine and neuter paradigms, was not a unique marker of ‘neuter-ness’ - instead, it corresponded to both masculine and neuter accusative:

Table 5. Fragment of the IE masculine and neuter singular paradigms for *o*-stems

	Masculine		Neuter	
	IE	Proto-Baltic	IE	Proto-Baltic
Nom. sg.	*-os	*-as	*-om	*-an
Acc. sg.	*-om	*-an	*-om	*-an

<sup>7</sup> Eight overall, but the last three are reserved for “nouns of uncertain gender”.

<sup>8</sup> Due to limitations of space, we will not consider plurals.

Therefore, it has probably been reasonably hypothesized in earlier work that the neuter declension class could easily merge with the masculine *o-/jo-*stem declension if the distinction between the paradigms was made in the nominative only.

Secondly, because it can be established that neuter nouns in Baltic constituted a separate (sub)-declension, we will assume that its merger with the masculine declension also meant the merger of neuter gender with masculine. Crucially, this is not always the case. For instance, in some Slovenian dialects that are undergoing the process of neuter loss a mismatch between loss of neuter gender and neuter declension class occurs, leading to the following forms:

Slovenji Plajberk dialect:

(2)	<i>wəsíaw-∅</i> happy-MASC <sup>9</sup> 'happy new year'	<i>nów-∅</i> new-MASC	<i>lét-a</i> year-NEUT
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Obrisko dialect:

(3)	<i>wəsél-ε</i> happy- NEUT 'happy new year'	<i>nów-ε</i> new- NEUT	<i>lɛət-∅</i> year-MASC
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(Priestly, 1984:357)

We do not know if anything of the sort happened in Baltic, due to the time depth of the EB neuter loss and scarce written record for OPr. Consequently, I will not consider such a mismatch, though it should be emphasized that merger of declension classes does not automatically mean merger of genders, and vice versa.

What is extremely important about (2) and (3) is that only in the case of (3) can it be argued that the language has a category of neuter: despite the masculine form of the noun, it triggers the neuter agreement pattern, which signals that the noun is neuter. In (2), on the contrary, the noun, though etymologically belonging to the neuter declension, triggers masculine agreement, and should therefore be considered masculine.

## 2. Neuter loss in the three Baltic languages: some evidence

### 2.1 Old Prussian

According to the traditional view, OPr provides the most evidence for the existence of the category of neuter in the Baltic languages in historical times, because neuter nouns and neuter forms of adjectives and pronouns are found regularly in OPr. On the other hand, work with OPr data requires the researcher to be aware of the assumptions about OPr gender they might have: finding neuter in

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<sup>9</sup> Abbreviations used in the glosses: MASC - masculine, FEM - feminine, NEUT - neuter, 'NEUT' - 'neuter' (refers to Lithuanian 'neuter' adjectives), NOM - nominative, ACC - accusative, DAT - dative, SG - singular, PL - plural, PRES - present tense, PAST - past tense, 3RD - 3rd person, PAP - past active participle, DEB - debitive form.

OPr shouldn't be hard if one firmly believes it is there, as opposed to considering the evidence in the written sources without such a bias.

In the 12<sup>th</sup>-15<sup>th</sup> centuries, OPr was the dominant language of present-day north-eastern Poland and Kaliningrad Oblast of the Russian Federation. With the advance of the crusaders German became the official language, and the use of OPr faced slow decline, so that by the year 1700 there were probably few, if any, speakers of OPr (Schmalstieg, 1974:3). Despite the general trend to abandon OPr, the German-speakers created some dictionaries, and after the Reformation translated some religious works into OPr for the benefit of the native population. Those that survive to this day – the Elbing Vocabulary (ca. 1440), Simon Grunau's Vocabulary (1560) and the three Catechisms (I, II – 1545, III – 1561) – are the main source of today's knowledge about OPr. However, it is vitally important to realize that these documents were written by German speakers whose command of OPr was at best questionable (Schmalstieg, 1974:7, 35). Therefore, though it is generally agreed that OPr had three grammatical genders, this assumption needs to be taken with some caution in light of the unreliability of the sources.

The most common way to argue for the existence of neuters in OPr is to compare the hypothetically neuter OPr nouns with their Slavic or other IE cognates, many of which indeed are neuter (Burda, 1870:404 as quoted in Schmalstieg, 1974:317; Petit, 2011:147-8):

- (4) OPr *assaran* 'lake' – Old Church Slavic (OCS) *jezero* 'lake', neuter;  
OPr *creslan* 'chair' – Pol. *krzesło* 'chair', neuter;  
OPr *kelan* 'wheel' – OCS *kolo* 'wheel', neuter;  
OPr *mestan* 'city' – OCS *město* 'place, settlement', neuter.

Contrary to Schmalstieg (1974) and Petit (2011), I would like to emphasize the fact that this type of evidence is not compelling, not just because there are some counterexamples (cf. OPr *pirsten* 'finger' – OCS *prъstъ* 'finger', masculine), but mainly because, as stated above, the crucial argument for the existence of a certain gender category is its agreement patterns. The argument built on bare (out of context) noun forms thus cannot be fully trusted, since the nominal forms on their own do not tell us anything about the grammatical properties that are manifested by agreement patterns.

Therefore, in looking at the OPr texts, the position of a linguist is essentially like that of a child learning a language: he needs to discern distinct agreement patterns and decide which of them are most likely to mark neuters. Neuter cognates in related languages, then, constitute secondary/additional evidence only. Another supplementary methodology is the comparison of OPr declensional patterns with those of EB languages – since EB has lost the category of neuter in nouns, one can make a reasonable assumption that the OPr nominal endings for which there are no EB counterparts, most probably, mark neuters (Petit, 2011:145). Cumulative evidence, then, is the key.

Let us now look at nominal categories - nouns, adjectives and pronouns - one by one.

Petit's (2011:143-5) application of the two techniques above – neuter cognates in IE and declensional patterns across Baltic - to the data from the Elbing Vocabulary and the Catechisms reveals the most likely endings of neuter nouns:

- -u or -o: *alu* ‘mead’, *dolu* (< \*golu) ‘gall’, *meddo* ‘honey’, *panno* ‘fire’.<sup>10</sup>
- -an, or (rarer) -en: *assaran* ‘lake’, *median* ‘forest’, *pirsten* ‘finger’  
(I will concentrate on this larger -an/-en class.)

