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ACCENT NOTATION IN THE CLASSICAL LANGUAGES
AND ITS INFLUENCE ON LITHUANIAN ACCENT NOTATION

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1. Introduction

1.1.   Research Subject

The subject of this dissertation is the origin of the Lithuanian accent notation system in the accentuation and written accent notation of the classical languages. We argue that the written notation of Lithuanian accents was developed by 16th century Lithuanian authors on the model of the accentuation of classical Greek, as well as on the system of diacritical marks which was used in Latin orthography from the second half of the 16th century to the end of the 18th century.

Since the practice (nowadays obsolete) of writing accent marks in Latin itself arose as a consequence of the theories (from the modern point of view, erroneous) of the grammarians of the 16th and 17th centuries on the accentuation of classical languages, the process of formation of these theories is examined.

And since this examination reveals that the ideas of the 16th and 17th century philologists arose from an erroneous (as compared to modern views on the matter) interpretation of classical quantitative versification, the research has also been extended into historical processes in quantitative versification, as well as the theories of those Renaissance grammarians who attempted to explain them.

1.2.   Objectives

The objective of this work is to demonstrate the influence of Greek and Latin accentuation and written accent notation on the development of Lithuanian written accent notation from the 16th to the 19th century, by revealing the developments in the accentuation of the classical languages themselves, as well as the old grammarians' understanding of those developments. The 16th century understanding of classical Greek accentuation was different from that of modern linguistics, and it goes without saying that the old Lithuanian authors, who devised the Lithuanian accent notation, were guided by the philological views of their own time. Therefore we set out an objective to explain the way of thinking on the matters of accentuation in the 16th and 17th centuries and to reveal how the old grammarians' views on these matters were different from ours.

1.3.   Relevance and Novelty

The history of accentuation is an important part of the history of the Lithuanian language. Information on the old Lithuanian accentuation is mostly derived from old accented texts. In those written monuments the accent is marked in writing differently from modern practice, so in order to conduct research into old Lithuanian accentuation it is necessary to grasp the nature and logic of the old accent notation.

Old Lithuanian texts have been intensively researched during the last century, but the question of the accent notation in writing was not given much attention. In monographs and articles, especially those accompanying new editions of the old texts, the old accent notation is usually discussed briefly as a part of that particular old author's orthography, without

giving it a separate treatment. In researching the actual accentuation in old authors, attention is paid to the relationship of the old accentuation to that of modern standard Lithuanian and its dialects; but peculiarities of the old accent notation in writing, its trends, anomalies, and especially the influence of the orthographic conventions of the classical languages, remain without systematic explanation.

It is to be borne in mind that Latin was the principal second language for most old Lithuanian authors, often more important to them than contemporary foreign languages. Therefore, without due regard to the influence of classical languages, it is not possible to thoroughly understand the inner logic of the old Lithuanian accent notation.

As revealed in the present work, the system of noting the accent in writing was transferred into old Lithuanian orthography from the system of Latin orthography of the time. This Latin system (nowadays obsolete) of diacritic marks was the result of philological theories in the study of classical languages in the European schools and universities in the 16th and 17th centuries; by 'European universities' we also mean the University of Vilnius. The views of the Renaissance grammarians on the subject of Greek and Latin accentuation can be evidently revealed by their practice of versification. In the present study we demonstrate that the so-called 'Henninian' system of accentuation for classical Greek has been attested in use at the University of Vilnius as early as 1604.

In this work we arrive at a conclusion that explicative diacritic marks (that is, accent signs employed more to distinguish and explain grammatical forms than to reveal prosodic qualities of the marked syllable) appeared in Latin and Lithuanian orthography at approximately the same time, the second half of the 16th century.

1.4.   Research Methods

The methods applied in this work are textological, hermeneutical, descriptive. Sometimes, when the subject matter requires it, the method of historical comparative linguistics is also called for, especially when comparing the views of old grammarians with the modern understanding of the linguistic phenomena in question.

1.5.   Sources

Material for this research was drawn from the works of Greek and Roman grammarians, the works of European philologists of the 16th and 17th centuries, certain Latin and Greek poetical works composed in the Grand Duchy of Lithuania and other countries, and old Lithuanian writings.

1.6.   Approbation of the Dissertation

The text of the doctoral dissertation was discussed and approved in the joint session of the Department of Classical Philology and Department of Baltic Philology, University of Vilnius, on August 29, 2007.

1.7. Thesis Statements

1. The system of accent notation in modern Lithuanian orthography originates in, and has developed uninterruptedly from, the system of accent notation used in Lithuania Minor since the second half of the 16th century. The system of accent notation used by the old authors of Lithuania Minor, in turn, is derived from the system of diacritic marks used in humanist Latin orthography, and preserves many of its features.

2. The system of diacritic marks used in humanist Latin orthography arose in the second half of the 16th century through the influence of the so-called 'Henninian' accentuation system in the study of classical Greek in European universities.

3. The 'Henninian' system in the study of classical Greek started in England and Holland, and is first attested in Lithuania in 1604 (that is, before the birth of H. C. Henninius himself). It originated from an erroneous interpretation of classical quantitative versification (especially the dactylic hexameter and Sapphic stanza) in the 16th and 17th centuries. This interpretation can be seen in the versification of the Greek Sapphic poem *Odarion* (1604) and the Lithuanian hexameters of 1589, both created at the University of Vilnius.

4. The said interpretation of the quantitative versification, the 'Henninian' system in the study of classical Greek, the rise of Latin diacritic marks, and that of Lithuanian accent marks, happened at the same time (second half of the 16th century), and are related phenomena.

2. Accent Notation in Classical Languages

The accent signs of most modern languages are derived from the Greek, but there is also an independently developed system of accent marking, used in the Vedas (Whitney 28–34, Schwyzer 375).

2.1. Vedic System of Accent Notation

As in ancient Greek, the actual word accent was a pitch accent in Vedic Sanskrit. The ancient Hindu grammarians called the syllabic tones *udātta, anudātta,* and *svarita. Udātta* meant the tone of the phonologically accented syllable, and *anudātta* that of an unaccented syllable; *svarita* was the name given to the tone either of the syllable immediately following the word accent, or a certain tone of a secondary origin, arising from a contraction of accented and unaccented syllables. The *anudātta* of the syllable preceding the accented one had a tone lower than other *anudātta*, and was called *sannatara*.

In the old Indian texts, especially in Rig Veda, a special sign was used to mark the *anudātta (sannatara)* preceding the accented syllable; the *udātta* syllable itself was left unmarked, and then another accent mark was used to mark the post-accentual *svarita*. At the beginning of a sentence the *sannatara* mark was applied to all syllables preceding the first *udātta* of the sentence. In another words, what is marked in Vedic texts is not the phonologically accented syllable alone, but the tone contour of a whole word. It is only modern European scholars who mark the phonological word accent extracted from the Vedic notation.

2.2. Alexandrine System of Accent Notation in Greek

2.2.1. The Pitch Character of the Classical Greek Accent

As in Vedic, the classical Greek accent was a pitch accent, so we can expect also some analogy between the systems of accent notation.

The ancient Greek philologists described the Greek accent in the terms of musical intervals. According to the *locus classicus* in Dionysius of Halicarnassus (*De compositione verborum*, 11.58–64), the difference between the tones of an accented and an unaccented syllable was a musical fifth.

