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# 1 Introduction: Baltic linguistics – State of the art

This introductory chapter to the volume is meant to give an overview of the state of research in the description of extant Baltic languages. Of course, we cannot supply a fully comprehensive account of all aspects of these languages. We will mainly focus on synchronic linguistics. We have not let ourselves be guided by functionalists' or formalists' prominence, although the survey to some extent reflects those domains and frameworks for which we ourselves felt competent enough. Sometimes we decided to be more explicit on noteworthy research results if these have been published in one of the Baltic languages or another language the knowledge of which cannot be assumed to be very much widespread among Western linguists. In any case, we are eager to account for the study of Baltic languages in the light of theoretically interesting issues and methods.

Before beginning our survey, we will give some basic introduction concerning the general typological "outfit" of the contemporary Baltic languages and their genealogical affiliation. This includes short explanations about the main differences between Lithuanian, Latvian, and Latgalian and the internal dialectal fragmentation of East Baltic (Section 1). Sections 2 and 3 contain the main body of our task. Section 2 is subdivided according to rather traditional levels of structural description (from phonetics to the syntax of complex sentences). Derivation is given an extra subsection (2.4). Section 3 is devoted to semantics and pragmatics and also fragmented following generally accepted linguistic disciplines. Subsequently, in Section 4, we will give some cursory information concerning aspects of areal linguistics, including dialect geography. Section 5 overviews typological studies into which Baltic data have been incorporated (Section 5.1) and highlights typologically outstanding features and rarities (Section 5.2). This subsection should show why more linguistic research into Baltic languages need not be judged just as the fancy occupation of a handful of scholars and why the Baltic languages are not to be dismissed as, on the one hand, only another tiny group of European languages (and thus not exotic enough from a global perspective), and yet, on the other hand, too obscure and hardly accessible in order to be worth labor (and thus too exotic on a European background). In the conclusion, we will sum up some outlines and add comments on paradoxes of the linguistic study of Baltic languages (Section 6) and briefly summarize the contents of the individual chapters of the volume (Section 7). The references list at the end does not pretend to be exhaustive but contains only work that has been mentioned in this introduction.

# 1 General outfit of Baltic languages

This section is meant to supply a rough survey of the internal subdivision of Baltic or, essentially, East Baltic, and some basic diachronic background (Section 1.1) as well as to give an overview of grammars and other general sources on Baltic languages (Section 1.2) and of electronic corpora that are currently accessible (Section 1.3).

## 1.1 Diachronic background, general genealogical, and dialectological issues

Originally, i.e., by more or less the mid-first millennium AD, Baltic dialects were dispersed over a large area stretching approximately from the region of today's Berlin over to eastwards of today's Moscow (Toporov 1997: 148). "Hard proof" for this extension comes from hydronymy (cf. Toporov & Trubačev 1962, Tret'jakov 1966, Vasmer 1971). The Baltic-speaking territory known from historical documents of the second millennium is usually divided into a western and an eastern branch. Old Prussian, which died out at the beginning of the eighteenth century AD, belonged to the western branch, whereas the only extant Baltic languages (Lithuanian, Latvian, Latgalian) form part of the eastern branch. On the next taxon, Lithuanian is usually divided into Aukštaitian (High Lithuanian) and Žemaitian (Samogitian or Low Lithuanian), with further subdivisions each. Latvian splits into High Latvian and Low Latvian, with the former constituted by Latgalian and Selonian dialects. Low Latvian further divides into Semigalian and Curonian. Tamian and Livonian dialects (in the north and northwest) are most affected by Finnic contact.

Figure 1 pictures the global splits that have occurred within the former Baltic dialect continuum and that are most relevant with respect to their contemporary stage (for the most recent diachronically oriented survey, cf. Petit 2010b: 3–51). Note that the two-dimensional arrangement does not reflect the real geographic location of the subdivisions of the former dialect continuum.

Both Lithuanian and Latvian have been heavily standardized, even if the process was late in comparison to other European languages (it started only at the end of the nineteenth century). Especially for non-specialists relying mostly on reference grammars and textbooks, it is crucial to remark that through standardization some features were introduced that did not exist in any dialect. As an example, we could cite the introduction of dedicated second plural imperative forms in standard Latvian, e.g., *ejiet* 'go:IMP.2PL' as against *(jūs) ejat* '(you) go:PRS.2PL'. In fact, the endings *-at* and *-iet* are used without functional difference in all Latvian dialects, and the distinction was artificially introduced in the 1920s by Endzelin, who had noted it in seventeenth-century Latvian texts and decided it should be restored in the modern language. In the case of Lithuanian,
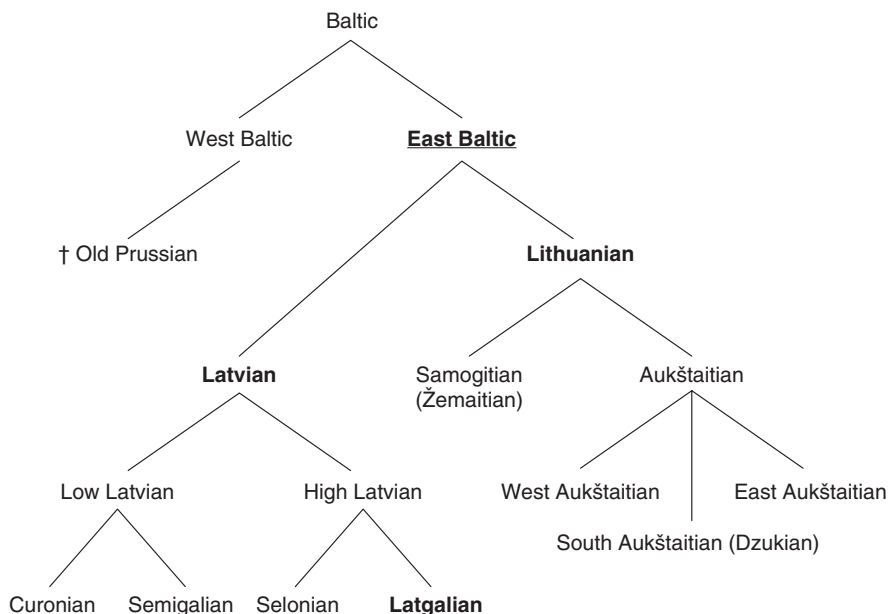
Fig. 1: Main areal and genealogical breakup relevant for contemporary Baltic.

the choice of the dialectal basis for the standard language was not definitively settled until the late nineteenth century. The West Aukštaitian dialects served as a vehicle for a tradition of Lithuanian writing in Prussian Lithuania from the sixteenth century onward, but in the Grand Duchy, it had to face competition from the Eastern Aukštaitian and (from the eighteenth century onward) Samogitian dialects. The ultimate choice in favor of West Aukštaitian was not only due to the prestige of this variety, established mainly in Prussian Lithuania, but also to the fact that this dialect is phonetically the most conservative, which seemed to make it particularly fit to serve as a metadialectal standard.

The Latvian standard language has been based, since the earliest texts (which date from the sixteenth century), on the so-called central dialect (*vidus dialekts*). This dialect area comprises the dialects of Vidzeme (former Swedish Livonia) and those of Kurzeme (Courland) and Zemgale (Semigalia). The dialects around Jelgava (German *Mitau*) are considered closest to the standard language. In addition to the central dialect, Low Latvian also comprises the so-called Livonian (*lībiskais*) dialect, whose distinguishing features are mostly connected with the influence of the Livonian (Finnic) substratum on which it developed. High Latvian (*augšzemnieku dialekts*) comprises the Latgalian dialects of former Polish Livonia as well as the Selonian dialects of what used to be called Upper Courland (the region south and north of the Daugava around Jēkabpils).

A separate writing tradition in High Latvian, associated mainly with the activities of the Roman Catholic Church, has been in existence since the eighteenth century and has become the basis of what is now often called the Latgalian language.

## 1.2 Sources on Baltic languages

General book-length overviews of the Baltic language family include the classical monographs of Stang (1942, 1966), Eckert, Bukevičiūtė, and Hinze (1994, in German), and Toporov (ed. 2006, in Russian); a concise overview in English is given by Holvoet (2011b). The work of Dini (1997, in Italian and translated into Lithuanian, Latvian, and Russian) contains a useful overview of the history of Baltic studies and especially of the historical-comparative tradition.

Existing grammars of Lithuanian have been largely guided by the Neogrammarian ideology of the end of the nineteenth century (e.g., Senn 1966) or by the Russian (Soviet) grammatical tradition, to which the fundamental three-volume Academy Grammar (LKG)[1] as well as the more recent and somewhat less comprehensive work DLKG (1996 edited by Ambrazas) and LG (1997 edited by Ambrazas, reprinted in 2006) are greatly indebted. The latter is to date the most comprehensive description of Lithuanian in English, having superseded the oft-cited non-academic textbook by Dambriūnas, Klimas, and Schmalstieg (1966). Among recent reference grammars written outside Lithuania, worth noting are the works of Mathiassen (1996a) in English and Chicouene and Skūpas (2003) in French.

Endzelin's (1923) German-language grammar of Latvian has remained, paradoxically, the most important source of information on Latvian available in a western language. The Latvian Academy Grammar (MLLVG 1959, 1962), heavily dependent on Soviet Russian grammar, is rich in information but is difficult to use and outdated in many respects. While preparing this introduction, a new academy grammar appeared (LVG 2013); thus, it will now become obvious whether this updated grammar is written with an account of modern linguistic approaches. Apart from that, *A Grammar of Modern Latvian* (Fennell & Gelsen 1980) is, despite its title, a textbook rather than a grammar, but it contains comprehensive and reliable grammar sections. *A Short Grammar of Latvian*, by Mathiassen (1997), is marred by numerous mistakes and should be used with caution. *Lettische Grammatik*, by Forssman (2001), is predominantly diachronic, and the synchronic sections also show a diachronic bias that often makes them misleading. *Lettische Grammatik*, by Holst (2001), is idiosyncratic and should be used with a certain caution. *Die lettische Sprache und ihre*

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**1** A much shorter Russian version based on this grammar is GLJa (1985). Remarkably, there is no equivalent for Latvian.

*Dialekte*, by Gāters (1977), is not about grammar but is a general introduction to the Latvian language, with ample coverage of the dialects. Nau (1998) is a short though quite useful grammatical sketch, while Nau (2001b) is a principled investigation into problems related to part of speech distinctions (in particular of pronouns), which basically deals with Latvian.

Of the Baltic languages, Latgalian remains the most poorly described. There exist some largely outdated grammars written in Russian and Latgalian in the first half of the twentieth century (Skrinda 1908, Trasuns 1921, Strods 1922), and the only modern description is the short and far from comprehensive sketch by Nau (2011a), apart from the grammatical handbook by Bukšs and Placinskis (1973) and a comparative study by Lelis (1961).

## 1.3 Electronic corpora of Baltic languages

The corpora of Lithuanian include DLKT (The Corpus of Contemporary Lithuanian, compiled at the Vytautas Magnus University, Kaunas), containing more than 140 million tokens, more than a half of which come from newspapers. The corpus includes texts produced during the post-Soviet period, including fiction translations from various languages. The publicly available version of DLKT does not have any kind of morphological or part of speech annotation, and the interface is only in Lithuanian. The other available corpus of Lithuanian is CorALit (The Corpus of Academic Lithuanian, compiled at Vilnius University), containing about 9 million tokens, coming from various academic publications. The corpus does not contain morphological annotation, but the interface exists both in Lithuanian and in English. Another drawback of both corpora worth mentioning is the lack of a convenient way of exporting search results.

For Latvian, there exists LVTK (The Corpus of Contemporary Latvian, compiled at the University of Latvia in Riga), which is morphologically annotated, but the interface is only in Latvian; the current size of the corpus is ca. 4.5 million tokens. Curiously, the size of the corpus is not indicated on its website. There also exists a small Latgalian corpus (MLTK, compiled by a joint Lithuanian-Latvian research program), containing 1 million tokens, without morphological annotation, and a parallel Latvian-Lithuanian corpus (LILA, compiled by the same joint program), which contains more than 9 million tokens from texts translated from Latvian to Lithuanian, from Lithuanian to Latvian, and from English into both of them; again, there is no morphological annotation. Both the Latgalian and the parallel corpora have interface in Latvian, Lithuanian, and English. A parallel Russian-Latvian corpus, yet unannotated and containing less than 1 million tokens, has been recently launched under the auspices of the Russian National Corpus project (http://www.ruscorpora.ru/search-para-lv.html). A collection of Latgalian texts (mostly transcripts of folklore texts collected in the late nineteenth century) with Polish

translations has been recently made available at the Adam Mickiewicz University in Poznań (http://inne-jezyki.amu.edu.pl/Frontend/Language/Details/1).

The only diachronic corpus of Baltic languages known to us is LVSTK (compiled at the Latvian University in Riga), comprising less than 1 million tokens. This corpus does not seem to have morphological annotation, and the interface is only in Latvian. The collection of digitalized Old Lithuanian texts compiled at the Institute of Lithuanian language in Vilnius (http://www.lki.lt/seniejirastai) cannot be considered a corpus even in the most relaxed sense of the term, since it only contains downloadable transcripts and concordances of individual texts. There also exists a searchable database of Old Prussian texts compiled at the University of Vilnius (http://www.prusistika.flf.vu.lt/zodynas/apie/).

## 2 Description of structural levels

### 2.1 Phonetics and phonology

Phonetics is among the best-studied fields of Baltic linguistics, at least in what concerns the description of the data in a predominantly Neogrammarian manner. Remarkably poorer is the state of the arts concerning phonology. Moreover, most of the modern and empirically adequate descriptive materials are published in Lithuania and Latvia in the respective languages, thus being virtually inaccessible to the broader linguistic audience. This has resulted in that discussions of Baltic phonetic and phonological data in modern theoretical and typological works are scarce, and those that exist often suffer from outdated, simplistic, and inadequate data. Thus, comprehensive book-length descriptions of the phonological systems of Lithuanian, Latvian, and Latgalian and their dialects, written from modern theoretically and typologically informed perspective and published in English, are badly needed.

One aspect that has to date received little attention in comparison to the description of phonological phenomena in individual Baltic languages and dialects or cross-dialectal surveys, is contrastive phonology of Latvian and Lithuanian. Works where phonological phenomena from both languages would be simultaneously taken into account and contrasted are not numerous (cf. e.g., Dogil 1999b, Daugavet 2010, this volume). Notably, Latvian and Lithuanian dialectologists have cooperated with each other rather insufficiently (with the notable exception of Marta Rudzīte, Zigmas Zinkevičius, and, more recently, Edmundas Trumpa). All these circumstances have seriously impeded areal research. Below we will give the basics of the phonological systems of Standard Lithuanian, Latvian, and Latgalian, together with the orthographic conventions, and briefly outline the state of the research in this domain.

### 2.1.1 Lithuanian

The phonological inventory of Lithuanian is given in Tables 1 (consonants) and 2 (vowels); these tables mostly follow those presented by Balode and Holvoet (2001a: 46, 48); we give the Latin-based letters corresponding to the IPA symbols in brackets < >.

Each Lithuanian consonant, except /j/, has a palatalized counterpart; palatalized consonants occur automatically before all front vowels and diphthongs, but may also freely occur before mid and back vowels, in which case, palatalization is indicated by <i>. Thus, *niūkia* Prs3 'mumble; urge' is phonologically /nʲuːkʲæ/.

The most comprehensive treatment of the Lithuanian phonological system, comprising not only segmental units but also such complex issues as vowel length, syllable structure, and the so-called syllable intonations (often somewhat misleadingly called "tones"), is contained in the works of Antanas Pakerys (Pakerys 1982, [1986] 1995) and Aleksas Girdenis (1981, [1995] 2003) (these books include summaries in Russian and in German or English; the English translation of Girdenis' book has just appeared as Girdenis 2014). On accentuation in Lithuanian from a diachronic perspective, cf. also Kazlauskas (2000a: chapter 1). There also exist numerous works written by Aleksas Girdenis and Antanas Pakerys and their collaborators and students dealing with various particular

**Tab. 1:** Lithuanian consonants

|  | Labial | | Dental and alveolar | | Palato-alveolar | | Palatal | Velar | |
|---|---|---|---|---|---|---|---|---|---|
| Plosive | p | pʲ | t | tʲ | | | | k | kʲ |
| | b | bʲ | d | dʲ | | | | g | gʲ |
| Nasal | m | mʲ | n | nʲ | | | | | |
| Affricate | | | ts <c> | tsʲ | tʃ <č> | tʃʲ | | | |
| | | | dz <dz> | dzʲ | dʒ <dž> | dʒʲ | | | |
| Fricative | f | fʲ | s | sʲ | ʃ <š> | ʃʲ | | x <ch> | xʲ |
| | v | vʲ | z | zʲ | ʒ <ž> | ʒʲ | | ɣ <h> | ɣʲ |
| Approximant | | | | | | | j | | |
| Lateral | | | l | lʲ | | | | | |
| Trill | | | r | rʲ | | | | | |

**Tab. 2:** Lithuanian vowels and diphthongs (cf. Daugavet, this volume)

| | | |
|---|---|---|
| ɪ <i> i: <y,į> i:ə <ie> | | ʊ <u> u: <ū,ų> u:ə <uo> |
| | | ui |
| ɛ <e> e: <ė> | | ɔ <o> o: <o> |
| ɛi <ei> | | |
| æ: <e,ę> | a <a>, a: <a,ą> | |
| æu <iau> | ai <ai>, au <au> | |

issues of phonology and phonetics of both standard language and its dialects, including both theoretical discussion and experimental research. Girdenis is also the author of the phonology chapters of the recent academic grammars of Standard Lithuanian, including the English edition LG ([1997] 2006). One of Girdenis' former students, Vytautas Kardelis, has presented an account of the differentiation of the Northeastern Aukštaitian dialect area (Kardelis 2009). This is, to our knowledge, the first truly dialect-geographic attempt at describing a dialect area of Lithuania not in terms of vaguely conceived "sound variations", but entirely based on structural phonology. The book is written in Lithuanian, but has a German and a Russian summary (see further in Section 4). Besides that, one could mention Vykypěl (2003), an original analysis of the Lithuanian phonological system based on Glossematics.

A somewhat separate trend of research concerns the description and interpretation of accentuation of standard and dialectal Lithuanian. Lithuanian has free mobile stress determined by morphological and phonological properties of morphemes and word forms (see Daugavet, this volume, for a short overview) and rules of stress placement in Lithuanian have attracted attention of both synchronic and historical-comparative linguists starting with Leskien (1876) and most prominently known from Ferdinand de Saussure (1894, 1896); cf. also Joseph (2009) and Petit (2010a) for recent studies. The most comprehensive description of accent rules of Standard Lithuanian are by Pakerys (1994, 2002), Stundžia (1995, 2009), and Mikulėnienė, Pakerys, and Stundžia (2007), written in Lithuanian but containing summaries in Russian and/or English. Notable works written outside Lithuania include those by Garde (1968: 160–165), which may be regarded as one of the sources of Lithuanian accentological theory, Young (1991), which contains standard as well as dialectal data, Halle and Vergnaud (1987: 190–203), Blevins (1993), Dogil (1999a,b), and Dogil and Möhler (1998). The works by Halle and Vergnaud and Blevins propose treatments of accentuation in metrical and autosegmental theories, unfortunately based on an inadequate view that Lithuanian has a tonal opposition (cf. also an early proposal in Kenstowicz 1972: 52–83, Dudas 1972, Dudas & O'Bryan 1972). The contributions by Dogil are important in that they take into account the works written in Lithuania and present an unbiased treatment of the phonetic representation of stress and accent in Lithuanian, comparing it to that of other languages including Latvian. Vykypěl (2004) formulates some interesting considerations arising from the relation between word-prosodic features and the shape of morphemes (and their allomorphs) in Lithuanian; his considerations are embedded into a general typological background.

Yet another major research area is the historical-comparative research into Baltic accentuation and its comparison with Slavic, represented by a huge and growing number of works, with which we cannot deal here. For a recent overview, see e.g., Olander (2009: 14–46) and Petit (2010b: 52–139).

In contrast to the rich ingenious tradition of comprehensive experimental and theoretical study of standard and dialectal phonology in Lithuania, actually not

much has been done in this domain outside of the country or published in languages other than Lithuanian. In addition to works already mentioned, one may add a few experimental studies such as the work of Balšaitytė (2004) or Campos-Astorkiza (2012) dealing with acoustic features of vowels and several theoretical studies such as Daugavet (2009, 2010, this volume) on the issues of syllable structure, length, and accents. (More numerous studies dealing with morphophonological processes will be referred to in the next section.) Worth mentioning are Geyer's (2011) considerations concerning the phonological treatment of Lithuanian diphthongs as monophonemic ("gliding") or biphonemic ("combined") sound units.

Finally, sentence prosody of Lithuanian and its relation to syntax and information structure have received very little treatment (and are not covered in reference grammars). Works we know include mainly contributions by Gintautas Kundrotas written in Lithuanian and Russian, see e.g., Kundrotas (2002, 2003, 2004, 2008), inspired by the tradition of the study of sentence intonation in Russian, and Zav'jalova (2006), where interesting preliminary observations are made on the relation of word order and sentence prosody.

### 2.1.2 Latvian

The phonological system of Latvian, which differs from that of both its more distant relative Lithuanian and its closest kin Latgalian in many important

**Tab. 3:** Latvian consonants

|  | Labial | Dental and alveolar | | Palato-alveolar | | Palatal | Velar and laryngeal | |
|---|---|---|---|---|---|---|---|---|
| Plosive | p  b | t | d |  |  | c <ķ> ɟ <ģ> | k | g |
| Nasal | m | n |  |  |  | ɲ <ņ> |  |  |
| Affricate |  | ts <c> | dz <dz> | tʃ <č> | dʒ <dž> |  |  |  |
| Fricative | f  v | s | z | ʃ <š> | ʒ <ž> |  | x <h> |  |
| Approximant |  |  |  |  |  | j |  |  |
| Lateral |  | l |  |  |  | ʎ <ļ> |  |  |
| Trill |  | r |  |  |  |  |  |  |

**Tab. 4:** Latvian vowels and diphthongs (cf. Daugavet, this volume)

| | | | |
|---|---|---|---|
| i <i>  i: <ī> iə <ie> | | u <u>  u: <ū>  u:ə <o> | |
| iu <iu, iv> | | | ui |
| e <e>  e: <ē> | | ɔ <o>  ɔ: <o> | |
| ei <ei>, eu <ev> | | ɔi <oi>, ɔu <ov> | |
| æ <e>  æ: <ē> | ɑ <a>, ɑ: <ā> | | |
| | ɑi <ai>, ɑu <au, av> | | |

respects, is given in Tables 3 (consonants) and 4 (vowels), with Latin letter correspondences given in < > (cf. Balode & Holvoet 2001b: 10–12).

Experimental research on Latvian phonetics started in the interwar period; it was conducted mainly by Anna Ābele (1915, 1924, 1932), and its results were published mainly in Latvian. Book-length studies of Latvian phonetics include Laua ([1969] 1997) and Grigorjevs (2008, in Latvian); the latter is an acoustic and auditive investigation of Latvian vowels, with a chapter on phonology. To our knowledge, there is no counterpart for the consonant system, except for Grigorjevs' (2012, in English) study on sonorants. A number of studies on particular problems, available in English, are mentioned below.

Prosody is the part of the Latvian sound system that has attracted most attention because of its unique features. Like Lithuanian, Latvian has a system of syllable accents, traditionally referred to as intonations; rather than being purely tonal, they involve a cluster of features including tone, length, and glottalization. The earliest experimental study is by Ābele (1915), and a book-length study is by Ekblom (1933). A characteristic and rare feature of Latvian is the existence of differences in syllable accent not only under stress (as in Lithuanian), but in unstressed position as well. Syllable accents in unstressed syllables are dealt with by Seržant (2003). The distinctive nature of the oppositions of syllable accents in both stressed and unstressed syllables is shown by Grīsle (1996/1997, 2008).