Importantly, Petit’s hypothesis can also be supported by some agreement evidence coming from ‘frozen’ adjectival forms incorporated into compound nouns. There, the distinct agreement pattern that does not seem to fit with either masculine or feminine consists of adjectives in -an modifying nouns in -an: for example, OPr *ructandaddan* ‘sour milk’, based on *daddan* ‘milk’ (cf. IE \*ded<sup>h</sup>h<sub>1</sub>-om; Vedic *dadhi* ‘sour milk’, neuter). This example is especially illustrative in comparison with corresponding Latvian *rūgušpiens*, which shows masculine morphology (cf. also Lithuanian *rūgpienis*). Schmalstieg’s (1974:82) observation that “in principle the adjectival endings are the same as those of the noun of the same stem”, supports this hypothesis. Thus, there is good reason to believe that adjectives in -an agreeing with nouns in -an mark neuters.

Turning to adjectives, the *Elbing Vocabulary* contains a number of them that can be identified as neuters according to the agreement pattern we established for neuter adjectives and nouns above: *kirsnan* ‘black’, *sywan* ‘grey’, *golimban* ‘blue’, *wormyan* ‘red’, *gelatynan* ‘yellow’ (Trautmann, 1910:88-89, words 460-464). Petit (2011:154) considers these color adjectives to be neuters too, but does not provide his reasons for this and says only that this is “offensichtlich”. The picture is largely the same in the Catechisms: there, too, -an/-on, as in *labban* ‘good’ and *peisāton* ‘written’, appear to mark neuter adjectives and participles. In the Catechisms there are also neuter forms in -u (*polīgu* ‘clear’) and -i (*arwi* ‘true’), which are confined to predicative use and are often used in impersonal contexts, but there are too few of them to make any definitive conclusions.

The situation in pronouns at first sight seems less clear. Supposed neuter forms in -a and -an, such as *sta/stan* ‘this’, *ka/kan* ‘what’, *wissa/wissan* ‘all/every’ appear to be in free variation, leading Smoczyński (1992:71-76) to the conclusion that OPr featured ‘sporadic nasalisation’ in this case. Petit (2011:165-168), however, shows that -a stands for nominative and -an for accusative, and explains that this distribution is obscured by the fact that when a sentence departs from SVO word order, the forms of pronouns are often confused.

Importantly, OPr texts not only exhibit neuter nouns, adjectives and pronouns, but also allow us to trace the process of their loss. Especially fruitful comparisons can be made between the Catechisms, since there are numerous parallel passages. The utterance “This chalice is the New Testament” has therefore three different versions:

(5)	<i>schis</i>	<i>kelchs</i>	<i>ast</i>	<i>sta</i>
	this <sub>1</sub> -NOM.SG.MASC	chalice-NOM.SG.MASC	be-3 <sup>RD</sup> SG	this <sub>2</sub> -NOM.SG.NEUT
	<i>nawans</i>		<i>testamentan.</i>	
	new-NOM.SG.NEUT.MASC(?)		testament- NOM.SG.NEUT	

(I Catechism, Trautmann, 1910:7, line 27)

The -s on *nawans* looks like a scribal error (Petit, 2011:158), which was corrected in the later edition:

(6)	<i>Sis</i>	<i>kelkis</i>	<i>aest</i>	<i>stae</i>
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<sup>10</sup> There are also less clear cases, like possibly neuter *seyr* ‘heart’.

this<sub>1</sub>-NOM.SG.MASC chalice-NOM.SG.MASC be-3<sup>RD</sup>SG this<sub>2</sub>-NOM.SG.NEUT

*neuwenen*

new-NOM.SG.NEUT

*Testamenten.*

testament- NOM.SG.NEUT

(II Catechism, Trautmann, 1910:13, line 28)

The III Catechism version, however, undoubtedly shows masculine agreement on the adjective and a shift of the noun to the masculine declensional class:

(7) *Schis*                      *kelks*                      *ast*                      *stas*  
this<sub>1</sub>-NOM.SG.MASC      chalice-NOM.SG.MASC      be-3<sup>RD</sup>SG      this<sub>2</sub>-NOM.SG.MASC

*nauns*

new-NOM.SG.MASC

*Testaments.*

testament- NOM.SG.MASC

(III Catechism, Trautmann, 1910:49, line 12)

This is a striking change, bearing in mind that the time gap between the II and III Catechisms is less than 20 years. Overall, the III Catechism is clearly different from earlier documents in that it already shows some cases of masculinisation of neuter nouns: *wundan* ‘water’ (Elbing Vocabulary), *unds* (III Catechism) (Petit, 2011: 153).

To sum up, the cumulative evidence shows that the category of neuter was reflected in nouns, adjectives and pronouns in OPr, though later documents allow us to trace the beginning of the neuter gender attrition process.

## 2.2 Lithuanian

Lithuanian is one of two surviving EB languages. It is often claimed to be one of the most archaic IE languages, and, as we will see, its overall ‘conserving’ character leads to preservation of some unexpected forms.

The oldest extant Lithuanian texts date from the sixteenth century (Zinkevičius, 1998:246), but by then neuter nouns have completely disappeared, so very little, if anything, can be said about the process of their loss. Most former neuters shifted to masculine gender and declension class, as might be expected: OPr *assaran* ‘lake’ – Lithuanian *ėžeras* (masc.), OPr *mestan* ‘city’ – Lithuanian *miėstas* (masc.).<sup>11</sup>

The existence of neuter adjectives in a language that does not have neuter nouns any more is one of the peculiarities of Lithuanian. Unlike nouns, Lithuanian adjectives have three distinct forms: along with masculine *gražūs* ‘beautiful’ and feminine *graži* one finds a form of the type *gražù*.<sup>12</sup> The use of such forms is confined to very few contexts; they do not decline for case, are only used predicatively and only in contexts with impersonal/non-human/‘generalized’ meaning. The traditional view is that

<sup>11</sup> In Lithuanian, there is an opposition between falling (acute) and rising (circumflex) tone on long vowels and diphthongs, while short accent is marked with grave.

<sup>12</sup> Apart from adjectives in *-is*, which do not have ‘neuter’ (Ambrazas et al. 1997:135).

these forms go back to neuter adjectives, although, as Petit (2011:172) points out, this assumption should not be mistaken for a fact. For the present purposes, I will call these Lithuanian forms ‘neuter’ (in single quotes) adjectives.

The main contexts the ‘neuter’ adjectives are used in are the following:

- Combined with subjects, expressed by “words of ‘generalized meaning’” (Ambrasas, 1997:135) (i.e., former neuter pronouns, which will be considered next):

(8) *Visa taĩ pasiródė jam keĩsta.*<sup>13</sup>  
 all-NOM.NEUT this-NOM.NEUT (?) seem-3<sup>RD</sup>PAST he-DAT strange-‘NEUT’  
 ‘All this seemed strange to him.’

