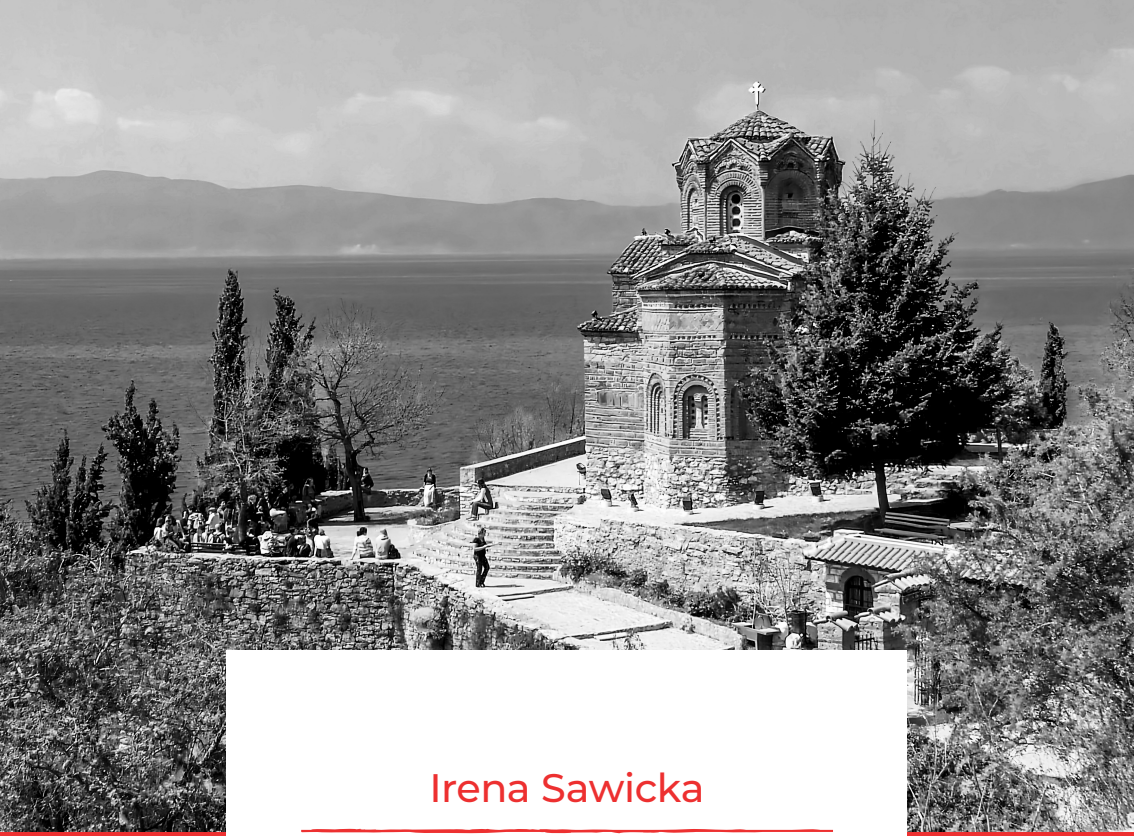

Irena Sawicka

Studies in Balkan Phonetics

48
Język na Pograniczach

Instytut Slawistyki Polskiej Akademii Nauk Fundacja Slawistyczna

Studies in Balkan Phonetics

Język na Pograniczach

[Borderland Languages]

48

Redaktor Naczelna [Editor-in-Chief]

Dr hab. HELENA KRASOWSKA, prof. inst.
Instytut Slawistyki Polskiej Akademii Nauk, Warszawa, Polska
[Institute of Slavic Studies, Polish Academy of Sciences, Warsaw, Poland]

Rada Naukowa [Scientific Board]

Dr hab. EWA DZIĘGIEL, prof. inst., Instytut Języka Polskiego
Polskiej Akademii Nauk, Kraków, Polska
[Institute of Polish Language, Polish Academy of Sciences, Cracow, Poland]

Dr. sc., izv. prof. TETYANA FUDERER, Sveučilište u Zagrebu, Zagreb, Hrvatska
[University of Zagreb, Zagreb, Croatia]

Prof. Dr. BJÖRN HANSEN, Universität Regensburg, Regensburg, Deutschland
[University of Regensburg, Regensburg, Germany]

Dr hab. KAZIMIERZ JURCZAK, prof. ucz., Uniwersytet Jagielloński
w Krakowie; Uniwersytet Warszawski, Kraków–Warszawa, Polska
[Jagiellonian University in Kraków; University of Warsaw,
Cracow–Warsaw, Poland]

Докт. філол. наук, професор НАТАЛІЯ КОЛЕСНИК, Чернівецький
національний університет імені Юрія Федьковича, Чернівці, Україна
[Dokt. filol. nauk, profesor Nataliia Kolesnyk, Yuriy Fedkovych
Chernivtsi National University, Chernivtsi, Ukraine]

Irena Sawicka

Studies in Balkan Phonetics

Translated by Tomasz Fojt

Warszawa 2023

Recenzje wydawnicze [Editiorial Reviews]

Prof. Brian Joseph, PhD
The Ohio State University, Columbus, OH, USA

Prof. Dr. Andrey N. Sobolev
Philipps-Universität Marburg, Marburg/Lahn, Deutschland & Институт лингвистических исследований Российской академии наук, Санкт-Петербург, Россия
(Philipps University of Marburg, Marburg/Lahn, Germany & Institute for Linguistic Studies, Russian Academy of Sciences, St. Petersburg, Russia)

Publikacja dofinansowana z programu „Doskonała nauka" Ministra Edukacji i Nauki w ramach projektu nr DNM/SN/550480/2022.
[The work was financed from the "Excellent Science" Programme of the Polish Minister of Education and Science, Project No: DNM/SN/550480/2022.]

Ministerstwo Edukacji i Nauki

Projekt okładki [Cover]
Katarzyna Gerula

Konsultacja językowa [Linguistic consultation]
James Pankhurst

Korekta [Proofreading]
Piotr Styk

Skład [Typesetting]
Jerzy Michał Pieńkowski

© Copyright by Irena Sawicka, 2023
© Copyright to English translation by Tomasz Fojt, 2023

This is an Open Access book distributed under the terms of the Creative Commons Attribution 3.0 PL License (creativecommons.org/licenses/by/3.0/pl/), which permits redistribution, commercial and noncommercial, provided that the book is properly cited.