Vowel quantity is closely bound up with syllable accents. Vowels with the so-called level pitch are ultra-long, inviting comparison with the putative distinction of three degrees of length in neighboring Estonian; conversely, Estonian over-length seems to involve tonal features, so that an areal account is called for; on possible Latvian-Finnic parallels in vowel and syllable length, cf. Koptjevskaja-Tamm and Wälchli (2001: 641–645) and Daugavet (2008a,b, 2009, this volume). On vowel length and word length, cf. Bond (1991).

Consonant quantity is a very interesting but insufficiently investigated feature of Latvian phonetics and phonology. Non-distinctive variation in obstruent quantity in correlation with syllable structure (voiceless obstruents are automatically lengthened between short vowels of which the first is stressed) is undoubtedly an areal feature induced by a Finnic substratum – it is completely unknown in Lithuanian. Its Finnic origins are convincingly shown by Daugavet (2013). There are a number of phonetic studies (in Latvian) on obstruent length in different phonetic contexts and in correlation with word length, but many details remain to be established.

On syllable length in general and the interplay between vocalic and consonantal length, cf. Daugavet (2008b, 2009). On phonotactics in connection with syllable structure, cf. Bond (1994a).

Latvian has abandoned the Common Baltic mobile stress in favor of fixed initial stress, probably under Finnic influence, although this is occasionally called into question, cf. Hock (this volume). On secondary stress, cf. Daugavet (2008a).

On vowel quality in stressed and unstressed syllables, cf. Bond (1994b). A characteristically Latvian feature is the optional voiceless realization or complete loss of short unstressed vowels in word-final position, as discussed by Kariņš (1995). On sentential intonation, there is one study by Bond (1998).

The effects of Latvian-Russian and Latvian-English bilingualism on Latvian phonetics and the properties of non-native Latvian are investigated by Bond (1978), Bond, Markus, and Stockmal (2003), Stockmal, Markus, and Bond (2005), and Bond, Stockmal, and Markus (2006).

The first attempt at a phonological description of Latvian, with focus on phonotactics, was proposed by Matthews (1959). The only book-length study of Latvian phonology is Steinbergs' (1977) unpublished PhD thesis. An overall analysis of the Latvian system of syllable accents in the framework of autosegmental phonology is given in a PhD thesis by Kariņš (1996).

### 2.1.3 Latgalian

The phonological system of Latgalian shares certain important features both with Latvian and Lithuanian but differs substantially from both, e.g., in allowing word-final palatalized consonants (see Tables 5 and 6, based on Nau 2011a: 9–13).

**Tab. 5:** Latgalian consonants

| | Labial | Dental and alveolar | | Palato-alveolar | Palatal | Velar and laryngeal | |
|---|---|---|---|---|---|---|---|
| Plosive | p  pʲ | t | tʲ | | | k | kʲ <ķ> |
| | b  bʲ | d | dʲ | | | g | gʲ <ģ> |
| Nasal | m  mʲ | n | nʲ <ņ> | | | | |
| Affricate | | ts <c> | tsʲ | tʃ <č> | | | |
| | | dz <dz> | dzʲ | dʒ <dž> | | | |
| Fricative | f  fʲ | s | sʲ | ʃ <š> | | x <h> | xʲ |
| | v  vʲ | z | zʲ | ʒ <ž> | | | |
| Approximant | | | | | j | | |
| Lateral | | l | lʲ <ļ> | | | | |
| Trill | | | | r | | | |

**Tab. 6:** Latgalian vowels and diphthongs

| | | | |
|---|---|---|---|
| i, i: <ī>, ie, iu | ɨ <y>, ɨu <yu> | | u, u: <ū>, uɔ <uo, ō> |
| e | | ɔ <o> | |
| æ <e>, æ: <ē> | | a, a: <ā> | |
| ei, æi <ei> | | ai, au | |

The major works on Latgalian phonetics and phonology remain the theses by Lelis (1961) and Breidaks ([1989] 2007), as well as a number of works by Breidaks published in his two-volume *Selected Writings* (Breidaks 2007).

## 2.2 Morphophonology

The rich and complex phonological processes occurring throughout Lithuanian inflection and derivation have attracted attention of various linguists both inside and outside of Lithuania (unfortunately, to our knowledge, much less attention has been paid to no less intricate and in many respects different morphophonological processes in Latvian). In addition to the descriptions of major phonological processes in grammars and special publications in Lithuanian, as well as such classic works as Leskien (1884) on ablaut, several influential works appeared during the last decades dealing with Lithuanian morphophonology from the perspective of various versions of generative phonological theory. These include Heeschen (1968) and Kenstowicz (1972), as well as a paper by Bulygina (1970); a number of contributions deal specifically with morphophonological processes occurring in verbs, e.g., Schmalstieg (1958), Clair (1973), Bulygina (1977: 238–269), Regier (1977), Arkadiev (2012a). Hoskovec (2002) examines Lithuanian morphophonology from the point of view of Prague School structuralism. On Lithuanian morphophonological issues, cf. further Akelaitienė (1987, 1996) and Karosienė (2004).

There also exist a number of theoretically oriented works devoted to specific phonological processes of Lithuanian, among recent ones, see e.g., Hume and Seo (2004) on metathesis, Flemming (2005: 294–300) on nasal deletion, Baković (2006) on *i*-insertion in verbal prefixes, Dressler, Dziubalska-Kołaczyk, and Pestal (2006: 57–61) on morphotactics and consonant clusters, Kamandulytė (2006a) on the acquisition of morphotactics. On Latvian morphophonology, cf. Kalnača (2004), and in the generative framework, Fennell (1971a) and Halle (1986).

The Latgalian morphophonological system, where nominal and verbal inflection and derivation involve an interaction of consonant and vowel adjustments between suffixes and roots, is by far the most complex and non-trivial among the Baltic languages. Although preliminarily described by Lelis (1961: 121–131) and Nau (2011a: 15–21), the full range of these alternations still begs for a comprehensive description and theoretical interpretation.

Morphophonological phenomena of Lithuanian and Latvian dialects, where various alternations absent from standard languages have arisen, e.g., due to vowel reduction, stress retraction, etc., have, to our knowledge, not received any systematic treatment so far.

## 2.3  Inflectional morphology

In general, academy and comprehensive grammars written in Lithuania and Latvia after World War II were skewed by structural descriptions of Russian during Soviet times (e.g., in the Russian academy grammars; see above). This holds for the division into morphological categories as well as for the treatment of stem derivational patterns.

The only contrastive study of Lithuanian and Latvian inflection (both nominal and verbal) is the unpublished dissertation by Andronov (1999); the Latvian part, however, has been published in Andronov (2002: 323–402). The morphology of Lithuanian is contrasted with that of Russian in the still useful monograph Mustejkis (1972).

In terms of morphotactic rules, morphological subparadigms in contemporary Baltic are very regular. Although the relation between past and present tense forms of verbs are often quite opaque (see Section 2.3.2), in the Baltic languages (perhaps with the exception of Latgalian), there are overall less morphophonological alternations than in the neighboring Slavic languages, and paradigms are astonishingly void of suppletive forms. There are only a few clear cases of inflectional suppletion in modern Lithuanian, first of all the paradigm of the copula and existential verb *būti* 'be' (present: 1SG *es-u*, 2SG *es-i*, 1PL *es-ame*, 2PL *es-ate* vs. 3 *yra*; all other forms are based on the stem *bū-* with a regular alternant *buv-* before vowels, cf. past 3 *buvo*, imperative 2SG *būk*); *yra* (as well as its Latvian cognate *ir*)[2] has replaced the older, non-suppletive form *esti*, which is still in use, but only as a copula and in stylistically marked contexts. In Latvian and Latgalian, there is one more suppletive verb ('go', cf. Latvian present 1SG *eju* vs. 3 *iet* vs. Past *gāja*). Besides that, there is suppletion for personal pronouns (e.g., Lithuanian 1SG.NOM *aš* vs. 1SG.ACC *mane*).

The distinction between inflection ("endings") and derivational morphology (suffixes, stem extensions) is not always straightforward, and not always have decisions on how to distinguish them in practice been realized with consequence (cf., for instance, Holvoet 2006 for a criticism concerning Lithuanian grammaticography).

On inflection in the acquisition of Latvian as a first language, cf. Rūķe-Draviņa (1973).

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**2** Its etymology might go back to a demonstrative pronoun (cf. Mańczak 2003).

### 2.3.1 Nominal morphology

Baltic nominal morphology is relatively well described, at least in what concerns the standard languages. From the diachronic perspective, nominal morphology has been dealt with, among others, by Kazlauskas (2000a: chapter 2, which is a reprint of his book from 1968). Nominals in Baltic inflect for number and case as well as for gender and definiteness (adjectives and some pronouns) and degree (adjectives). The two genders (masculine and feminine) constitute an inflectional (agreement or concord-based) category for adjectives and pronouns and a classificatory (inherent) category for nouns. However, both in Lithuanian and Latvian, many nouns denoting humans, especially professions, have both a masculine and a feminine variant formally distinguished by the choice of inflectional paradigm only (not by any derivational affixes), e.g., Lith. *darbinink-as* 'worker (M)' vs. *darbinink-ė* 'worker (F)'. Thus, for these nouns, gender can arguably be considered an inflectional feature; cf. Džežulskienė (2001, 2003), Judžentis (2002a: 41f.), Vykypěl (2006: 98f.), Smetona (2005: 84) for discussion concerning Lithuanian. Stołowska's (2014) work is a recent investigation on the techniques by which conflicts between grammatical gender (masculine vs. feminine) and biological sex (male vs. female) are resolved in Latvian. Cf. also Armoškaitė (2014) on a generative treatment of gender features in Lithuanian derivation.

Baltic nominal morphology shares with Slavic and older Indo-European languages such basic principles as cumulative exponence of case and number (and gender). These parallels do not, however, pertain to animacy distinctions, which are practically inexistent in Baltic, to the extent that the common interrogative pronoun *kas* does not distinguish 'who' and 'what' (cf. Nau 1999, among others). Baltic nominal morphology is furthermore characterized by a rich system of (synchronically) unmotivated inflectional classes, some instances of inflectional homonymy (syncretisms), and, notably, non-trivial interaction between inflectional morphology and stress (in Lithuanian). However, the data from Baltic has largely remained outside of the scope of theoretical and typological studies of such issues as declension classes, syncretism, stem alternations, and other inflectional phenomena abundant in the Baltic languages (cf. however, the study of Baltic pluralia tantum in Koptjevskaja-Tamm and Wälchli 2001: 629–637).

A general, but typologically not that infrequent, feature of Baltic is the disappearance of the neuter gender. Disappearance is stepwise, both in areal and diachronic terms. One can observe it in Old Prussian (cf. Petit 2000, 2010b: 141–169), in particular, in its vocabularies. From the synchronic viewpoint, Lithuanian (more precisely, Aukštaitian) has preserved remnants of the neuter in a handful of demonstrative pronouns (*(ta)tai* 'this', *čia* 'here, this', and *viskas* 'everything'), and the marker of the neuter singular is productive in adjectives and participles

(i.e., in syntactic classes that are regularly used as predicates; see Section 2.5.2). This can be interpreted as a situation in which the number of target genders (masculine, feminine, neuter) exceeds that of controller genders (in terms of Corbett 1991, 2007), for which the neuter has become extinct. However, the neuter singular of potential agreement targets remains exploited as a default in all cases of lack of agreement on clause level.[3] In participles, it has been re-interpreted for both grammatical and lexical marking of evidential functions (see Sections 2.3.2.2 and 3.3, respectively). Latvian (besides some last traits in certain dialects) has not kept any remnants of the neuter at all, and the same applies to Latgalian. As default for lack of agreement, the masculine singular is used, and this two-gender system thus reminds of French and Italian.

### 2.3.1.1 Lithuanian

Standard Lithuanian nouns distinguish two numbers (singular and plural); the dual is now obsolete, although it has been optionally in use in the written language up to the beginning of the twentieth century. Its relics have been preserved in some dialects (Vykypěl 2002), and dual forms of personal pronouns (which are highest on the animacy hierarchy) are still used (at least optionally) in Standard Lithuanian. For this reason, one might argue that the dual still forms part of the number system in Lithuanian (cf. Roduner & Čižik-Prokaševa 2006).

There are seven unequivocal cases (comprising the vocative, which is distinct from the nominative only in the singular). Lithuanian nouns fall into four major declension types, each further divided into several subtypes, in most cases, according to the distinction between stems ending in a non-palatalized ("hard") vs. palatalized ("soft") consonant. Most inflectional classes are at least by default associated with just one gender, although, in fact, most of them contain exceptional nouns of the opposite gender. Declension classes are cross-cut by four major stress classes usually called "accentual paradigms" (see e.g., Daugavet, this volume); in the general case, membership of a noun in a declension class is completely independent from its membership in an accentual paradigm, although

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**3** From this perspective, one could admit, together with Sawicki (2004: 158), that "the nominals in neuter gender represent in fact not a third gender (beside masculine and feminine) but rather a negative statement about gender: 'neither masculine nor feminine'". Semėnienė (2003), by contrast, focuses on substantivized adjectives, for which the neuter forms refer to inanimate notions (e.g., *gẽra* '(the) good', *pìkta* '(the) evil', **Raudona** *yra ryški spalva* '**Red** is a bright colour') in contrast to substantivized forms of masculine or feminine gender, which always refer to persons. Because of this, one can, of course, say that Lithuanian displays a (sort of reanalyzed) system with three controller genders.

**Tab. 7:** Sample paradigms of Lithuanian nouns

|  |  | I hard 'man' (M) I a.p. | I soft 'horse' (M) III a.p. | II hard 'day' (F) IV a.p. | II soft 'bee' (F) II a.p. | III hard 'son' (M) III a.p. | IV soft 'night' (F) IV a.p. |
|---|---|---|---|---|---|---|---|
| SG | NOM | *výras* | *arklỹs* | *dienà* | *bìtė* | *sūnùs* | *naktìs* |
|  | GEN | *výro* | *árklio* | *dienõs* | *bìtės* | *sūnaũs* | *naktiẽs* |
|  | DAT | *výrui* | *árkliui* | *diẽnai* | *bìtei* | *sū́nui* | *nākčiai* |
|  | ACC | *výrą* | *árklį* | *diẽną* | *bìtę* | *sū́nų* | *nāktį* |
|  | INS | *výru* | *árkliu* | *dienà* | *bitè* | *sūnumì* | *naktimì* |
|  | LOC | *výre* | *arklyje* | *dienojè* | *bìtėje* | *sūnujè* | *naktyjè* |
|  | VOC | *výre* | *arklỹ* | *diẽna* | *bìte* | *sūnaũ* | *naktiẽ* |
| PL | NOM | *výrai* | *arkliaĩ* | *diẽnos* | *bìtės* | *sū́nūs* | *nāktys* |
|  | GEN | *výrų* | *arkliũ* | *dienų̃* | *bìčių* | *sūnų̃* | *naktų̃* |
|  | DAT | *výrams* | *arkliáms* | *dienóms* | *bìtėms* | *sūnùms* | *naktìms* |
|  | ACC | *výrus* | *árklius* | *dienàs* | *bitès* | *sū́nus* | *naktìs* |
|  | INS | *výrais* | *arkliaĩs* | *dienomìs* | *bìtėmis* | *sūnumìs* | *naktimìs* |
|  | LOC | *výruose* | *arkliuosè* | *dienosè* | *bìtėse* | *sūnuosè* | *naktysè* |

certain statistical tendencies exist. In Table 7, we give sample paradigms representative of major declension classes and accentual paradigms (a.p.), of course, not aiming at an exhaustive representation.

Lithuanian adjectives, in addition to number and case, inflect also for gender, degree, and definiteness. The declension of indefinite adjectives in the feminine completely follows the II declension of nouns (except for the special nominative singular ending *-i* of the "soft" stems), while the declension of adjectives in the masculine has certain peculiarities, i.e., special inflectional suffixes not appearing in the declension of nouns as well as a non-trivial mixture of "hard" and "soft" stems in the declension of adjectives with the nominative singular masculine in *-us* (see Table 8, where the special forms are highlighted).

Lithuanian definite adjectives are formed by the agglutination (and partial fusion) of the inflected forms of the third-person pronoun (formerly a demonstrative) *jis* with the inflected forms of indefinite adjectives. This creates a peculiar instance of "pleonastic" inflection (cf. Stolz 2007, 2010) (see Table 9). The development of the definite declension has been a salient topic for the study of adjectives from a diachronic perspective as well (cf. Zinkevičius 1957, Kazlauskas [1972] 2000, Rosinas 1988: 163–166). In addition to that, recently, Ostrowski (2013, forthcoming) has written two studies on the development of the comparative and superlative forms of adjectives.

**Tab. 8:** Sample paradigms of Lithuanian indefinite adjectives

|   |   | 'High' III a.p. | | 'Calm' IV a.p. | |
|---|---|---|---|---|---|
|   |   | **Masculine** | **Feminine** | **Masculine** | **Feminine** |
| SG | NOM | *áukštas* | *aukštà* | *ramùs* | ***ramì*** |
|   | GEN | *áukšto* | *aukštõs* | *ramaũs* | *ramiõs* |
|   | DAT | ***aukštám*** | *áukštai* | ***ramiám*** | *rāmiai* |
|   | ACC | *áukštą* | *áukštą* | *rāmų* | *rāmią* |
|   | INS | *áukštu* | *áukšta* | *ramiù* | *ramià* |
|   | LOC | ***aukštamè*** | *aukštojè* | ***ramiamè*** | *ramiojè* |
| PL | NOM | ***aukštì*** | *áukštos* | *rāmūs* | *rāmios* |
|   | GEN | *aukštṹ* | *aukštṹ* | *ramių̃* | *ramių̃* |
|   | DAT | ***aukštíems*** | *aukštóms* | ***ramíems*** | *ramióms* |
|   | ACC | *áukštus* | *áukštas* | *ramiùs* | *ramiàs* |
|   | INS | *aukštaĩs* | *aukštomìs* | *ramiaĩs* | *ramiomìs* |
|   | LOC | *aukštuosè* | *aukštosè* | *ramiuosè* | *ramiosè* |

**Tab. 9:** Sample paradigm of Lithuanian definite adjectives

|   |   | 'High' III a.p. | |
|---|---|---|---|
|   |   | **Masculine** | **Feminine** |
| SG | NOM | *aukštàsis* | *aukštóji* |
|   | GEN | *áukštojo* | *aukštõsios* |
|   | DAT | *aukštájam* | *áukštajai* |
|   | ACC | *áukštąjį* | *áukštąją* |
|   | INS | *aukštúoju* | *aukštája* |
|   | LOC | *aukštájame* | *aukštõjoje* |
| PL | NOM | *aukštíeji* | *áukštosios* |
|   | GEN | *aukštṹjų* | *aukštṹjų* |
|   | DAT | *aukštíesiems* | *aukštósioms* |
|   | ACC | *aukštúosius* | *aukštą́sias* |
|   | INS | *aukštaĩsiais* | *aukštõsiomis* |
|   | LOC | *aukštuõsiuose* | *aukštõsiose* |

In addition to the detailed descriptions of the declension of Lithuanian nouns, adjectives, and pronouns found in all major reference grammars, one can point out the book-length study of Marvan (1978), which addresses the Lithuanian data from an original, although admittedly highly idiosyncratic, theoretical perspective (see Carstairs 1981 for a very critical review) and the monograph on nominal categories of Paulauskienė (1989). More recently,

insights of Natural Morphology have been applied to Lithuanian declension in Savickienė, Kazlauskienė, and Kamandulytė (2004); cf. also Savickienė (2005) on the frequency of cases and its relation to markedness. Note also Armoškaitė (2011), studying the interaction of syntactic categories (parts of speech specifications), derivational and inflectional morphology, and roots in Lithuanian from the perspective of Distributed Morphology.

An issue that has received quite extensive treatment in the literature concerns the origins, form, and use of the now largely obsolete "secondary" local cases in Lithuanian, going back to combinations of case markers with postpositions. Special works dedicated to this topic include, inter alia, Smoczyński (1974), Zinkevičius (1982), Rosinas (1999, 2001: 136–152), Kavaliūnaitė (2001, 2002, 2003), and Seržant (2004a,c). Cf. also Rosinas (1995: 53–76) on Baltic in general, Seržant (2004b) on East Baltic (i.e., excluding Old Prussian) and Nilsson (2002) on the illative in Old Latvian.

It is also worth noting several contributions paying attention to such poorly studied phenomena as "Suffixaufnahme" in Old Lithuanian (Parenti 1996) and in some Lithuanian peripheral and insular dialects at the border with or in Belarus (cf. Grinaveckienė 1969: 221, discussed by Wiemer 2009b: 357), "double inflection" of definite adjectives and dual pronouns (Stolz 2007, 2010), the grammatical status of numerals (Boizou 2012), and the morphology and functioning of indefinite pronouns (Haspelmath 1997: 275–276; Kozhanov 2011, this volume).

### 2.3.1.2 Latvian and Latgalian

Latvian declension differs from Lithuanian in many respects, including the organization of inflectional classes, presence of non-phonologically determined stem alternations, and the number of morphological cases (Latvian lacks a distinct instrumental, which has merged with the accusative in the singular and with the dative in the plural, see also below; the status of the vocative form is not unequivocal, either, see Holvoet 2012, and in the plural, case distinctions have retreated, cf. Wälchli 1998). The sample paradigms are given in Table 10.

The declension of adjectives in Latvian is much more unified than that of Lithuanian, comprising just one major declension type, completely coinciding with the noun declension I for masculine gender and with noun declension III for feminine gender. The definite declension has become largely opaque, with most of the suffixes being no longer segmentable (see Table 11).

Latvian nominal inflection has attracted attention of linguists because of various mismatches between syntax and morphology that it presents. The most well-known problem is the status of the instrumental case, which does not have

**Tab. 10:** Sample paradigms of Latvian nouns[4]

|  |  | I 'father' (M) | II 'brother' (M) | III 'sister' (F) | IV 'mother' (F) | V 'ice' (M) | VI 'night' (F) |
|---|---|---|---|---|---|---|---|
| SG | NOM | tēvs | brālis | māsa | māte | ledus | nakts |
|  | GEN | tēva | brāļa | māsas | mātes | ledus | nakts |
|  | DAT | tēvam | brālim | māsai | mātei | ledum | naktij |
|  | ACC | tēvu | brāli | māsu | māti | ledu | nakti |
|  | LOC | tēvā | brālī | māsā | mātē | ledū | naktī |
| PL | NOM | tēvi | brāļi | māsas | mātes | ledi | naktis |
|  | GEN | tēvu | brāļu | māsu | māšu | ledu | nakšu |
|  | DAT | tēviem | brāļiem | māsām | mātēm | lediem | naktīm |
|  | ACC | tēvus | brāļus | māsas | mātes | ledus | naktis |
|  | LOC | tēvos | brāļos | māsās | mātēs | ledos | naktīs |

**Tab. 11:** Declension of adjectives in Latvian (*augsts* 'high')

|  |  | Indefinite | | Definite | |
|---|---|---|---|---|---|
|  |  | Masculine | Feminine | Masculine | Feminine |
| SG | NOM | augsts | augsta | augstais | augstā |
|  | GEN | augsta | augstas | augstā | augstās |
|  | DAT | augstam | augstai | augstajam | augstajai |
|  | ACC | augstu | | augsto | |
|  | LOC | augstā | | augstajā | |
| PL | NOM | augsti | augstas | augstie | augstās |
|  | GEN | augstu | | augsto | |
|  | DAT | augstiem | augstām | augstajiem | augstajām |
|  | ACC | augstus | augstas | augstos | augstās |
|  | LOC | augstos | augstās | augstajos | augstajās |

a dedicated exponence; this issue has been discussed by Fennell (1975), Lötzsch (1978), Holvoet (1992, 2010a), and Andronov (2001). An account of Latvian declension in terms of early Distributed Morphology is presented by Halle (1992). Another interesting issue is the defective paradigms of reflexive action nominals and participles treated in Kalnača and Lokmane (2010). From a more general

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**4** The numbering of inflection classes in Table 11 differs from the traditional one reflected in grammars and textbooks.