- In impersonal contexts:

(9) *Taĩp giėdra iĩ liĩksma!*  
 so bright-‘NEUT’ and joyful-‘NEUT’  
 ‘It’s so bright and joyful!’

(10) *Mán visur yra gėra.*  
 I-DAT everywhere be-3<sup>RD</sup>PRES good-‘NEUT’  
 ‘For me, it is good everywhere.’

- Two neuter adjective forms combined, one used as a subject, the other as a predicate:

(11) *Saldũ – gardũ.*  
 sweet-‘NEUT’ delicious-‘NEUT’  
 ‘Sweet is delicious.’

- Used as substantivized elements:

(12) *Gėra eĩna toli, blĩga dár toliaũ.*  
 good-‘NEUT’ go-3<sup>RD</sup>PRES far bad-‘NEUT’ still farther  
 ‘Good goes far, evil goes still farther’

(13) *Esũ jaũ iĩ šĩlta, iĩ šálta mĩtęs.*  
 be-1<sup>ST</sup>PRES already and warm-‘NEUT’ and cold-‘NEUT’ see-PAP.NOM.SG.MASC  
 ‘I have seen both warm and cold.’

- “Sometimes”<sup>14</sup> – alongside masculine or feminine adjectives qualifying masculine or feminine nouns:

(14) *Ilgi sijõnai negražũ.*  
 long-NOM.PL skirt-NOM.PL.MASC not-beautiful-‘NEUT’  
 ‘Long skirts are not beautiful.’

<sup>13</sup> It might be possible to speak about agreement in cases like (8), but this needs further investigation.

<sup>14</sup> This is Ambrasas’s (1997:135) original formulation; no further clarification could be found.

- (15) Svėčias                      malonù.  
 guest-NOM.SG.MASC   nice-‘NEUT’  
 ‘[Having] a guest [is] [something] nice.’

(examples from Ambrazas et al., 1997: 135-137)

Ambrazas et al. (1997:137) comment on the semantics of neuter adjectives saying that, while masculine and feminine adjectives refer to a quality attributed to a thing, “neuter adjectives refer to a quality in general. They are never attributes to a noun, and the quality they refer to is never an attribute to a concrete thing”.

What is unexpected about Lithuanian ‘neuter’ adjectives is not only that they outlived neuter nouns, but also that they found such a niche for themselves in the language structure.<sup>15</sup> As Petit (2011:174) notes, this is also surprising because Lithuanian is a highly inflected language, in which case such frozen forms are unusual, particularly when they are used in the place of nouns and regular adjectives. It would be interesting to investigate their competition with adverbs – Petit (2011) looks at the synchronic distribution of both, but it also would be worth looking at the diachronic picture – a predictable trend would be gradual loss of ‘neuter’ adjectives.

The situation in the realm of Lithuanian pronouns is quite complex and for the most part still awaits explanation. There are several difficulties. The ending *-an*, pervasive in OPr neuters, does not figure in Lithuanian – instead, Lithuanian pronouns end mainly in *-as* (*kàs* ‘who, what’, *kažkàs* ‘something, someone’, *niėkas* ‘nothing, no-one’, *viskas* ‘everything’) and *-ai* (*taĩ* ‘it, that’, *šitai* ‘this one, here’). While *-as* is identifiable as the canonical masculine ending, the origin of *-ai* is obscure. It would be reasonable to hypothesize that *-ai* goes back to neuter pronouns, but this is by no means clear.

To conclude, Lithuanian has lost all traces of the neuter in nouns, but preserved some in adjectives and pronouns: the so-called ‘neuter’ adjectives in Lithuanian are typologically uncommon frozen impersonal forms that go back to neuter forms of adjectives, and some of the pronouns, notably *-a* (and probably also *-ai*) forms, seem to be remnants of old neuter pronouns, though their distribution is hard to account for both synchronically and diachronically.

## 2.3 Latvian

Latvian, the other surviving EB language, is least interesting at this point since it preserves no traces of neuters in any category. Like in Lithuanian and unlike in Prussian, the process of neuter noun loss cannot be observed in the historical record. Moreover, Latvian has abandoned neuters even in the class of pronouns: in place of Lithuanian *taĩ*, Latvian uses fully masculinized *tas* (Petit, 2011:183).

In the realm of nouns, as expected, an absolute majority of former neuters shifted to masculine, though there are some interesting mismatches with Lithuanian. For instance, while Lithuanian has masculine *úostas* ‘port, harbor’, in Latvian it features as *uôsta* (feminine), cf. also OPr neuter *austo* ‘mouth’. The same holds for Lithuanian masculine *milas* ‘coarse fabric’ and Latvian feminine *mila* ‘coarse peasant clothing’, both related to OPr *milan* ‘clothing’ (Petit, 2011:183).

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<sup>15</sup> Lithuanian is not the only language featuring ‘neuter’ adjectives; they are also found in some Slovenian dialects that underwent neuter loss (Priestly, 1983:355).

There are no traces of neuter gender in adjectives either. In impersonal constructions where Lithuanian might use ‘neuter’ adjectives, Latvian has adverbs or nouns:

(16) *Man visur ir labi.*  
 I-DAT everywhere be-3<sup>RD</sup>PRES good-ADV  
 ‘For me, it is good everywhere.’

(17) *Labums iet tālu, ļaunums vēl tālāk.*  
 good-NOM.SG.MASC go-3<sup>RD</sup>PRES far bad- NOM.SG.MASC still farther  
 ‘Good goes far, evil goes still farther’

Neuter pronouns, too, have been completely masculinized and take typically masculine endings *-s* and *-as* (Petit, 2011:191). Therefore, the conclusion is that in Latvian the category of neuter gender has been abandoned completely.

To sum up, the three major Baltic languages show various degrees of neuter loss. As we have seen, earlier OPr sources exhibit a full-fledged three-gender system, while later ones allow us to observe the restructuring of this system that took place when neuter and masculine genders merged. Modern Lithuanian, in turn, does not have a category of neuter gender in nouns, while in the realms of adjectives and pronouns there are some remnants of old neuters. Modern Latvian does not provide virtually any evidence for the existence of neuters in Baltic.

The next section deals with the questions about the factors led to the restructuring of the Baltic gender system.

### 3. Some problems of the phonologically-driven account

The process of gender loss as well as restructuring of the gender systems for some reason does not receive as much attention as the process of emergence of gender distinctions. Even within well-studied IE languages, there have been few if any in-depth studies of gender developments since the early 20<sup>th</sup> century. This is especially striking since comparatively few IE languages have retained the IE gender system intact – among them only some West (German) and North Germanic (Icelandic) languages, Standard Modern Greek, some Indo-Iranian languages (Marathi, Gujarati) and most Slavic languages. In contrast, a considerable number of IE languages significantly modified their gender system – either by eliminating one gender, usually the neuter, like Baltic, Celtic and Romance languages, or by restructuring the gender system, whereby former masculine and feminine merge into common gender, which is opposed by neuter, as in Danish, Swedish and Dutch.