The pitch nature of ancient Greek accent is also confirmed by the system of classical Greek versification, in which the word accent was irrelevant. This universally accepted fact can be exemplified by another *locus classicus*, the fragment of a lost comedy by Menander (344/3–292/1 BC), quoted by Athenaeus (*Deipnosophists* 13, 28). In this fragment we see that the word accent, although in clash with the iambic ictus, must have been clearly heard by the audience in Menander's time. Another classic place, Euripides' *Orestes* 279, parodied in Aristophanes' *Frogs* 303–304, illustrates that in the 5th century BC acute and circumflex were clearly audible in Greek, and an occasional mispronunciation of an acute as circumflex could have produced unintentional word play thus turning a tragedy into comedy.

Although there is only one phonologically accented syllable in a word, the ancient Greek grammarians, just like their Hindu counterparts, thought of the word accent as of the pitch contour of the entire word. The shapes of the old Alexandrine accent marks were devised as if to draw the graph of the rising and falling tones. We inherited the shapes of the Greek accent marks, but the original motivation of their graphical form is forgotten.

2.2.2. The System of Aristophanes of Byzantium

According to tradition, Greek accent marks were devised by the Alexandrine philologist Aristophanes of Byzantium (257–180 BC). This is the so-called Alexandrine system. It uses three accent marks: acute, grave, and circumflex. Bearing in mind the writing direction from left to right, an acute sign draws a graph of a rising syllable tone, and grave sign accordingly represents a graph of a falling tone.

From certain testimonies of late Greek grammarians (such as Herodian, *De prosodia catholica* 3.1.10 Lentz) it might seem that the grave was used, simply, for marking of *any* unaccented syllable. However, from the specimens of surviving accented papyri it seems that originally the grave sign was used to only certain syllables *preceding* the accented one, whose tone was even lower than that of the remaining unaccented syllables, which is a noteworthy analogy with the practices in Vedic: *all* unaccented syllables are *anudātta*, but a special mark was placed only on the *sannatara* syllables *preceding* the accented (*udātta*) syllable.

The acute allotone of the final syllable, which in modern editions is marked with grave (the 'oxytonic grave'), was not marked – just like the Vedic *udātta*.

It is uncertain at what time the grave sign changed its function from a *sannatara* (low tone syllable preceding the accented syllable) sign into the sign of *any* unaccented syllable (as described by Herodian). Probably these functions were never clearly distinct.

The circumflex mark was composed from the acute and grave marks (´`). As its shape itself demonstrates, the circumflex depicted the rise of the tone in the first mora of a long vowel and the fall of the tone in the second. As the graphic components of the circumflex merged together, it acquired the shape of an angle (ˆ), and later was rounded into an arc

form, like an inverted breve arc. Some time in the Middle Ages the Greek circumflex acquired its wavy tilde-like form (˜).

2.2.3. Glaucus' Tones

In the works of ancient grammarians some other syllabic tones are also mentioned. Glaucus of Samos, according to the fragments of Varro, spoke of six syllabic tones in Greek, calling them by special names. The first three of these Glaucus' tones can be identified with the grave (i.e. *sannatara* grave), the Aristotelian 'middle tone' (i.e., in all likelihood, the 'oxytonic grave'), and the acute. The remaining three tones, according to Varro, are 'variants of circumflex' (*quasi species unius flexae*). The fact that Greek circumflex tone could have different varieties was also mentioned by another obscure Greek grammarian, Theodorus. That said, it is to be concluded that Glaucus' theory of six tones was neither accepted in the theoretic works of other Greek grammarians, nor left any traces in practical Greek accent orthography, where the Alexandrine system remained in use.

It also seems that there was never a specific system of accent notation for any particular Greek dialect. In Greek texts composed in other dialects, the accents were noted in the same Alexandrine system, devised primarily for Homeric and Classical Attic.

2.3. Byzantine System

2.3.1. The Transformation of Greek Pitch Accent into Stress

Although the prosody of ancient Greek radically changed in the 3rd and 4th centuries AD, the old accent marks continued to be written according to the traditional rules.

This transformation of Greek pitch accent into stress can be seen from the orthographic errors in inscriptions and emerging new versification.

Under dynamic stress, the stressed vowel is perceived as acoustically longer than that in an unstressed syllable, and conversely, unstressed long vowel appears shortened. It can be seen in inscriptions from the 3rd and 4th centuries AD onwards that unstressed omega is written as omicron and vice versa, stressed omicron is written as omega, and similarly with other vowels.

It can also be observed that the 4th century AD brings the earliest examples of Greek accentual versification. For illustration, the hexameters by Nonnus (5th century AD), although they formally adhere to the quantitative versification rules, have the word stress coinciding with the verse ictus in an unusually high proportion, especially at the ends of hexameter lines.

In the *Carmina moralia* of another Greek poet, Gregorius of Nazianzus (329–389 AD) we can see both correctly written quantitative hexameters with no attempt to make the word stress coincide with the metrical ictus, and purely accentual hymns composed with no regard to syllable quantities whatsoever.

From the whole of these data we can clearly see that in the 4th century AD the transformation of Greek accent from pitch to stress was an accomplished fact. Without doubt, this transformation also eradicated the audible distinction of syllable tones, but the traditional acute, grave, and circumflex signs continued to by marked by the old rules.

The final syllable acute allotone was still marked with the *sannatara* grave on the penultimate syllable (σὸφος λέγει). The Byzantine practice of marking the 'oxytonic' grave appeared later.

2.3.2. Oxytonic Grave

With time, Greek accent orthography changed because of certain peculiarities of handwriting. When oblique cursive script appeared, the diacritic marks graphically shifted towards the right (e. g. earlier ὁι turned into the familiar οἱ, etc.).

Similarly, the *sannatara* grave also graphically shifted to the last syllable (i. e. σὸφος became σοφὸς as we know it). Thus shifted grave conveniently coincided with the actually stressed syllable. In polysyllabic words, both *sannatara* graves accordingly shifted (that is, γὲὼργος became γεὼργὸς). While the last grave conveniently marked the accented syllable, the purpose of the other grave became unclear. This confusion was settled around 400 AD by the reform of Theodosius of Alexandria, who started to write only one grave on the final actually accented syllable (the 'oxytonic' grave, as it is sometimes called). Thus the Byzantine system of accent notation was born.

This change of the meaning of the grave sign introduced some terminological confusion which persists up to our days: for instance, the term *barytone* in modern usage does not mean a word with a grave accent (βαρεῖα) on the last syllable, but a word with unaccented last syllable — or indeed, with a grave (βαρεῖα) tone in its Alexandrine, not Byzantine, sense.

As the distinction of syllable tones disappeared from living Greek speech, it started to appear as if the grave sign on the last syllable had no other meaning than to mark the end of the word.

Greek circumflex, originally written in the form of an arc like an inverted breve, was graphically transformed into its wavy shape (identical to Latin tilde) some time before the 15th century. The wavy shape of the Greek circumflex became its standard shape in most Greek typefaces.

2.4.   Accent Marks in Latin (the 'Servian Tones')

2.4.1. Greek Tone Marks in Latin

Certain Roman grammarians attested that the distinction between acute and circumflex tones existed also in Latin, so the Greek accent signs could be occasionally used also in the Latin script.

Modern scholars often do not believe that there were actual syllabic intonations in Latin, and conclude that the Roman grammarians invented them in blind imitation of their Greek models. The rule which, according to Roman grammarians, predicts the syllable tone in Latin, is identical to the so-called Greek third mora rule.[1]

A brief attestation of acute and circumflex tones in Latin is in Quintilian (*Inst. Or.* I.5.22–23 and I.5.29–30). A more amplified testimony is in Maurus Servius Honoratus

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[1] This rule is known by various names: *περίσπασις κατηναγκασμένη* ('forced circumflex', a term not attested in ancient Greek texts), *Perispomenierungsgesetz, Dreimorengesetz, ἦμα-Gesetz* or *Hemagesetz, règle de l'intonation de la pénultième, loi de la pénultième longue accentuée, la loi σωτῆρα, the final trochee rule*, and sometimes other names.