**Tab. 12:** Sample paradigms of Latgalian nouns (based on Nau 2011b: 155, 162)[5]

|     |     | I 'end' masc. hard | II 'cock' masc. soft | III 'edge' fem. hard | IV 'mouse' fem. soft | V 'fire' masc. soft |
| --- | --- | --- | --- | --- | --- | --- |
| SG | NOM | *gols* | *gaiļs$^j$* | *mola* | *pele* | *guņs$^j$* |
|    | GEN | *gola* | *gaiļa* | *molys* | *pelis$^j$* | *guņs$^j$* |
|    | DAT | *golam* | *gaiļam* | *molai* | *pelei* | *gunei* |
|    | ACC | *golu* | *gaili* | *molu* | *peli* | *guni* |
|    | LOC | *golā* | *gailī* | *molā* | *pelē* | *gunī* |
| PL | NOM | *goli* | *gaili* | *molys* | *pelis$^j$* | *guņs$^j$, gunis$^j$* |
|    | GEN | *golu* | *gaiļu* | *molu* | *peļu* | *guņu* |
|    | DAT | *golim* | *gailim* | *molom* | *pelem* | *gunim* |
|    | ACC | *golus* | *gaiļus* | *molys* | *pelis$^j$* | *guņs$^j$, gunis$^j$* |
|    | LOC | *golūs* | *gaiļūs* | *moluos* | *pelēs$^j$* | *gunīs$^j$* |

perspective, nominal paradigms in Latvian and Latgalian were addressed by Nau (2011a: 21–42, 2011b), which, together with Lelis (1970), are actually the only works in English treating Latgalian declension. A structuralist account of nominal inflection in Latvian can be found in the study of Rosinas (2005), and a theoretical analysis from the perspective of the "No Blur Principle" can be found in Carstairs-McCarthy's (2014) work.

Latgalian nominal inflection is superficially similar to the Latvian one but differs from it in certain important, although intricate, respects, see in particular Nau (2011b), e.g., in a consistent differentiation between "hard" and "soft" stems. Sample paradigms of nouns are given in Table 12.

On Latgalian pronouns, see Stafecka (1989, 1997), based on older texts.

### 2.3.2 Verbal morphology

General overviews of Lithuanian and Latvian verbal morphology, both inflectional and derivational, can be found in any of the standard and academy grammars (see the introduction to this section). The hitherto unsurmounted standard reference books on Baltic verbal morphology from a diachronic perspective have remained Stang (1942, 1966: 309–482), on Lithuanian cf. also Kazlauskas (2000a: chapter 3), and more generally on Baltic diachronic morphology the collection of papers by Kazlauskas (2000b) and the useful handbook by Schmalstieg (2000).

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**5** The superscript *<j>* indicates palatalization not marked in the standard orthography.

The acquisition of Lithuanian verbal morphology (both inflectional and derivational) is dealt with by Wójcik (2000).

The four most general features of Baltic verbal morphology are (a) the consistent lack of number distinctions in the third person of all finite forms, (b) the entire architecture of inflectional categories of the Baltic verb is based on stem alternations involving suffixation, infixation,[6] consonant alternations, and qualitative and/or quantitative vowel changes, cf. Arkadiev (2012a) for a recent overview of these issues in Lithuanian; (c) the inflectional endings (person-number markers) of all tenses belong to a uniform set, with slight morphophonological changes for individual subparadigms (cf. Schmid 1966 with the diachronic background, on Lithuanian cf. also Otrębski 1965, II: 307).

The system of verbal categories consistently shows an inflectional distinction of past, present, and future tenses (see Tables 15–17) plus a series of periphrastic perfect tenses, which will be considered separately (see Section 2.3.2.4). The same holds for grammatical marking of evidential functions, synchronically based on participles (see Section 2.3.2.4). The mood system is rather poor. Apart from the subjunctive and imperative in all extant languages, contemporary Latvian and Latgalian have a special debitive construction (see Section 2.3.2.2), and all three languages have analytical hortatives. The latter have ousted what is sometimes referred to as the permissive mood, i.e., a set of third-person hortative forms ending in *-ie*, *-ai* going back (as the original Baltic imperative does) to the Indo-European optative; modern Lithuanian has retained only a few fossilized instances like *te-būn-ie* 'let it be'.[7]

In a most schematic (and somewhat simplified) way, we can say that Baltic verbs formally distinguish at least three stems. For instance, in Lithuanian, the infinitive stem is always the basis for the future, the past habitual, the imperative, and the subjunctive, as well as of some non-finite forms; if the present and past tense stems differ, the infinitive stem sometimes goes with the past, sometimes with the present stem (see Table 15). If the root in the infinitive stem is extended by {y}, this suffix lacks in both past and present tenses (e.g., *sak-y-ti* 'say' ⇒ *sak-iau*

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**6** The present tense of intransitive inchoative verbs often shows an {*n/m*} infix or {*st*} suffix (cf. Stang 1942: 132–133; Temčin 1986, Ostrowski 2006: 55).

**7** This form reflects the older Lithuanian synthetic hortative with the prefix *te-* (cf. Kazlauskas 2000a: 373–379). In modern Lithuanian, it shows up as a permissive-restrictive prefix (cf. Arkadiev 2010).

'I said', *sak-au* 'I say'). The imperative and subjunctive forms are late innovations; here the extant Baltic languages differ and show non-cognate forms.[8]

According to the composition and mutual relations between stems, Lithuanian verbs are traditionally classified into the so-called primary verbs, i.e., those where neither of the three stems contains a syllabic suffix; (ii) the suffixal verbs, which are derived from verbs or words of other parts of speech by syllabic suffixes; and (iii) the so-called mixed verbs, which have syllabic suffixes (*-o-*, *-ė-*, or *-y-*) in their infinitive stem and lack it in one or both of the remaining stems. This classification can be, *mutatis mutandis*, extended to the verbs of Latvian and Latgalian as well.

It is also worth noting that although all three Baltic languages have quite complex systems of morphophonological vowel and consonant alternations in their conjugation, their functional load is different. In Lithuanian, stem alternations are almost always subsidiary, co-occurring with, and often conditioned by overt segmental affixes serving as a primary exponence of particular morphosyntactic features. By contrast, in Latvian and especially in Latgalian, there are many cases where stem alternations become the primary means of differentiation between forms with identical (not always zero!) affixal markers (see some examples in Tables 13 and 14).

**Tab. 13:** Stem alternations as primary exponence in Latvian conjugation

|  | *vest* 'lead' | | *pirkt* 'buy' | |
|---|---|---|---|---|
|  | **Present** | **Past** | **Present** | **Past** |
| 1SG | *ved-u* [væd-u] | *ved-u* [ved-u] | *pērk-u* [pæːrku] | *pirk-u* |
| 2SG | *ved-ø* [ved] | *ved-i* [ved-i] | *pērc-ø* [peːrts] | *pirk-i* |
| 3 | *ved-ø* [væd] | *ved-a* [ved-a] | *pērk-ø* [pæːrk] | *pirk-a* |

**Tab. 14:** Stem alternations as primary exponence in Latgalian conjugation

|  | *nest* 'carry' | | *ēst* 'eat' | |
|---|---|---|---|---|
|  | **Present** | **Past** | **Present** | **Past** |
| 1SG | *nas-u* | *neš-u* [nʲeʃu] | *ād-u* | *iež-u* |
| 2SG | *nes-ø* [nʲæsʲ] | *nes-i* [nʲesʲi] | *ēd-ø* [æːtʲ] | *ied-i* |
| 3 | *nas-ø* | *nes-e* [nʲæsʲæ] | *ād-ø* | *ēd-e* [æːdʲæ] |
| Supine | *nas-t(u)* | | *ās-t(u)* | |

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**8** For the provenance of the contemporary imperative forms, cf. Stang (1942: 245–248), Kazlauskas (2000a: 380–385), on the rise of the subjunctive inflection, cf. Stang (1942: 250–254, 1966: 428–434), Smoczyński (1988: 861; 1999), and Michelini (2004).

### 2.3.2.1 Lithuanian

The basic pattern of verbal stems and verbal forms in contemporary Lithuanian is given in Table 15. Unless otherwise indicated, in this and similar tables for other languages verbs are given in the third person.

Various varieties of Lithuanian demonstrate innovations in the aspect-tense domain. The Lithuanian standard variety has, based on West Aukštaitian dialects, entrenched the past habitual (sometimes misleadingly called "frequentative") (cf. Geniušienė 1989, Roszko & Roszko 2006). Holvoet and Čižik (2004: 141–142) include it as a third member in an opposition of aspect, which, in their opinion, is tightly connected to the semantics of "imperfective" verbs (Holvoet & Čižik 2004: 153–154). For an elaborate treatment of this gram in Standard Lithuanian, see Sakurai (this volume). From an areal point of view, it is remarkable that although languages with a past habitual gram are not that rare all over the world (cf. Bybee, Perkins & Pagliuca 1994: 154–155), Standard Lithuanian is the only variety in Europe marking this function with a bound morpheme (suffix). It does have functional equivalents in other Baltic varieties, namely in those to the west and north

**Tab. 15:** The basic relation between stems of verbal inflectional categories in Lithuanian

| Infinitive | Present | Simple past | Future | Imperative | Subjunctive |
|---|---|---|---|---|---|
| **I Primary verbs** | | | | | |
| *dirb-ti* 'work' | *dirb-a* | *dirb-o* | *dirb-s* | *dirb-k* | *dirb-tų* |
| *tap-ti* 'become' | *ta-m-p-a* | *tap-o* | *tap-s* | *tap-k* | *tap-tų* |
| *ding-ti* 'disappear' | *ding-st-a* | *ding-o* | *ding-s* | *din-k* (<\**ding-k*) | *ding-tų* |
| *kirs-ti* 'cut' | *kert-a* | *kirt-o* | *kir-s* | *kirs-k* | *kirs-tų* |
| *drėb-ti* 'throw' | *dreb-ia* | *drėb-ė* | *drėb-s* | *drėb-k* | *drėb-tų* |
| *kel-ti* 'raise' | *kel-ia* | *kėl-ė* | *kel-s* | *kel-k* | *kel-tų* |
| *gau-ti* 'get' | *gau-n-a* | *gav-o* | *gau-s* | *gau-k* | *gau-tų* |
| *bū-ti* 'be' | 1SG *es-u*, 3 *yra* | *buv-o* | *bu-s* | *bū-k* | *bū-tų* |
| **II Mixed verbs** | | | | | |
| *kalb-ė-ti* 'speak' | *kalb-a* | *kalb-ė-jo* | *kalb-ė-s* | *kalb-ė-k* | *kalb-ė-tų* |
| *myl-ė-ti* 'love' | *myl-i* | *myl-ė-jo* | *myl-ė-s* | *myl-ė-k* | *myl-ė-tų* |
| *žin-o-ti* 'know' | *žin-o* | *žin-o-jo* | *žin-o-s* | *žin-o-k* | *žin-o-tų* |
| *dar-y-ti* 'do' | *dar-o* | *dar-ė* | *dar-y-s* | *dar-y-k* | *dar-y-tų* |
| **III Suffixal verbs** | | | | | |
| *tikr-in-ti* 'check' | *tikr-in-a* | *tikr-in-o* | *tikr-in-s* | *tikr-in-k* | *tikr-in-tų* |
| *dėk-o-ti* 'thank' | *dėk-o-ja* | *dėk-o-jo* | *dėk-o-s* | *dėk-o-k* | *dėk-o-tų* |
| *rag-au-ti* 'taste' | *rag-au-ja* | *rag-av-o* | *rag-au-s* | *rag-au-k* | *rag-au-tų* |
| *maž-ė-ti* 'diminish' | *maž-ė-ja* | *maž-ė-jo* | *maž-ė-s* | *maž-ė-k* | *maž-ė-tų* |

of the Aukštaitian territory: Samogitian (Lithuanian) and Latvian. However, these grams are formed analytically around verbs with an original meaning of 'like': Samogitian *liuobėti* (which still occurs as an independent verb with this meaning as well) and Latvian *mēgt* (which has come to be used only as an auxiliary) (cf. Arkad'ev 2012b: 83–85).[9] From the point of view of the inner-Baltic dialect continuum (and from a diastratic viewpoint), the Standard Lithuanian "synthetic" habitual and the analytical habituals are in complementary distribution.

Another peculiarity of Lithuanian is the productive use of inflectional prefixes (in addition to the derivational prefixes, see Sections 2.3.2.5 and 2.4.1). These include, in addition to the negative prefix *ne-*, attested in all Baltic languages, two polyfunctional prefixes, *te-* and *be-*. Both *te-* and *be-* can be used in isolation and in combination with each other and with negation. The uses of *te-* include permissive (mostly with third-person present; see (1a)) and restrictive (with any verbal forms; see (1b)) (cf. Arkadiev 2010).

(1)　Lithianian

　　a.　*T-as,*　　　　　*kur-is*　　　　　*sukurt-as*　　　　*rašy-ti* –
　　　　that-NOM.SG.M　which-NOM.SG.M　created-NOM.SG.M　write-INF
　　　　***te-raš-o,***　　　*kalbė-ti* –　***te-kalb-a...***
　　　　PRM-write-PRS.3　speak-INF　　PRM-speak-PRS.3
　　　　'Let that who is created to write, write, and that who is created to speak, speak.' (DLKT)

　　b.　*...man*　　　*ne-atrod-o*　　*natūral-u,*　*kad*　*j-is*
　　　　I:DAT　　　NEG-seem-PRS.3　natural-N　　that　3-NOM.SG.M
　　　　*vis-ą*　　*laik-ą*　　　*apie*　　　*tai*　***te-kalb-a.***
　　　　all-ACC.SG　time-ACC.SG　about　　that　RSTR-speak-PRS.3
　　　　'It does not seem natural to me that he is always speaking only about that.' (DLKT)

The prefix *be-* is very polyfunctional, and its interpretation often depends on the type of verbal form (e.g., finite vs. non-finite) to which it attaches as well as to the broader context, see Arkadiev (2011b). The most salient uses of *be-* include the continuative and the avertive. The continuative comes in two kinds distinguished

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**9** According to the material presented in Zinkevičius (1966: 357f.) and Eckert (1996a,b), Samogitian dialects differ among each other for both the form of *liuobėti* (= auxiliary) and the lexical verb: *liuobėti* can occur either as an inflected verb or as a particle (*liuob*); the lexical verb can occur as infinitive or in the future form. Irrespective of the formal marking, the Samogitian constructions always carry past reference and the Latvian ones (with *mēgt*) inflect and distinguish tense (Arkad'ev 2012b: 84).

by polarity: a positive one (with the additional prefix *te-* to yield *te-be-*) and a negative one (with the prefix *ne-* giving *ne-be-*), cf. (2a,b).

(2)  Lithuanian

a.  *...miestel-yje*  **te-be-gyven-o**  *daug*  *našli-ų.*
    small.town-LOC.SG  POS-CNT-live-PST.3  many  widow-GEN.PL
    '... in the town there still lived many widows.' (DLKT)

b.  *Tada*  *j-is*  *jau*  **ne-be-gyven-o**  *su*  *žmon-a...*
    then  3-NOM.SG.M  already  NEG-CNT-live-PST.3  with  wife-INS.SG
    'Then he already no longer lived with his wife...' (DLKT)

In the avertive construction, the prefix *be-* attaches to a present active participle in combination with the inflected auxiliary *būti* in the past tense (cf. 3). On Lithuanian avertive, sometimes misleadingly called "continuative", besides Arkadiev (2011b), see also Sližienė (1961, 1995: 227–228) and Mathiassen (1996b: 8–9).

(3)  Lithuanian
    *Kai*  *aš*  *jau*  **buv-au**  **be-iš-ein-ąs**,
    when  1SG.NOM  already  AUX-PST.1SG  CNT-out-go-PRS.PA.NOM.SG.M
    *paprašė manęs stiklinės vandens.*
    'When I was already going to exit, he asked me [to bring him] a glass of water.' (DLKT)

### 2.3.2.2  Latvian and Latgalian

Tables 16 and 17 illustrate the general patterns of verb inflection in Latvian and Latgalian, respectively. On the classification of Latvian verbs, see e.g., Fennell (1971b, 1986).

**Tab. 16:** The basic relation between stems of verbal inflectional categories in Latvian

| Infinitive | Present | Past | Future | Subjunctive |
|---|---|---|---|---|
| I Primary verbs | | | | |
| *nes-t* 'carry' | *nes* | *nes-a* | *nes-īs* | *nes-tu* |
| *pirk-t* 'buy' | *pērk* | *pirk-a* | *pirk-s* | *pirk-tu* |
| *cel-t* 'raise' | *ceļ* | *cēl-a* | *cel-s* | *cel-tu* |
| *bār-t* 'scold' | *bar* | *bār-a* | *bār-s* | *bār-tu* |
| *bruk-t* 'collapse' | *brūk* | *bruk-a* | *bruk-s* | *bruk-tu* |
| *grim-t* 'sink' | *grim-st* | *grim-a* | *grim-s* | *grim-tu* |
| *sie-t* 'tie up' | *sie-n* | *sē-ja* | *sie-s* | *sie-tu* |
| *ie-t* 'go' | 1SG *eju*, 3 *iet* | *gā-ja* | *ie-s* | *ie-tu* |
| *bū-t* 'be' | 1SG *esmu*, 3 *ir* | *bi-ja* | *bū-s* | *bū-tu* |
| II Mixed verbs | | | | |
| *tur-ē-t* 'hold' | *tur* | *tur-ē-ja* | *tur-ē-s* | *tur-ē-tu* |
| *zin-ā-t* 'know' | *zin-a* | *zin-ā-ja* | *zin-ā-s* | *zin-ā-tu* |

**Tab. 16:** (*Continued*)

| Infinitive | Present | Past | Future | Subjunctive |
|---|---|---|---|---|
| *aic-in-ā-t* 'bid' | *aic-in-a* | *aic-in-ā-ja* | *aic-in-ā-s* | *aic-in-ā-tu* |
| *las-ī-t* 'read' | *las-a* | *las-ī-ja* | *las-ī-s* | *las-ī-tu* |
| **III Suffixal verbs** | | | | |
| *run-ā-t* 'speak' | *run-ā* | *run-ā-ja* | *run-ā-s* | *run-ā-tu* |
| *mekl-ē-t* 'search' | *mekl-ē* | *mekl-ē-ja* | *mekl-ē-s* | *mekl-ē-tu* |
| *lab-o-t* 'correct' | *lab-o* | *lab-o-ja* | *lab-o-s* | *lab-o-tu* |

**Tab. 17:** The basic relation between stems of verbal inflectional categories in Latgalian (based on Nau 2011a: 42–49; Leikuma 2003: 30–37, Aleksej Andronov, p.c.)

| Infinitive | Present | Past | Future | Subjunctive |
|---|---|---|---|---|
| **I Primary verbs** | | | | |
| *nes-t* [nʲæsʲtʲ] 'carry' | *nas* | *nes-e* [nʲæsʲæ] | *nes-s* [nʲæsʲ:] | *nas-tu* |
| *seg-t* [sʲæktʲ] 'cover' | *sadz* | *sedz-e* [sʲædzʲæ] | *seg-s* [sʲæksʲ] | *sag-tu* |
| *jim-t* [jimtʲ] 'take' | *jam* | *jēm-e* [jæːmʲæ] | *jim-s* [jimsʲ] | *jim-tu* |
| *stum-t* [stumtʲ] 'push' | *stum* | *styum-e* [stʲumʲæ] | *stum-s* [stumsʲ] | *stum-tu* |
| *krau-t* [krautʲ] 'pile' | *krau-n* | *kruov-e* [kruovʲæ] | *krau-s* [krausʲ] | *krau-tu* |
| *snig-t* [sʲnʲiktʲ] 'snow' | *snīg* | *snyg-a* | *snig-s* [sʲnʲiksʲ] | *snyg-tu* |
| *grim-t* [grimtʲ] 'sink' | *grym-st* | *grym-a* | *grim-s* [grimsʲ] | *grym-tu* |
| *ī-t* [iːtʲ] 'go' | 1SG *īm-u*, 2SG *ej* [æj], 3 *īt* [iːt] | *guoj-a* | *ī-s* [iːsʲ] | *ī-tu* |
| *byu-t* [bʲutʲ] 'be' | 1SG *asm-u*, 2SG *es-i* [esʲi], 3 *ir* | *bej-a* [bʲeja] | *byu-s* [bʲusʲ] | *byu-tu* |
| **II Mixed verbs** | | | | |
| *dar-ei-t* [dareitʲ] 'do' | *dor-a* | *dar-e-ja* [darʲeja] | *dar-ei-s* [darʲeisʲ] | *dar-ei-tu* [darʲeitu] |
| *tic-ē-t* [tʲitsʲæːtʲ] 'believe' | *tic* [tʲitsʲ] | *tic-ē-ja* [tʲitsʲæːja] | *tic-ē-s* [tʲitsʲæːsʲ] | *tyc-ā-tu* |
| *tec-ē-t* [tʲætsʲæːtʲ] 'flow' | *tak* | *tec-ē-ja* [tʲætsʲæːja] | *tec-ē-s* [tʲætsʲæːsʲ] | *tac-ā-tu* |
| **III Suffixal verbs** | | | | |
| *mekl-ē-t* [mʲækʲlʲæːtʲ] 'search' | *mekl-e-j* [mʲækʲlʲæj] | *mekl-ē-ja* [mʲækʲlʲæːja] | *mekl-ē-s* [mʲækʲlʲæːsʲ] | *makl-ā-tu* |
| *run-uo-t* [runuotʲ] 'speak' | *run-o-j* | *run-uo-ja* / *run-ov-a* | *run-uo-s* [runuosʲ] | *run-uo-tu* |
| *peļn-ei-t* [pʲelʲnʲeitʲ] 'earn' | *peļn-e-j* [pʲelʲnʲej] | *peļn-e-ja* [pʲelʲnʲeja] | *peļn-ei-s* [pʲelʲnʲeisʲ] | *peļn-ei-tu* [pʲelʲnʲeitu] |

A peculiarly Latvian innovation in the verbal system is the debitive, an inflectional form expressing necessity. It consists of a basic form with the prefix *jā-* added to the third-person present of the verb, and the verb 'be' as an auxiliary, e.g., *bija jā-strādā* 'one had to work'. Originally, the base was probably the infinitive, retained in the case of 'be': *jā-būt* 'one has to be'. The person on whom an obligation is imposed is in the dative, the original accusative object of the verb is usually in the nominative (cf. 4a). In many dialects, however, the second argument is in the accusative; in all dialects, the second argument is in the accusative if it is a first- or second-person pronoun or a reflexive pronoun (cf. Schmalstieg 1990) (see 4b).

(4)   Latvian

   a.   *Man        jā-no.pērk    cimd-i.*
        1SG.DAT    DEB-buy       glove-NOM.PL
        'I must buy gloves.'

   b.   *Man        jā-sa.tiek    tevi.*
        1SG.DAT    DEB-meet      2SG.ACC
        'I must meet you.'