ISBN: 978-83-66369-53-5 [e-book]
ISSN: 1230-1302 (Język na Pograniczach)

Instytut Slawistyki Polskiej Akademii Nauk
[Institute of Slavic Studies, Polish Academy of Sciences]
ul. Bartoszewicza 1b/17, 00-337 Warszawa, tel. 22 826 76 88,
wydawnictwo@ispan.edu.pl, www.ispan.edu.pl

CONTENTS

INTRODUCTION

The Balkan Sprachbund[1] is an absolutely unique phenomenon in Europe. It comprises languages/dialects of various origins, characterised by the same grammatical structure, shaped as a result of centuries of multilingualism. The degree of grammatical homogeneity is significantly higher here than in other European areas, where language leagues also occur (cf. Hinrichs, 1999 and many others).

My adventure with the Balkan phonetics began thirty years ago. I have reviewed the phonetic systems of particular languages to determine whether or not the Balkan phonetic league is a fact (cf. Sawicka, 1997). The issue deserves close attention, but the area under consideration is not coextensive with the extent of the morphosyntactic Balkan league.

It is worth emphasising that, despite the emergence of national states, this is still a remarkably multi-ethnic area, where various types of convergence processes are taking place, also on the phonetic level. On the other hand, it seems that the division into Balkan and non-Balkan phonetics is secondary with regard to the primary division into European and non-European phonetics (of the Eurasian type). Thus, Balkanisation in the area of phonetics would be tantamount to Europeanisation, which does not make it particularly interesting. There is, however, a certain central region, which is characterised by unique (in relation to the environment) phenomena, resulting from mutual linguistic convergences. Such phonetic features concentrate in the area where Albanian, Greek, Aromanian and Macedonian meet. This is also the area where convergence processes are very intensive even today, while in the Bulgarian-Romanian region, as a result of the creation of national states, minority languages have been significantly reduced, hence plurilingualism is limited, while linguistic convergence has practically come to a stop (or it is unidirectional if one takes into account the influence of the official standard on all local dialects).

The volume *Studies in Balkan Phonetics* is a result of the search for Balkanisms in the area of phonetics. The publication aims to verify the received views

[1] It should be mentioned that the area encompassed by the Balkan Sprachbund is not coextensive with the geographic area of the Balkans.

on this subject, repeated in every introduction to Balkanology. The volume contains short summaries of the content which has already been presented. Successive approximations of selected issues have been published several times in various journals and volumes. Thus, these are not original texts, however, they are not identical to my previous publications on this subject. I found it advisable to bring together the basic information in one place. For more detailed information, sources and more comprehensive literature on the subject, please refer to more complete studies, which are indicated at the beginning of each chapter.

We rarely find information on phonetic problems in works on the Balkan Sprachbund. Usually, these are short notes on the two features which are considered to be Balkan ones. The first is the occurrence of consonant clusters *mb*, *mp*, *nd*, *nt*, *ŋg*, *ŋk* at the beginning of words, and the second is the presence of a central, extra-short vowel, a variation of "schwa", as an independent phoneme. These short notes are, of course, not sufficient as a description of Balkan phonetics. First, they require comments and verification; secondly, these are not the only phonetic features that characterise Balkan languages; and thirdly, the distribution areas of particular phonetic features do not overlap and, moreover, they differ from the distribution of Balkan morphosyntactic features.

In addition to the two mentioned phonetic characteristics, we should also consider, at least, word stress, the type of sandhi between words, vocalic clusters, certain consonant clusters, certain characteristics of sentence intonation, some kind of citacism and other phenomena.

The geographic extension of Balkan phonetics is determined by the occurrence of particular morphosyntactic features, which define the Sprachbund from the qualitative perspective. Both the phonetic features and the morphosyntactic ones are fuzzy sets, just as the geographic extension of the Language League is not clearly delineated.

The borderline between Balkan and non-Balkan phonetics runs across the area of the Balkan morphosyntactic league. This borderline, too, is fuzzy.

It is not surprising that the ranges of the phonetic and grammatical phenomena differ. The received opinion is that a so-called holistic typology is not possible. This should be understood to mean that the typological division of languages based on grammatical features does not go hand in hand with the division based on phonetic features. However, at least when Slavic languages are taken into consideration from this perspective, some parallels are apparent: the languages which have preserved nominal declension to the highest degree but have lost much of conjugation have also preserved the most archaic form of Slavic phonetics. The north-east pole of the Slavic area may be characterised in this way. At the opposite, south-west pole, the situation is not so clear-cut, but generally it may be described as antithetical, both with regard to grammar and phonetics. Between these two poles, there is a series of transitory situations.

When it comes to the Balkans, a central area may be distinguished where the most typical Balkan grammatical structures and specific phonetic features converge; apart from this, there is a broad periphery, whose phonetics relates to the neighbouring phonetic types.

Along with the development of Balkanology, attempts have also been made to characterise the Balkan phonological system. Several scholars (Havránek, 1933; Minissi, 1982; Schaller, 1975) attempted to define Balkan vocalism as a phonological system containing only the so-called "clear" vowels and one central vowel with phonemic status.

The vocalic system of five "clear" vowels is an overgeneralised picture and does not apply to the entire Balkan region (on schwa-like vowels, see Chapter 4). This assessment is based on the phonological[2] systems of the standard forms of Balkan languages. The analysis of dialectal phonetics is much more encouraging. It is only at the dialectal level that you can see the actual areal divisions in the Balkans.

Boris Simeonov described the Balkan consonantism, relying on the phonological systems characteristic of the more eastern part of the Balkans (Simeonov, 1977). Neither of these attempts is credible because, as mentioned above, the Balkans are not uniform in this respect. Friedman argues in a similar vein: "[...] it can be argued that it is precisely in phonology that the Balkan languages generally preserve striking differentiating specificities at the macrolevel, although particular developments can be locally shared" (Friedman, 2008, p. 141; see also Hamp, 1977).