(*Comm. in artem Donati* 426–427). For brevity, let the hypothetic syllable tones of Latin, attested by Servius and other Roman grammarians, be called 'Servian tones' in this work.

Scholars had believed the testimonies about the existence of the 'Servian tones' until the 20th century, but in our times they are usually viewed with scepticism. However, the solution of this question – whether different tonemes (syllable tones) in spoken Latin really ever existed or they were forged by Roman grammarians – is not essential to our research. Whatever the answer, the fact remains that the Roman grammarians themselves and their successors in the 16th and 17th centuries firmly believed that acute and circumflex tonemes must have existed in Latin in classical times, and this fact had influence on their way of thinking and the development of accent signs.

The Latin script employed pre-Byzantine Greek accent signs: acute (´), grave (`), and circumflex, which had the old angled form (ˆ). Accent signs were rarely used in Latin script (until the 16th century). The grave sign had the old Alexandrine meaning, that of an unaccented syllable, and there was no 'oxytonic grave'.

2.4.2. The Tilde Mark

For long time (probably since the 4th century AD), there was a wavy supralinear sign in Latin script to mean omitted nasal consonant *m* or *n*. The name of the sign was *titulus*. Since the sign survives in the orthography of Portuguese and Spanish, it is nowadays called by its Spanish name *tilde* (ultimately derived from the Latin name *titulus*). When the Greek circumflex acquired its wavy shape, it happened to become identical in appearance to the Latin tilde sign. Tilde was used in Latin script until 19th century, so most printing houses had letter punches with this sign. It was one of the factors leading to the invention of the wavy circumflex mark in Lithuanian script.

3. The Rise of Explicative Diacritics

Although the accent signs primarily had phonetic and prosodic meaning, with time their usage accreted with formal orthographic rules. The earliest germs of purely explicative use of accent marks (that is, to distinguish otherwise homonymous words, such as ó and ȏ) had already appeared in Byzantine Greek.

In the 16th century the system of explicative accent marks was introduced into Latin script. In this research we pay especial attention to those cases where an accent mark was written on an actually *unaccented* syllable of the Latin word. According to Burkard, this was the 'last phase' of the Latin accent orthography in the 16th century (Burkard 2003, 35). For brevity, let this system be called humanist Latin orthography.

In this system, Greek accent signs (especially grave and circumflex, less frequently acute), usually on the last syllable of a Latin word, were written not to denote the actual word accent (which is almost never on the last syllable in Latin), but to explain certain morphological categories and to distinguish otherwise homonymous word forms.

While we observe this orthography in most late 16th and 17th century Latin books, it is legitimate to ask what reasons made humanist grammarians believe that an *accent mark* in a word does not necessarily have to *coincide with the actual place of the word accent*.

The humanist Latin orthography was one of the consequences of the 'Henninian' accentuation system in the studies of Greek. According to this system, Greek words were to be accentuated according to the Latin rules, and the written accent of Greek was to be ignored. This entails another legitimate question: how this system came into existence, and what made many Renaissance philologists to accept it.

3.1. Henninian Accentuation

3.1.1. The Origin of the Henninian System

In the 16th and 17th centuries Dutch scholars interested in Greek prosody and versification did not fully understand the difference between accent and ictus, and the nature of classical quantitative versification. The fact that the same Greek words were to be accented differently in verse and in ordinary speech seemed an anomaly which required rational explanation.

In 1673 the Dutch scholar Isaac Vossius published a treatise *De poematum cantu*, in which he argued that genuine ancient Greek word accents should be in concordance with the verse ictus. He based his reasoning on various deductions, but especially on the versification of classical Greek hexameters. According to Vossius, if we were to accentuate Greek words according to Latin rules, the word accent would frequently coincide with the metrical ictus (especially in the ends of lines, just as in Latin hexameter). So he made a conclusion that accentuation rules identical to those of Latin were the genuine Greek accentuation in Homer's time. In 1684, a German-born Dutch scholar H. C. Henninius (Henning) published another book, ΕΛΛΗΝΙΣΜΟΣ ΟΡΘΩΙΔΟΣ, in which he promoted this theory. It happened that this system was later called by his name, 'Henninian accentuation', although this theory was already known a century earlier.

We can see that the proponents of the Henninian system based their theory on the comparison of Greek hexameters with Latin hexameters. It is natural that if Greek words were to be accentuated according to the Latin rules, the percentage of coincidences of accent and ictus in Greek hexameters would automatically be the same as in Latin hexameters. So a brief analysis into the relation of accent and ictus in Latin hexameters would be useful here.

Hexameter and other forms of quantitative versification were borrowed by Latin from Greek, and the quantitative principles were strictly observed. However, a certain tendency towards the coincidence of word accent and metrical ictus can be observed in Latin verse, which is absent from the Greek models. Usually accent and ictus coincide in the second half of a Latin hexameter line, especially the last two feet of the line. In the first half of the line the word accent is more often in discord than in concord. This tendency, as has been already observed, displays a slow but steady statistical growth from Ennius to Virgil.

As appears from a metrical analysis of Latin hexameter lines, this tendency of the coincidence of accent and ictus is an automatic consequence of another regularity, that of the dependence of the Latin word accent upon the metrical structure of the Latin word. In another words, if only a poet avoids a monosyllabic word at the end of a hexameter line, the coincidence of word accent and metrical ictus at the end of line is achieved automatically, without special effort. In Greek, there is no such dependence between word accent and the word's metrical shape, so there is no such automatic accent and ictus relation in Greek hexameters. Such accent and ictus relation in Greek hexameters can be achieved only by conscious effort, and actually appears in Greek poetry no earlier than the 5th century AD, as in the hexameters of Nonnus.

This principle of Latin hexameters, that of the concord between accent and ictus in the second half of a line and discord in the first half, has no name. Since we must refer to it frequently in this work, a short name would be useful. So we take a liberty here to give this phenomenon a short name. Let the coincidence of the accent and ictus be called *symptosis*, and the discord between them, *paraptosis*. A combination of these two principles in different halves of the same line may therefore be called *heteroptosis*.

At first an automatic and unavoidable consequence of other regularities, with time heteroptosis started to live its own life. This can be evidently seen from the hexameters of Commodianus (who lived some time between the 3rd and 5th centuries AD), which are composed with no regard whatsoever to the syllable quantities, but according to the heteroptosis principle alone (some scholars therefore call them accentual imitations of hexameters).

This heteroptosis principle, sometimes alone with no regard to syllable lengths, and sometimes in conjunction with the quantitative principle, was later used in hexameters written in other languages as well.

From the specimens of 16th century English hexameters by Thomas Watson and Gabriel Harvey, quoted by W. S. Allen, we can see that they were also composed in the heteroptosis principle, the syllable lengths sometimes being imaginary and deduced from the spelling.

The same principle was also employed in the anonymous Lithuanian hexameters of 1589. As Franz Brender concluded in 1933, the 1589 hexameters attempted quantitative versification, the actual syllable quantities often being real according to the phonetics of Lithuanian, but at times also short syllables being 'lengthened' by orthographic means. To this analysis we add that the Latin heteroptosis principle is clearly seen there, the word accents being mostly in concord with the hexameter ictus at the ends of lines (with rare exceptions), and mostly in discord in the first halves of the lines.