The debitive has arisen from a biclausal structure containing an infinitival relative clause: an original structure \**man nav jā pirkt* 'I do not have [anything] which to buy' (≅ 'I have nothing to buy') gave rise to the modal meaning 'I need not buy' (the original meaning is attested in Old Latvian). On the grammaticalization process that led to the rise of the debitive as a modal form, cf. Holvoet (1998).

An interesting feature of the Latvian verbal system is the morphologization of evidential marking (cf. Holvoet 2001c). This marking originally consisted, like in Lithuanian (see Section 2.3.2.4), in the use of participles instead of finite verb forms, but in Latvian declinable participles have been replaced with converbs in *-ot*, and this ending has become dissociated from its original function and has become a dedicated evidential marker that can be added to many forms already marked for other categories, e.g., there is an evidential debitive, e.g., *jā-domāj-ot* 'one reportedly has to think', and some dialects have an evidential irrealis of the type *būt-ot* 'would reportedly be'. The evidential marker can also spread over the whole verbal form and be added to both auxiliary and main verb, e.g., *es-ot jā-strādāj-ot* 'one reportedly has to work'. Because of this "syntactic emancipation", Nau (1998: 27) and Holvoet (2001a: 117f., 2007: 83–89) treat the evidential suffix *-ot* as a finite (or "finitized") part of the regular verbal paradigm.

After having illustrated the general outfit of the verbal morphology of individual Baltic languages, we will now deal with several issues relevant for all of these languages, without artificially distributing information among subsections.

### 2.3.2.3 Participles and other deverbal nominal categories

Baltic languages betray a rich inventory of participles, which covers all tenses and fulfills a central role in different parts of the grammar (TAM system, including taxis, voice, evidentiality, all sorts of complex sentences), which we will come across at different places below. In Lithuanian, the inventory tends toward symmetry in terms of voice distinctions, while in Latvian and Latgalian, such a symmetry is lacking.

Inflected and uninflected participles have to be distinguished. The latter can for their most part be characterized as converbs, but inflected participles can also serve as adverbial ("semi-predicative") additions to the main predicate when the subjects of the participle and of the matrix verb are identical (cf. Sakurai 2008; see Section 2.5.3). From the diachronic viewpoint, the most comprehensive work on participles has been done by Ambrazas (1979, 1990); from a synchronic point of view, cf. also Gruzdeva (1958), Wiemer (2001b, 2007b: 201–206), Arkadiev (2011a, 2012c, 2013a, 2014b) on Lithuanian, Eiche (1983) on Latvian, and Nau (2011a: 57–60) on Latgalian. Uninflected participles in Lithuanian are consistently used as sort of switch reference markers in clause combining when the overt or understood subject of the participle does not coincide with the (nominative) subject of the matrix clause (cf. Wiemer 2001b: 78–80, 2009a: 183–200; Arkadiev 2012c, 2013a). By contrast, in Latvian and Latgalian, uninflected participles are productive in same-subject clauses as well, occur as components of the debitive construction, and are used as a productive marker of reportive evidentiality (see Section 2.3.2.4).

In Lithuanian, participles can be formed from any verb of any tense stem (including the past habitual). The most convenient way to subcategorize the paradigmatic organization of inflected participles is to distinguish between active and passive orientation and between participles with agreement categories (case, number, gender) and those without them, i.e., showing default agreement (active participles in *-ą*, *-į*, *-ę*, passive participles in unstressed *-a*). The latter are consistently used to mark lack of agreement with the highest-ranking (mostly the single) semantic argument, which with the passive participles can only be expressed in the genitive; in fact, these participles are predominantly derived from one-place verbs (e.g., *Čia žmoni-ų*.GEN.PL *given-ta* 'People must have lived here').

The symmetry of voice orientation is not perfect (even in Lithuanian), for two reasons: first, passive participles of future stems, although usually indicated in reference grammars, are extremely rare. Second, so-called passive participles – marked with {m} for the present stem and with {t} for the past stem – should generally better be characterized as devices of deranking the syntactic valency, irrespective of the transitivity of the verb (cf. also Sawicki 2004: 164). Both suffixes are exploited in the *ma/ta*-evidential of Lithuanian (see Section 2.3.2.4), in which one-place verbs predominate (see above). Moreover, *m*-participles

are consistently used in the derivation of nouns (together with pronominal or definite inflection, see Section 2.3.1.2) to denote generic terms irrespective of any voice orientation, e.g., (*sprog-ti* 'explode' >) *sprog-st-a-**m**-o-**ji** medžiag-a* 'explosive material', (*valg-y-ti* 'eat' >) *valg-o-**m**-as-**is** kambar-ys* 'dining room', (*raš-y-ti* 'write' >) *raš-o-**m**-o-**ji** mašin-ėl-ė* 'typing machine' (cf. Wiemer 2006b: 279).

In Latvian, participles in *-am-/-ām-* have acquired a modal meaning of either possibility or necessity, as in *viņu dzīvība ir glābjama* 'their lives can/must be saved'. In its original premodal meaning, this participle is used in shortened form, as a truncated accusative in *-am/-ām-*, in complement clauses of verbs of sensory perception and a few others; here, however, their value has switched from passive to active as a result of reanalysis shown in examples (5a,b); the construction has then spread to intransitive verbs, as in example (5c).

(5) Latvian

    a.  *Es*       *redz-ēj-u*     [*viņ-u*   *ved-am*       *uz*     *iecirkn-i*].
        1SG.NOM   see-PST-1SG   he-ACC   lead-PRS.PP   to    police.station-ACC.SG
        'I saw him being led to the police station.'

    →

    b.  *Es*       *redz-ēj-u*     [∅     *viņ-u*     *ved-am*
        1SG.NOM   see-PST-1SG   ∅     he-ACC    lead-PRS.PART
        *uz*       *iecirkn-i*].
        to        police.station-ACC.SG
        'I saw how they were leading him to the police station.'

    c.  *Es*       *dzird-u*       [*kād-u*       *dzied-am*].
        1SG.NOM   hear-PRS.1SG   somebody-ACC   sing-PRS.PART
        'I hear somebody singing'.

### 2.3.2.4 Resultatives, the perfect, and grammatical evidentiality

All Baltic languages have a full-fledged system of perfect tenses (or "anterior grams" in the sense of Thieroff 2000), which is based on the nominative of the gender-number inflected past active participles occurring together with the 'be'-verb (Lithuanian *būti*, Latvian *būt*, Latgalian *byut*) as an auxiliary inflected for tense and agreement categories. This system is presented in every reference and academy grammar of the Baltic languages. For concise treatments concerning Latvian cf. Nau (2005), concerning Lithuanian cf. Wiemer (2007b: 206–210; 2009a: 168–172). It must be noted, however, that the use of the perfect tenses in Lithuanian and Latvian diverges in many respects (the Latvian perfect seems to be more grammaticalized than the Lithuanian one, which in many cases is in free or stylistic variation with the simple past tense), most of which are still to be investigated.

Close to the perfect in functional terms are resultatives; the subject-oriented resultative formally coincides with the (present) perfect, whereas the object-oriented resultative is based on participles with the {t}-suffix used also for the passive and the non-agreeing evidential (see below). A striking feature of Baltic resultatives is the perfectly complementary distribution of marking types (i.e., participial suffixes) over subject- vs. object-oriented resultatives (cf. Geniušienė & Nedjalkov 1988, Wiemer & Giger 2005: chapter 4; see further Section 4). Another fact striking only for Lithuanian (but not Latvian) is the occurrence of a weakly grammaticalized HAVE-perfect (Geniušienė & Nedjalkov 1988: 385–386; Wiemer & Giger 2005: 47ff; Arkad'ev 2012b: 105–106), which is outstanding both from an areal and a structural perspective: it is composed of the inflected transitive verb *turėti* 'have' and **active** anteriority participles agreeing in number and gender with the (nominative) subject, not the object (as was the case in initial stages of Germanic and Romance leading to the perfect, and what has been observed for centuries in all West Slavic languages). The reasons that might have led to this peculiar situation were discussed by Wiemer (2012b).

All extant Baltic languages display an evidential extension of the present perfect based on inflected participles. The reportive function clearly predominates. From a syntactic viewpoint, it is probable that a certain role in the rise of the reportive function of inflected active participles was played by syntactically embedded complement clauses[10] (as illustrated in 6a). However, this function is fulfilled by these participles also in independent (main) clauses. Insofar as the present perfect appears to have been the primary source for the spread of reportive marking in the northeastern part of the Circum-Baltic Area (CBA) (Wälchli 2000), in the Baltic languages, a second source construction proves to be no less important, namely, logophoric constructions based on a complement-taking predicate (CTP) of speech and the predicate of the complement expressed by a nominative active participle of past, present, or future tense agreeing in number and gender with the subject of the CTP (cf. Ambrazas 1979: 96–128, 1990: 124–141; Wiemer 1998, 2007b: 228–232; Arkadiev 2012b) (see 6).

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**10** On alternative assumptions, participles in reportive use might have evolved from a sort of syntactic tightening of erstwhile juxtaposed (asyndetic) coordination (finite predicate+inflected participle, with the latter re-interpreted as clausal argument of the former). This hypothesis, which is also tightly linked to the rise of logophoric constructions (as will be discussed later), does not invalidate assumptions about a development out of subordination. Rather, both assumptions may complement each other if different stages are assessed (Ambrazas 1990: 129f.; Wiemer 1998: 236–240).

(6)   Lithuanian
*Vaik-as*             *skund-ė-si*
child(M)-NOM.SG    complain-PST.3-RFL
'The child complained

  a.  *prarad-ęs*                            *žaisliuk-ą.*
      lose-PST.PA.NOM.SG.M                   toy-ACC.SG
      that it had lost its toy.'

  b.  *nor-į̃s*                    *valgy-ti.*
      want-PRS.PA.NOM.SG.M       eat-INF
      that it wanted to eat.'

  c.  *šiandien*   *ne-maty-s-iąs*                     *draug-o.*
      today       NEG-see-FUT-PA.NOM.SG.M             friend-GEN.SG
      that it wouldn't see its friend today'.

Basically, this sort of logophoric construction is a prominent case in point to illustrate the rather widespread role of participles in the complementation of clausal arguments (see Section 2.5.3). However, this syntactically rather tight construction represents but the canonical case of a logophoric construction (Nau 2006: 64). Another, syntactically "loose" way of marking logophoricity will be discussed in Section 3.4.2.

Only Lithuanian has developed a second device of marking evidentiality, with a predominant inferential function. This "second" grammatical evidential is based on non-agreeing participles ending in *-ma* (simultaneous) and *-ta* (anterior), with the highest-ranking argument in the genitive (cf. Holvoet 2007: chapter 4, Wiemer 2006a, 2007b: 213–216, Lavine 2006, 2010). In a sense, this functional extension turns out to be an indirect consequence of the disappearance of the neuter as a control gender (see Section 2.3.1). Another remarkable observation is the almost complementary distribution of the *ma/ta*-evidential in comparison to the passive (see Section 4).[11]

Apart from this, it should be stressed that for both types of evidentials, the functional association with voice-related operations has remained weak, since particular context conditions can cancel the evidential interpretation (cf. Roszko 1993: chapter 3; Wiemer 2007b: 206–208). This annulation is not possible with the specialized morphological evidential marker *-ot* in Latvian (see Section 2.3.2.2).

### 2.3.2.5  The quest of aspect
Even trying to give an only brief account of this issue would go beyond the limits of this general survey, because, among other things, such an account would require

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**11** The most recent attempt at accounting for the syntactic peculiarities of the Lithuanian *ta/ ma*-impersonal (inferential evidential) from a generative perspective is by Lavine (2010). Here diachronic considerations do not play any role whatsoever.

not only "stock taking" for Baltic, but also a comparison with Slavic, whose perfective vs. imperfective opposition has often influenced (not always fortunately) the discussion of aspect in Baltic. Here we can but mention the most basic things. For more comprehensive discussions and analyses, cf. Dambriūnas (1960), Holvoet (2001a: chapter 8), Wiemer (2001a), Kardelis and Wiemer (2002, 2003: 59–64), Holvoet and Čižik (2004), Wiemer and Pakerys (2007), Arkad'ev (2008a, 2009, 2011c), Holvoet (2014), and the probably most up-to-date treatment in Arkad'ev (2012b). On more particular problems, cf. Dambriūnas (1959, 1975), Sawicki (2000, 2010), and Mikulskas (2005: 32–38). As for Latvian, cf. also Hauzenberga-Šturma (1979).

From the notional perspective, aspect is usually defined as a category of the verb by which the internal contours of a situation (event, process, state), distinctions between singular and iterated situation tokens, and speaker's representation of the eventuality as bounded or unbounded (limited or unlimited) are distinguished. However, when aspect is regarded as a *grammatical* category, one has to consider whether such distinctions are expressed regularly and predictably by means of language-particular morphosyntactic devices. From a typological point of view (cf. Dahl 1985, 2000, Bybee & Dahl 1989, Bybee, Perkins, & Pagliuca 1994), aspect is most often expressed in one of two ways: either by inflectional markers (e.g., past tenses of conservative Romance), or in an analytical way by a combination of an auxiliary with some sort of nonfinite form of the lexical verb (e.g., the English progressive or the past habitual with *used to*). Syncretisms of aspectual categories with tense functions are commonplace.

By contrast, an aspectual opposition of the Slavic type, which rests on stem derivation, is cross-linguistically much less widespread. Most briefly, it results from an evolution "whereby stems related by morphological derivation can eventually substitute each other as lexical synonyms, but with complementary grammatical functions" (Wiemer 2011: 743). By the same process, the whole stock of verb stems is being divided up into different (in the Slavic case: two) classes with specific inventories of grammatical functions (Wiemer 2001a, Lehmann 2004). In this sense, aspect based on stem derivation yields a classificatory type of morphological oppositions, which can be compared to gender systems of nouns, albeit with more restrictions caused by lexically inherent aspectual distinctions carried by the stems themselves (such as state vs. process, instantaneous vs. durative, telic vs. atelic etc.). These are partially known as Vendlerian aspectual types of predicates, but they also pertain to lexical modifications of the verbal meaning known as "Aktionsarten" in the Indoeuropeanist tradition (after Agrell 1908). Both sorts of lexicon-internal divisions have played a role in standard and academy grammars of the Baltic languages (certainly to some extent framed on the model of Soviet academy grammars in post-war Russia); thus, we occasionally encounter sections on "lexico-semantic" or "semantico-derivational" classes of verbs

(cf., e.g., GLJa 1985: 250–277).[12] Influence from (Soviet) Russian grammatico-graphy can also be explained from the fact that Baltic shares with Slavic basically the same inherited stem-derivational patterns of verbal morphology.

Let us summarize where parallels between Baltic (mainly Lithuanian) and Russian or Polish aspect indeed exist and what the crucial differences are. The most basic common feature is productive derivation of verb stems (by prefixes **and** suffixes) itself. Since inflection is of no concern, all finite and nonfinite verb forms distinguish what is considered as aspect (Lith. *veikslas*). Importantly, stem derivation includes suffixation of verbal stems to yield new verbal stems (further on this issue in Sections 2.4 and Section 4). Latvian shares the use of perfectivi-zing prefixation with Lithuanian, but has acquired additional means of opposing imperfective and perfective aspect: perfective verbs with spatial prefixes have exact imperfective counterparts in the form of phrasal verbs containing adverbs semantically corresponding to the prefix in combination with the simple verb, e.g., ***ie-**nāca istabā* 'entered the room' (perfective) vs. *nāca **iekšā** istabā* 'was ente-ring the room' (imperfective). Although basically restricted to spatial prefixes, this pattern also comprises many of their more abstract or metaphorical uses, e.g., ***iz-**putēja* 'went bankrupt (perfective)' vs. *putēja **ārā*** 'was going bankrupt (imper-fective)'. Still, there is a predominant group of verbs containing prefixes radically changing lexical meaning for which phrasal imperfectives are not available, and they are bi-aspectual, e.g., *iz-mantot* 'use, exploit' (perfective and imperfective).

The differences in comparison to Slavic aspect are of three kinds: first, despite very productive patterns of prefixation and suffixation on token level (i.e., in dis-course), pairs of stems acquired by derivation do not pervade the stock of verb stems (i.e., types) with the same consequence as in, say, Russian or Polish (cf. Holvoet & Čižik 2004: 148; Arkad'ev 2009, 2012a: 60–78). Second, where pairs of lexically identical stems exist, their functional distribution over grammatically definable contexts is often not very clear-cut and unpredictable (Wiemer 2001a). Third, each verb stem regardless of its assignment to "perfective" or "imperfective" aspect (Lith. *įvykio* vs. *eigos veikslas*) can be used in any inflectional and infinite form and does not show virtually any restrictions in combination with other gram-matical categories (simple and compound tenses, mood, voice, etc.). East Slavic and Polish, by contrast, show severe restrictions in both regards: neither can a Russian or Polish perfective verb be used in all tenses, nor can it derive all kinds of participles. Notice further that many Lithuanian verbs called "perfective" can occur

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**12** On discussion concerning comparisons with Russian by Lithuanian scholars, cf., Galnaitytė (1962, 1963, 1966, 1979a) and Mustejkis (1972).

in the scope of a phasal verb denoting the final stage, or with a proximative reading of a goal-directed activity or process (e.g., *baigė per-skaityti knygą* 'finished reading the book', *baigė už-migti* 'was about to fall asleep'; cf. e.g., Brauner 1961); this is generally impossible for perfective verbs in any (standard) Slavic language. Phasal verbs denoting the initial stage of (bound or unbound) processes are less well accepted by many native speakers (e.g., *pradeda nu-si-rengti* 'begins to undress'). As shown in Holvoet (2014), these differences (both with regard to Slavic languages and between ingressive and egressive phasal verbs in Lithuanian) can be explained as a distinction of two construction types: instead of simply a phasal meaning, the combination 'finish, end'+"pfv." verb by default yields a proximative reading, i.e., "refers to an imminent event viewed as the outcome of a (basically unexpressed) process that is in its final phase" at some reference interval. Note that Latvian does not show this behavior.

   Another important difference between Baltic and Slavic languages in the domain of aspect lies in the existence in Baltic of a large and heterogeneous class of verbs (many of which belong to the most basic and frequent lexemes), which cannot be ascribed to any of the alleged "aspects", being able to occur both in bounded (associated to perfective) and unbounded (associated to imperfective) contexts. Cf. the following Lithuanian examples with a typical (and very frequent) "bi-aspectual" verb *patikti* 'like'.

(7)   Lithuanian

   a.   *J-ai        labiau    **pa.tik-o**,   kai     t-ie*
        3-DAT.SG.F  rather    like-PST.3   when    DEM-NOM.PL.M
        *pašnekesi-ai             vyk-o          be         j-os.*
        conversation-NOM.PL      occur-PST.3    without    3-GEN.SG.F
        'She rather liked [state] when such conversations happened without her.' (DLKT)

   b.   *Tai,     k-ą             iš.vyd-a-u,       man         **pa.tik-o**.*
        DEM      what-ACC.SG     see-PST-1SG      1SG.DAT     like-PST.3
        'I liked [event of entry into a state] what I saw.' (DLKT)

   c.   *J-am         **pa.tik-o**        š-is              tilt-as.*
        3-DAT.SG.M   like-PST.3       DEM-NOM.SG.M     bridge-NOM.SG
        'He liked [ambiguous as to state vs. event] this bridge.' (DLKT)

   Of course, Slavic languages have "bi-aspectual" verbs as well; however, almost all of them are either exceptional and infrequent archaisms or recent borrowings, and by no means constitute a salient part of the core of the verbal lexicon of Slavic languages.

We conclude this discussion by saying that despite important differences between Baltic and Slavic languages in the domain of expression of aspectual distinctions, there is no difference of principle, rather a difference of degree of grammaticalization. Both Baltic and Slavic have aspectually marked lexical classes rather than inflectional aspect, and the differences between them are in (i) degree of generality and obligatoriness of choice between verb stems related to each other by derivational means and (ii) the extent of the rule-based interaction of aspectual marking with other verbal categories and morphosyntax.

## 2.4 Derivational morphology

Among works dealing with word formation in Baltic languages in general, the following can be mentioned: Bammesberger (1973) on abstract nouns, Rosinas (1988, 1996) on pronouns (cf. also Nau 2001b for Latvian pronouns), Kozhanov (2011, this volume) on indefinite pronouns in Lithuanian, Petit (2012) in Latvian. Forssman (2003) deals with adverb formation in Latvian, Ulvydas (2009) in Lithuanian.

Among the salient features of all Baltic languages, we find the abundant use of the reflexive marker (RM) with verbs. Cf. Geniušienė (1983, 1987) for a systematic taxonomic account on a typological background (see also in Section 3.1). Kalnača and Lokmane (2012) is an attempt at applying this taxonomy to Latvian. That reflexivization is an instance of derivational rather than inflectional morphology is usually taken for granted, obviously under the influence of Russian grammar. Holvoet (forthcoming a, cf. also Holvoet & Semėnienė 2004a) argues that reflexive morphology is actually closer to inflection than to derivation according to most criteria. The motivation for relegating reflexivity from the morphological category of voice to word formation is that anticausative reflexives such as Lith. *už-si-degti*, Latv. *iedegties* 'light up, start burning' tend to be interpreted as an instance of valency-decreasing derivation; but the existence of mediopassives in many languages militates against such a strict division between voice (as valency-preserving morphology) and valency-changing derivation. Besides, anticausatives, the main argument in favor of valency-decreasing derivation, are just one among the numerous types of middle-voice reflexives. Many reflexives do not mark a change in argument structure, cf., for instance, Latvian *es apēdu kūku* 'I.NOM ate the cake. ACC' vs. *man apēdā-s kūka* 'I.DAT inadvertently ate the cake.NOM'. For a detailed study, cf. Holvoet, Grzybowska, and Rembiałkowska (forthcoming).

Apart from that, it should be stressed that a truly reflexive passive (without any additional connotations, as in the last example from Latvian) has shown up in Baltic dialects only under extreme contact conditions with (East) Slavic; cf. Holvoet (2000e) on Latgalian and Wiemer (2004a: 501–504) on Southeast Lithuanian.

Most verbs still hold a derivational relation to existent non-RM verbs, and as just mentioned, the dominant function is that of argument demotion (on a syntactic and/or semantic level), but we also find two groups of verb pairs for which argument increase occurs, namely, causative-reflexives, as in (8), and reflexive-benefactives. Compare, for instance, Lith. *nu-**si**-pirkti knyg-ą* 'buy oneself a book.ACC', *ap-**si**-žiūrėti parod-ą* 'inspect (for one's own pleasure) an exhibition.ACC', *už-**si**-dėti kepurę ant galvos* 'put a cap.ACC on one's head'. In Latvian this type has become archaic ("almost non-existent in [contemporary] Latvian", Geniušienė 2007: 637), while in Latgalian, it seems to be productive, like in Lithuanian (Lidija Leikuma and Aleksej Andronov, p.c.).

(8)  Lithuanian

 a. *Kirpėj-as*     *ap-kirp-o*    *Jon-ą.*
   hairdresser-NOM.SG  PRV-cut-PST.3  Jonas-ACC.SG
   'The hairdresser cut Jonas' hair' (lit. cut Jonas)

 b. *Jon-as*     *ap-**si**-kirp-o*    *pas*   *mading-ą*
   Jonas-NOM.SG  PRV-RFL-cut-PST.3  at  fashionable-ACC.SG
   *kirpėj-ą.*
   hairdresser-ACC.SG
   'Jonas cut his hair at the hairdresser's' (lit. cut himself at the hairdresser)

As for other derivational extensions of verb stems, one should look separately at prefixation and suffixation. Latvian has lost most of its productive derivational suffixation, the only exclusion being causative suffixes. Instead, it has developed a rich inventory of 'verbal particles', see Section 4. Here (standard) Lithuanian proves much more conservative.