Pavle Ivić (1968), examining this issue, considered the Eastern area (Bulgarian-Romanian) as the phonetic centre of the Balkan Language League, probably because Bulgarian and Romanian phonetics differ considerably from other European phonetics. He did not take into consideration, however, that this area relates typologically to the broad area of Eastern Europe and, consequently, it is questionable whether it can be treated as a Balkan specificity. In view of the specific relations of the eastern part to European phonetics, it seems more adequate to consider this area as a periphery of another phonetic area (or league?). Roman Jakobson (1962) postulated the existence of the Eurasian phonetic league, characterised by the lack of accentual polytony and an elaborate correlation of consonantal palatality, both at the phonetic and phonological levels. One could also add the velar quality of the non-palatalised

[2] The starting point of any convergence phenomena is always the sound. The absorbed phonetic features sometimes penetrate the functional spheres, but the most important aspect is the sound, which becomes the object of unification. This is why I describe first of all the phonetics of the Balkans, although if necessary I also refer to phonology. Currently, it is quite popular not to distinguish the phonetic and phonological levels, to treat phonetics as a prephonological analysis and the rationale for such an approach is particularly apparent in relation to the phonetics of the Balkans (see in particular the phenomena described in Chapters 7 and 10, which discuss dialectal options in pronunciation, and functional and auditory equivalence of strings of sounds consisting of various phonemes).

lateral consonant or the occurrence of a centralised vowel. The remaining part of the Balkan language area is characterised by a simpler phonetics which is closer to western European phonetics and antithetical to Bulgarian-Romanian phonetics. The south-west area of the Balkans (which I consider to be the centre of the Balkan Sprachbund at present) has an additional specificity, distinguishing it from the phonetics of other European languages. The phonetics of this area constitutes the main topic of this publication.

Thus, the Balkan specificity is also manifested at the phonetic level, however, the static areal conception does not allow for the formulation of Balkan phonetics within the same geographical boundaries in which the morphosyntactic Balkan League is localised. The area of the morphosyntactic Balkan League thus becomes divided into several different areas with different phonetics, which clearly relate to non-Balkan phonetic types. Apart from this, particular phonetic areas are defined according to some selected features, so it happens that some language or dialect belongs to one distinguished area due to certain typologically important phonetic features and due to another set of features, it is included in another area.

The main areas are distinguished on the basis of the overall phonetic characteristics; subareas are delimited on the basis of specific phonetic features, which are ascribed particular Balkan specificity. Incongruences between particular isophones mark extensive transition bands.

On the basis of the overall phonetic characteristics, the Balkans may be generally divided into two types: the eastern and the western types (and considering exclusively Slavic dialects, we can distinguish the more "archaic" and the more "contemporary" types). The whole of the Balkan specificity concentrates in the south-west part of the western area. This part is still a multinational area, with extensive multilingualism and ongoing convergence phenomena.

*

The first three chapters are introductory. The following chapters describe the particular phonetic features of the Balkans.

The book contains a lot of repetition. This is a deliberate procedure because phonetic features often mutually condition each other and it is necessary to explain these relationships. Otherwise, the reader would have to seek clarification in other chapters.

Simplified international transcription is used.

A warm thank you to Brian Joseph, who was kind enough to go over and check my Greek materials.

1. THE PHONETICS OF THE EASTERN BALKANS[3]

The type of phonetics that characterises the Eastern Balkans is different from that of the Western Balkans. We will refer to this phonetic type as confluent pronunciation or accommodative pronunciation. This means that the pronunciation is relatively continuous, characterised by a series of interrelationships between segments – assimilations and neutralisations. In the case of the Bulgarian-Romanian dialectal area, this feature is manifested primarily in the occurrence of combinatory palatalisations of consonants (the degree of palatalisation depends on the dialect) and in vowel alternations (at the level of phonemes or allophones), dependent on the position relative to the stressed syllable and on the consonantal context (palatal or non-palatal).

The transition between the two phonetic types appearing in the Balkans is gradual. Generally, the number of phenomena mentioned increases towards the east. The vast transitional area between the two opposing phonetic types is constituted by almost the entire area of the so-called western Bulgarian dialects and the south-eastern periphery of the Macedonian area and the eastern periphery of Serbia. The Bulgarian standard language, which is essentially based on the phonetics of eastern dialects, has a complete set of palatalised consonants with phonemic status in contrast to all remaining Balkan standard languages. However, their distribution is significantly restricted, which lowers their token frequency (cf. preliminary survey data in Sawicka & Grzybowski, 1999).

Consonantal palatality decreases towards the west. The most striking example is the difference between standard Macedonian together with its western, central, and a part of eastern dialects (west-Balkan type) on the one hand and Bulgarian (both standard and its eastern dialects) on the other hand. In Macedonian, there are only five palatalised phonemes, whose distribution (in the case of palatalised sonorants) is being constantly restricted or whose palatalisation is weakening – the phonetic difference with regard to the corresponding non-palatalised sounds is clearly diminishing (in the case of affricates and the palatalised lateral). /ɲ/ no longer occurs in south-western dialects and in standard Macedonian it has completely lost palatalisation in word-final positions. There are very few combinatory palatalisations in Macedonian. In standard Bulgarian, all non-palatalised consonants have palatalised counterparts with the status of phonemes. Moreover, normative

[3] The claims advanced in this study appear in several of my publications, which have preceded more detailed research, e.g. Savicka & Cihnerska, 2018.

rules suggest slight palatalisation before [e, i] but not to the degree which would cause their fusion with phonologically palatal consonants (at least this is the view expressed in the normative descriptions of Bulgarian phonetics and phonology, e.g. *Gramatika*, 1982). In the eastern dialects, the palatalisation is strong. This fact fundamentally changes the rules for the distribution of Bulgarian consonants. In the standard language, palatalised consonantal phonemes occur exclusively before back vowels; the consonants before front vowels are pronounced without (or almost without) palatalisation. In the eastern dialects, palatalised consonants occur both before back and before front vowels, but non-palatalised consonants do not occur before front vowels.

This is why the frequency of the more strongly palatalised consonants (having phoneme status) is relatively low in standard Bulgarian. In contrast, in the east of Bulgaria, combinatory palatalisations are strong, as a result of which there occur frequent identifications of palatal consonantal phonemes occurring before back vowels and those which received palatalisation through combinatory palatalisation (i.e. before front vowels). This drastically increases the frequency of palatality in texts (for details, see Sawicka, 1997) and significantly reduces the number of distributional restrictions on palatal consonants; on the other hand, the number of restrictions on the occurrence of non-palatalised consonants increases. Combinatory palatalisations occur also in Romanian. Diachronically, this differential feature (sensitivity or lack of sensitivity to the palatal/non-palatal context) has been abating (cf. Piotrovskiĭ, 1968).