These facts add to our understanding of the genesis of the 'Henninian accentuation'. Since the philologists of the time supposed that the heteroptosis principle was universal, and the versification had necessarily be related to word stress, they naturally concluded that ancient Greek hexameters should also have been subordinated to this principle, in their opinion a universal one. An explicit specimen of such reasoning we can see in the previously mentioned treatise by Vossius.

The genesis of the Henninian accentuation in Greek can also be observed in the analysis of 16th and 17th century Sapphic stanzas, in the same way as in the above analysis of hexameter.

3.1.2. Henninian System in Lithuania and Sapphic Stanza

The Henninian system was attested in Lithuania as early as 1604. A Greek Sapphic poem *Odarion*, of disputed authorship, published that year in Vilnius, reveals that the Henninian system was already known at the University of Vilnius at the time.

The metrics of the *Odarion* are curiously complicated. Two different versification systems are employed in the *Odarion* at the same time: it can be read as a correct quantitative Sapphic and, using the Byzantine pronunciation and Henninian accentuation, as an accentual rhymed poem. This illustrates both the Henninian system in use, and its genesis from the accentual reinterpretation of classical quantitative metre.

While the *Odarion* stanza satisfies all requirements for a correct quantitative Sapphic, two differences can be observed: a caesura after the fifth syllable (which was optional in Aeolic poets), and obligatorily long 4th syllable (which was anceps in Aeolic poets). In another words, the quantitative versification of the Greek *Odarion* imitates not the Greek Sapphic stanza of the Aeolic poets, but the Latin Sapphic stanza of Horace.

The Horatian reform, as it is known, of the Sapphic stanza – the obligatory length of the 4th and obligatory caesura after the 5th syllable – arranges the Latin word accents in the stanza in a symmetric and rhythmical order. This fact has caused further accentual reinterpretation of the stanza in the Middle Ages, as can be seen from Paulus Diaconus' *Ut*

queant laxis (8th century AD) and other poems. The emerging accentual rhythm, different from the quantitative Sapphic rhythm, can be seen from medieval rhymed Sapphics, such as *O salutaris micans stella maris*. In another words, such analysis of the Sapphic stanza led 16th and 17th century scholars to the same conclusion as did their analysis of hexameter: always stress the long penultimate, and thus most accent and ictus clashes may be avoided. The versification of the *Odarion* illustrates such a principle applied to Greek, that is, de facto the Henninian system (although long before the birth of Henninius himself).

3.1.3. The Chronology, the End, and the Legacy of Henninian Accentuation

Although the system of accentuating Greek words by Latin rules is called by the name of Henninius who published his treatise in 1684, in fact we have the following chronology. 1580: the first indirect testimony of the 'Henninian' accentuation in England, in a letter of Gabriel Harvey to Edmund Spenser; 1604: direct attestation in Lithuania (*Odarion*); 1673: the treatise of Vossius; 1684: the treatise of Henninius. Conclusion: the 'Henninian' system in fact appeared in the second half of the 16th century.

This artificial accentuation of Greek gradually disappeared in the 19th century (although, according to W. B. Stanford, in England, at least in some universities, it was still in use at the beginning of the 20th century). The last known specimen of the Henninian accentuation in poetry, according to W. S. Allen, is the poem *Blind Bartimeus* by Henry Wadsworth Longfellow (1807–1882), written in English with New Testament quotations in Greek.

Before sinking into oblivion, the Henninian accentuation left a certain legacy: because of it, Greek accent marks became purely explicative diacritics in Latin script (often marked on *unaccented* syllables), which in turn had a significant influence on the creation of Lithuanian accent notation.

3.2.   Humanist Latin Orthography

Accent marks in Latin orthography of the 16th and 17th centuries were recently researched by Piet Steenbakkers (1994) and Thorsten Burkard (2003). They concluded that, although accent marks were occasionally written in Latin since the Middle Ages, it was only from the second half of the 16th century that circumflex mark started to be written on *unaccented* Latin case endings. An attempt was made to explain such practice by the analogy with the usage of the Roman *apex* mark as described (more exactly, prescribed) by Quintilian. In this work we propose a different explanation, that of the influence of the 'Henninian' accentuation in Greek.

Accentuation of Greek words according to the Henninian principle loosened the relation between a written accent mark and the actually accented syllable in the reader's mind. For example, gen. sg. ἀγυιᾶς and acc. pl. ἀγυιάς, pronounced in the Henninian manner, would be stressed, both alike, on the penultimate, and the reader might have an impression that the purpose of the accent mark on the final, unaccented, syllable, was nothing else but to distinguish and explain grammatical forms. In this way the accent marks become de facto explicative diacritics.

3.2.1. Preconditions for Humanist Latin Orthography

As already mentioned, in the Byzantine accent notation of Greek the grave mark had acquired the meaning of 'oxytonic grave'. A similar reform never happened in the Latin script, and the teaching of Roman grammarians, that the purpose of the grave was to mark an unaccented syllable, remained valid. This caused uncertainty among Renaissance Latin grammarians as to the true meaning of the grave sign. As mentioned, the legacy of this ambiguity still remains in such linguistic terms as 'barytone'.

When reading the explanations of humanist grammarians on the matter, one cannot abandon a suspicion that they were similarly confused about the meaning of the circumflex mark. The *ancient* grammarians taught that in pronouncing a circumflex, the tone of voice first rises, then falls. Compare the explanation by Petrus Ramus in 16th century: "Acuto syllaba elevatur, hebes est gravis aut flexus. Gravi syllaba deprimitur, flexo tum elevatur, tum deprimitur." From such wording one can understand that a syllable marked with a circumflex 'sometimes is accented, sometimes unaccented' – as if the circumflex mark could be written on both accented and unaccented syllables with no regard to actual accentuation. From the analysis of humanist Latin orthography it indeed seems that many understood the meaning of circumflex in exactly this way.

Also, it is to be borne in mind that the Latin syllable tones, as described by Servius and other Roman grammarians, are predictable by the Greek third mora rule. Therefore, marking a 'Servian tone' of a Latin word with an accent mark would not furnish much information about the grammatical form (e. g. nom. sg. *domus* and gen. sg. *domūs* would have the same 'Servian tone', '*dómus*'). Similarly in Greek itself the case forms of non-final accentuation, such as gen. sg. ἡμέρας and acc. pl. ἡμέρας, look identical, while the case forms of final accentuation would be clearly distinguished by the toneme of the final syllable, such as acc. pl. θεάς and gen. sg. θεᾶς. So it is obvious that to distinguish homonymous (or more exactly, homographic) Latin word forms it would be most convenient to place an accent mark on the final syllable, which would imitate the Greek syllable tone of the corresponding Greek word form. However, Latin words almost never have the accent on the final syllable, so an acute mark would be clearly out of place there, because it is devised for actually accented syllables ("acuto syllaba elevatur"). However, the grave mark (the Latin grave, derived from the Alexandrine Greek grave, not from the Byzantine 'oxytonic grave') is devised for exactly this purpose, to mark an unaccented syllable ("gravi syllaba deprimitur"). Therefore, a grave sign on the last syllable of a Latin word would not be in conflict with the actual Latin accentuation and would be a convenient instrument of graphical distinction. But the circumflex mark is also "hebes"; the syllable marked with a circumflex "tum elevatur, tum deprimitur". Therefore, a circumflex mark can also find a place on the final syllable of a Latin word for the purpose of form distinction. However, a syllable marked with a circumflex sometimes also "elevatur"; that is, a circumflex can be written also on an accented syllable, especially on a long penultimate, in conformity with the Greek third mora rule (which would be also in concord with the 'Servian tone'). In addition to this, Latin words of the iambic or anapaestic metrical shape (e. g. gen. sg. *domûs, gemitûs*), because of their very shape, in Latin verse (except the metres which admit resolution) can only have ictus on their final (because long) syllable. But the humanist grammarians, as we have seen, did not quite understand the difference between ictus and accent. So it seemed that the final syllable of, say, *domûs*, indeed 'tum elevatur' (when reciting verse), 'tum deprimitur' (when reading prose).