### 2.4.1 Lithuanian

General overviews of Lithuanian derivational morphology are supplied by Otrębski (1965), Senn (1966: 316–351), DLKG (1996: 86–167, 191–238). A general theoretical background applied to Lithuanian is given by Urbutis (1978). On diachronic studies, see Section 3.2. The pervading force of analogy in derivation was illustrated by Mikelionienė (2002). She also gave a structural classification of occasional formations and tried to find criteria to differentiate between potential and occasional words. Traditional methods of classifying derivational types in Lithuanian were criticized by Smetona (2005), who proposed an alternative, more bottom-up-like method.

 Shorter grammars, as a rule, do not contain information on derivational morphology (cf. Mathiassen 1996a), nor does LG ([1997] 2006); obviously, derivation

was considered as belonging rather to the lexicon, even if productive rules in verbal morphology have given rise to the assumption that Lithuanian has been developing a perfective vs. imperfective aspect opposition of the Slavic type (see Section 2.3.2.5). GLJa (1985: 250–277), however, does account for stem derivational patterns as far as they concern rather regular semantic distinctions of ±transitivity, inchoativity-causativity, or the temporal shape of situations (phasal, iteration). DLKG (1996: 282–290) and LG ([1997] 2006: 221–237) supply extensive lists of affixes used to derive verb stems and correlating them with certain semantic (aspectual, diathetical) distinctions. It would be justified to discuss at least some of them from the perspective of lexical semantics (see Section 3.1), but we treat them in this subsection for the sake of systematicity, restricting ourselves to the most salient and productive patterns.

Nominal derivational morphology of Lithuanian has been extensively treated in the classic reference works by August Leskien (1891) and Pranas Skardžius ([1943] 1996), written from a Neogrammarian historical-comparative perspective. Works in English include Klimas (1975) on word formation in general and Klimas (1994) on reflexive nouns. The only issue that has received detailed treatment in more modern work is the formation, use, and acquisition of Lithuanian diminutives, see Savickienė (1998, 2001, 2007), Savickienė, Kempe, and Brooks (2009), and Dabašinskienė and Voeikova (this volume and references therein). Besides that, several studies exist dealing with the acquisition of nominal morphology of Lithuanian, e.g., Savickienė (2002, 2003), Kamandulytė (2006b).

Lithuanian shows two productive patterns of verbal suffixation. The first one is the suffix {elė/er(ė)} used for marking semelfactives derived from unprefixed stems, sometimes combined with ablaut (e.g., *baub-ti* ⇒ *baubt-**elė**-ti* 'bellow, low (of a cow)', *šok-ti* ⇒ *šokt-**elė**-ti* 'jump', *žvelgti* 'look, watch' ⇒ *žvilgt-**erė**-ti* 'catch sight, have a look', *laukti* ⇒ *lukt-**er(ė)**-ti* 'wait') (cf. Srba 1911, Galnaitytė 1979b, Geniušienė 1997: 224f.). Often these stems bear an inherently multiplicative semantics (in the sense of Xrakovskij 1997). Interestingly, the reversed order of derivation can be observed with so-called eventives (Lithuanian *ištiktukai*), a special word class discussed by Danylenko (this volume) and Wälchli (this volume), which can signal multiple action (subsumed under 'iterativity' by Wälchli) if the eventive is reduplicated. A single eventive (e.g., *cypt* 'squeak', *takš* 'hit') can thus be treated as an equivalent of a semelfactive verb, whereas reduplicated eventives (*cypt-cypt*, *takš-takš* etc.) can be considered as equivalents of multiplicatives.

The other productive suffix is {(d)inė}; its functional range is broader. As a rule, it serves to mark iterativity, multiplicativity, and (with certain restrictions often having to do with style and dialect) durativity. Verbs with this suffix can non-redundantly be combined with the habitual past (cf. Galnaitytė 1966, Geniušienė 1987, 1997, and references therein, as well as Sakurai, this volume).

The productivity of {(d)inė} seems to be especially high in Eastern Lithuania and in Lithuanian islands in Belarus. Since Fraenkel's (1936: 76–79, 104) study on Southeast Lithuanian, this fact has repeatedly been interpreted as an indication of the development of an aspect system of the Slavic type (cf. Vidugiris 1998, among others).

Formation of morphological causative verbs in Lithuanian, especially of the so-called curative verbs based on transitive predicates, has received some attention, cf. Galnajtite (1980), Savičiūtė (1985), Toops (1989), Rackevičienė (2005), Naktinienė (2011), Žeimantienė (2011), and Arkadiev and Pakerys (forthcoming).

As for prefixes, a first systematic treatment for Lithuanian was undertaken by Paulauskas (1958). From his analysis, one can deduce five types of prefixation, if one distinguishes the semantic relation to the deriving base: (i) prefixes that preserve the lexical prototype of the base, but add some (i.a) spatial (e.g., *eiti* 'go' ⇒ *iš-eiti* 'go out'), (i.b) temporal (e.g., *sėdėti* 'sit' ⇒ *pa-sėdėti* 'sit for a while'), or (i.c) other specification (e.g., *rašyti* 'write' ⇒ *per-rašyti* 'write sth. over, again'); (ii) prefixes that do not change the lexical meaning of the base stem (e.g., *sakyti* 'say' ⇒ *pa-sakyti* 'say'); (iii) prefixes that disambiguate a lexically diffuse meaning (e.g., *braukti* 'brush, draw, rub' ⇒ *iš-braukti* 'strike out, erase', *pa-braukti* 'underline'); (iv) prefixed stems for which the deriving base has been lost (e.g., †*prasti* ⇒ *pri-prasti* 'become accustomed'); (v) prefixed stems with a meaning largely dissociated from the (still existent) deriving base (e.g., *nešti* 'carry' ⇒ *pra-nešti* 'report', *tikti* 'be suitable' ⇒ *pa-tikti* 'like, please', *pa-si-tikti* 'meet (deliberately)').

### 2.4.2 Latvian

Latvian (let alone Latgalian) derivational morphology has not attracted much attention, with the exception of diminutives, cf. Rūķe-Draviņa (1953, 1959) and Horiguchi (this volume). A discussion of the relationship between inflectional and derivational morphology in Latvian is offered by Nau (2001c), Soida (2009), and the academy grammars (MLLVG, I: 75–374; LVG: 190–299). Latvian morphological causatives are discussed in Holvoet (forthcoming c) and Nau (forthcoming); on agent nouns see Nau (2013). On Latgalian, some aspects of word formation have been touched in work by Breidaks ([1966] 2007).

### 2.5 Syntax

Syntactic phenomena of Baltic languages have received very unequal attention and treatment in the existing literature. Sections of reference grammars of Lithuanian and Latvian devoted to syntax are usually written from an outdated

perspective (often, again, influenced by the traditional academy grammars of Russian) and do not cover most of the issues on the agenda of contemporary syntactic theories. Theoretically and typologically informed studies of syntactic and morphosyntactic phenomena in Baltic treat only certain selected issues, and the general picture remains largely understudied.

Work on Lithuanian syntax, in a sense, starts with Jablonskis (1922: 241–254). General reference works, in addition to the relevant sections in grammars, include Labutis (1976, 1998) and Sirtautas and Grenda (1988). Many aspects of Lithuanian syntax have been described from a more theoretically informed perspective by Holvoet and Judžentis (eds. 2003), Holvoet and Semėnienė (eds. 2004b), Holvoet and Mikulskas (eds. 2005, 2006, 2009), all published in Lithuanian. Work on Latvian syntax starts with Karl Mühlenbach (Kārlis Mülenbachs); the information on syntax in Endzelin's well-known German language grammar of Latvian (Endzelin 1923) is also due to Mühlenbach. Traditional descriptions of Latvian syntax can be found in MLLVG (by Bergmane, Grabis, Lepika, & Sokols 1962) and in the work of Ceplītis, Rozenbergs, and Valdmanis (1989). Gāters (1993) is a study of the language of the Latvian folk songs; it contains relatively little on syntax in the modern sense, concentrating mainly on the use of grammatical forms; it is rich in facts, but difficult to use because of the obsolete terminology. This is deplorable, since, in general, folk songs provide a very valuable body of primary data for Baltic linguistics.[13]

There is no good syntax based on more modern linguistic notions, but there are a number of studies on particular aspects of Latvian syntax, to be briefly overviewed below. On syntax in the acquisition of Latvian as a first language, there is a detailed study by Rūķe-Draviņa (1963).

Latgalian syntax, which in many respects differs from that of both Lithuanian and Latvian, remains largely undescribed. For a general overview and a preliminary description of many interesting patterns, see Nau (2011a); on the issue of differential object marking (i.e., the choice of accusative vs. genitive case of the object), see Nau (2014).

Some specific syntactic issues in Baltic, like constructions with nominative objects, have received attention first and foremost from the point of view of areal linguistics, see e.g., Larin (1963), Timberlake (1974), Lavine (1999), and Ambrazas (2001a) (see Section 4 for further discussion).

Complex predicates do not fit common divisions into morphology vs. syntax, but since their formation ultimately goes back to syntactic patterns (or restrictions), it

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[13] Of particular importance are the work of Ozols ([1961] 1993), a monograph on the use of folk songs, and the collection of songs by Barons ([1894–1915] 1922).

seems justified to treat them briefly here. Complex predicates traditionally coincide with analytical predicates in the TAM domain or for marked voice constructions (provided the latter are based on participles). Passives are discussed in Section 2.5.3.1 (as for the status of 'middle voice' see Section 2.4); complex predicates related to tense (perfect), aspect, and evidentiality are discussed in Sections 2.3.2.3 and 2.3.2.4. Modal auxiliaries were comprehensively described by Holvoet (2009), particular modal constructions by Holvoet (2001b, 2003b). Jasionytė (2012) described the two Lithuanian non-epistemic necessity-modals *reikėti* 'need' and *tekti* 'be gotten', Usonienė and Jasionytė's (2010) study is devoted to acquisitive modals. Wiemer, Vladyko and Kardelis (2004) is a study on the behavior of possibility modals in the dispositional domain, which seem to show convergent patterns in the Baltic-Slavic contact zone. On the Latvian and Latgalian debitive, see Section 2.5.3.2.

### 2.5.1 Diachronic matters

The hitherto fullest account of Lithuanian syntax from a diachronic perspective has been presented by Ambrazas (2006). The standard reference work in English is by Schmalstieg (1988), which is largely based on previous work of Ambrazas (mainly Ambrazas 1979) and other scholars. The syntax of participial constructions in Baltic is treated from a diachronic perspective in the seminal monograph of Ambrazas (1990, in Russian, with a German summary), which has served as a basis for some diachronic-typological observations of Arkadiev (2013a).

Claims concerning an alleged "ergative pre-history" of Baltic (cf., among others, Palmaitis 1977, Schmalstieg 1982, 1988, etc.) could be refuted (cf. Ambrazas 1994, 2004, Holvoet 2000d; Wiemer 2004d: 96–102 for a survey of the pros and cons). The question of 'esse'- vs. 'habere'-based predicative possession was discussed by Holvoet (2003a).

Holvoet (2004a) gave a comprehensive analysis of changes in the case marking of predicative nominals with finite and non-finite predicates in Lithuanian and Latvian.

The most systematic account of NP-internal word order patterns in Lithuanian from the sixteenth to the nineteenth century was supplied by the monograph of Vasiliauskienė (2008, written in Lithuanian with an English summary) (cf. also Say 2004). Vasiliauskienė (2001) is a more specialized study on NP-internal word order in the eighteenth-century religious writings of Lukauskas. She also paid attention to discontinuous NPs, which by that time had come to be characteristic of writings in Eastern Lithuania.

There are only some few articles on the diachronic rise of complex sentence patterns, all but one (Holvoet 2010c) in Lithuanian. Judžentis and Pajėdienė (2001, 2005) analyzed clausal coordination and clause order (2001) as well as

the use of comparative constructions (2005) in Daukša's *Katekizmas*. Judžentis (2002b) looked at complement clauses in this and another of Daukša's texts. He concluded that these texts did not yet show a clear differentiation between adverbial and complement clauses, since there was no complementizer void of additional semantic shades (see further Holvoet 2010c). An account of causal clauses and pertinent conjunctions was given by Kibildaitė (2001).

### 2.5.2  Noun phrases

Noun phrase structure in standard Baltic languages is typologically non-trivial in that it requires that agreeing modifiers (adjectives) go before non-agreeing ones (genitive noun phrases). NP structure in Baltic languages in comparison with Finnic is discussed by Christen (2001). A separate question concerns the use of definite and indefinite adjectives, see e.g., Gāters (1959); for a useful recent survey of the situation in both Baltic languages, see Holvoet and Spraunienė (2012). On the structure of phrases including numerals, see e.g., Cerri (2010, 2013).

Noun phrase structure in Lithuanian has been studied by Vaskelaitė (2003) and Holvoet and Mikulskas (eds. 2006). It has also received some treatment in the recent generative literature, see Rutkowski (2007, 2008), Rutkowski and Progovac (2006). From a diachronic and grammaticalization perspective, NP structure in Lithuanian is addressed by Say (2004). On definite adjectives, in addition to the already mentioned work by Holvoet and Spraunienė (2012), see also Valeckienė (1957, 1986), Baldauf (1967), Levin (1979), and Spraunienė (2011). The last mentioned paper was, to a large extent, based on Holvoet and Tamulionienė (2006) and Mikulskas (2006b), who argued for a treatment of definite adjectival forms as markers on the level of noun phrases (i.e., not as an adjectival category, contrary to Lithuanian academy grammars).

### 2.5.3  Simple sentences

#### 2.5.3.1  Lithuanian

Quite a lot has been written on the uses of cases in Lithuanian, starting with the classic books by Ernst Fraenkel (1928, 1929) on the syntax of Lithuanian cases and adpositions. The most comprehensive reference work concerning the use of cases (and adpositions) in Standard Lithuanian is the monograph by Šukys (1998). The diachronic development of case relations, in particular of the adverbal genitive, was elaborated on by Ambrazas (2001b). Non-trivial aspects of case morphosyntax in Lithuanian and Latvian are discussed in the already mentioned paper of Holvoet (2010a).

Theoretically and/or typologically oriented studies of Lithuanian case syntax and semantics include the works of Mo (1977), Sawicki (1992), Klaas (1996),

Ambrazas (2004), Park (2005), Roduner (2004, 2005), Franks and Lavine (2006), Kerevičienė (2008), Anderson (2011, 2013, this volume), Aleksandravičiūtė (2013), Arkadiev (2013a, 2014a), and Seržant (2013a,b). Valency patterns of the comparative and the superlative degrees of adjectives were described in Semėnienė (2002). Some specific issues of case usage have received more extensive treatment, e.g., the case marking of predicate nominals (the opposition between predicate nominal agreement and predicative instrumental), see Fraenkel (1926), Nichols (1980), Timberlake (1988, 1990), Holvoet (2004a, 2005a, 2008), and Semėnienė (2004). As for predication by "neuter" adjectives (see Section 2.3.1), cf. Tekorienė (1990), Semėnienė (2003), and Ruskan (2013).

The problem of grammatical relations and subjecthood in Lithuanian has been first discussed from a modern perspective by Christen (1995), where different subjecthood criteria were applied and the distinction between "canonical" (nominative) and "non-canonical" (non-nominative) subjects was drawn. Since then, various problems associated with "non-canonical" subjects and objects have been studied from theoretical, typological, and diachronic perspectives; see various contributions to Holvoet and Mikulskas (eds. 2009), Holvoet (2013, this volume), Seržant (2013a,b, this volume), Piccini (2008), Holvoet and Nau (eds. 2014b). Seržant (2014a,b) treats the ACC-GEN and NOM-GEN alternation of Lithuanian on the background of differential object and subject marking. On differential subject marking cf. also Semėnienė (2005).

The problem of subjecthood and grammatical relations is also closely tied to voice-oriented phenomena like the passive. Passive and impersonal constructions in Lithuanian have received quite an extensive treatment in the literature, being approached from diverse perspectives. On Lithuanian passives in general, see Geniušienė (1974, 1976, 2006), Klimas (1993), Wiemer (2004a, 2006b). On impersonal passives, and in particular on the so-called evidential passives, see Timberlake (1982), Nuñes (1994), Christen (1998), Danylenko (2005), Lavine (2006, 2010), Privitelli and Roduner (2006), Holvoet (2001a: chapters 10–11; 2001e, 2007: chapter 4), Ambrazas (2004), and Wiemer (2006b: 284–303, forthcoming: Sections 2.2.2. and 3.3.2). From a diachronic viewpoint, the passive in Baltic was dealt with by Ambrazas (2001c) and Wiemer (2004b); an attempt at sketching its developmental relation to the impersonal for Lithuanian and Latvian was given by Holvoet (2001e) and for Lithuanian, by Wiemer (2006b, forthcoming: Section 2.2). Special attention to the rise of the *genetivus auctoris* in Baltic was paid by Holvoet (1995). From a synchronic perspective cf. also Roduner (2004).

Works on word order in Lithuanian and its relations to constituency, grammatical relations, and information structure are scarce and include, e.g., Schwentner (1922), Valeika (1974), and such more recent but sporadic contributions as the already mentioned Franks and Lavine (2006), Zav'jalova (2006), and Murakami (2011).

Syntactic properties of specific constructions have been studied in the works of Mo (1978), Toops (1989, 1994), Arkadiev and Pakerys (forthcoming,

see references therein) on causative constructions, Mikulskas (2007), Vaičiulytė-Semėnienė (2007), and Čižik (2003) on comparative constructions, Kalėdaitė (2002, 2008, 2012) on existential clauses, Giparaitė (2010) on small clauses, Holvoet (2003a) and Mazzitelli (2014, 2015) on predicative possession, and Kerevičienė (2004) and Holvoet (2011a) on external possession; on copular constructions from the perspective of Cognitive Grammar, cf. Mikulskas (2009, 2014a,b).

### 2.5.3.2 Latvian

A complex issue in Latvian syntax is that of grammatical relations, due to the frequent occurrence of sentence patterns without nominative subjects but with least-oblique dative arguments for which the status of 'oblique subjects' could be considered. This is examined, with reference to Keenan's list of subject properties, by Berg-Olsen (2001). The Latvian passive is investigated by Holvoet (1994). It is interesting in that it is only agentless (whereas Lithuanian has developed an agented passive), but occurs alongside a construction also based on passive participles but clearly distinct from the dynamic passive, serving to identify the agent; it is called 'agentive construction' by Holvoet (2001e), where the areal links to Finnic are also pointed out. When expanded with a dative, the resultative passive with the auxiliary 'be' yields a kind of possessive perfect, with parallels in neighboring Finnic and Eastern Slavic (cf. 9) (see Section 4).

(9)  Latvian

| | | | |
|---|---|---|---|
| *Man* | *t-as* | *jau* | *noskaidro-t-s.* |
| 1SG.DAT | DEM-NOM.SG.M | already | sort.out-PST.PP-NOM.SG.M |

'I've got this sorted out.'

A related topic is that of grammatical relations with the debitive, an affixal form expressing modality but with a specific valency pattern (see Section 2.3.2.2). The discussion starts with Fennell (1973); for a more recent view, cf. Holvoet and Grzybowska (2014).

Latvian 'impersonal' constructions, i.e., constructions with referential and non-referential implicit animate subjects (with zero realization in syntax) are dealt with, in an areal Balto-Finnic context, by Holvoet (1995, 2001e). Agreement of predicative participles reveals a difference between a third-person-plural type also known in Slavic and many other Indo-European languages, and a singular type with clear areal connections to Finnic.

The syntax of case and prepositions comprises a number of interesting issues. The demise of the genitive as a case governed by verbs is the subject of work by Berg-Olsen (1999, 2000). Case semantics, specifically those of the genitive and dative, are dealt with from a cognitive point of view by Berg-Olsen (2004). A constructional analysis of an instance of case variation in intransitive

subjects is given by Berg-Olsen (2009). The loss of the opposition of stative and lative meanings in local cases is discussed in an areal context by Wälchli (1998). A problem of verbal government is dealt with by Holvoet (2001d). The peculiarities of case agreement in vocative noun phrases, apparently an instance of agreement with morphological case rather than with syntactic case, are discussed by Holvoet (2012). The place of Latvian with regard to the typology of head and dependent marking is the object of a study by Stolz and Urdze (2001). The Latvian constructions with external possessor datives, conspicuous for the lack of the constraints well known from other European languages, especially with regard to animacy, dynamicity, and affectedness, are dealt with by Holvoet (2001f; 2011a).

An interesting feature of Latvian is the widespread use of relational adverbs and relational nouns instead of prepositions, a feature perhaps influenced by a Finnic substratum. On relational adverbs, see in particular Stolz (1984, 1990), Lagzdiņa (1998); on relational nouns, cf. Holvoet (1993, 2011a). The category of relational adverbs is, in its turn, closely bound up with that of adverbs functioning as verbal particles in what, in English grammar, would be called phrasal verbs. These can also be found in neighboring Livonian and Estonian, and Wälchli (2001b) argues for parallel development of the Latvian and Baltic Finnic verbal particle systems. Such phrasal verbs are rudimentarily developed in Lithuanian (with a greater productivity and frequency in the northern dialects; cf. Mikulskas 2003, with reference to Girdenis and Kačiuškienė 1986) and absent from Finnish, which suggests a local Latvian-Finnic innovation perhaps connected with German influence.[14] Particles render the verb telic, but have perfectivising effect only in Estonian, whereas in Latvian, this function is reserved for prefixes (cf. Holvoet 2000a for details). Phrasal verbs have, at any rate, acquired an important function in the Latvian aspect system (see 2.3.2.5 and Section 4).

### 2.5.4 Complex sentences

Baltic languages possess quite elaborate systems of clause combining comprising both "balanced" structures employing finite sentences introduced by conjunctions or complementizers and "deranked" structures built around various non-finite verbal forms. Although clause combining features in most contemporary reference grammars of Lithuanian and Latvian, the patterns attested in Baltic

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**14** Recently (and probably for the first time), the development of this phenomenon in Latvian-Finnic contact has been investigated from a usage-based perspective by Karjus (2012).

languages have hardly ever been subject to a comprehensive theoretically and typologically informed treatment or contrastive comparison, and many empirical issues still remain unresolved.

### 2.5.4.1 Lithuanian

The only works accounting for sentential complementation in Lithuanian from a contemporary theoretical perspective are the not easily accessible overview article by Gronemeyer and Usonienė (2001) and Holvoet (2010c, forthcoming b), who has supplied a first attempt at a systematic account of complementizer choices in Lithuanian and Latvian. His criteria encompass contrasts between truth- and non-truth-valued complements, the realis/irrealis distinction as well as degrees of control and epistemic (i.e., truth-qualifying) complementizers. This study also takes account of diachronic changes in the distribution of complementizers (*jog*, *kad*, *idant*) over the named distinctions and indicative vs. subjunctive mood of the embedded predicate. Other more specific contributions to the study of functional range of complementizers are Wiemer's (2010a,b) case studies devoted to Lith. *esą,* which can function as a complementizer with speech act denoting matrix predicates (see Section 3.3).

Works dealing with the syntax of participial constructions, in addition to the already mentioned books Ambrazas (1979, 1990), include Schmalstieg (1986), Wiemer (1998, 2000, 2001b, 2007b), Greenberg and Lavine (2006), Sakurai (2008), and Arkadiev (2011a, 2012b, 2013a). The key role of participles in taxis relations was described by Wiemer (2004c, 2009a).