Other differences between standard Bulgarian and standard Macedonian and Serbian phonetics include the frequency of consonant gemination (more frequent in Bulgarian, vestigial in Macedonian and Serbian, cf. Feuillet, 1986; Kozyra, 2015), and the frequency of vowel groups (including vowel gemination, cf. Korytowska, 2001; Korytowska & Sawicka, 2007), which is very high in Macedonian whereas in Bulgarian it is the lowest of all South Slavic languages. In Bulgarian and Romanian, there is a centralised vowel that has phoneme status (in Romanian there are even two such vowels). Standard Macedonian lacks a centralised vowel, although in many dialects there occurs schwa of varying phonological value (in fact, only a small area in west-central North Macedonia is completely devoid of this sound, see Savicka & Cihnerska, 2018). This feature is commonly included in the set of Balkanic features. In Bulgarian, inter-word sandhi operates in its "full" form, just as in Polish, Russian or Czech; in Macedonian, there occur inter-word assimilations of obstruents, however, according to the norm, obstruents before sonorants and vowels preserve their etymological voicing value. However, research suggests (Korytowska, 2012) that devoicing of obstruents does occur in this position (even though sporadically), especially in the eastern part of the Macedonian area. Bulgarian and Macedonian (except for the Macedonian eastern border area) also differ with respect to word stress. In most Macedonian vocabulary, stress placement is determined on the phonetic plane whereas stress

placement in Bulgarian is determined on the morphological plane. All these features, together with the collection of issues connected with consonantal palatality and vowel reduction, are important in both typological and areal perspectives.

A vocalic feature which characterises the eastern area is so-called vowel reduction. It consists mostly in raising the unstressed mid and low vowels, and in some Romanian dialects (and Aromanian in Dobrogea) also in the alternation along the front/back parameter, depending on the preceding consonant. Also this feature is more prevalent in the eastern dialects.

The eastern area, characterised mainly with reference to the phenomena of consonantal combinatory palatalisation and vowel reduction, extends to the North-Greek dialects. In the dialects of northern Greece, vowel reductions are very strong and they lead to the loss of unstressed high vowels, to the shift of mid vowels to high ones (in varying degree and range). In most areas where northern dialects are spoken, the unstressed /i/ and /u/ are lost, and /e/ and /o/ turn into /i/ and /u/, e.g. /poðari/ 'leg' [puðar]. In some peripheral northern Greek areas, the reductions are incomplete: either the high vowels disappear but the mid ones remain unchanged (cf. Thracian [poðar]), or the high vowels remain unchanged but the mid ones become higher ([puðari]/[po^{u}ðari]).

The issue however, is far from simple because reduction and the occurrence of the phonological schwa pertain also to Albanian dialects, which belong to the opposite type. In North-Greek dialects, in principle, reduction results only in the creation of the so-called pure vowels (mid vowels shift to high ones) or in the loss of vowels (high ones). It is difficult to assess to what extent this phenomenon is alive. The reductions of [a] to a schwa-type vowel seem current, but only in northern micro-regions, where this sound finds support in the local Slavic dialect. In Albanian dialects, the reduction consists not in raising, but in centralisation and is probably no longer a current process (cf. Asenova, 1989). The unstressed schwa which resulted from reduction is preserved in North-Albanian dialects only when its loss would lead to the emergence of consonant clusters which are systemically unacceptable or difficult to pronounce. However, because such a schwa appears for the same reasons also in the places in which it was etymologically absent, it should be assumed that Albanian reductions led to the complete disappearance of the vowel in most (however not all) contexts (there still exist Albanian dialects representing the state after the loss of the schwa in all unstressed positions, cf. Sawicka & Dargiel, 2018), whereas the occurrence of the unstressed schwa constitutes a systemic means of solving contextual conflicts (distributional ones), irrespective of whether it occurs in place of some etymological vowel or not, e.g. Albanian **realismus* > *realizm* > *realizëm* [realizəm] 'realism'. Thus, in my opinion, the occurrence of schwa in present-day Albanian should not be connected with the phenomenon of the historical reduction of unstressed vowels.

In South-Albanian dialects, the schwa has a greater range of occurrence – it occurs also in stressed positions (where its origin is different).

Generally, combinatory palatalisations in Greek dialects are limited to changes in the articulation of velar consonants under the influence of the following front vowels (which leads to various phonological consequences) but in Thessaly or in Macedonia palatalisations of all consonants before or after front vowels are common. Palatalisations are the least numerous in Epirus. Greek combinatory palatalisations have both a regressive and progressive character. This characteristic has been transferred to the neighbouring or coexisting Macedonian and Bulgarian dialects (in the eastern part of the contact area), e.g. Mac. [maca] < *majka* 'mother', [ucu] < *yjĸo* 'uncle', [seʎu] 'village', [piçme] '(we) drank' (examples from eastern Aegean[4] Macedonia, for more cf. Savicka & Cihnerska, 2018). The very east of North Macedonia is more saturated with palatality. Because progressive palatalisations are not typical of Slavic dialects (it is probably transferred from Greek dialects), the occurrence of palatalisation is somewhat chaotic, sometimes even without any contextual motivation, e.g. Mac. [dadoç] '(I) gave', [seɲka] 'shadow', [fustaɲ] 'dress'.

There is less consonantal palatalisation and vowel variation in south-western Aromanian dialects than in the same dialects whose speakers were displaced at the beginning of the 20th century to Dobrogea. Nicolae Saramandu lists as many as 13 correlative pairs of vowels in Aromanian dialects in Dobrogea (whose quality depends on the palatal/non-palatal consonantal context and on the position relative to the stressed syllable) (Saramandu, 1972).