The acute mark is reserved only for actually accented syllables, but, because the place of Latin accent is almost always predictable, there is rarely any need at all to employ it in

writing. As was shown by Steenbakkers (1994), acute mark was used only before the enclitic conjunction -*que* (also before less frequent particles -*ne*, -*ve*), but even in these cases the acute mark was often shifted rightwards on the first letter of the particle, so the sign -*q́;* for -*que* de facto became an abbreviation symbol in its own right, and acute accent proper was seldom needed on vowel letters.

Such is our attempt to reconstruct the way of thinking of the humanist grammarians concerning the purpose of the accent marks in Latin. In the next chapter we adduce examples of actual Latin orthography in 16th and 17th centuries to confirm this reconstruction.

3.2.2.   Examples of Humanist Latin Orthography

The archaic genitive singular -*ās* of the *ā*-stems (the first declension) is marked with a circumflex: *aurâs, Majâs, paterfamiliâs, materfamiliâs*, in imitation of Greek gen. sg. -ᾶς.

The genitive singular of the *u*-stems (the fourth declension) is marked with a circumflex, such as *domûs*, as if in imitation of the Greek εὐτυχοῦς, Σαπφοῦς, αἰδοῦς or similar.

The nominative singular -*ūs* of the Greek names ending in -οῦς in the original, is also written with a circumflex: *Trapezûs, Hierichûs*.

The genitive plural ending -*um* (= -*ōrum*) was written with a circumflex mark, such as *deûm* (versus unmarked acc. sg. *deum*), in imitation of the Greek gen. pl. ending -ῶν.

The genitive partitive of the personal pronouns *nos*, *vos* was marked with circumflex: *nostrûm*, *vestrûm* (versus unmarked acc. sg. masc. and nom./acc. sg. neuter of the possessive *nostrum*, *vestrum*), in imitation of Greek ἡμῶν, ὑμῶν.

The ablative singular of the *ā*-stems (the first declension) was marked with a circumflex: *linguâ, Româ,* versus unmarked nom. sg. *lingua*, *Roma*. This particular case is likely to have been indirectly influenced (or at least *a posteriori* justified) by Quintilian's teaching (1.7.3) about the usage of the *apex* mark.

Sometimes the explicative diacritic of the humanist Latin orthography coincided with the actual word accent: *nostrâs, Samnîs*, which, according to Roman grammarians, could have been accented on the last syllable.

The grave mark on the last syllable was often used to distinguish adverbs, prepositions, and some other, usually indeclinable (Steenbakkers 1994, Burkard 2003), words: *maximè* (adverb) versus *maxime* (vocative), *cùm* (conjunction) versus *cum* (preposition), *verò* (conjunction) versus *vero* (dat./abl. sg.), *quòd* (conjunction) versus *quod* (pronoun) etc. For the logic of such orthography, compare also Quintilian's mention (1.5.26) of the oxytonesis of auxiliary words, and the Greek oxytonic grave, especially frequent in prepositions (ἀνὰ, κατὰ, μετὰ, ὑπὸ etc).

Various humanist grammarians proposed also other orthographic rules to distinguish homographs, such as to mark the accent on the penultimate syllable according to the Greek third mora rule, such as to write *lăbor* and *lābor* respectively *lábor* and *lâbor*, or to write *pône* (imperative of a verb) but *ponè* (preposition).

Sometimes contracted or syncopated word forms were written with a circumflex (*dî* = *dii*, *nîl* = *nihil*, *mî* = *mihi*, *nôrat* = *noverat*, etc.) in imitation of the Greek contracted forms with the circumflex from the first mora accent: νόος > νοῦς, φάος > φῶς etc.

The system of explicative diacritics in Latin orthography was abandoned between 18th and early 19th centuries.

4. The Beginning of Accent Marking in Lithuanian

In literature it is often stated that Lithuanian accent marks were invented by Friedrich Kurschat; sometimes Daniel Klein is also credited. In fact Kurschat merely regularised Lithuanian accent notation, but he based his system on the tradition of Daniel Klein. A deeper analysis of old Lithuanian writings reveals that Klein was not the inventor of Lithuanian accent notation; he followed an older tradition, which can be traced back to the second volume of Mažvydas' Hymnal (1570).

4.1. Accent Marks in Mažvydas

In the 1547 Catechism of Mažvydas, there is only one tilde-shaped accent mark; although curiously it coincides with the modern accent mark in this word form, this is probably accidental. A few instances of tilde-shaped circumflex and one word form with an acute are found in the second volume of Mažvydas' Hymnal (1570). The tilde-shaped circumflex on the genitive plural ending in *praſtũ*, *iawũ* imitates the Latin nasalisation tilde (as in *deorũ*) as well as the Greek circumflex (as in θεῶν).

It is to be borne in mind that at the time of publishing the Catechism of Mažvydas, the explicative diacritics had not yet come into general use in Latin itself (as can be seen in Mažvydas' Latin orthography in his own Latin preface to the Catechism).

4.2. Accent Marks in the Writings of Baltramiejus Vilentas

A more advanced system of accent notation can be observed in the Gospels and Epistles of Baltramiejus Vilentas (1579), who used acute, grave, angled circumflex, and tilde-shaped circumflex. The latter was used exclusively in the genitive plural ending *-ũ*, a practice that seems to be modelled on the Greek circumflex as in θεῶν, and Latin nasalisation tilde as in *deorũ*, as well as the humanist Latin explicative circumflex as in *deûm* (=-*orum*). In nearly half of all cases where the tilde-shaped circumflex is found in Vilentas, it is written on the genitive plural ending, which is not actually accented. In other words, the tilde-shaped circumflex is used as an explicative diacritic mark.

The usage of other accent marks in the writings of Vilentas is inconsistent.

4.3. Lithuanian Accent Notation in the Grand Duchy

While the said developments were going on in Lithuania Minor, in the Grand Duchy of Lithuania we see a much simpler system: accents are rarely marked, and there is no attempt to harmonise the form of the accent marks with Greek accentuation or Latin orthography. The hexameters of 1589 have but a few acutes, which however always indicate the *actually accented* syllable, with no attempt to use accent marks as explicative diacritics.

In Mikalojus Daukša's *Postilla* of 1599, the accent marks are acute, the Latin angled circumflex, and sometimes also a dot accent. Only the actually accented syllables are marked, but the different accent marks (acute, circumflex, and the dot) are used without any consistency whatsoever.

4.4. Accent Notation in the 1625 Psalter by Jonas Rėza

The accent marks used by Rėza in his 1625 Psalter are acute, grave, angled circumflex and dot mark. The circumflex in Rėza's Psalter has both functions: that of signifying the actual word accent, and that of distinguishing otherwise homographic word forms. In the latter case it does not necessarily occur on the actually accented syllable. Like in other authors, very often the circumflex in this capacity is employed in the genitive plural ending *-û* (like in Latin *-ûm*).