In general, as concerns the role of participles in contemporary Baltic, they can be used both to adjoin adverbial (adjunct) clauses and clausal arguments. This holds not only for inflected participles,[15] but also for uninflected ones. By contrast, uninflected participles in the closest Slavic languages have practically lost this ability (cf. Greenberg and Lavine 2006, Wiemer 2014: 202–205). Participial complement clauses involving both agreeing (same-subject) and non-agreeing (different-subject) participles have attracted attention primarily from the diachronic point of view (cf. e.g., Tangl 1928, Ambrazas 1979, 1990). For a recent synchronic analysis of the morphosyntax of participial complements in Lithuanian, cf. Arkadiev (2012b); for a typologically oriented account of

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**15** For a detailed study dealing with inflected participles used as adjuncts, cf. Sakurai (2008). She demonstrated that "adjectival past participles and main verbs construct one predicate as a single entity where the combinatory possibilities are strictly constrained by the principle of semantic consistency in stativity and intransitivity" (2008: 81).

case-marking strategies in Lithuanian participial constructions in general (including a comparison with Latvian and Latgalian), cf. Arkadiev (2013a).

Infinitive constructions of different kinds are treated in the work of Ambrazas (1981, 1987), Holvoet (2000b,c, 2003b), Franks and Lavine (2006), and Arkadiev (2013a, 2014a); see also Geniušienė (1985) on varieties of phasal constructions, which involve different kinds of non-finite forms. In Lithuanian, case assignment rules turn out to be construction-based (rather than governed by lexical requirements of verbs) in at least some adjunct infinitival clauses. This obtains for the so-called dative and genitive of goal.[16] For the diachronic background of these constructions, cf., Ambrazas (1995, 2006: 313–326). The genitive-plus-supine construction has been documented for earlier stages of Lithuanian (Ambrazas 2006: 222ff, 321ff) and attested in the northeastern Aukštaitian dialects (Zinkevičius 1966: 390) and is still productive in Latgalian (Nau 2011a: 61; 2014).

Syntax and semantics of complement clauses are treated by Usonienė (2001, 2002). Pajėdienė (2004) investigated Lithuanian adverbial temporal clauses using a variety of criteria, among which we find [±finite] predicate of the subordinate clause, taxis relations (simultaneity vs. sequence), subject deletion, and types of subordinators.

### 2.5.4.2 Latvian and Latgalian

Apart from what is said in the grammars, there is no study of adverbial clauses in Latvian. Relative clauses are dealt with by Nau (2009). A specific type of them, viz. infinitival relative clauses (a kind of relative purpose clauses) is discussed by Holvoet (1999, 2000b), who argues that they might have arisen from the purposive *dativus cum infinitivo* construction discussed above (see Section 2.5.4.1). A subtype of infinitival relative clauses gave rise to the Latvian debitive, an inflectional form expressing necessity (see Section 2.3.2.2); this process is dealt with by Holvoet (1998). In the domain of clausal complementation, only complementizers have received some coverage (Holvoet 2010c, forthcoming b), but not complementation strategies in general.

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**16** They were briefly mentioned by Anderson (this volume, see her examples 3 and 4), but cf. also Wiemer (2000: 287f.), Schmalstieg (2004), and Valiulytė (2001) for the genitive of goal.

# 3 Semantics and pragmatics

Apart from sociolinguistics and syntax, semantics and pragmatics have remained the worst investigated parts in the description of all Baltic languages.

## 3.1 Lexical semantics (including derivation)

There is no theoretically original work on lexical relations in Baltic languages. However, quite useful for an overview of modern theories of lexical semantics and as an introduction into their application to contemporary Standard Lithuanian are the monographs by Gudavičius (1985, 2007) and Jakaitienė (2010); for a rough analogue concerning Latvian, cf. Veidemane (1970). These books are largely semasiologically oriented and usually reflect on Lithuanian resp. Latvian material via comparison to previous research done in Slavic (mostly Russian) and Germanic languages (among some others). Nepokupnyj's (2005) work is a collection of semasiologically oriented studies on the semantic development of selected roots in Lithuanian and their remote cognates in Germanic and Slavic. Mikulskas (2002a) attempted to set up a functional model of correlated denomination systems (based on the spatial figure of the 'hook' in Lithuanian dialects). The onomasiological perspective was based on semiotic assumptions about the visual conceptualization of the natural world (cf. also Mikulskas 2002b for an abridged presentation).

Kabašinskaitė (1998) captures different types of folk etymology and gives a first account of the involved processes.

A critical analysis of the usage of motion verbs in a cognitive framework has been provided by Mikulskas (2005, 2006a). His primary interest lies in corroborating claims about cognitive foundation in the widespread use of verbs of motion (and of related changes of state) for the description of static, primarily oblong objects (e.g., *Per lygumas **bėga** vieškelis* 'Through the plain a road **runs';** *Kelias lengvai **kilo į kalną*** 'The way smoothly **rised** upwards the hill'). Other sparse work on cognitive semantics in Lithuanian are by Šeškauskienė (2004) on spatial relations and Vaičenonienė (2000) on conduit metaphors, both with comparisons to English.

Papaurelytė (2003) analyzed the lexical field of sadness in Lithuanian, in particular the relation between an emotional state and its causes. Šileikaitė (2004) studied expressions meaning 'heart' in a comparative Lithuanian-German-Georgian analysis. For Latvian, Trumpa (2010) has recently published a monographic comparison on etymologically related Latvian and Lithuanian adjectives and their semantic differences and shifts.

Quite a few works exist dealing with the syntax-semantics interface from the perspective of lexical typology or closely to lexicalistic syntax. Thus, Lithuanian verbs of "aquamotion" were described by Arkadiev (2007). A comprehensive account of lexical converses in Lithuanian is given in Maskaliūnienė (this volume, with further references) and, more particularly, for reflexive-marked verb lexemes, by Geniušienė (1987: 118–124) and Wiemer (2006b: 291–297). Geniušienė (2007) is a concise and impressive study of the lexical groups of verbs belonging to natural reciprocals and of their polysemy with other argument-deranking functions of the RM. This article presents a more subtle account of the taxonomy of reflexives (cf. Geniušienė 1983, 1987) applied to this specific semantic group. A systematic survey and coherent analysis of different alternations in the marking of arguments typical for certain lexical groups of verbs has recently been provided by Lenartaitė in her unpublished PhD thesis (Lenartaitė 2011) (cf. also Lenartaitė 2007, 2009, Lenartaitė-Gotaučienė 2014).

In some more elaborate grammars, stem derivation of the main parts of speech is treated quite extensively, particularly in sections on verbal morphology (see Section 2.3.2). Actually, in most cases, the stem classes should be regarded as classificatory categories, since it is the stems that determine the class the whole word form belongs to (often as well as the type of inflection added to the stem). The analysis of Arkadiev (2005, 2006a,b, 2008b), following earlier work by Leskien (1884: 381ff), Stang (1942: 132–133), Arumaa (1957), Toporov (1973), Temčin (1986), Wiemer (2004d), showed that the two inflectional classes of primary verbs, which are marked with *j*- and *n/st*-stem extensions, are obviously semantically motivated by the parameters [±agentive] and [±change of state] (cf. similar observations in Metuzāle-Kangere 2000 on *st*-verbs in Latvian). Cf. also Arkadiev (2010, 2013b) on the link between valency- and event-related oppositions of Lithuanian inflectional classes.

Starting from a systematic revision of extant research, Pakerys (2004) laid the ground for a three-way classification of denominal (including deadjectival) verbs: essive, inchoative, and causative (e.g., *kvail-as* 'stupid' ⇒ *kvail-**io**-ti* 'behave like an idiot' – *kvail-**ė**-ti* 'become/start behaving like an idiot' – *kvail-**in**-ti* 'mock, make an idiot out of sb.'). As for Latvian, studies into the Latvian lexicon and specific lexical groups are numerous (they are increasingly inspired by cognitive semantics), but virtually nothing of this research is accessible in languages other than Latvian. A notable exception is Urdze's (2010) important work on Latvian sound verbs, which includes their phonetic, phonological, morphophonological, and morphological aspects. The richness of the Baltic languages in sound verbs and the related category of onomatopoeic 'eventives' (dealt with in contributions by Wälchli, this volume, and Danylenko, this volume) is a typologically significant feature.

### 3.2 Lexicography and diachronic derivational morphology

Until now, Lithuanian and Latvian lexicography lacks a coherent methodology.[17] No operative principles have been formulated of what is to count as a lexical unit, nor is there any theoretical foundation of the way lexical units interact with grammatical distinctions. There are no theoretical guidelines concerning a share between lexicon and grammar. Consequently, the vast "gray zones" between lexicon and grammar have hardly been reflected upon, let alone integrated into lexicographic work. An analogous problem concerns a differentiation between lexicographic accounts of the standard language vs. dialects (or other non-standard varieties); as concerns Lithuanian, cf. the discussion of Kardelis and Wiemer (2003: 47–54, 66–68).

Work on the largest Lithuanian dictionary (LKŽ, 20 volumes, Internet version at http://lkz.lt/; henceforth LKŽe) started before World War II, the last volume was issued in 2002.[18] The biggest problem with this dictionary is not that its first volumes had become obsolete by the time the last ones appeared, but that there have never been any clear principles of selection and description. As a consequence, one can find promiscuously various dialect data reaching back to the nineteenth century, even without any qualification. Murmulaitytė (2000) criticized LKŽ's practice of listing nominal derivatives in the entry of the deriving verbs (verb stems). The lexicographic practice does not satisfactorily distinguish between regular and more idiomatic (less predictable) items. As concerns speech act verbs, Zaikauskas (2006) reports that in LKŽe, their semantics was described incoherently.

A motivated argument concerning the lexicographic treatment of motion verbs (primary usage vs. figurative use in which they are stative) has been given by Mikulskas (2006a). In a sense, the mirror image to verbs, i.e., the lexicographic treatment of so-called verbal particles in northern and western Lithuanian dialects was analyzed by Mikulskas (2003) (see also Section 4).

The existence of the frequency dictionary of Lithuanian based on a 1 million token annotated corpus should be mentioned here as well (cf. Utka 2009, available online at http://donelaitis.vdu.lt/publikacijos/).

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**17** For an overview of current standards in lexicography oriented toward Lithuanian, see the handbook *Leksikografija* by Jakaitienė (2005).

**18** Work, headed by Juozas Balčikonis, started in 1930. The first volume appeared in 1941, the second in 1947. Then the work on the dictionary was held up by Soviet authorities, the editorial board changed, and the third volume of the LKŽ, based on principles of officially accepted Soviet lexicography, appeared only in 1956. Later, in 1968–1969, the already published first two volumes were considered to reflect "bourgeois-nationalistic" ideology and re-edited on "new" principles.

Traditionally, lexicographers have been devoting much attention to etymology and the diachrony of word semantics as well as of the system of derivational affixes, many of which became unproductive a long time ago. As for derivational morphology, Saulius Ambrazas (1993, 2000a) presented onomasiologically oriented monographs on the diachronic formation of derivational categories of nouns with verbal or nominal origin, respectively.[19] As a partial diachronic equivalent on the side of the verb lexicon and the involved derivational suffixes of Lithuanian, one may regard Kaukienė (1994, 2002). This approach has been applied more broadly to the entire Baltic area by Kaukienė and Jakulis (2009). Ostrowski's (2006) selection of studies focuses on the diachrony of aspectually relevant suffixation and denominal verbs in Lithuanian. Larsson (2002) deals with nominal compounds from a diachronic perspective (with an Indo-European background).

Fraenkel's etymological dictionary (Fraenkel 1955–1965) is quite well known, but one has to have in mind that Fraenkel was not able to account for a great many of important lexical items, because when he was writing the dictionary only the first few volumes of the LKŽ had been issued (Sabaliauskas 1990: 5). The recent etymological dictionary by Smoczyński (2007, an expanded English version, to be published by Peter Lang, is under preparation) comprises a smaller amount of lexemes than Fraenkel's, but the selection is based on the entire LKŽ (since 2000), and the author deliberately included borrowings.

To our knowledge, apart from work on derivational morphology and Mikulskas (2002a,b) (see above), no onomasiologically oriented studies of lexical fields have been undertaken, although one occasionally finds discussions of word meanings arranged by onomasiological fields scattered over the lexicon (see, for instance, in Gudavičius 1985). Furthermore, Sabaliauskas (1990) subdivided his annotated dictionary into lexical groups that correspond to periods beginning with common Indo-European heritage and ending with layers restricted to Lithuanian. The last third of his book is dedicated to different layers of borrowed lexemes, among which Slavicisms occupy the most prominent place. Despite this fact, a coherent methodology for the lexicographic treatment of Slavicisms, in general, and for the differentiation of different Slavic languages as particular sources still waits for its master (cf. Kardelis & Wiemer 2003: 46–54). Kardelis (2003) gives a survey of the

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**19** The sections of these books are organized according to notional types (e.g., *nomina actoris*, *resultati*, *instrumenti*, *actionis* for deverbal nouns, collective, diminutives, etc., for denominal nouns). S. Ambrazas (2001) deals with the provenance of certain Lithuanian adjectives derived from numerals. S. Ambrazas (2000b) discusses the most striking differences in the derivation of nouns between Lithuanian and Latvian. First of all, they concern *nomina actionis*, diminutives, and collective nouns.

problems connected to establishing the concrete source language of Slavicisms and applies a principled method to the chronology and phonological integration of Slavic loans into Lithuanian.

Admittedly, the problem of identifying the specific Slavic source language is partly rooted in objective difficulties, and it is even aggravated by the fact that often one can hardly discern between borrowings from Slavic, on the one hand, and root morphemes and derivational affixes from a common Slavic-Baltic stock, on the other hand. This issue proves particularly problematic in the lexicon and morpheme layers of Lithuanian dialects whose speakers have for centuries been in intense contact with speakers of (East) Slavic (cf. Wiemer 2009b: 358–385 for a comprehensive investigation; see Section 4 for further discussion of contact phenomena).

Modern Latvian lexicography starts with the dictionary commonly referred to as 'Mühlenbach-Endzelin' 1923–1932 (with two supplement volumes: Endzelin and Hausenberg 1934–1946), a dictionary covering the nineteenth- and early twentieth-century written language, the dialects, and the language of oral folklore, started by Karl Mühlenbach and, after his death, completed and provided with brief etymological notes by Jānis Endzelīns. It is still the only dictionary of any use for historical linguists as it marks syllable accents, a tradition since abandoned in Soviet Latvian dictionaries.

The Soviet period saw the compilation of a comprehensive dictionary of the modern Latvian literary language (LLVV). Although obviously valuable as the main lexicographical source on modern written Latvian, especially the language of the post-war period, it has several drawbacks: its normative character leads to exclusion of large parts of the lexicon, such as loanwords considered undesirable, much of the colloquial vocabulary etc.; there is no phonetic or prosodic information.

Latvian historical lexicography is still in its childhood, but the compilation of a corpus of Old Latvian texts from the sixteenth and seventeenth centuries (LVSTK) is to be the foundation of an Old Latvian dictionary, work on which started in 2004.

Several dialect dictionaries have been compiled in Lithuania since Vitkauskas (1976) as well as in Latvia during and after the Soviet period. The most useful among them is probably that of the High Latvian dialect of Kalupe, compiled by Antoņina Reķēna (1998), as it gives an image of the lexical stock and also (through its illustrative material) of the morphosyntax and syntax of one of the dialects of Latgalian, for which but few descriptions are available at this moment (see Section 1.2). As long as no comprehensive Latgalian dictionary is available (see, however, Bukšs 1969, Bērzkalns 2007), Reķēna's work will remain the principal gap filler.

In addition to the etymological notes in Mühlenbach and Endzelin's dictionary, there is a separate etymological dictionary of Latvian by Konstantīns Karulis (1992). It does not quite meet modern standards, being based on the Neogrammarian paradigm of Indo-European reconstruction and offering mostly root etymologies, but it certainly is a valuable work, with lots of useful information on word history, and it offers a synthesis of earlier research as well as an overview of the relevant literature.

### 3.3 Function words (particles etc.)

Under the label of function words, we subsume units traditionally labeled 'syncategorematic', or similar. Extensionally, they comprise adpositions, conjunctions, complementizers, sentence and stance adverbs, and different sorts of particles and discourse markers. Intensionally, they can be united as subclasses of connective lexemes; the units they connect are of different formats (in terms of constituency), beginning from NPs (as for adpositions) via clauses (conjunctions, complementizers) up to entire sentences or utterances (particles). On higher levels, they scope over propositions or even illocutions. As an umbrella term, one might therefore call them 'connectives'. Some other function words primarily serve as attractors of the addressee's attention or carry just an expressive function (in the sense of Bühler's [1934] 'Ausdruck'). Consequently, we can roughly subdivide function words into units operating within or between constituents (adpositions, complementizers, conjunctions) or as operators scoping over propositions or illocutions, without being integrated into constituent structure (modal particles, hedges, all sorts of epistemic, evidential, or quotative modifiers). In practice, this division is sometimes difficult to maintain because many units fit into two or more subclasses, thus being heterosemic (in the sense of Lichtenberk 1991) (see further below).

To begin with adpositions, one cannot but mention the classical work by Fraenkel (1929). In more recent times, Šukys (1998) took up this issue, somewhat as an updated and joint equivalent of Fraenkel (1928, 1929) (see Section 3.5.3.1). Although this modern source is written largely from a prescriptive perspective, it is a useful reference book concerning the standard language. Lithuanian prepositions as means of structuring space were looked at from the point of view of cognitive semantics by Malesa (2003).

The most up-to-date collection of papers on particles, conjunctions, and complementizers in Baltic is by Nau and Ostrowski (eds. 2010). First, the editors themselves supplied a very valuable survey of the state of the art in reference grammars of Baltic languages, the notional distinctions made by various authors, the diachronic development of selected groups of units and a cursory typological background. The case studies account primarily for discourse markers, causal

conjunctions, focus, and question particles as well as for paths leading to them (e.g., from coordinative connectors).

Some articles deal with heterosemic units. Chojnicka (2010) analyzes the functions of Latv. *it kā* ≈ 'as if' as a particle and a conjunction. Wiemer (2010a,b) does the same for Lith. *esą* used as particle and complementizer with reportive function. It derives from the paradigm of the present active participle of *būti* 'be', from which it has been isolated and petrified. Interesting is the comparison with its Latvian cognate *esot*, because their status differs markedly. Latv. *esot* is just a trivial case of the application of the suffix *-ot* deriving from a formerly inflected participle, which can be applied to any verb stem to mark reportive evidentiality (see Section 2.3.2.2; Wiemer 2010a: 286–288, 2010b: 187f). Other evidential particles (which are partially heterosemic) have been analyzed by Roszko (1993: chapter 4), Wiemer (2005, 2007c), Petit (2008), and Sinkevičienė (2014). On Lithuanian evidential adverbs and predicative adjectives, cf. Ruskan (2013). For a typologically oriented overview of non-grammatical markers of evidentiality in Lithuanian, cf. furthermore Wiemer (2007b: 217–223, 2010c).

### 3.4 Discourse syntax and semantics

Discourse-oriented case studies on the usage of forms from the grammatical core have been conducted by Sawicki (2004, 2010, 2012). Sawicki (2004) is a study of text functions of Lithuanian "neuter" participles (ending in unstressed *-a*; see Section 2.3.2.3) on the basis of a small newspaper corpus. Sawicki (2010) examined the distribution of unprefixed and prefixed verbal forms and found interesting correlations with the narrative background/foreground distinction. Finally, Sawicki (2012) deals with Lith. *kad* and *na*, used as turn-opening particles. Macienė (2002) investigated the textual functions of Lithuanian diminutives in contemporary belletristic and journalistic texts. Nau (2010) analyzed the discourse-pragmatic functions of the Latvian particle *neba* in internet fora.

In her case study based on Latgalian fairytales from the late nineteenth century, Nau (2008) demonstrates how participles and infinitives are exploited as means of represented speech, i.e., of "giving voice" to a character (vs. the narrator's speech). Nau stresses that for this dimension of speech the distinction between direct and indirect becomes irrelevant, and it differs from evidentiality. Similarly to Nau's study, a first attempt at a principled and corpus-based account of reported speech vs. hearsay vs. quotation in Latvian is by Chojnicka (2012a,b).

Somehow related to the differentiation of "speaking subjects" (and to quotatives) in narrative discourse is the re-interpretation of various grammatical forms (e.g., the imperative, analytical hortatives, or modal auxiliaries) as 'interpretive deontics'. This has been described, among other languages, for Lithuanian and Latvian by Holvoet (2005b) and Holvoet and Konickaja (2011).

### 3.4.1 Pronouns: Specific forms and uses

Kibrik (1987, 2011: 62–67) coined the notion of "referential conflict" and proposed a typology of ways how languages can solve such a conflict (Kibrik 2011: 287–333). A typical case comes up if, in a narrative setting, two human referents of equal sex are introduced one after another and, at some point, within a chain of sentences, ambiguities may arise which one of the two is being mentioned. Compare an invented, but characteristic, example (10):

(10)  English
    a.  *John$_i$ invited James$_k$ to meet at 6 pm.*
    b.  *He$_?$ however didn't want to sit in some boring café.*

Some European languages are able to solve such ambiguities by choosing a marked pronoun; such pronouns usually derive from demonstrative pronouns and function as indicators that it is not the most topical referent (antecedent) that is "picked up" anaphorically, but its more rhematic "rival". Apart from German, where this technique is used freely, Russian and Lithuanian, in principle, allow for the same distinction.[20] See the following translational equivalents to the English text in (10):

(11)  German
    a.  *Hans$_i$ lud Horst$_k$ ein, sich um 18 Uhr zu treffen.*
    b.  *Er$_?$ / Der$_k$ wollte aber nicht in irgendeinem langweiligen Café sitzen.*

(12)  Lithuanian
    a.  *Jonas$_i$ pakvietė Jurgį$_k$, kad susitiktų 18 valandų.*
    b.  *Tačiau jis$_?$ / **šis**$_k$ nenorėjo sėdėti kažkokioje nuobodžioje kavinėje.*

This and similar mechanisms were surveyed on a European background for Lithuanian by Wiemer (1999). However, to date, there are no empirical studies of when referential conflicts really arise, how they are (or might be) resolved, and to what extent paradigmatic contrasts of pronouns are involved.

    Apart from logophoric constructions based on clausal complementation (see Section 2.3.2.4), Latgalian (and also, but less consistently, Latvian) knows an opposition between anaphoric and logophoric pronouns, which has developed out of the inventory of former demonstrative pronouns. According to Nau (2006), in many Latgalian dialects, non-attributive pronouns of the *š*-series are consistently used as

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**20** For examples and discussion concerning Russian, cf. Berger and Weiss (1987: 32–52).

a means to mark co-reference between the speaker of a reported speech act and an anaphoric pronoun in an embedded clause (cf. 13) (adapted from Nau 2006: 61):

(13)  Latgalian
    *Tagad  j-is$_i$      suoka      runuot,   t-ys            bruolān-s$_i$,*
    now     he-NOM    start.PST.3  talk.INF  DEM-NOM.SG.M  cousin(M)-NOM.SG
    *lai    es          precejūs                  ar     **j-ū$_{\neq i}$**  / **š-ū$_i$**.*
    COMP    1SG.NOM  marry.PST.PA.NOM.SG.F   with   he=ACC  / LOG-ACC.SG.M
    'Now he$_i$ started to say, this cousin$_i$, that I should marry **him**
    [= the uncle$_{\neq i}$ / = the cousin$_i$].'

Clauses containing the logophoric pronoun are often accompanied by participial predicates, which themselves function as reportive markers as well, both in dependent and independent clauses (see Section 2.3.2.4).