The western Balkan phonetics (*ergo* European) is directly related to the typological-areal division of Slavic phonetics. Today, many researchers assume that the Slavs, at the dawn of their European history, entered into close relationships with some Turkic tribe (most likely, with the Avars). In any case, they certainly arrived together in the Balkans (Pritsak, 1983). Probably, the most evident trace of this relationship was the Proto-Slavic syllabic synharmonism, which consisted in the agreement of all elements in the syllable with regard to the feature +/- palatality. The unification of syllables in this regard (i.e. the occurrence of front vowels after palatalised consonants instead of the etymologically expected back ones) is most often observed in Old Slavic in inflectional endings and suffixation, which is remarkably reminiscent of Turkic vocalic harmony. However, this is still an unconfirmed hypothesis. The subsequent development of Slavic languages consists in the gradual loss of this feature.

In the South, stronger and numerous palatalisations have been preserved especially in the eastern part of the Slavic area – in the phonetics of Bulgarian,[5] especially east Bulgarian (despite some phonological and distributional

[4] Aegean Macedonia – term used for the Greek part of Macedonia; Pirin Macedonia – the part of Macedonia in Bulgaria; Vardar Macedonia is North Macedonia.

[5] Initially, as evidenced by a number of other features, Bulgarian phonetics developed consistently with the South Slavic phonetics. This is indicated by the differences in the inventory of palatal phonemes and their origin. However, accommodation of pronunciation has been

differences regarding the occurrence of palatalisation in relation to North Slavic languages), but not in Serbian, Macedonian, or Slovenian, in which most palatalised consonants have fairly quickly become non-palatalised. The process of restricting consonantal palatalisation occurs in all Slavic languages, even in the East Slavic ones, but is significantly delayed compared to the south. The archaic "palatal" phonetics first disappeared in the south-west, thus in the Balkans, later in the area of Czech and Slovak, which today decidedly belongs to the South-West Slavic phonetic type.

The North-East Slavic and also the East-Balkan phonetic types are relatively rare in Europe; they are clearly distinct, distinguished from European phonetics by virtue of a significant degree of accommodation. However, bearing in mind the fact that Balkanisation consists in, *mutatis mutandis*, Europeanisation, we will consider this area as peripherally European, and therefore non-Balkan in phonetic terms[6] and (on the basis of comparative research of Slavic languages) rather archaic. The idiosyncrasy of Bulgarian and Romanian phonetics viewed against the background of most languages of western Europe prompted Pavle Ivić to consider it a Balkan specificity (Ivić, 1968). Simeonov (1977) expressed a similar opinion. However, the most specific Balkan phonetic features occur on the other side of this borderline, where intense multilingualism persists to this day, i.e. in a relatively small area, encompassing North Macedonia, Aegean Macedonia in Greece, Albania, Kosovo, southern Serbia, Montenegro, and the southernmost part of Bulgaria.

Nowadays, two distinct phonetic poles can be defined in Slavic, in which the feature +/- palatality (phonological and combinatory) is accompanied by a series of other phonetic features (cf. Sawicka, 2001). There is an ongoing process of departing from the structure which is rich in palatality, vowel reductions, with elaborate consonantism.

The high frequency of palatality in texts and the sensitivity of consonants to palatal vowel context are maintained in the highest degree in East Slavic and in the east of the Balkans. Therefore, this area, representing a withdrawing phonetic type in Europe, should not be associated with the Balkans, but rather with the so-called Eurasian Phonetic League, postulated by Roman Jakobson (Jakobson, 1931, 1962). According to Jakobson, the League is characterised by the lack of accentual politony and an elaborate correlation of palatalisation (we can certainly augment the list with the characteristically velar quality of the non-palatalised lateral consonant and a frequent occurrence of the centralised vowel phoneme of the schwa type [ɪ/ɨ/ə]). Naturally,

---

preserved to a degree or it has been developed again (under the influence of Proto-Bulgarian? Romanian? Greek?), as a result of which Bulgarian, especially its eastern variety, should be included in the same phonetic type as Russian or Belarusian, despite some phonological differences.

[6] Of course, taking into consideration the morphosyntactic features, the Bulgarian-Romanian area is classically Balkanic.

a clearly delineated borderline between the Eurasian and the European phonetic types cannot be established. At any rate, to a greater or lesser extent, the Eurasian type includes all East Slavic languages, and also partially Polish (especially the Polish borderland dialect), Bulgarian (especially the eastern dialects), Romanian and partially also Greek (especially in the north-east). Both phonological and combinatory palatalisation and, on the opposing pole of Slavic phonetics, politony, are subject to continuing restrictions (narrowing of the context for the occurrence, decomposition, dephonologisation, loss of palatalisation, etc.).

Although the frequency of the occurrence of palatalisation in Bulgarian texts is still more comparable to that of other South Slavic languages than to that of East Slavic languages (Sawicka & Grzybowski, 1999), the phonemic situation bears resemblance to the East Slavic rather than to other languages of the Slavic south. In standard Bulgarian, all non-palatalised consonants have their palatalised counterparts which have phoneme status. "Semi-palatalised" alveolar obstruents (/ʧ, ʤ, ʃ, ʒ/) constitute an exception. However, due to considerable distributional restrictions, the frequency of palatalised consonants is not high.[7]

In this respect, the remaining South Slavic languages belong to another type. What is more, in Shtokavian and especially in Macedonian, we can observe further processes restricting the occurrence of palatalisation (palatalised affricative obstruents become non-palatalised in Serbian, Croatian and Macedonian; in Macedonian, this is also true of /ɕ/ and /ɲ/).

Greek has certain features which are characteristic of East-Balkanic as well as West-Balkanic phonetics, and also Mediterranean features. Moreover, Greek is the main contributor of the most important Balkanic (i.e. non-eastern) phonetic feature, which consists in the specific functioning of consonant clusters of the type "nasal sonorant + occlusive".

Petya Asenova also identifies the geographical division mentioned above with the borderline between the East-Balkanic and West-Balkanic language types (Asenova, 1989). Asenova, too, observes vowel reductions and consonantal palatalisations on the right of this borderline. This is decidedly a regressive type, as evidenced by the development of Slavic phonetics. Assimilative palatalisation is weakening also in Romanian dialects. In standard language, stronger palatalisation occurs mostly before front diphthongs (mostly before iota), e.g. *mreană* 'species of fish, barbel' [mrʲeanə]; strong palatalisation occurs before /i/, in the situation in which [i] is lost e.g. *bani* 'money' [baɲ], *ieri* 'yesterday' [jerʲ]. As in Bulgarian, the phonological interpretation of these phenomena requires the involvement of deeper structures.[8]

---

[7] According to a survey Sawicka & Grzybowski, 1999 the percentage of palatalised consonants among all consonants in South Slavic texts (including Bulgarian) does not exceed 10%, whereas in East Slavic languages it oscillates between 20% and 30%.