The only (relatively) recent survey of the gender loss-related processes in IE languages, including some interesting generalisations, is provided by Priestly (1983). One of Priestly’s immediate observations is that the first gender to be lost is normally the neuter, which is also a much more frequent phenomenon than the alternative development of common-neuter systems in some Germanic languages (Priestly, 1983:339-342). The main cause of radical changes to the traditional three-part IE gender system, according to him, is the fact that over time the system had developed a considerable degree of semantic opacity, and thus the conditions for gender drifts – similar

innovations made by the daughter languages because of the imbalances and stresses of the common proto-language – were created.

Priestly (1983:340) also stresses the importance of phonological impetus, saying that an opposition in gender is in jeopardy if weak phonological opposition adds to inconsistent semantic opposition. In the traditional IE gender system, it is the semantic and phonological opposition between masculine and neuter that matches these criteria (see Table 5), so the loss of neuter in Baltic, in this sense, should not be surprising. In many IE languages the operation of the phonological impetus was facilitated by the fact that masculine and neuter show distinctive declensional and agreement patterns only in the nominative singular and converge in the oblique cases; this also must have been the case in Baltic. Moreover, as already mentioned, the neuter nominative/accusative singular *-an*, as attested in OPr, is not unique in the neuter paradigm but corresponds to the masculine accusative singular, thus making the neuter even less distinctive. Finally, Priestly (1983: 342) points out that if an opposition within a paradigm is expressed by a single phonological segment, it has a potential to become unstable. All of this, as we have seen, applies to the Baltic *-an* vs. *-as*.

Some scholars of the earlier philological tradition (cf. the work of Schmidt, Nieminen and Meillet, among others) discussed the conditions for the Baltic neuter loss. Though the details of the proposed analyses vary, they all are in accord with Priestly's generalisation that insufficient phonological distinction between masculine and neuter paradigms lies at the heart of neuter loss in Baltic and other IE languages. Nevertheless, they all run into the same problems.

First of all, paradigm merger alone is *not* sufficient to cause gender loss. For instance, in French the paradigms of masculine and feminine nouns have merged entirely, but the distinction between them is retained. One can argue against the case of French emphasising the fact that it has no 'paradigms' because of the loss of the case system – so there is nothing to merge. A more convincing argument comes from Russian *mama* and *papa* (see (1)) that are identical in inflection patterns but belong to different genders. Thus, declension is extremely important for the acquisition and stability of gender categories in some languages, but it does not seem to be the only crucial factor.

More importantly, Priestly's (1983) evidence from Slavic strongly suggests that phonological closeness of the paradigms is a *necessary* but not a *sufficient* factor for gender loss, because there are instances when the relevant phonological conditions are the same throughout a language, but only some dialects are affected by neuter loss. Slavic is especially interesting in this respect. In addition to the semantic opacity of IE gender already discussed, all Slavic languages developed an animate/inanimate opposition (in one form or other and to differing extents), which arguably made them "(potentially) even more likely to lose the N[euter] on semantic grounds (i.e. phonological 'triggers' aside)" (Priestly, 1983:350-351). The combination of phonological impetuses required for weakening the opposition between masculine and neuter, (a) shift of stress from final syllables and (b) the weakening of vowels in unstressed final positions, is found in Russian, Belarusian and Slovene, but in all cases only some dialects lost the distinction between masculine and neuter, whilst the standard languages fully preserve it (Priestly, 1983:351). The phonological conditions, crucially, are the same in both cases.

As an illustration, let us look at neuter loss in some Russian dialects. In Russian, the neuter-to-feminine shifts that occur in some dialects are comparatively well-studied and successfully described

as phonetically/phonologically conditioned developments (Vysotskij, 2002:154). The neuter-to-masculine shift is, on the other hand, “less well-studied, geographically not fully defined and wrongly explained with phonetic reasoning by some authors” (Vysotskij, 2002:154). Specifically, it has been argued that in dialects with *akan’e* (/a, o/ merger in unstressed positions) that underwent the neuter-to-masculine shift, *akan’e* was the main factor: extreme vowel reduction resulting from it would lead to loss of final vowels in agreeing adjectives, essentially turning the nominative neuter adjectives into nominative masculine and leading to subsequent reanalysis of corresponding nouns as neuters:

- Standard Russian:

(18) *cvetno-e* ([o-je])      *plat’e*  
 colorful-NEUT              dress-NEUT

- Neuter-to-masculine shift dialects:

(19) *cvetno-j∅*              *plat’e*  
 colorful-MASC              dress-?

(Abakumov, 1942:66, as quoted in Vysotskij, 2002:155)

However, if such strong reduction of final vowels had actually occurred, it would apply to feminine forms of adjectives too, but developments of this type are not attested:

- Standard Russian:

(20) *cvetna-ja*              *rušašk-a*  
 colorful-FEM              shirt-FEM

- Neuter-to-masculine shift dialects:

(21) \**cvetna-j∅*              *rušašk-a*  
 colorful- MASC              shirt-?

(Vysotskij, 2002:155)

Therefore, Vysotskij, (2002:155-156) comes to the same conclusion for Russian as was reached for Baltic above: it is obvious that the phonetic interpretation of the neuter-to-masculine shift is insufficient.

Further, Vysotskij (2002:156-8) rather tentatively proposes the following reasons for the neuter-to-masculine shift in some Russian dialects: low frequency of neuter nouns in the vocabulary of traditional dialects (only about 16% of the lexicon), overall markedness of the neuter, frequent use of masculine-declension plural inflection for plural neuter nouns because of the rarity of plural neuters (which are mainly abstract/mass/collective nouns), low productivity of the old neuter suffixes *-eno*, *-išče*, *-evo*, etc. Vysotskij (2002:158) stresses paradigm merger as an extremely important factor for gender merger, too. More generally, multiple causation situations like this are extremely difficult to resolve, and Vysotskij finishes his paper by saying:

“The phonetic and morphological features of many dialects present identical conditions for the process of neuter gender loss. However, this does not happen in a uniform fashion; instead, for some as yet undiscovered socio-historical reasons the archaic three-way gender distinction has been fully preserved in many locations” (Vysotskij, 2002: 161).