### 3.4.2 Parentheticals and other means of taking stance

Briefly, parentheticals can be understood as discourse-driven downgrading of information "above" the propositional and illocutionary content of an utterance (cf. Kaltenböck 2007, Moroz 2010, Wiemer 2010c: 104–106). It is important to stress that parentheticals are not a separate class of words or phrases, since basically anything can be "parentheticalized". In this respect, parentheticals can be considered as non-conventionalized pieces of discursively secondary information; they cannot be focused or addressed.

Probably, Durys (1927) was the first one to have drawn attention to parentheticals (Lith. *įterpiniai*) in Lithuanian. Among his more recent followers, one should mention Balkevičius (1963, 1998) and the section on 'Parenthetical Words and Phrases' written by Zelma Dumašiūtė in LKG (1976: III, 698–719). For the first time in Lithuanian, Balkevičius (1963: 267, 275) seems to have captured parentheticals as units that serve to make prominent the speaker's subjective (emotional, cognitive) point of view. Akelaitis (2002, 2003) concentrated on parentheticals based on predicative units (verbs, adjectives).[21]

However, in Lithuanian, parentheticals have been studied primarily by Aurelija Usonienė and her collaborators, mostly in a rather strict corpus-driven approach. Usonienė claims that the most common parenthetical expressions serving the purposes of hedging and marking of epistemic stance and/or evidential functions "are synchronically traceable back to complement taking

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**21** We are grateful to Birutė Ryvitytė for supplying us with the information conveyed in this paragraph.

predicate clauses functioning as parenthetical elements in the sentence" (Usonienė, this volume: Section 1). For similar studies taking into consideration units of different prominence, cf. Usonienė and Šolienė (2010) and Šinkūnienė (2012). Alosevičienė (2006) provided a comparative study of hedges in Lithuanian and German political discourse, differentiating evaluative, epistemic, emphatic, and distancing as well as metalinguistic hedges.

We do not know of any similar work done on Latvian or Latgalian.

### 3.5 Pragmatics

Domains that are usually treated under the heading of pragmatics have hardly been studied at all. Apart from the few works on information structure mentioned in Sections 2.1.1 and 2.5.3.1, for Lithuanian, we can name only the following two articles.

Zaikauskas (2002) supplied interesting observations on how (direct and indirect) performative speech acts are realized in Lithuanian. He focuses on communicative strategies, social roles and a subclassification of notions of speaker and hearer, taking into account differences not only of illocutionary force, but also of situational settings (e.g., official vs. familiar) and other circumstances of speech. In turn, Hilbig (2008) seems to be the only methodologically well-founded study dealing with politeness. She rightly states that simply based on linguistic expressions used for purposes of politeness "no cultural community can be considered more or less polite than others", because these expressions are inherently assessed on the background of social norms and thus can have different values depending on the given semiotic system. This assumption was tested on the example of service encounters in Vilnius.

No comparable studies on Latvian or Latgalian are known to us.

## 4 Aspects of areality

Areally interesting properties of at least one of the Baltic languages (or some of their dialects) have already been pointed out casually at different places above. In general, from an areal viewpoint, Baltic should be considered as the eastern part of the CBA, for which a host of convergent, typologically non-trivial features (some of them discussed above) were surveyed and analyzed by Koptjevskaja-Tamm and Wälchli (2001). Furthermore, the Baltic region can be considered as a transitional zone for features regarded as typical for Standard Average European (cf. Haspelmath 2001), on the one hand, and Eurasian features, on the other.

The areal and typological significance of many features (and probably of some more yet to be discovered) remains to be established. This is not to suggest that Baltic is homogeneous. It is not; even from the perspective of larger areal clines, the southeastern part of Baltic (Aukštaitian) often patterns differently from the northwestern (Low Latvian) part, with Latgalian (High Latvian) being intermediary in many respects or even closer to East Slavic than even east and south Lithuanian dialects. A basic north(west)-south(east) layering in the dialect continuum of Baltic will become apparent below.

The purpose of this section is to pinpoint some selected morphosyntactic properties of the extant Baltic dialect continuum and its intersections with Slavic and Finnic. Although the role of language (or dialect) contact as a soil for areal convergences is obvious, no more elaborate comments on research into language contact will be made here. The same holds for Lithuanian and Latvian dialect geography, which anyway has largely remained in a stage reflecting nineteenth-century goals (frequently intermingled with issues of ethnogenesis) and/or structuralist models of dialectology. To our knowledge, no dialectological research guided by principles of modern sociolinguistics (variationist frameworks) has been conducted. Thus, it does not astonish that the first pioneering work accounting for Baltic varieties in areal terms was conducted in the domain of loanwords, as early as at the end of the nineteenth century, by Thomsen ([1890] 1931); cf. also the later studies Endzelīns ([1951] 1980), Sehwers (1953), and more recent works like Nepokupnyj (1976), Kagaine and Bušs (1985), and Wälchli (1996).

General surveys of the dialect divisions of Lithuanian and Latvian (with further references) are given in Balode and Holvoet (2001a,b), cf. also Petit (2010b: 3–51). The foundations of Latvian dialectology were laid in Bezzenberger (1885), but systematic fieldwork was initiated by Mühlenbach and Endzelin from 1901 onward; many valuable dialect descriptions were published in the *Filologu Biedrības Raksti* (*Writings of the Philological Society*) between the two world wars. A synthesis of Latvian dialectology is given in Latvian in Rudzīte (1964), but Gāters (1977) gives a useful overview in German. In Latvian dialectology, the post-war period has seen the publication of a number of dialect monographs with selections of texts. Internet sources on Latvian dialects are not (yet) available. A *Latvian Dialect Atlas* is in course of publication; it now comprises volumes on the lexicon (Laumane ed. 1999) and phonetics (Sarkanis ed. 2013).

After Jaunius' first comprehensive classification of Lithuanian dialects (cf. Javnis [Jaunius] 1908–1916), the criteria for the division of Lithuanian dialects were reconsidered by Girdenis and Zinkevičius (1966) and described feature by feature by Zinkevičius (1966). They also comprise inflectional morphology for different parts of speech (but no syntax). However, when it came to giving areal subdivisions of dialects, almost only phonetic and morphophonological features have been applied (see the maps in Zinkevičius 1966). The Lithuanian

dialect atlas (LKA) comprises three published volumes dedicated to lexical items
(1977), phonetics (1982), and morphology (1991); the last one takes into account
also phonetic and morphological variation of some derivational affixes. Recently,
Lithuanian and Latvian dialectologists started on a common Baltic dialect geo-
graphic program, based on the LKA and its Latvian equivalent (Laumane ed.
1999). According to information on http://www.tarmes.lt (accessed July 21, 2014),
only some lexical items have been surveyed so far.

Kardelis (2013: Sections 6–10) concisely and critically surveys the practice of
cartography for East and South Aukštaitian dialects in the most influential works
on Lithuanian dialect geography since Girdenis and Zinkevičius (1966) and Zin-
kevičius (1966). He finds that existing maps do not allow for a clear distinction
between subdivisions of Lithuanian dialects themselves and zones of overlay
with heavy (east) Slavic interference or dominance. A recent critical reconsidera-
tion of the Latvian dialectological tradition can be found in the work of Trumpa
(2012). A brief overview of Lithuanian island dialects and of dialects bordering
with East Slavic ("peripheral dialects") is supplied in Wiemer (2009b: 350–352).
Zinkevičius' (2006) renewed introduction into the division of Lithuanian dialects
has remained traditional, i.e., it is predominantly based on phonetic changes and
betrays a pronouncedly ethnographic bias, while Kardelis (2006) gives a short
introduction into the internal division of contemporary East High Lithuanian dia-
lects (Lith. *rytų aukštaičių vilniškių patarmės*), i.e., those dialects that, together
with the southern dialects (Lith. *dzūkų patarmės*), belong to borderland dialects
that have been experiencing (East) Slavic influence most intensely.

In comparison to East Slavic, contacts of Lithuanian with Polish (a West Slavic
language) have been either locally highly restricted to the tiny region around the
small towns Puńsk and Suwałki in northeast Poland bordering with southwest
Lithuania (for recent monographs, cf. Birgiel 2002, Marcinkiewicz 2003). These
contacts have been based on so-called *polszczyzna kresowa*, i.e., Polish arisen
in the Lithuanian-Latgalian-East Slavic border region from a language shift from
Lithuanian or Belarusian toward Polish, which, according to the most accepted
theory – and apart from urban contacts lasting from approximately the fifteenth
century, – took place in rural settings only during the nineteenth century and
became particularly intense in the interwar period (cf. Wiemer 2003a: 218–222;
2003b: 111–114, 124–129 for summaries and further references). On a whole, the
zone where Baltic and (East) Slavic dialects overlap forms part of a larger con-
tinuum stretching roughly in the southwest-northeast direction, with Podlasie
and Mazowsze in the southwest and the Russian dialects of the Pskov region in
the northeast. Overviews of salient features relevant for this overlap zone and
its relation to embracing areas are supplied by Wiemer (2003a, 2013b), Wiemer
and Erker (2011), Wiemer and Giger (2005: chapter 3–5, 12.2, 12.4), and Wiemer,

Seržant, and Erker (2014). Most important are contacts with Belarusian, which for many centuries performed the role of a transmitter in language contact, in particular in language shift from Lithuanian into Polish (see Wiemer 2003b: 109–119, 124–127 for a survey).

A good illustration of how inner-Baltic dialectal clines are "inserted" in larger areal clines is the varying preference for prefixes vs. movable particles as verb satellites marking the boundedness or modifying situations denoted by verb stems. (Low) Latvian seems to be outstanding in its rich inventory of adverbal modifiers (Wälchli 2001a). This richness appears to be due to an overlap of two larger areal clines running through Baltic territory on a north-south axis, but in opposite directions. Verb particles are quite common in Finnic to the north, whereas all Slavic languages (to the east and to the south) make abundant use of verbal prefixes, but rarely use verb particles (both on type and token level). The stepwise overlay of both clines becomes manifest if we look at its rough inner-Baltic distribution: standard (=Low) Latvian has more than 20 verb particles, northern Lithuanian dialects have some 10, while Standard Lithuanian, which is closer to dialects in the south(east), has only three more frequently used particles (*lauk* 'off, to the outside', *žemyn* 'down', *aplink(ui)* 'around'); cf. Wälchli (2001b) on Latvian-Finnic, Mikulskas (2003) for a minute analysis of verb particles in northern Lithuanian, and Wiemer (2013a) for the general picture and a comparison with Slavic minority languages under heavy contact with German. Such a broader areal perspective leads to the impression that southern East Baltic and the Slavic languages neighboring to it constitute just a relatively "particle-hostile" zone intermediate between two "particle-friendly" zones in the north(east), i.e., Latvian and Finnic, and the west, i.e., continental West Germanic.

A similar cline, more or less in north-south direction, can be observed with respect to the nominative object (see Section 2.5). Following Ambrazas (2001a), it can be assumed that this construction, with common roots in both Baltic and Slavic, spread from north to south in times prior to any written documents, and that contact with Finnic triggered this development to some considerable extent (as it did in Northwest Russian). This direction of spread would correspond to the observation that in some Northwest Russian dialects (around Pskov), the nominative object was encountered in the twentieth century not only with infinitives and other non-finite predicates, but even with finite verbs (e.g., dial. Russ. *Ja topila **pečka*** 'I.NOM heated the **stove**.NOM'). However, within Baltic, the nominative object has remained most widespread far away from this region, namely in Southeast Lithuanian dialects (whereas it seems to be absent in the immediately neighboring Slavic dialects), and there it has been retained not only with the infinitive, but also with non-agreeing participles (e.g., dial. Lith. *Kaip čia man **karvė** nusipirkus?* 'How should I now buy a **cow**.NOM?'). A plausible explanation may be found in

an analogy to non-agreeing predicative constructions with neuter adjectives and *ta/ma*-participles (e.g., Lith. *Alus sveika* 'Beer.NOM.SG.M is healthy', *Laukai ariama* 'The fields.NOM.PL.M are being ploughed'); such an explanation was offered by Ambrazas (2001a: 407). These adjectives and participles do not show agreement (as remnants of the neuter as a target gender; see Section 2.3.1), and they have disappeared altogether in Latvian. Thus, together with them a possible model for the retention of the nominative with non-finite predicates vanished. On the other hand, different varieties of Slavic through various periods have known similar patterns with neuter adjectives or participles non-agreeing with a masculine, feminine, or plural nominative (cf. Wiemer 2012a). The areal distribution (and change in time) of such patterns and their impact on contact, and thus, areal convergence with Baltic still reserves many intricacies to be disclosed.

Other big parts of the complex "story" in the area of Baltic, Slavic, and Finnic associated to predication patterns concerns the relation among the perfect, grammatical evidentials, the foregrounding, and the so-called impersonal (backgrounding) passive. All of them build on participles, but the lines of development for particular constructions and subareas only cross-cut. As discussed in Section 2.3.2.4, in all Baltic languages, the perfect based on active anteriority participles (agreeing for syntactic categories with the subject) has been extended to a reportive function. This functional extension was most probably triggered by Latvian-Finnic contact in the northern part of the Baltic territory (cf. Stolz 1991, Wälchli 2000). In turn, only in Lithuanian (on the basis of Aukštaitian dialects in the south) has a second grammatical evidential, with a predominant inferential function, evolved. It is based on the same *ta/ma*-participles mentioned in the preceding paragraph, which were lost in Latvian. As surrounding Slavic nowhere shows any traits of an evidential use of neuter, non-agreeing participles, Standard Lithuanian (and the dialects on which it is based) represents a "pocket" in areal terms (for more such pockets, see below).

However, as has recently been argued by Seržant (2012), non-agreeing participles served as a starting point in the evolution of another type of perfect farther to the north, namely, in the contact region among Latvian, Finnic, and Northwest Russian dialects. Typical for this perfect is the oblique marking of the actor: in Latvian, it is marked by the dative; in Finnic, by the adessive case, and in Northwest Russian by an adessive PP (*u* 'at' + GEN); all three realizations of the actor are closely associated to the basic pattern of predicative possession typical for these three language (or dialect) groups (on the Latvian *mihi est*-pattern, see below). This connection also corresponds to the observation that Baltic (in particular Latvian), Russian (in particular its Northwestern dialects), and Finnic demonstrate non-trivial coincidences with dative experiencer constructions (cf. Seržant, this volume). On the contrary, non-agreeing, originally neuter participles at the southern end of the Baltic language continuum seem to have partially been influenced by an entirely

independent development of this participle type in Polish, which rendered a passive-like impersonal with objects marked with the accusative. In Lithuanian, this pattern is attested, although only scarcely (cf. Wiemer, forthcoming: Section 2.2.2). On this background, the evolution of foregrounding passives in all areally involved Baltic and Slavic languages appears to have proceeded separately (cf. Wiemer 2004b). At least, in the whole area for which Baltic and Slavic (apart from Finnic) contact has been relevant, the evolution of the passive proper has not influenced the "new perfect" in the northern part (with Northwest Russian as the hotbed), and in the southern part (with Polish as the hotbed), the non-agreeing pattern with neuter participles ultimately went another way from the passive (not later than by the turn to the eighteenth century). For details, cf. Seržant (2012), Wiemer (forthcoming), Wiemer, Seržant, and Erker (2014: 30–36).

Furthermore, in the northern part of Baltic, the evolution of a new perfect has probably been connected to the frequent exploitation of the *mihi est*-pattern of predication (showing up also in the Latvian debitive; see Section 2.5.3.2). The Latvian possessive construction of the *mihi est* type, often mentioned in the literature as a Finnic substratum feature, is argued to be the inherited Common Baltic construction by Vykypěl (2001) and Holvoet (2003a). Its historical priority with regard to the 'have'-construction, which is now used in Lithuanian (and has never developed in Latvian and Latgalian), is shown by its providing the grammaticalization source for archaic modal 'be'-constructions in both Baltic languages and, incidentally, also in Slavic, as argued by Holvoet (2003b). Another modal construction of Latvian, based on the verbal noun in -*šana* and the existential verb 'be', is argued to be modeled on Finnic in Holvoet (2004b). The Latvian constructions with external possessor datives, which have already been mentioned above for their lack of the constraints with regard to animacy, dynamicity, and affectedness (Holvoet 2011a), find parallels in the neighboring Finnic languages (Estonian and Livonian), but the areal links of this phenomenon still await a detailed investigation. Many other details in the domain of modality still wait to be investigated thoroughly. A typical issue in this regard is the question whether convergent patterns in the use of dispositional possibility modals ('can' vs. 'be able to'), to be observed in the Baltic-Slavic contact zone (Wiemer, Vladyko, and Kardelis 2004), have resulted from contact or rather from parallel development following more universal tendencies.

The morphosyntactic realization of core arguments is another major kind of phenomena for which Baltic languages and their dialects yield an excellent example of how convergent grammatical patterns characteristic for a comparatively small region gain significance if it can be shown that these patterns are part of larger areal clines. Differential object and subject marking have been the target of quite a number of works, mostly dedicated to Lithuanian and Latgalian (see Section 2.5, 2.5.3.1), since Latvian has been reducing the use of genitival objects and subjects (see Section 2.5.3.2). Lithuanian and Latgalian inscribe very well as sort of transitory languages between

Finnic to the north and Slavic to the east, south, and west (i.e., Polish). This applies especially if we account for two gradable parameters: (a) specific reference- and clause-related rules of case alternations for subject and object; (b) restrictions to these rules by the admissible lexical input (in terms of actional classes and lexical groups). This has been shown by Koptjevskaja-Tamm and Wälchli (2001: 650–660) in an insightful comparative analysis of Polish, Russian, Lithuanian, Latvian, and different Finnic languages. Analyses of this sort have been conducted for Lithuanian (with areal comparisons) by Seržant (2014a), partially also by Lenartaitė (2011: chapter 4.3). A parallel analysis exists for Russian by Seržant (2014b), and Holvoet (1991: chapters 7–8 and 11) contributed ample succinct considerations on related facts from Polish (with comparisons to Russian, Baltic, and Finnic).

There are properties of Lithuanian that illustrate just the opposite of areal clines, insofar as they are isolated and do not (any more) occur, or have drastically been reduced, in the neighboring languages. One of these properties is the high frequency and productive formation of reflexive-benefactive verbs, which were already mentioned in Section 2.4. Latvian has reduced this type of argument-increasing derivation, it is virtually inexistent in the East Slavic neighbors and in Polish; instead, Lithuanian patterns with German, French, and Italian. Another, much more spectacular, although infrequent and lexically highly restricted, phenomenon is the Lithuanian HAVE-resultative (see Section 2.3.2.4), whose properties are probably unique even on a worldwide scale (Wiemer 2012b). On these and some other aspects of Lithuanian verbal morphology and morphosyntax that can be considered areally isolated, see Arkad'ev (2013c).

## 5 More from the perspective of typology

In this section, we will briefly review the representation of Baltic languages in the current typological literature and will point out some specific outstanding features of Baltic languages, that we consider of direct relevance to typological studies.

### 5.1 Account of Baltic in typological studies

Baltic languages have never figured prominently in work on linguistic typology. The reasons for this are manifold. First, Baltic data are not always easily accessible, and existing descriptions often do not provide sufficient empirical details and explications and are generally written from a perspective very different from that found in modern reference grammars. Second, one should have in mind the general trend of typologists to overcome the European and Indo-European bias, e.g., by means of working with balanced language samples into which Baltic languages simply have very little chance to get included. Thus, even in

the strongly Indo-European-biased sample of Dahl (1985), Baltic languages do not find a place. Among well-known sample-based typological studies including data from Baltic languages, one should mention Hawkins (1983), whose 350-language sample includes Lithuanian; Stassen (1985), whose 110-language sample includes Latvian; Haspelmath (1997), whose 40-language sample includes both Lithuanian and Latvian; Stassen (1997), whose 410-language sample includes both Lithuanian and Latvian; and Wälchli (2005), whose more than 100-language sample includes both Lithuanian and Latvian.

Among typological studies not based on language samples in the strict sense of this word, the one giving prominent emphasis to Baltic languages is certainly the work of Geniušienė (1987); in general, the work by the Leningrad/Saint-Petersburg School of Linguistic Typology has systematically taken Lithuanian (but unfortunately not Latvian) into account, with chapters by Ema Geniušienė (1974, 1985, 1989, 1997, 2007, Geniušiene and Nedjalkov 1988) and recently by Björn Wiemer (2004c, 2007b, 2009a) being included into almost all collective volumes edited since the late 1990s by this research group. Also noteworthy is a current project headed by Sergej Say [Saj] in St. Petersburg dealing with alignment patterns of bivalent verbs in 16 languages, which include Latvian and Lithuanian (cf. Saj 2011, Say 2014).

Both Lithuanian and Latvian are represented in the *World Atlas of Language Structures* (Haspelmath et al. eds. 2005, online version, Haspelmath & Dryer eds. 2013, consulted in December 2013), and Latvian is included into the 200 languages core sample of WALS. In the printed version, Latvian is mentioned six times (less than, say, Lezgian), and Lithuanian, only five times. In the online database, Latvian has values for 126 WALS features out of 192, and Lithuanian is represented by just 80 features. It is worth noting that much of the Latvian data recorded in WALS are taken from the nineteenth-century grammar by Bielenstein (1863). Representation of both Baltic languages in WALS is moderately accurate. Actually, Latvian has been categorized downwardly incorrectly for at least the following WALS features[22]: (i) it is claimed to belong to languages with a moderately small consonant inventory (15–18, feature 1A compiled by Maddieson; compare with Section 2.1.2); (ii) it is classified as a language with obligatory pronouns in subject position, while Lithuanian correctly goes under languages with subject affixes on the verb, which seems to imply that subject pronouns are not obligatory (feature 101A, Dryer); (iii) Latvian is said to be zero-marking in all 3sg person forms of verbs (feature 103A, Siewierska; see Section 2.3.2); (iv) as concerns words for "tea", Latvian *tēja* is clearly derived from Min Nan Chinese *te*, and not from Sinitic *cha* (feature 138A, Dahl). In addition, it is not evident why

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**22** Many of these shortcomings have been brought to our attention by Bernhard Wälchli.

with respect to feature 26A ("Prefixing vs. Suffixing in Inflectional Morphology", Dryer 2013) Lithuanian is treated as "strongly suffixing", while Latvian as "weakly suffixing"; if in terms of the clear definitions of the values given by Dryer (2013), the languages should be treated identically (in fact, overall, Lithuanian has more inflectional prefixing than Latvian, although this type of inflectional prefixing is not taken into account by Dryer). Finally, if one relies on WALS, one has to conclude that neither Lithuanian nor Latvian have definite affixes (in contrast to Scandinavian languages; see Section 2.3.1) and that Latvian has a "[d]emonstrative word used as definite article" and an indefinite article with the indefinite word same as 'one' (Features 37A and 38A, Dryer). First, this is wrong, and, second, Lithuanian is presented as differing from Latvian in these respects, since it is (rightly) counted among those languages (together with Polish and Czech, but also Finnish) that lack indefinite and definite articles.

Apart from such shortcomings in WALS, for many, if not most book-length wide-scale typological studies, both monographs and edited collections of articles, the norm is not to mention Baltic languages at all. Notable exceptions are constituted, first, by Boeder and Hentschel (eds. 2001) on differential case marking with Holvoet (2001g) on possessive genitive and dative, Abraham and Leisiö (eds. 2006) on passives with two papers dealing with Lithuanian (Geniušienė 2006, Wiemer 2006b), and Gast and Diessel (eds. 2012) on clause-combining (Arkadiev 2012c on participial complements), and, second, by volumes on grammaticalization co-edited by Björn Wiemer, i.e., Bisang, Himmelmann, and Wiemer (eds. 2004) (Wiemer 2004b on passives) and Wiemer, Wälchli, and Hansen (eds. 2012) (Nau 2012 on modality in Latgalian). Not much Baltic material has, to date, figured in the issues of *Linguistic Typology*, the journal of the Association of Linguistic Typology; the only article published in this journal specifically addressing Baltic data from a cross-linguistic perspective is the work of Arkadiev (2013b). The other typological journal, *Sprachtypologie und Universalienforschung*, has, however, featured a special issue on typological approaches to Latvian (Nau ed. 2001a).