It seems likely that Rėza did not have the conscious intention of conveying actual Lithuanian tonemes (syllable intonations), as is shown by the inconsistencies in his use of accent marks. A special case seems to be the circumflex on *ê*: here the accent sign appears to have an additional phonetic meaning – that is, Rėza's *ê* usually corresponds to the long narrow vowel (*ė* in modern orthography). This practice was apparently based on intuitive comparison of humanist Latin orthography (such as *legere* versus *legêre*) with Lithuanian phonetics.

The dot accent is used in the inessive (locative) singular ending *-ė* (*-e* in modern orthography), sometimes also in the instrumental singular, and rarely in the inessive plural. Like circumflex, the dot accent does not always coincide with the actually accented syllable. The sign was most likely modelled on the humanist Latin circumflex distinguishing the ablative singular ending *-â*, as can be deduced from the relevant chapter in Daniel Klein's Lithuanian Grammar.

4.5. The Influence of Rėza's Accent Notation to Daniel Klein

Rėza's system of marking accents in writing is notably close to that of Daniel Klein. Apparently Klein was familiar with Rėza's work and adopted some of his practices; but, being a man of greater linguistic ability, he had a better grasp of the actual syllabic intonations of Lithuanian. However, many of the similarities between Rėza's and Klein's accent notation can be simply explained: both authors based their systems on humanist Latin spelling habits and Greek accentuation.

The principal similarities between Klein's and Rėza's Lithuanian accent notation are as follows: genitive plural is marked with angled circumflex (*-û*); genitive singular of *ā* and *ē* stems (including pronouns) are marked with angled circumflex (*-âs*, *-ês*); instrumental singular ('ablativus instrumentalis') of *ē* stems is marked with a dot accent (*-ė*); adverbial ending *-os* is marked with angled circumflex (*-ôs*), apparently in imitation of the Greek adverbs in -ῶς ; thematic vowels *-o-* or *-ė-* (actually acute) are marked with angled circumflex in verbs (apparently by an illusory analogy with Greek contracted verbs and such humanist Latin spellings as *nôrat*, *fuêre* etc).

4.6. Synchronic Development of Latin Orthography and Lithuanian Accent Notation

It can be observed that the arrival of accent marks in Lithuanian is roughly contemporary with the rise of explicative diacritics in the Latin orthography: accent marks are rare and occasional in Mažvydas (as well as in his Latin writings), but towards the end of the 16th and in the 17th century the accents become much more regular and frequent (in both Latin and Lithuanian, as can be evidently seen in Klein's Grammar).

4.7. Lithuanian Grammar by Sapūnas and Šulcas

Various accents are marked also in the 1673 Lithuanian grammar by Sapūnas and Šulcas, known as the Compendium. At first sight it might seem that accent notation in the Compendium is desperately chaotic.

This apparent chaos stems from the circumstance that the authors of the Compendium had invented phonetic dots or strokes (*puncta* or *virgulae*) of their own, but their accent marks (acute, grave, and angled circumflex), as well as the whole doctrine of accent notation, were copied verbatim from Klein's Grammar. As it happened, Sapūnas' and Šulcas' phonetic *puncta* or *virgulae* were printed as grave marks, which visually coincided with the Kleinian grave accent proper; add to this the hesitation of the authors themselves as to which mark to use in a particular case (and probably also some typesetter's errors).

Our analysis of the Compendium text shows that its authors sanctioned the use of the circumflex mark on the genitive plural ending -*û*, in concord with Klein, but independently from him (that is, before adopting Klein's accentuation chapter into the original text of the Compendium). This circumflex on genitive plural -*û* was without doubt influenced by the humanist Latin circumflex in -*ûm* and Greek -ῶν, and continues the Mažvydas', Rėza's, and Vilentas' tradition of marking this ending -*û* or -*ũ*.

4.8. Mechanical Application of Greek Accentuation Rules in Klein

In the writings of Klein and his contemporaries we can see a system of accent notation where the accent signs are primarily intended to clarify grammatical forms but do not always coincide with the actually accented syllable. We can also observe a mechanical application of Greek accentuation rules to Lithuanian words, as well as an analogy with visually similar Greek word forms, in choosing accent marks. As a result, the written accents, even if they fall on the right syllables, might not always coincide with the actual Lithuanian tonemes (syllable intonations).

In applying the circumflex to the endings of genitive singular and plural, Klein did not consider it important that in some cases the accent mark falls on the actually accented syllable (as in *garbês*), and sometimes not (as in *motês*). Similarly, as was mentioned earlier, Latin grammarians of the time did not care that, say, the words *Româ*, *domûs*, *paterfamiliâs*, or *deûm* are not accented on the final syllable, although *nostrâs* and *Arpinâs*, arguably, are.

In those cases where Klein's accents are on the actually accented syllable, the toneme is often right, but sometimes wrong. Klein's attempts to follow analogies with Greek accentuation are evident in the following cases. Genitive singular as in *giesmês* is marked with a circumflex like Greek -ῆς (cf. Latin *paterfamiliâs*); the ending is indeed circumflex in Lithuanian (-*ẽs*). Genitive plural as in *senû, dienû* is marked with circumflex like Greek -ῶν (cf. *deûm*); the Lithuanian ending is indeed circumflex (-*ų̃*). The interjection *ô* is marked with circumflex like Greek ῶ (the same orthography *ô* is also seen in humanist Latin); the Lithuanian interjection is indeed circumflex (*õ*). Adverbs in -*os*, such as *atgalôs,* are marked with a circumflex on illusory analogy with Greek adverbs in -ῶς (as in καλῶς etc., similarly also in humanist Latin orthography *sophôs* = σοφῶς); the Lithuanian ending is indeed circumflex (*atgaliõs*). Nominative plural -*ai*, as in *kełaì,* is marked with a grave, on visual analogy with Greek nominative plural -οὶ ; the Lithuanian ending is actually circumflex (*keliaĩ*). The verbal thematic vowel -*ė*-, as in *mylêti,* is marked with a circumflex, partly by the Greek third mora rule, partly by illusory analogy with Greek contracted verbs, partly by

the illusory analogy with certain Latin verb forms, as discussed earlier; the Lithuanian forms are actually acute (*mylė́ti*).

Klein explicitly states that, according to the rules of grammar (meaning Greek grammar) circumflex cannot exist on the antepenultimate syllable. We can see instances where Klein intuitively correctly marked the Lithuanian toneme, and then on second thought he changed it by mechanically applying Greek rules, such as *rûpeſtis* was changed into *rúpeſtis* (which is actually circumflex, *rũpestis*).

4.9.   The Correspondence of Greek and Lithuanian Tonemes in Case Endings

Although in marking Lithuanian accent Klein and his contemporaries followed Greek accentuation rules and visual analogy (either grounded or illusory) with similar Greek forms, in many cases the Lithuanian accent thus marked is correct. This is especially evident in the genitive singular endings *-ês* and *-ôs*, as well as the genitive plural ending *-û*.

The actual correspondence of the circumflex in these endings in Greek and Lithuanian is not accidental, but stems from some phonetic phenomenon in the Indo-European proto-language itself. In this work we deliberately set apart the question of exactly what phenomenon it was, but the affinity of the syllabic intonations in case endings in Greek and Lithuanian is an established fact (at least, it has never been convincingly disproved).

4.10.   How the Grave Accent Came to Denote a Short Accented Syllable

The meaning of the written grave accent changed with time in the classical languages themselves, and in Lithuanian system the grave sign came to denote a short accented syllable.