What is significant about this quote is that it mentions “socio-historical reasons” as a possible cause of neuter retention (or, in our case, loss). So, it seems that apart from the semantic vagueness, declensional closeness and phonological impetus, there should be another, probably extra-linguistic, factor that initiates/facilitates the change in question. This mysterious factor might vary from case to case, but a very plausible candidate for Baltic is language contact. This hypothesis will be investigated in the next section.

## **4. A contact account of the loss of neuter in Baltic**

### **4.1 Baltic in contact with Finnic**

The Baltic languages have been in contact with the neighboring non-IE Balto-Finnic for thousands of years<sup>16</sup> – according to some Indo-Europeanists, since the beginning of the Common Era, and, according to some archaeological evidence, since the second millennium BC (Sabaliauskas, 1963:109). When the Proto-Baltic tribes came from the south, they invaded the territory that had been inhabited by Finnic speakers shortly beforehand. The recent studies of the gene pool of the Baltic area support the prolonged interaction hypothesis too (and also deny the idea of common ancestry of Balts and Finns) (Čėsnyš & Kučinskis, 2004:13). The intensity of contact led to mutual linguistic influence, both lexical and structural, and it is generally believed that the technologically more advanced Balts “gave more than [they] got” (Čėsnyš & Kučinskis, 2004:11).

Over the centuries of contact, gradual assimilation of the Finnic speakers to the Balts took place, leading to a classic situation of substratum interference – a subtype of contact-induced language change that results from imperfect group learning during a process of language shift. The geographical distribution of Finnic languages – small enclaves surrounded by Baltic- and Slavic-speaking areas – support the idea that the Finnic languages form the more ancient substratum, from which the speakers shifted to superstratum Baltic (and Slavic) (Thomason & Kaufman, 1988:238). Therefore, it is extremely likely that the Baltic languages would show traces of the Finnic substratum interference (see, for example, Koptjevskaja-Tamm & Wälchli, 2001).

Surprisingly, most researchers of the Baltic and Finnic contact phenomena (Thomason, Sabaliauskas, Zeps) are interested chiefly in lexical borrowing and limit themselves to providing extensive word-lists of Baltic-to-Finnic and Finnic-to-Baltic loans. Zeps (1962) also investigates Finnic phonological influence on Latvian, but there is little discussion of (and notably little interest in) the diffusion of structural features between the two language groups (Junttila, 2009). Thomason & Kaufman (1988:239) note that “we know of no thorough investigation of Uralic interference in Baltic”, and the situation has not changed much in the past thirty years.

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<sup>16</sup> The terms ‘Balto-Finnic’ and ‘Finnic’ will be used interchangeably in this paper as a collective term for the Uralic languages of the Baltic region (Estonian, Finnish, Livonian, etc.) as well as the Uralic proto-languages of the area.

Despite this general trend, a number of structural features likely to have been imposed on Baltic from Finnic have been identified; among the most probable are use of genitive instead of accusative for objects after a negated verb (Sabaliauskas, 1963:136) and 3<sup>rd</sup> person verb form unspecified for number (Thomason & Kaufman, 1981:242-3). In Lithuanian, Uralic influence is likely to have caused, for instance, the emergence of imperative in *-k*, cf. the widespread Uralic imperative suffix *-k,-ka* (Thomason & Kaufman,1988:245-6), as well as the rise of illative, allative and adessive - the locative cases quite foreign to IE but widespread in Finnic languages (the latter two presently available in dialects only) (Thomason & Kaufman,1988:242-3). Characteristic Latvian developments include, e.g., stress fixing on the first syllable – cf. Uralic languages, which typically have fixed word-initial stress (also see below). OPr experienced the least Finnic influence, probably due to its southernmost location (Sabaliauskas, 1963:111).

It is well-known that contact is a notoriously hard to prove factor in language change. Since it is usually difficult to attribute any change only/mainly to language contact, definitions of contact-induced change are often very cautious: “any linguistic change that would have been less likely to occur outside a particular contact situation is due at least partly to language contact” (Thomason, 2001: 62). In a similar vein, Sabaliauskas (1963:113) says about the Latvian word-initial stress-fixing that the process was very complex and could have started even without the influence of the Livonian language, but most probably contact with Livonian at least influenced the intensification of the process.

One of the keys for identifying structural features as contact-induced is their total quantity – cf. Veenker (1967:328) about the Uralic substratum in Russian: “There are too many features in Russian that are considered to have equivalents in many of the Finno-Ugric languages not to speak about the substratum”. The fact that Baltic and Uralic languages are very different typologically facilitates identifying the phenomena acquired through interference because often they are quite foreign to the IE language type – and, indeed, they are numerous.

Crucially for our topic, Finnic languages lack the category of grammatical gender. Therefore, it is extremely likely the neuter loss in Baltic was initiated/facilitated/intensified by this fact – in the spirit of the quote from Sabaliauskas (1963:113) above.

The Baltic neuter-loss-through-contact idea was first alluded to by Meillet (1925:100-101) in a discussion of language-specific developments, where he says that elimination of neuter in EB “might be attributed to the mixing of Finnic-speaking populations with those who spoke Letto-Lithuanian”. However, Meillet did not develop this idea, and it was never accepted by the scholarly community, because now as then language scholars were wary to attribute too much weight to language contact (cf. Royen, 1926; Wölfel, 1928).

Nevertheless, there is evidence for the contact hypothesis that has not been considered before. The Baltic situation adheres to the so-called hierarchy of gender loss for IE languages, proposed by Priestly (1983:339): “the hierarchical order of the categories to lose formal gender distinctions is noun>adjective>pronoun”.<sup>17</sup> This is applied to Baltic in Table 9, from which it is evident that the

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<sup>17</sup> Interestingly, Corbett (1979, 1983, 1991, 2006, as quoted in Karatsareas, 2011:180), argues that a new gender category in a language emerges in the order pronouns > relative pronouns > predicates > attributives > nouns. That is, the reverse of Priestly’s hierarchy.

availability of neuters in Baltic not only obeys Priestly’s hierarchy, but also is strikingly clearly correlated with the geographical position of a language: in the north of the Baltic area, there are no retentions of neuter, and proceeding south (and then further back in time, from III to I&II Catechisms), one finds more and more evidence for neuters. Since the influence of Finnic languages is stronger in the north, this is exactly the result expected from the point of view of the contact hypothesis:

Table 9. Availability of neuters in different parts of speech in the Baltic languages

Languages (north to south)	Nouns	Adjectives	Pronouns
Standard Latvian	-	-	-
Samogitian (Žemaičių) dialect of Lithuanian (closest to Latvian)	-	- (Zinkevičius, 1998:117)	+ (?)
Standard Lithuanian	-	‘neuter’ adjectives	+
OPr (III Catechisms)	very few	+ (and ‘neuter’ adjectives ?) (Euler, 1987-88:127)	+
OPr (I & II Catechism)	+	+	+

The next step is to research the gender situation in the northernmost Latvian in order to find out whether the cradle of neuter loss was indeed there.