If one turns to areal-typological studies, it is astonishing how little attention the Baltic languages attracted even where they could not be completely ignored, for instance, in the volumes of the EUROTYP project. The only article in the whole EUROTYP enterprise specifically devoted to Baltic languages is Dogil (1999b); if one simply browses the indices of the volumes, one finds that Latvian and Lithuanian taken together are usually mentioned on fewer pages than, say, Swedish, Portuguese, or Bulgarian. Besides EUROTYP, Baltic languages have been represented by individual chapters in such edited volumes devoted to European languages as Thieroff (ed. 1995) on tense systems (Sližienė 1995 on Lithuanian), Braunmüller and Ferraresi (eds. 2003) on multi-lingualism (Wiemer 2003b), Schroeder, Hentschel, and Boeder (eds. 2008) on secondary predicates (Holvoet 2008), Rothstein

and Thieroff (eds. 2010) on mood and modality (Holvoet 2010b), Kortmann and van der Auwera (eds. 2011) on European languages in general (Holvoet 2011b); Baltic languages are amply represented in the work by Thomas Stolz and his associates, cf. Stolz, Stroh, and Urdze (2006, 2011), Stolz et al. (2008), as well as in some other recent work on the typology of European languages, e.g., Mauri (2008).

## 5.2 Typologically outstanding features and rarities

In the preceding sections, we have focused on both most basic features of the structure of Baltic languages and their peculiarities. Here we will briefly summarize the latter, focusing on what Baltic languages can contribute to linguistic typology.

In the domain of phonology, the following phenomena can be named as typologically outstanding: (i) the highly non-trivial and cross-linguistically by no means frequent interaction of morphologically sensitive free mobile stress and "syllable intonations" in Lithuanian, as well as "syllable intonations" in Latvian and word prosodic phenomena in Baltic dialects in general; (ii) interaction between vowel and consonant length in standard and dialectal Latvian; (iii) the so-called "diphthongal sequences" consisting of a vowel and a nasal or liquid consonant, phonologically behaving like more familiar diphthongs and, in particular, subject to "syllable intonation" contrasts; (iv) in connection with the latter, a great range of combinability and thus the occurrence of systematic mismatches between the sonority contour (vowel quality) and prominence contour (syllable peaks) in diphthongs and diphthongal sequences (otherwise called "semi-diphthongs") in Lithuanian (cf. Geyer 2011: 184–186; Daugavet, this volume); (v) various morphophonological phenomena lying on the borders of phonology and morphology, deserving a large-scale cross-dialectal study with possible non-trivial implications for both phonological and morphological typology.

In the domain of morphology, Baltic languages can offer much for the recently developing typological studies of inflectional classes, and for the understanding of the interplay of different types of inflectional exponence (affixal and non-affixal). Lithuanian can offer a fairly productive instance of inflectional infixation, otherwise absent from European languages, as well as such rarities as double inflection of definite adjectives and a "mobile" reflexive marker, while Latvian and especially Latgalian show intricate patterns of stem alternation in inflection and derivation.

Among morphological categories peculiar to Baltic, let us once again mention the Lithuanian inflectional habitual past and continuative and the Latvian debitive;

Lithuanian can also boast as being one of the very few languages of the world possessing a morphological restrictive marker with variable scope (see Arkadiev 2010 for details). Baltic systems of derivational aspect are sufficiently different from Slavic ones (and from each other) for being, in our view, indispensable for a typologically adequate characterization of this type of aspectual system (see e.g. Arkadiev 2014c). Baltic languages can offer much to students of evidentiality and modality as well. Last but not least, Latvian shows an evidently very rare pattern in the imperative: from among 547 languages accounted for in WALS, Latvian is one of but two languages (the other being Apurinã in South America) in which there exists a morphologically dedicated second plural imperative but no such second singular imperative (see feature 70a in WALS); in actual fact, however, this dedicated 2PL imperative seems to have existed in Old Latvian until the seventeenth century and was then artificially reintroduced in the twentieth century, cf. the remark in Section 1.1. Among the morphosyntactic peculiarities of Baltic languages, one can mention a wide variety of case marking patterns. Here belong phenomena such as the exclusive occurrence of the dative in the plural after all postpositions in Latvian. But, primarily, the Baltic languages demonstrate quite a few rare and typologically interesting features in the marking of core arguments, which depend on such factors as referentiality and/or partitivity, verb meaning, negation, modality, evidentiality, (non-)finiteness, and clause type. Baltic has also never shown a lexical distinction between 'who' and 'what' (the interrogative pronoun *kas* is indifferent in this respect), a feature that seems to be rare, as it has been attested only in Kayardild (Australia) (cf. Nau 1999: 134, 144–147). One should furthermore single out the Lithuanian evidential impersonal passive, which applies to all kinds of intransitive predicates, including non-agentive, copular, and even passive ones and a peculiar "participle of accompanying motion" in *-in-* (Gliwa 2003), showing, first, non-trivial restrictions on the verbs from which it may be formed, and, second, instrumental case marking of its direct object. These and many other non-trivial phenomena in the domain of argument structure found in Baltic languages can enrich the linguists' understanding of the nature of grammatical relations and case marking, see e.g., Holvoet and Nau (eds. 2014b). On the typological significance of the Lithuanian HAVE-perfect, see Sections 2.3.2.4 and 4.

In the domain of syntax, Baltic languages are classic representatives of languages with "free", i.e., information-structure determined word order of main constituents, and the interaction of constituency, information structure, sentence prosody, and word order in these languages beg for a detailed theoretically and typologically informed study. No less can Baltic languages offer to students of clause combining, complementizers, and (non-)finiteness.

# 6 Paradoxes and conclusions

As we hoped, the previous sections, in particular Sections 4 and 5, have made it evident that the three extant Baltic languages offer a host of phenomena to be investigated not only because many of them have remained understudied, but also because they are intriguing from the more general perspectives of typology and linguistic theory. In other words, not only would the study of Baltic languages (and their dialects) profit from a consistent application of contemporary linguistic methods, but, conversely, the empirical "check" of assumptions about the structural diversity of languages and the motives of their dynamics would gain much if typological overviews and in-depth or case studies into diverse linguistic phenomena accounted more for what linguistic variation and rare phenomena in Baltic have to offer to them. In fact, Lithuanian was one of the languages that attracted keen attention among the best linguists of the second half of the nineteenth century, not only from Neogrammarian circles. In the same period, investigations about moribund minority languages were published, for instance, Bezzenberger's (1888) and Pietsch's (1982) studies devoted to Nehrungskurisch (the latter contains a corpus with German translations). The documentation of this meanwhile extinct Baltic variety appears highly relevant for issues like the mixed-language debate. However, the aforementioned interest did not last further than by the Second World War, and many Latvian and Lithuanian linguists still do not recognize any other than Neogrammarian linguistics.

As we have shown in Section 2, quite a few phenomena attested in Baltic are peculiar not only on a European but even on a worldwide background, and already for this reason, they are interesting for general theories in phonology, morphology, or syntax. For other domains, for instance, lexical semantics or discourse-syntax and pragmatics, no reliable "prognoses" can be made about their use in cutting-edge research, since the study of such domains for Baltic has remained in its infancy (see Section 3). Moreover, as was alluded to in Section 4, insights into the rise and structure of areal clines (on different levels of granularity) can become more diversified and be posed on an empirically more solid ground if micro-variation were investigated for smaller-scale areas in which Baltic dialect continua participate.

In view of this, the first paradox consists in the fact that the more general, or even global, significance for linguistics borne by data and phenomena prominent in Baltic has almost never been brought to an audience outside the Baltic-speaking countries by "domestic" scholars specializing in Baltic studies. It was scholars educated in general linguistics who have succeeded in making Baltic languages (in the first place, Lithuanian) recognized and respectable among

broader communities of linguists. As a prominent example, one may name the efforts made by linguists of the Leningrad Typology School, in particular by Ema Geniušienė (cf. Geniušienė 1987, 1997, 2006, 2007), who were among the first having highlighted outstanding features of Baltic languages and having made their structures systematically comparable to other languages and accessible for non-specialists of Baltic. As concerns merits for areal linguistics, we may name here the pioneering work by Larin (1963) and by Timberlake (1974), among some others, dedicated to syntax; cf. also Nepokupnyj (1964) as another pioneer of areal linguistic studies in the Baltic-Slavic region. As mentioned in Section 4, lexical phenomena (loanwords) attracted attention much earlier. Both domains of research have so far remained separated, but it seems desirable to integrate them for a better understanding of contact relations in past and present.

In general, although in our survey we have concentrated on the synchronic stage of Baltic languages, a more pronounced account of work dealing with diachronic issues would not have considerably shifted the general conclusion about the state of the art of the study of Baltic languages. This is so because work into diachronically interesting phenomena of these languages has largely been restricted to an Indoeuropeanist historical-comparative vantage point with a Neogrammarian or structuralist methodology. To a considerable extent, this strong bias has resulted from a belated nineteenth-century-fashioned interest in the ethnogenesis of Baltic tribes and nations. This tendency also partially explains why Baltic dialectology has either largely remained on a stage of atomistic collections of observations, or has been guided by ethnographic considerations with often linguistically rather superficial and not easily comprehensible accounts. Further serious obstacles for progress in linguistic research into dialectology and dialect geography are the lack of a sound theory of areally interesting issues and the inaccessibility of fieldwork data that have been collected and stored for about 60 years in academic institutions.[23] There do not exist any reliable and commonly accessible corpora of dialectal speech that would reflect the real structural diversity of Baltic dialects. There exist two chrestomathies of Lithuanian dialects[24] and a short, "didactic" one of Latvian dialects by Rudzīte (2005) together

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**23** See http://www.tarmes.lt/index_meniu.php?id=1 for more detailed information on Lithuanian. It remains to be hoped whether tons of sound records and handwritten field notes can be analyzed without the participation of non-Balticist and "non-domestic" scholars in a reliable, faithful, and comprehensive enough up-to-date manner.

**24** LKT (1970) and LKTCh (2004). The latter comprises texts from a smaller amount of places than LKT (1970), but is based on Girdenis' and Zinkevičius' dialect classification (see Section 4) and also presents the texts in sound form on a CD.

with series of collections of transcripts from dialectal speech; furthermore, some appendices with transcribed dialect speech dispersed over the literature on dialects in the Baltic-Slavic contact region, and some dozen books with collections of texts from diverse Lithuanian dialects, most of them published in the last 15 years (e.g., Petrauskas & Vidugiris 1987, Mikulėnienė & Morkūnas 1997, Vidugiris & Mikulėnienė 2005, 2010, Markevičienė et al. 2009). However, the transcripts included into these book editions are highly selective; the basis of their choice often remains obscure, in particular, in view of prescriptivist thinking that sometimes intrudes also into dialect documentation. By no means do such book editions compensate for the lack of computerized corpora of non-adapted dialectal speech that would allow for independent online searches; such corpora are an indispensable prerequisite for any manageable quantificational approaches (as practiced, e.g., in variationist frameworks). The same concerns, *mutatis mutandis*, research into diachronic morphosyntax, which suffers from the lack of larger, reliably edited, and commonly accessible corpora (or of similar databases). Thus, one can at best make use of solid structuralistic descriptions (see e.g., Section 2.1.1 on the phonological system of Standard Lithuanian or Lithuanian dialects or the diachronic development and synchronic stage of Baltic pronouns by Rosinas 1988, 1995, 1996; see Section 2.4), but possibilities of falsification of claims on the basis of larger amounts of data remain severely restricted.

Finally, the richness of Baltic dialects and their significance as "witnesses" of ethnogenesis has time and again been stressed by Lithuanian and Latvian dialectologists and historical-comparative linguists. Thus, the second, and even greater, paradox lies in the surprising indifference among the same groups of scholars toward authentic, unprejudiced accounts of the observable situation that would be comprehensible for a broader audience and allow for reliable comparisons with dialects and diachronic development of language groups or areas elsewhere. After all, richness of linguistic variation (in a diatopic or diastratic dimension) can only be made visible if commonly recognizable tools of linguistic description are applied and if the observed variation is captured within coherent theoretical approaches. Otherwise, it will remain more or less a hodgepodge of accidental observations.

In sum, the paradoxes in the study of Baltic languages and dialects pointed at above arise from a self-chosen isolation of most specialists, in particular in the Baltic-speaking countries themselves. There were notable exceptions before 1989 (like Vytautas Ambrazas, Konstantins Karulis, or Jonas Kazlauskas), but even after 1989, most scholars of the generation "raised" in Soviet times have retained reluctant, if not hostile, attitudes toward modern linguistic theory. This isolation has started to slowly break down during the last decade, and we hope that the present volume is a solid contribution to this trend.

## 7 Structure and summary of the volume

The present volume does not, of course, aim at a comprehensive representation of current theoretically and typologically oriented approaches to Baltic languages, and – to the regret of the editors – suffers from the more general bias toward Lithuanian at the expense of Latvian and especially of Latgalian (the editors, despite their efforts, were not able to procure a contribution to the volume from the very few specialists on this language). However, we hope that the volume is able to give an impression of the diversity of current problems of Baltic linguistics and of how these problems and solutions developed by Balticists may have an impact on general linguistics.

The volume is not subdivided into thematic parts, although most of the thirteen chapters constituting the book do cluster around certain more or less broad domains such as phonology (**Hock** and **Daugavet**), diminutives (**Horiguchi**, **Dabašinskienė and Voeikova**), peculiarities of case syntax and grammatical relations (**Anderson**, **Holvoet**, **Seržant**, and **Maskaliūnienė**), and onomatopoetic expressions (**Wälchli** and **Danylenko**), and the order of chapters follows their thematic proximity. On the other hand, from the point of view of scope, there are areal studies with implications for contact linguistics (**Daugavet**, **Hock**, **Seržant**, and **Kozhanov**), as well as in-depth studies of particular forms or constructions in individual languages (**Horiguchi**, **Anderson**, **Sakurai**, **Usonienė**, and **Wälchli**), as well as contrastive or comparative studies involving Baltic and Slavic (**Dabašinskienė and Voeikova**, **Sakurai**, and **Danylenko**). In the following, we will briefly summarize the chapters of the volume in the order of their occurrence.

**Hans Henrich Hock**, in "Prosody and dialectology of tonal shifts in Lithuanian and their implications", discusses the relation between the reduction or loss of final short vowels and stress retraction occurring in many dialects of Lithuanian, with more developed stages attested to the north. Hock interprets stress retraction as the reassignment of high tone to the preceding mora or syllable when the original mora or syllable gets deleted and claims that the restriction of ictus retraction in Žemaitian to final short syllables and long syllables with the "circumflex" ("low-high") tone can be attributed to the cross-linguistically well-documented "finality effect", i.e., the tendency to avoid prosodic prominence (e.g., high tone) in the utterance-final and word-final position. This chapter presents a theoretically and typologically informed, but somewhat speculative, analysis of the quite nontrivial prosodic phenomena attested in Lithuanian dialects.

**Anna Daugavet**, in "The lengthening of the first component of Lithuanian diphthongs in an areal perspective", approaches the problem of the phonological interpretation of vowel length in Lithuanian in the light of comparable phenomena in Latvian and Livonian, giving a comprehensive overview of vocalic

systems, syllable structure, and relevant phonological processes in these langua-
ges and their dialects. She concludes that the peculiar development that stressed
diphthongs have undergone in Lithuanian is a product of two different lengthe-
ning processes found in the neighboring languages and shows how in different
parts of the area these processes have led to different results. This chapter is in
fact the first comprehensive account of phenomena related to syllable structure
in Baltic languages and their dialects written in English, combining both solid
empirical grounding and up-to-date theoretical insights.

A contrastive-linguistic perspective on diminutives is taken by **Ineta
Dabašinskienė** and **Maria Voeikova** in "Diminutives in spoken Lithuanian and
Russian: Pragmatic functions and structural properties". They show that despite
many similarities, Lithuanian and Russian diminutives differ in such properties
as morphology (Lithuanian diminutives are formally more diverse and less lexi-
calized than their Russian counterparts) and use (e.g., in Russian, the use of dimi-
nutives is avoided in many formal contexts, whereas Lithuanian speakers freely
employ them, which suggests differences in pragmatic functions of diminutives
in the two languages). From the point of view of morphology, it is shown that
diminutives help the native speakers overcome the frequent irregularities and
opacities of nominal paradigms and accentual patterns in both languages.

**Daiki Horiguchi**, in "Latvian attenuative *pa*-verbs in comparison with dimi-
nutives", takes a non-trivial perspective in comparing nominal diminutives with
verbal delimitative or attenuative Aktionsart in Latvian. The chapter, based on
contemporary corpus data, shows that these two morphological categories share
common semantic and, notably, pragmatic features, e.g., expression of emotio-
nal attitude or familiarity. "Secondary" prefixation of the attenuative *pa-* to the
already prefixed verbs is discussed in detail; this phenomenon, largely neglected
by the Latvian descriptive grammars, is non-trivial for Baltic languages, which
allow only one Aktionsart prefix per verb, with a couple of lexicalized exceptions.
This contribution clearly shows that a proper account of word formational pheno-
mena may require consideration of discourse pragmatic factors.

**Cori Anderson**, in "Non-canonical case patterns in Lithuanian", convincingly
shows the relevance of Lithuanian data for the current formal approaches to case
marking. She analyzes several Lithuanian constructions posing problems for the
standard generative case theory, e.g., passivization promoting the non-accusative
marked object of a bivalent verb to the position of the nominative subject, accusa-
tive vs. instrumental alternations with a diverse range of verbs, and substitution
of the accusative case of the direct object by the genitive or dative in goal and
purpose infinitival constructions. All these phenomena require a subtler con-
ception of case than the generally assumed distinction between "structural" and
"inherent" case.

**Axel Holvoet** in "Non-canonical subjects in Latvian: An obliqueness-based approach", deals with the problematic interpretation of grammatical relations in Latvian constructions with "dative subjects". He shows that in these constructions, it is often impossible to attribute the subject status to a particular argument and that instead we are often dealing with "diffuse grammatical relations" when behavioral properties are distributed between two arguments. To capture the peculiarities of such constructions, the obliqueness hierarchy, which involves such features as relative topicworthiness, semantic role, and morphosyntactic accessibility of arguments, is invoked instead of the notions of subject and object, which are strictly applicable only to the canonically transitive structures in relation to which they are defined.

In "Dative experiencer constructions as a Circum-Baltic isogloss", **Ilja Seržant** analyzes Baltic, Russian, and Balto-Finnic constructions with dative experiencers from an areal-typological perspective. To show that such constructions constitute a case of convergent development in all these languages, Seržant invokes the "requirement for idiosyncratic correlations", whereby an areal feature must exhibit a bundle of typologically non-trivial properties shared by non-cognate elements. In the domain of dative experiencer constructions, such idiosyncratic properties include stative morphology of pain predicates, which are often denominal, and notably, similar syntactic (behavioral) properties of arguments. From a more general perspective, Seržant supplies a case study illustrating how methods and assumptions of different disciplines dealing with linguistic variation (typology, areal linguistics, contact linguistics, and historical-comparative linguistics) should be combined to yield sound, equilibrated explanations for the rise of areally outstanding structural convergence. His study also exemplifies the necessity of looking more closely at specific alignment patterns of lexically restricted groups of predicates and the impact these patterns have for the (areally convergent) re-shaping of argument marking.

**Nijolė Maskaliūnienė**, in "Morphological, syntactic, and semantic types of converse verbs in Lithuanian", addresses another topic lying on the intersection of lexicon and morphosyntax, i.e., lexical and morphological converses – verbs denoting identical real-world situations with different argument structures (e.g., *buy* and *sell*). The chapter provides a detailed overview of formal and syntactic relations between members of converse pairs in Lithuanian, as well as of lexical semantic classes of predicates entering into converse relations. It also points out some phenomena that would furthermore be interesting to investigate more closely in connection with lexical typology, e.g., it calls for an explanation why certain patterns of converse pairs appear to be rarer than others.

**Eiko Sakurai**'s chapter, "Past habitual tense in Lithuanian", is the most comprehensive description of the semantics and discourse functions of the Lithuanian

past habitual tense with the suffix -*dav* to date. The author draws both on corpus and statistically analyzed experimental data to show complex correlations between the use or non-use of the past habitual and such factors as aspectual class of the predicate and presence of certain kinds of adverbials and further contrasts the Lithuanian past habitual to the Russian past imperfective, which has a much broader range of functions. The chapter yields considerable empirical feedback for aspectological theories dealing with habituals and associated functions.

**Aurelija Usonienė**, in "Non-morphological realizations of evidentiality: The case of parenthetical elements in Lithuanian", broadens the horizon of the studies on Lithuanian evidentiality by considering such "lexical" means of encoding evidentiality and epistemic stance as parenthetical expressions stemming from complement-taking predicates, which are actually the preferred way of expressing these meanings in modern Lithuanian. The chapter presents the results of a corpus investigation of morphosyntactic and semantic properties of Lithuanian parentheticals. It is grounded in recent corpus-driven studies dominated by investigations on English, with which the author's findings are consistently brought into relation.

**Kirill Kozhanov**, in "Lithuanian indefinite pronouns in contact", investigates the contact-induced changes in the Lithuanian indefinite pronouns attested in rural dialects and non-standard urban speech. These developments, mainly occurring under Slavic influence, involve both straightforward borrowing of matter and more intricate transfer of structural patterns. The author thoroughly (re-)considers Haspelmath's (1997) findings on the semantics and functional range of indefinite pronouns and thus brings to light interesting observations about the actual consequences of language contact on a general typological background.

The two last chapters of the volume are devoted to Lithuanian ideophones or onomatopoetic lexical items, which have peculiar formal and functional properties and constitute a typologically non-trivial feature for a European language. **Bernhard Wälchli**, in "*Ištiktukai* 'eventives' – The Baltic precursors of ideophones and why they remain unknown in typology", provides a general description of Lithuanian ideophones from the point of view of their morphology, morphosyntactic properties, and use in discourse and discusses them from the perspective of recent typological studies of onomatopoetic vocabulary. **Andrii Danylenko**'s chapter, "The chicken or the egg? Onomatopoeic particles and verbs in Baltic and Slavic", discusses Baltic and Slavic ideophones in the light of their derivational relation to verbs sharing the same root. Reviewing evidence from phonology, morphology, and semantics, Danylenko reaches the conclusion that ideophones are derived from verbs – even if by stripping the latter of their verb-specific morphology.

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## Abbreviations

| | | | |
|---|---|---|---|
| 1 | first person | M | masculine |
| 2 | second person | N | neuter |
| 3 | third person | NEG | negation |
| ACC | accusative | NOM | nominative |
| AUX | auxiliary | PA | active participle |
| CNT | continuative | PART | participle |
| COMP | complementizer | PL | plural |
| DAT | dative | POS | positive polarity |
| DEB | debitive | PP | passive participle |
| DEM | demonstrative | PRM | permissive |
| F | feminine | PRS | present |
| FUT | future | PRV | preverb |
| GEN | genitive | PST | past |
| INF | infinitive | RFL | reflexive |
| INS | instrumental | RSTR | restrictive |
| LOC | locative | SG | singular |
| LOG | logophoric pronoun | VOC | vocative |

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