The earliest use of the grave sign in this capacity can be observed in Klein. Adhering to the Greek rules, Klein employs the grave mark only on the last syllable (actually accented) of certain word forms (such as nominative singular *akìs, alùs*, first and second person singular of verbs, as in *regiù, regì*) to distinguish them from other, homographic but differently accented, forms. It is probable that in marking the Lithuanian third declension nouns, such as *akìs*, with the grave, Klein was also influenced by the visual analogy with Greek third declension nouns as ἐλπὶς (which are actually from consonantal stems; the visual similarity with the Lithuanian forms is merely accidental).

It happened that the syllable thus marked with a grave by Klein was de facto short in most cases.

Eighty-four years after Klein, in the 1737 grammar, we already see the rule concerning the grave sign: "gravis accentus in ultimis syllabis positus notat eas singulari brevitate pronunciandas, v[erbi] g[ratia] *awìs*" (grave accent, written in final syllables, indicates that they are to be pronounced with especial brevity, as in *awìs*).

Later the orthographic restriction of the last syllable (inherited from the Greek oxytonic grave) was dropped, and in modern Lithuanian system grave mark denotes any short accented syllable.

5. The Rise of Modern System of Accent Notation in Lithuanian

5.1. Universitas Lingvarum Litvaniae

The 1737 grammar *Universitas Lingvarum Litvaniae* is the first Lithuanian grammar to correctly mark Lithuanian accents, guided by the sound of Lithuanian alone, without mechanical application of Greek rules or other conventions. The system of accent notation employed in the *Universitas Lingvarum Litvaniae* is nevertheless consistent with the Graeco-Latin tradition in its choice of the circumflex sign to mark the Lithuanian circumflex accent. In the printed 1737 book the accent notation appears, however, somewhat awkward – an accentless letter of a different typeface is substituted for a letter with acute – but we argue that this oddity was not the original author's intention but was due to the lack of accented letter punches at the Vilnius University printing house, as acute marks were seldom used in humanist Latin orthography.

5.2. The Alternative Tradition of Lithuanian Accent Notation

In 19th century it was observed that Lithuanian *acute*, which can be interpreted as the accent of the *first* mora of a long syllable, should be phonetically closer to the Greek *circumflex*; and the Lithuanian *circumflex*, being the accent of the *second* mora, should be phonetically closer to the Greek *acute*.

From the point of view of historical linguistics, however, the Lithuanian circumflex in case endings corresponds to the Greek circumflex, and the same with the acute – although the phonetic realisation of these tonemes appears to be inverted in Greek and Lithuanian. Let these two different correspondences be called, respectively, *genetic* (Greek nom. θε-ά, gen. θε-ᾶς = Lithuanian nom. *ger-ó-ji*, gen. *ger-õs-ios*) and *phonetic* (Greek rising tone, named 'acute' = Lithuanian rising tone, named 'circumflex', and accordingly with the falling tone).

While the traditional system of Lithuanian accent notation came to be based on the *genetic* correspondence, in 19th century another system was devised, consciously based on the *phonetic* correspondence. The earliest proponent of this system was Simonas Stanevičius. Stanevičius' system was adopted by Kazimieras Jaunius, then inherited by his disciple Kazimieras Būga, who later abandoned this notation, and reverted to the traditional system, as reformed by Kurschat.

5.3. The Reform of Kurschat

Lithuanian accent notation was given its final form by Friedrich Kurschat, who also gave the Lithuanian circumflex sign its present wavy shape, directly and consciously, as he himself admits, derived from Greek (especially from the Greek typefaces current in Germany and France; in Anglophone countries the Greek circumflex often still has the older arcuate form).

As we have seen, the choice of written signs for marking Lithuanian accents, through nearly all of its history, has stemmed from one or another comparison of Greek and Lithuanian tonemes (syllable intonations). It has been asserted that Adalbert Bezzenberger was the first to notice the correspondences between Greek and Lithuanian tonemes in the case endings, but this is not quite correct. Bezzenberger was the first to present this fact to the

studies of Indo-European linguistics (in his 1883 article), but the fact itself had been intuitively noticed by old Lithuanian grammarians centuries earlier.

6. Conclusions

1. The system of accent notation in modern Lithuanian orthography, finally regularised by Friedrich Kurschat, derives, in an uninterrupted development, from the system of accent notation used in Lithuania Minor since the second half of the 16th century. The earliest germs of this system are found in the writings of Mažvydas.
2. The system of accent notation used by the authors of Lithuania Minor derives, in turn, from the Latin system of diacritic marks, where accent marks of Greek origin, especially grave and circumflex, were written on the last syllables (actually unaccented) of Latin words, to distinguish homographic word forms and to clarify morphological categories.
3. The system of diacritic marks in humanist Latin orthography arose in the second half of the 16th century because of the 'Henninian' system of accentuation used in the study of ancient Greek in European universities (from an erroneous supposition that Greek words ought to be accented according to the Latin rules, ignoring the written accent marks).
4. The 'Henninian' accentuation used in the study of ancient Greek, which arose in England and Holland, and in Lithuania was first attested in 1604 (that is, before the birth of H. C. Henninius himself), in turn stemmed from incorrect analysis of classical quantitative versification (especially hexameter and Sapphic stanza) in 16th and 17th centuries. Such reinterpretation of ancient versification forms is attested in the Greek poem *Odarion*, composed in Vilnius in 1604, as well in the Lithuanian hexameters of 1589.
5. The said reinterpretation of classical quantitative versification in 16th and 17th century was caused by the heteroptosis observed in classical Latin hexameters. The heteroptosis principle (when word accent and verse ictus are mostly in discord in the first half of a line and in concord in the second) emerged in classical Latin verse because of the automatic dependency of the Latin word accent on the quantitative shape of the word, and later it was reinterpreted as a complementary principle of Latin versification. The Lithuanian hexameters of 1589 are also composed according to the heteroptosis principle.
6. The 'Henninian' system used in the study of ancient Greek, the Latin system of diacritic marks, and the Lithuanian system of accent marks (often also not phonetic, but purely explicative) appeared at approximately the same time, the second half of the 16th century. The 'Henninian' system in Greek studies disappeared also at about the same time (19th century) as the diacritic marks in Latin orthography. At about the same time Kurschat regularised Lithuanian accent notation.
7. A distant legacy of these 16th and 17th century theories is the modern Lithuanian system of accent notation, where acute and circumflex tonemes in Greek and Lithuanian are marked with the same marks. The meaning of the grave mark has changed.
8. Besides the accent notation system of Lithuania Minor, for some time there was the accent notation tradition of the Grand Duchy of Lithuania, represented by Mikalojus Daukša and the hexameters of 1589. In this system, only the really accented syllables are marked (that is, there are no explicative accent marks on unaccented syllables), and no attempts are made to mark the distinction of tonemes or to match the shapes of the accent marks to those in Greek.
9. A certain junction of these two traditions of Lithuanian accent notation (that of Lithuania Minor and the Grand Duchy) was the 1737 grammar *Universitas Lingvarum Litvaniae*,

where only the actual Lithuanian tonemes were marked, without applying Greek rules or analogies, or marking explicative accents on unaccented syllables. However, the author of the 1737 grammar also adhered to the Graeco-Latin tradition in choosing the circumflex mark to mark Lithuanian circumflex intonation. The acute intonation was originally intended to be marked with an acute mark, but the printing house, lacking properly made letter punches, substituted accentless letters of a different typeface for the acutes.

10. The alternative system for Lithuanian accent notation of Simonas Stanevičius and Kazimieras Jaunius partly continued the GDL tradition started by Daukša, and partly was based on the achievements of the 1737 grammar, but the shape of the signs for marking Lithuanian accents were chosen by Stanevičius according to the hypothetical phonetic similarity to ancient Greek.