## 4.2 Latvian and Livonian

Among the Baltic languages Latvian is undoubtedly most influenced by Finnic – to such an extent that Comrie (1981:100) suggested modern Latvian is a result of merger of IE Baltic features with a Balto-Finnic substratum. Throughout its history and until now, Latvian has been in closest contact with Finnic languages – notably, with Livonian (also Liv, Livian; Livonian *līvõ kēļ/rāndakēļ* ‘coast language’), a minority Finnic language of Latvia.

Apart from countless loanwords, Latvian and Livonian show a certain degree of mutual structural influence. For example, Livonian acquired ‘stød’ similar to that of Danish from Latvian ‘broken tone’ (Kiparsky, to appear) and developed a dative case separate from allative (atypical of Finnic) (Comrie, 1981:101). Latvian, apart from developing word-initial stress, lost the verb ‘to have’ under Uralic influence (Décsy, 158-159, as quoted in Thomason & Kaufman, 1988:246)<sup>18</sup> and acquired a nominative-object debitive construction from Finnic (Comrie, 1981:152; Nau, 1998:39):

<sup>18</sup> The same holds for Russian (but not in Slavic more widely) and is attributed to Finnic influence too (Thomason & Kaufman, 1988:246).

- (22) *Mums jā-lasa grāmat-a*  
 we-DAT DEB-read book-NOM.SG.FEM  
 'We must read a book'

However, except for these well-established developments, there is little certainty about the structural interplay of the two languages due to lack of research on the matter. Nevertheless, the Tamian dialect of Latvian, which has been most influenced by Livonian, provides extremely interesting evidence supporting the neuter-loss-through-contact hypothesis.

The Tamian (German *Tahmisch*) dialect of Latvian is currently spoken on both banks of the Venta river in north-western Kurland (Trumpa, 2010:83), and also on the east coast of the Riga Gulf (Gāters, 1977) - exactly the territory that in historical times was inhabited by Livonians. It is well-known that the Tamian dialect has undergone significant changes due to contact with Livonian (Trumpa, 2010).

Gāters's (1977:17-18) list of such distinctive phonological, morphological and syntactic developments in Tamian runs to eighteen, and one of them is "reduction of feminine gender in favor of masculine <...>; less frequently – shift of feminine nouns to the category of masculine" (Gāters, 1977:18). As you can see in (23-26), adjectives in Tamian show masculine agreement when modifying etymologically feminine nouns (*mīksc, garš*, cf. Standard Latvian *mīkst-a, ar-a*), and the nouns either show masculine agreement (*asc* cf. Standard Latvian *ast-e*) or no agreement at all (*siŗd*, cf. Standard Latvian *sird-s*):

- (23) *Man siŗd tŗc mīksc* [mīkst-s]  
 me-DAT heart-∅ so soft-NOM.SG.MASC  
 'I have a soft heart'

- (24) *Garš* [garš-s] *asc* [ast-s]  
 long-NOM.SG.MASC tail- NOM.SG.MASC  
 'long tail'

cf. Standard Latvian:

- (25) *Man sird-s tik mīkst-a*  
 me-DAT heart-NOM.SG.FEM so soft-NOM.SG.FEM  
 'I have a soft heart'

- (26) *Gar-a ast-e*  
 long-NOM.SG.FEM tail- NOM.SG.FEM  
 'long tail'

This loss of gender distinctions in Tamian has been explicitly attributed to Livonian substratum influence by a number of researchers (for example, Thomason & Kaufman, 1988:242; Comrie, 1981:147). Like Standard Latvian, Tamian does not have neuter gender, but the substratum influence of gender-less Finnic in Tamian was so strong that the masculine-feminine distinction was eliminated too. This should not be surprising, since Tamian is the dialect of the assimilated Livonians, for whom IE gender was completely opaque.

Consequently, Tamian is very likely to be the cradle of the changes to the IE gender system in Baltic. Here, the substratum influence from Finnic was so strong that it led to complete elimination of

grammatical gender, and this development provided the impulse that was needed for the ‘marked’ and insufficiently distinct neuter gender to lose stability and via complex phonological changes gradually merge with masculine – first in Latvian and then in other Baltic languages (the masculine-feminine opposition must have been stable enough to resist the change in the rest of Baltic). Transmission from Latvian further south into Lithuanian and OPr is not inconceivable, considering close contact between Curonian and Samogitian dialects of Latvian and Lithuanian, respectively, as well as strong cultural and linguistic bonds between Lithuanians and Prussians (Zinkevičius, 1998:35-48). Décsy (1967:150, as reported in Thomason & Kaufman, 1988:240) also believes that some Uralic features were transmitted from Old Russian into South Slavic in a similar way.

There is also evidence for neuter loss in Slavic for which contact with neuter- or gender-less languages is a significant contributing factor. Apart from the more often discussed case of some Northern Russian dialects losing the neuter in contact with Finnic (probably among the dialects considered by Vysotskij (2002); for details see, for example, Čagiševa, 1968), there are also instances of neuter loss in Belarusian dialects spoken in the Belarusian-Lithuanian border area, to which contact with neuter-less Lithuanian must have contributed (Wiemer & Erker, 2011).

What should be emphasized specifically is that interference from Finnic did not alone cause the loss of neuter in Baltic. There seems to be a tendency for grammatical gender systems undergoing restructuring in language contact situations to become overall more transparent by transforming into semantically determined systems (Gumperz & Wilson, 1971). Moreover, when in contact with a gender-less language (interference scenario), a language possessing a category of gender is likely to lose the whole gender system (and not just one category within it) – this is what happened in Tamian, and also probably in Armenian (Meillet, 1925:100) and Cappadocian Greek (Janse, 2002:366, as quoted in Karatsareas, 2011:167).<sup>19</sup> This can be explained by the fact that abandoning just one category of an opaque gender system does not make the task of the shifting substratum language speakers any easier, since the remaining categories are just as opaque. Instead, major restructuring or abandonment of the gender system often takes place.

In contrast, the role of Finnic interference in the Baltic case was that of an initial trigger needed to destabilize the IE masculine-neuter opposition and make the gender system more receptive to subsequent phonological change. Ignoring this factor in favor of a solely phonological account would be misleading, whereas taking it into account immediately makes the Baltic neuter case much clearer. Therefore, further research on the Finnic substratum is very important for understanding the process of neuter loss across Baltic.