[8] For instance, Bulgarian standard [Cʲ], due to its distributional properties can be interpreted as the phonological cluster /Cj/, whereas Romanian word-final [Cʲ] can be interpreted as /Ci/.

As already mentioned, there is no clearly delineated borderline between the East-Balkanic and West-Balkanic phonetic types – there are vast transitional areas, where dialectal phonetics manifests both East-Balkanic and West-Balkanic features. The typological boundary often runs within the area of one language. This situation is especially pertinent to Macedonian, Bulgarian and Serbian.

Summing up, the phonetic division of Europe into the western and eastern type runs across the Balkan area and also across the Slavic area.

An almost complete repertoire of palatalised word-final consonants occurs in the south of Bulgaria in Rup dialects, bordering directly on the area of Ser and Drama in Aegean Macedonia on the Greek territory, where word-final palatal consonants are also abundant. In the Strandja dialect there occur additionally long or geminated palatalised consonants [ɲ, ʎ, c, ɟ, ç], e.g. [raɲɲet] 'early' definite form, [kameɲɲe] 'stones', [livaɟɟe] 'meadows', [suççet] 'dry' definite form, etc. (cf. Stoĭkov, 2002, p. 213). As in Belarusian and Ukrainian, also here this is a result of the progressive assimilation of iota (e.g. [suçijat] > [suçijet] > [suçjet] > [suççet]). On the other hand, the scope of progressive assimilation of the obstruents in words such as [majka] 'mother' > [maca] is different – it encompasses the dialects of south-western Bulgaria, including Pirin Macedonia, and only some Rup dialects (see BDA, 2001, map 107). Progressive palatalisation of this type is one of the features which unite borderline Macedonian, Bulgarian and Serbian dialects – a small area along the eastern section of the border between Macedonia and Serbia and along the southern section of the border between Bulgaria and Serbia (Ivić, 1994, pp. 35 *& passim*). The southern part of this area is more saturated with this feature. This is due to the proximity of the Greek dialects, which are the most likely source of this feature.

On the other hand, in western Vardar Macedonia, in Macedonian dialects there is little consonantal palatalisation. The occurrence of [ɲ] is especially restricted; in western Aegean Macedonia, [ɲ] no longer occurs in any position. The occurrence of the palatalised lateral sonorant is rather restricted in Macedonian. Generally, the frequency of palatal obstruents is not high (cf. Gerazov, 2011). Only the iota has a relatively high frequency, but in some positions it is unstable.

Macedonian dialects are located between typologically different languages: Albanian, in which, just as in Serbian and standard Macedonian and in western Macedonian dialects, there are 5 palatalised segments and assimilative palatalisation is absent; Bulgarian has many more palatal segments and in the eastern dialects there are strong palatalisations before front vowels. Yet another typologically different neighbouring language is Greek. Consonantal palatalisation is restricted in standard Greek and in some Greek dialects. In principle, it is restricted to the phonological iota (which is unstable in certain positions, as in Macedonian) and positional velar palatalisations before front vowels. However, in northern dialects, especially in Thessaly, there

are a lot of palatalised consonants; they are abundant in the whole Aegean Macedonia.[9] This is the result of combinatory palatalisations. On the other hand, in the Slavic dialects in western Aegean Macedonia the situation with regard to consonantal palatalisation is the same as in standard Macedonian and the remaining western Macedonian dialects, despite a different situation in the coexisting Greek dialects. Further to the west – in Epirus – consonantal palatalisation is almost absent in Greek.

In Greek dialects, there occurs mostly assimilative palatalisation; its range is the greatest in Thessaly, where all consonants become palatalised before front vowels. In Aegean Macedonia, palatalisations before front vowels are also relatively common in Greek dialects. Generally, in Greek dialects, the palatalisation before the iota has the greatest range (also before the secondary iota resulting from the glidisation of [i] in vowel groups), followed by the palatalisation before [i]; the consonants before [e] are the least likely to become palatalised (Newton, 1972, p. 137).[10] Combinatory palatalisations may lead to the phonologisation of palatalised consonants. The reductions of unstressed vowels contribute significantly to this process as they lead to the loss of the context which determines palatalisation and, consequently, to the phonologisation of palatalised consonants. In the new contexts created in this way, there are both non-palatalised and palatalised segments of the opposition, e.g. [filisa] '(I) kissed' > [fil^{j}isa] > [fiʎsa]. Another source of the phonologisation of [ɲ] and [ʎ] are the processes leading to a change of the vowel context – from the position before a front vowel to the position before a back vowel, e.g. [enia] 'nine' > [enja] > [eɲja] > [eɲa], [elia] 'olive' > [elja] > [eʎja] > [eʎa]. In addition, it should be remembered that consonants in northern Greek dialects undergo palatalisation only before primary front vowels. Palatalisation does not occur before secondary /i/, resulting from /e/ in the second stage of reduction, e.g. [vaʒ^{j}] '(he) lays' < [vazi], but [evazi] '(he) laid' < [evaze].

---

[9] According to Greek dialectologists, word-final palatal [ʎ] and [ɲ] occur in western and central Aegean Macedonia, but not in its eastern part. In western Greek dialects (especially around Kozani, e.g. in Velvendos, Katafidhi, also in the region of Kastoria) all palatal consonants occur word-finally (Margariti-Ronga, 1985, 1989), but this fact did not affect the situation in Slavic dialects, in which palatalisation is the least common.