Klasikinių kalbų kirčio žymėjimo įtaka lietuvių kirčio žymėjimui

Disertacijoje tiriama lietuvių kalbos kirčio ir priegaidžių žymėjimo (akcentografijos) sistemos kilmė iš graikų kalbos kirčiavimo ir lotynų kalbos rašyboje XVI amžiaus antrojoje pusėje susiformavusios diakritinių ženklų sistemos, kurią senieji lietuvių autoriai perkėlė į lietuvių rašybą.

Dabartinė kirčio žymėjimo sistema lietuvių kalbos rašyboje, galutinai sutvarkyta Fridricho Kuršaičio, nepertraukiamos raidos keliu kyla iš kirčio žymėjimo sistemos, vartotos Mažojoje Lietuvoje nuo XVI amžiaus antrosios pusės. Pirmosios šios sistemos užuomazgos randamos jau Mažvydo raštuose.

Mažosios Lietuvos autorių vartota kirčio žymėjimo sistema savo ruožtu kyla iš humanistinės lotynų kalbos rašybos eksplikatyvinių diakritikų sistemos, kurioje graikiškos kilmės kirčio ženklai, ypač gravis ir cirkumfleksas, dažnai buvo žymimi paskutiniame (nekirčiuotame) lotyniško žodžio skiemenyje homografinėms žodžių formoms atskirti ir morfologijos kategorijoms paaiškinti.

Humanistinės lotynų kalbos rašybos eksplikatyvinių diakritikų sistema susidarė XVI amžiaus antrojoje pusėje dėl vadinamosios „Heninijaus" kirčiavimo sistemos senosios graikų kalbos studijose Europos universitetuose (manant, kad graikiškus žodžius reikėtų kirčiuoti pagal lotyniškas taisykles, rašytinius kirčio ženklus ignoruojant; taip rašytiniai kirčio ženklai to meto filologų mąstysenoje tarsi nustojo fonetinės reikšmės).

„Heninijaus" sistema senosios graikų kalbos studijose, atsiradusi Anglijoje ir Olandijoje, o Lietuvoje pirmą kartą paliudyta 1604 m. (t. y. prieš paties H. C. Heninijaus gimimą), savo ruožtu kilo iš klaidingo antikinės eilėdaros (ypač daktilinio hegzametro ir mažosios sapfinės strofos) interpretavimo XVI ir XVII amžiuje. Tokį interpretavimą iliustruoja 1604 m. Vilniuje sukurto graikiško eilėraščio *Odarion* sapfinė strofa, ir lietuviškas 1589 m. hegzametras.

Klaidingą antikinės eilėdaros interpretavimą XVI amžiuje labiausiai sąlygojo heteroptotinis principas lotyniškame hegzametre. Pats heteroptotinis principas lotynų poezijoje susidarė dar klasikinėje Antikoje dėl automatinės lotyniško žodžio kirčio priklausomybės nuo skiemens kiekybės, o vėliau buvo suvoktas kaip papildomas eilėdaros principas. 1589 m. lietuviškas hegzametras irgi sukurtas heteroptotiniu principu.

Heninijaus sistema graikų kalbos studijose, lotynų rašybos eksplikatyvinių (gramatines formas aiškinančių) diakritikų atsiradimas ir kirčio ženklų (taip pat dažnai ne fonetinių, o tik eksplikatyvinių) atsiradimas lietuvių kalboje įvyko vienu metu, XVI amžiaus antrojoje pusėje. Heninijaus sistema graikų kalbos studijose išnyko irgi maždaug tuo pat metu (XIX amžiuje), kaip ir eksplikatyviniai diakritikai lotynų rašyboje. Maždaug tuo pat metu Kuršaitis galutinai sutvarkė lietuvių kirčio ženklų rašybą.

Šių reiškinių (heteroptotinės hegzametro eilėdaros, akcentinės sapfinės strofos eilėdaros, Heninijaus sistemos, eksplikatyvinių diakritikų humanistinėje lotynų ir senojoje lietuvių rašyboje) tolimas palikimas yra dabartinė lietuvių kirčio žymėjimo sistema, kurioje akūtas ir cirkumfleksas rašte žymimi tokiais pat ženklais, kaip senojoje graikų kalboje. Gravio ženklo reikšmė dabar yra pasikeitusi.

Greta Mažosios Lietuvos kirčių žymėjimo sistemos kurį laiką egzistavo LDK lietuvių kirčio žymėjimo tradicija, kuriai atstovauja Mikalojus Daukša ir 1589 metų hegzametras. Šioje sistemoje žymimi tik tikrieji žodžių kirčiai (nėra eksplikatyvinių diakritikų, nesutampančių su tikrąja žodžio kirčio vieta), o žymėti priegaidžių ir derinti kirčio ženklų formą pagal analogiją (tikrą ar iliuzinę) su graikų kalbos kirčiavimu nemėginama.

Šių dviejų kirčio žymėjimo tradicijų (Mažosios Lietuvos ir LDK) jungtis buvo 1737 metų lietuvių kalbos gramatika *Universitas Lingvarum Litvaniae*, kurioje buvo sužymėti tik tikrieji lietuvių kirčiai ir priegaidės, netaikant lietuvių kalbai graikų kirčiavimo taisyklių ir nežymint eksplikatyvinių diakritikų nekirčiuotuose skiemenyse. Vis dėlto 1737 metų gramatikos autorius laikėsi ir Mažojoje Lietuvoje kilusios humanistinės tradicijos, lietuvių cirkumflekso priegaidę žymėdamas tokiu pat lotynišku cirkumflekso ženklu, kaip ir Mažosios Lietuvos autoriai. Tvirtapradę lietuvių priegaidę 1737 m. gramatikos autorius ketino žymėti akūto ženklu, tačiau spaustuvė raidžių su akūtais vietoje išspausdino kito šrifto raides be diakritinių ženklų.

Kurį laiką gyvavusi alternatyvioji Simono Stanevičiaus ir Kazimiero Jauniaus lietuvių priegaidžių žymėjimo sistema iš dalies tęsė LDK kirčių žymėjimo tradiciją, pradėtą Daukšos ir 1589 m. hegzametro autoriaus, iš dalies rėmėsi 1737 m. gramatikos pasiekimais, be to, kirčio ženklų formą lietuvių kalbai parinko pagal hipotetinį fonetinį panašumą į senosios graikų kalbos priegaides.

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The following articles on the dissertation subject have been published in reviewed periodicals:

Disertacijos tema paskelbti šie straipsniai recenzuojamuose leidiniuose:

1. *Graikų kalbos kirčiavimas ir eilėdara XVII amžiaus Vilniaus universitete* (Greek accentuation and versification in use at the University of Vilnius in the 17th century),— Literatūra 43 (3), Vilnius, 2001, 106–116.
2. *Graikų kalbos kirčiavimo teorijos ir Grigaliaus Sventickio* Odarion *(1604) eilėdara* (Greek accentuation theories and the versification of the *Odarion* of Grigalius Sventickis),— Literatūra 44 (3), Vilnius, 2002, 87–96.
3. *Graikų ir lotynų kirčiavimo įtaka lietuvių kirčio žymėjimui* (The influence of Greek and Latin accentuation on Lithuanian accent notation), Baltistica XXXIX(2), 2004, 289–307.
4. (Kartu su Jonu Palioniu / Together with Jonas Palionis) *Jono Rėzos 1625 m. Psalmyno kirčiavimas* (The accentuation of Jonas Rėza's Psalter of 1625),— Baltistica XL(1), Vilnius, 2005, 31–44.