## Conclusion

Researching the process and causes of the loss of the neuter in Baltic is important not only for achieving a better understanding of the development of nominal grammatical categories in Baltic, but also because the theoretical account of the Baltic developments most probably will shed light on the other instances of gender loss in IE, and contribute to the analysis of gender from the point of view of language typology too. Also, investigating the topic at hand is important for the theory of

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<sup>19</sup> Though Karatsareas (2011) argues that loss of gender distinctions in Cappadocian Greek is a language-internal development.

language contact and analyzing the possibility of diffusion of structural features between typologically distinct languages. However, providing a complete account of the loss of Baltic neuters is a very large (if at all possible) undertaking; the aim of this paper was to point at another way of addressing the question, and here are the conclusions I arrive at.

All in all, Stang's (1966:179) opinion on the loss of Baltic neuter – “this happened in prehistoric times, and there is no possibility of reconstructing the course of this development” – is far too pessimistic. As I hope to have shown, with the advance of linguistics over the fifty years since Stang's writing, the topic can be fruitfully readdressed from the perspective of language contact.

In this paper it has been argued that the determinant of change in the Baltic case was the Finnic substratum. As a powerful factor in the development of Baltic languages overall, it turns out to have played a crucial role in the changes to the gender system too. Even though it is hard to prove that an individual phenomenon is due to contact, the evidence available, as well as extralinguistic factors like geographical distribution, leads us to conclude that interference from Finnic in the Latvian Tamian dialect is likely to have been the source of the push necessary to start/intensify the process of neuter loss first in the neighboring dialects, and then throughout Baltic. Therefore, further research on the contact account is very promising. Importantly for other instances of IE gender loss, language contact might be a more widely available factor than previously thought. While no contact account of the neuter loss in, for instance, Romance or Celtic has yet been developed, the contact situations these languages have been in, notably with each other, might prove relevant (obviously, this is not to say that contact with a genderless language is a necessary factor for gender loss).

Many questions about Baltic neuters remain; although for some of them, like the details of morphological reconstruction, the time depth might be an insurmountable obstacle, there are some that are more promising. The rapid timing of the IE neuter loss process is a particularly interesting one. The only evidence of the Baltic neuter loss in progress, coming from the OPr III Catechism, suggests that the masculine-to-neuter shift in nouns and agreeing adjectives was complete in less than twenty years (as far as the written sources can be trusted). Similar evidence comes from a neuter-less Slovenian dialect of Sele Fara, in which fieldwork completed in 1935 (Isačenko, 1939) shows the beginning of neuter loss, while fieldwork from 1978-82 (Priestly, 1984) shows only isolated neuter reflexes. In both cases the timeframe is rather short for such a significant change. Therefore, the hypothesis is that such changes are dormant unless suitable conditions emerge, but once the conditions are there, they proceed rapidly; contrary to this tendency, though, there are some half-way developments, like Lithuanian and Slovenian ‘neuter’ adjectives.

Finally, what does the Baltic case tell us about the gender-related changes in IE in general? Let us return to the quote from Vysotskiy (2002: 161): “...for some as yet undiscovered socio-historical reasons the archaic three-way gender distinction has been fully *preserved* [emphasis added] in many locations”. This perspective gives us yet another angle to the question: is it not the loss but the retention of neuter, and the three gender system in IE languages more generally, that is surprising? Should the conditions for the masculine-feminine-neuter system *retention* and not *modification* be looked for? Given its semantic opacity, the unstable “anomalous” IE gender system (Brosman, 1976) is almost expected to be lost; it might even be called a regular development in the daughter languages. It has been established in this paper that contact with Finnic was crucial in the Baltic case, but the question remains as to what provides the first impulse for this change in other IE languages,

and what conditions shape its subsequent development (i.e. loss of neuter vs. development of the common-neuter system). These are the questions for the future.

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## References

- Ambrasas, Vytautas et al. 1997. *Lithuanian grammar*. Vilnius: Baltos lankos.
- Borkovskij, Viktor I. and Kuznecov, Petr S. 1965. *Istoričeskaja grammatika ruskogo jazyka*. Moscow: Nauka.
- Brosman, Paul W. 1976. The Hittite gender of cognates of PIE neuters. *Journal of Indo-European Studies*, 6, 93-106.
- Čagiševa, Vera. 1968. K voprosu o kategorii srednego roda v mestnyx govorax . *Pskovskie govory II* : 146 – 159. Pskov.
- Česnys, Gintautas and Kučinskis, Vaidutis. 2004. The Balts and the Finns in historical perspective: a multidisciplinary approach. *Acta Medica Lituanica*, 11, 3, 8-14.
- Comrie, Bernard. 1981. *The languages of the Soviet Union*. Cambridge: CUP.
- Corbett, Greville G. 1982. Gender in Russian: an account of gender specification and its relationship to declension. *Russian Linguistics*, 6, 197-232.
- Corbett, Greville G. 1991. *Gender*. Cambridge: CUP.
- Cornips, Leonie and Hulk, Aafke. 2008. Factors of success and failure in the acquisition of grammatical gender in Dutch. *Second Language Research*, 267–295.
- Dabašinskienė, Ineta and Kalėdaitė, Violeta. 2012. Child Language Acquisition Research in the Baltic Area. *Journal of Baltic Studies*, 43:2, 151-160.
- Euler, Wolfram. 1987-88. Das Neutrum als aussterbendes Genus im Altpreußischen und seinen baltischen Schwestersprachen. *Klagenfurter Beiträge zur Sprachwissenschaft*, 106-137.
- Fennell, Trevor G. 1977. The emergence of a Latvian grammatical tradition: Noun morphology. *Journal of Baltic Studies*, 8:1, 51-62.
- Gāters, Alfrēds. 1977. *Die lettische Sprache und ihre Dialekte*. Mouton Publishers.
- Gathercole, V. C. M., Thomas, E.M. and Laporte, E.M. 2001. The acquisition of grammatical gender in Welsh. *Journal of Celtic Language Learning* 6, 53–87.
- Gumperz, John J. & Wilson, Robert. 1971. Convergence and creolization: a case from the Indo-Aryan/Dravidian border in India. In: Hymes, Dell H. (ed.) *Pidginization and Creolization of Languages: proceedings of a conference held at the University of the West Indies, Mona, Jamaica, April, 1968*. Cambridge University Press.
- Haspelmath, Martin. 2002. *Understanding morphology*. London: Arnold.
- Hockett, Charles F. 1958. *A Course in Modern Linguistics*. New York: The Macmillan Company.
- Isačenko, Aleksander V. 1939. *Narečje vasi Sele na Rožu*. Ljubljana: Učiteljska tiskarna.