[10] In northern Greek dialects strong palatalisations of /l/ and /n/ before front vowels, including the contexts before the lost unstressed word-final **i*, which underwent reduction, leave a trace in the form of the palatalisation of the word-final consonant, e.g. [vaɲ] '(he) lays', [f^{j}iʎ] 'friends'; /s/ and /z/ undergo palatalisation in the same contexts, resulting in [ʃ^{j}], [ʒ^{j}]. According to Newton (1972, p. 148), northern Greek dialects are characterised by the palatalisation of /l, n, s, z/ before front vowels, and in Thessaly, Macedonia and Thrace, also /t/ and /d/ undergo palatalisation, e.g. [kat^{j}] 'something' < [kati], [δonti] 'teeth' > [δond^{j}] (Thessaly, western Aegean Macedonia) or [δod^{j}] (Thrace, eastern Aegean Macedonia). In many dialects, mostly southern, the palatalisation of [t], [d] results in [ʧ^{j}], [ʤ^{j}]. In Macedonia, such a phenomenon was observed in the region of Kozani – in the town Siatista, south of Kastoria, e.g. [pateras] 'father' > [paʧ^{j}eras], [pefti] '(he) falls' > [peftʧ^{j}], but it is not observed in the neighbouring Katafidhi, and in Galatini this phenomenon is optional.

The saturation of text with palatalisation depends not only on the presence of particular segments in the phonetic inventory of a given dialect, but also on their distributional properties. The fewest palatal segments are found in the south-western Slavic Macedonian dialects (in Aegean Macedonia, in the area of Kastoria), where, firstly, there is no [ɲ], and secondly, the only source of palatal [c], [ɟ] are borrowings from Turkish, and thirdly, the only palatalised segment in the word-final position is usually the iota.

The difference between the eastern and the western parts of Aegean Macedonia may be related to the broader foreign language context: on the one hand, in the west, there is Albanian (with limited palatalisation), and on the other, in the east – Bulgarian (where there is much more palatalisation). Greek palatalisation did not affect the situation in the Macedonian dialects of western Aegean Macedonia. Greek left the greatest mark on the eastern Slavic dialects of Aegean Macedonia, and on the neighbouring Bulgarian dialects. Moreover, as in the Greek dialects, in many cases, combinatory palatalisations, as a result of the reduction of high vowels, turned into phonological palatality.

2. THE MEDITERRANEAN PHONETIC AREA[11]

The southern Balkans border on a distinct European area characterised by specific phonotactic features. We will refer to the area as the Mediterranean Phonotactic League. Unfortunately, I cannot define any social background for such a League, except for the supposition that lenitions occurred in Latin at the time of the conquest – both the south of Italy and the Iberian Peninsula were conquered by Rome more than once. The area in question encompasses the northern peninsulas of the Mediterranean Sea, especially, their southern parts. Here, too, the Greek and the Romance elements met and contributed in their own distinct ways to the emergence of the Mediterranean phonotactics. Of primary importance are two features which occur in slightly different forms and with different intensity in the area under discussion. They can, however, be covered by a common term, namely, the phonetic model of the word which is characterised by, firstly, open (or relatively open) syllables, especially in word-final positions, and, secondly, by the restriction on the intervocalic occurrence of voiced occlusives (for lenition as a Balkan feature, see Bednarczuk, 2005 and Chapter 9).

Voiced stops in the intervocalic position underwent lenition to fricatives very early in the developmental history of Greek and this state is characteristic of standard Greek and most of the southern dialects of Greek at present. However, in many dialects, intervocalic voiced stops emerged again after the simplification of the clusters "nasal sonorant + voiced occlusive" (cf. Chapter 6). Despite the fact that the restriction itself (on the occurrence of voiced stops between vowels) is still current in standard Greek and in the southern dialects, voiced fricatives cannot be treated as combinatory allophones of the corresponding stops. This is because voiced occlusives entered the combinatory relationship with the clusters "nasal sonorant + voiced occlusive" and, at present, intervocalic stops in borrowings do not undergo lenition, but are substituted by the clusters "nasal sonorant + voiced occlusive" instead of fricatives (e.g. *Paganini* in colloquial speech may be pronounced as [paŋganini], but not as [paɣanini]). Nevertheless, in the southern part of Greece, voiced occlusives do not occur between vowels, which can also be interpreted as a combinatory variation "voiceless occlusive ~ voiced fricative", but it is not a current relation, which is confirmed by the way borrowings are adapted. In general, the situation is as follows: the opposition "voiceless stop" vs. the cluster "nasal sonorant + voiced stop"

[11] Based on Perlin & Sawicka, 1987; see also Sawicka, 1997; Sawicka & Sujecka, 2015.

replaced the opposition "voiceless stop" vs. "voiced stop". The cluster "nasal sonorant + voiced stop" occurs in a combinatory variation with voiced stop (not preceded by the nasal sonorant) in word-initial position. In colloquial speech, however, clusters "nasal sonorant + voiced occlusive" occasionally occur also in this position (for details and examples, see Chapter 7).

In some dialects (on the Dodecanese islands), there occurs lenition which leads to the complete loss of the consonants. The voiced intervocalic fricatives disappear on a regular basis also in the Cypriot dialect (e.g. *φοβος* 'fear' > [foos]).

In the diachronic phonetics of Spanish, the voicing of the stops is explained with reference to prior lenition, e.g. *limitera* > *limidera* > *lindar* 'border', *semita* > *senda* 'path', *vindicare* > *vengar* 'avenge', *bonitate* > *bondad* 'goodness' (Menéndez-Pidal, 1960). Either lenition (manifested in voicing) occurred first and then the reduction of the vowel led to the emergence of the cluster "nasal sonorant + stop" or, after the reduction of the unstressed vowel, the cluster "nasal sonorant + voiceless occlusive" emerged, and the stop underwent voicing in this position (additionally the place of articulation of the nasal sonorant assimilated to that of the following stop), similar as in Greek or in southern Italian dialects and in some other places.

In Romance dialects, lenition is a current phenomenon and voiced stops obligatorily or optionally alternate with the fricative allophones in the intervocalic position. Lenition occurs in Italian, Spanish, Portuguese, Catalan and Occitan. In Spanish, lenition is usually explained with reference to internal development (Penny, 2002).

The lenition of [b, d, g] in Spanish and Catalan is a regular phenomenon, although it is not obligatory, e.g. Spanish *pagar* [paɣar] 'pay', *sabe* [saβe] '(I) know'. Voiced occlusives, just as in Greek, occur only word-initially or as elements of certain consonant clusters. Lenition is less regular in Portuguese. It occurs mostly in fast speech, it is not common and differs in range. In Iberian languages, lenition may also take place when stops constitute elements of certain consonant clusters. The range of clusters in which lenition occurs is significantly narrower in Portuguese than in Spanish or Catalan, in which the lenition of the initial voiced occlusive may occur even on the boundary between words (although some examples are lexicalised forms, similar as in the case of the complete loss of the stop, as in the suffix *-ado* > [ao]).