- Junttila, Santeri. 2009. *The contacts between Baltic and Proto-Finnic: Anything new since Thomsen?* Presentation abstract from the Baltic Languages and the Nordic Countries International conference on June 19–20, 2009. University of Oslo.
- Karatsareas, Petros. 2011. *A study of Cappadocian Greek nominal morphology from a diachronic and dialectological perspective*. PhD Dissertation: University of Cambridge.
- Kiparsky, Paul. Livonian stød. To appear in: Boersma, Paul, van Oostendorp, Marc, Hermans, Ben and Kehrein, Wolfgang (eds.), *Segments and Tone*.
- Koptjevskaja-Tamm, Maria & Wälchli, Bernhard. 2001. The Circum-Baltic languages: An areal-typological approach. In: Ö. Dahl, M. Koptjevskaja-Tamm (eds.). *The Circum-Baltic Languages. Typology and Contact*. Vols. I–II. Amsterdam, Philadelphia: John Benjamins, V. 2, pp. 615–750.
- Matasović, Ranko. 2004. *Gender in Indo-European*. Heidelberg.
- Meillet, Antoine. 1925. *La method comparative en linguistique historique*. Oslo.
- Nau, Nicole. 1998. *Latvian (Languages of the word: Materials, 217)*. München-Newcastle: Lincom Europa
- Nieminen, Eino. 1922. *Der urindogermanische Ausgang -ai des Nominativ-Akkusativ pluralis des Neutrums im Baltischen*. Helsinki: Druckerei der Finnischen Literaturgesellschaft.
- Petit, Daniel. 2011. Das baltische Neutrum. In: *Untersuchungen zu den baltischen Sprachen*. Leiden: Brill.
- Priestly, Tom M. S. 1983. "On 'drift' in Indo-European gender systems", *The Journal of Indo-European Studies*, 11, 339-363.
- Priestly, Tom M.S. 1984. O popolni izgubi srednjega spola v selščini: enodobni opis. *Slavistična revija*, 32, 1, 37-47.
- Priestly, Tom M.S. 1984. O popolni izgubi srednjega spola v selščini: raznodobna rekonstrukcija. *Slavistična revija*, 32, 4, 357-372.
- Royen, Gerlacus. 1926. *De jongere veranderingen van het indogermaanse nominale Drieklassensysteem*. Hertogenbosch.
- Sabaliauskas, Algirdas. Baltų ir Pabaltijo suomių kalbų santykiai. *Lietuvių kalbotyros klausimai*, 6, 109-136.
- Schmalstieg, William R. 1974. *An Old Prussian Grammar. The phonology and morphology of the three Catechisms*. The Pennsylvania State University Press.
- Schmidt, Johannes. 1889. *Die Pluralbildungen der indogermanischen Neutra*. Weimar.
- Smoczyński, Wojciech. 1992. Die altpreussische Entnasalisierung und ihre Folgen für die Deutung der Deklinationendungen. In: W. Smoczyński (ed.), *Colloquium Pruthenicum Primum, Papers from the First International Conference on Old Prussian held in Warsaw, September 30th - October 1st, 1991*. Warszawa: Wydawnictwa Uniwersytetu Warszawskiego, 47-83.
- Stang, Christian S. 1966. *Vergleichende Grammatik der Baltischen Sprachen*. Oslo-Bergen-Tromsø: Universitetsforlaget.
- Sutrop, Urmias and Pajusalu, Karl. 2009. Medieval Livonian county Metsepole and the historical and linguistic border between Livonians and Estonians. *Linguistica Uralica*, 4, 253-268.
- Švedova, Natalia Ju., Arutjunova, Nina D., Bondarko, Alexander V., Ivanov, Valerij Vas., Lopatin, Vladimir V., Uluxanov, Igor' S., Filin, Fedot P. 1980. *Russkaja grammatika I: Fonetika, fonologija, udarenie, intonacija, slovoobrazovanie, morfologija*. Moskva: Nauka.
- Thomason, Sarah Grey and Kaufman, Terrence. 1988. *Language contact, creolization, and genetic linguistics*. University of California Press.

- Thomason, Sarah Grey. 2001. *Language Contact: An Introduction*. Washington, D.C.: Georgetown University Press.
- Trautmann, Reinhold. 1910. *Die altpreussischen Sprachdenkmäler*. Gottingen, Vandenhoeck and Ruprecht.
- Trumpa, Edmundas. 2010. „Karte des lettischen Sprachgebiets“ (1881) – pirmā latviešu valodas dialektu karte. *Baltu Filoloģija*, 79-103.
- Vääru, Eduard. 1966. Livskij jazyk. In: *Jazyki narodov SSSR, vol. III*. Moscow: Nauka.
- Veenker, Wolfgang. 1967. *Die Frage des finnougriischen Substrats in der Russischen Sprache*. Bloomington: Indiana University.
- Vinogradov, Viktor V., Istrina, Evgenija S., Barxudarov, Stepan G. (eds.). 1952. *Grammatika russkogo jazyka I: Fonetika i morfologija*. Moskva: AN SSSR.
- Vysotskij, Sergej S. 2002 [1942]. Utrata srednego roda v govorax k zapadu ot Moskvy. In: E.I. Janovič, L.G. Moščenskaja and V.A. Sanikovič (eds.). *Istorija i dialektologija russkogo jazyka: xrestomatija issledovanij*. Minsk.
- Wiemer, Björn. 2007. Sud'by balto-slavjanskix gipotez i segodnjašnjaja kontaktnaja lingvistika. In: Vjač.Vs. Ivanov (ed.): *Areal'noe i genetičeskoe v strukture slavjanskix jazykov (Materialy kruglogo stola)*. Moscow, 31-45.
- Wiemer, Björn & Erker, Aksana. 2011. Manifestations of areal convergence in rural Belarussian spoken in the Baltic-Slavic convergence zone. *Journal of Language Contact*, 4, 184–216.
- Wölfel, Dominik Josef. 1928. A review of Royen, Gerlacus: “De jongere veranderingen van het indogermaanse nominale Drieklassensysteem” (Hertogenbosch, 1926). *Anthropos*, 23 – 1, 362-364.
- Zaliznjak, Andrej A. 2002 [1967]. *Russkoe imennoe slovoizmenenie*. Moscow: Jazyki slavjanskoj kul'tury.
- Zeps, Valdis J. 1962. *Latvian and Finnic linguistic convergences*. Indiana University Publications.
- Zinkevičius, Zigmās. 1998. *The history of the Lithuanian language*. Vilnius: Mokslo ir enciklopedijų leidybos institutas.
- Zirnīte, Māra. 2011. *Livonians in Northern Kurzeme*. The „Baltic Green Belt” Project.