In Italian, lenition is an irregular, dialectal phenomenon. It occurs in colloquial speech, too, e.g. Calabrian [kruele] < *crudele* 'cruel', [preo] < *prego* 'please'. Lenition also occurs as a result of substitution, e.g. Neapolitan [pele] = *piede* 'foot'. Although Italian lenitions are, in principle, accounted for with reference to Celtic influences, in the south of Italy, characterised by the greatest number of similarities to Balkan phonetics, we may talk about areal scope (and a convergence perhaps?) of a number of phenomena, including lenition. However, this may be just a similarity – lenition, just as the second Mediterranean feature (the tendency to open syllables) – occurs

or occurred in the development of many languages. These processes are attendant on the articulatory preferences of a given language, but above all on the rhythmic requirements, as a result of which they are frequent in the developmental histories of many languages. Of importance for the present discussion is the fact that these features cover a large, compact area and pertain to languages from different language families. Lenitions occur all over Italy. The more regular ones occur in the north of Italy, e.g. Toskan *sabato* 'Saturday' [sa:βaθo], *nido* 'nest' as [ni:δo], *mago* 'wizard' [ma:γo], also in certain clusters, e.g. *magro* 'thin' as [ma:γro]. In the north, also voiceless stops often undergo lenition, changing into spirants or voiced stops (Hualde & Nadeu, 2011; Marotta & Sorianello, 1992; Martinet, 1952).

Lenition characterises also the southern Italian dialects, where (barring a few exceptions) it is less regular. Thus, the situation in Italian dialects is, *mutatis mutandis*, similar to that in Greek, where the same phenomena occur both in the north and in the south, however, their structural traces are preserved only in the south. In the north, voiced occlusives may occur between vowels, both in Italy and in Greece, but in Greece they result from the simplification of the clusters "nasal sonorant + voiced occlusive", and in Italy they result from lenition (voicing of the voiceless stops).

Italian lenition is not a completely regular phenomenon. It affects [d] most often, whereas [b] is the least likely to undergo lenition (it is sometimes prenasalised, as in [rimbresjun] 'mutiny', observed in Calabria). Voiced intervocalic occlusives are also avoided in Italian dialects in other ways, for instance, through other substitutions, e.g. Sicilian [krirriri] < *credere* 'believe', or Neapolitan [pavare] < *pagare* 'pay', [pelə] < *piede* 'foot'. Occasionally, there also occur such phenomena as prenasalisation, e.g. [mbe] < *bene* 'well', [ottombre] < *ottobre* 'October', or a complete reduction of the sound, e.g. Neapolitan [preo] < *prego* 'please', Calabrian [kruele] < *crudele* 'cruel'. Such phenomena are less frequent in consonant clusters, e.g. [livro] < *libro* 'book'. There even occurs the opposite phenomenon to lenition – fortition, consisting in the creation of the geminate (especially as the so-called *raddoppiamento sintattico*, when a voiced occlusive occurs on the border between words; when the initial consonant of the lexeme occurs also in the intervocalic position in the prosodic word, i.e. in the so-called phonological word), as in Campanian [varva/bbarba] < *barba* 'beard'.

Lenition occurred also in the history of Albanian, cf. *pyll* 'forest' < Lat. *padulem*, *djall* 'devil' < *diabolus*, *kal* 'horse' < *caballus*, *mjek* 'doctor' < *medicus*. At present, however, voiced stops occur between vowels without restrictions in Albanian dialects. Rare cases of fricativisation occur in more recent borrowings from Italian, e.g. *periudhë* 'period', *adhuroj* '(I) adore'. Only in Arbëresh (an Italo-Albanian dialect in the south of Italy), /g/ regularly undergoes fricativisation, e.g. *rruga* > [ruγa] 'street'. On the other hand, in some Arvanitika dialects, strongly influenced by Greek, sometimes intervocalic stops are prenasalised, e.g. *rruga* > [ruŋga], *vogël* > [voŋgəʎ] 'small' (examples come from

Leake, 1814). Lenition is also observed in the history of Macedonian and also today in Macedonian dialects, especially the western ones, in which lenition is not limited to voiced stops, especially [d] and [g], but affects also [v], [x], [j] and, sometimes, sonorants, especially the palatalised ones, which also undergo mutual substitutions. The lenitions of [d] and [g] occur in the whole area of Macedonia – they are more intense in the west, sporadic in other parts, whereas the lenitions of [v], [x] and [j] are territorially restricted, but regular. They are discussed in Chapter 9 on Balkan lenitions.

As can be seen, only in the southern Greek dialects and in the literary form of Demotic Greek the restriction on the occurrence of voiced stops between vowels is almost unconditional (exceptions are constituted by words of foreign origin which undergo adaptation in colloquial speech). Also, only in Greek, the voiced fricatives which result from lenition do not constitute combinatory variants (obligatory or optional) of the corresponding occlusives, as is the case in the remaining languages of the Mediterranean.

The second Mediterranean feature is the open or relatively open syllable model. Simple syllable structures – the so-called one-peak syllables[12] – occur in the area under discussion. In word-initial position, only simple consonant clusters may occur, in which a sonorant may occur only after an obstruent or after another (less sonorous) sonorant, whereas the end of a word is usually vocalic. Words hardly ever end in a single consonant; typically, they end with a sonorant. The inventory of the consonants in the word-final position is restricted and different in each language of the area under consideration. Word-final consonant clusters are very rare and usually occur in isolated borrowings.

Such a syllable structure occurs in standard Greek and in the southern Greek dialects. Words typically end in a vowel and the only word-final consonants are [n] (which, however, is lost in colloquial speech) and [s]. In Grecano (a Greek dialect from southern Italy), the word-final [s] is also lost. Other consonants or consonant clusters occur only in isolated words, e.g. *τραμ* [tram] 'tram'.

In Italian and most southern Italian dialects the coda is consistently open. Just as in Greek, in standard Italian there are only isolated words which end in consonant clusters, the structure of which is simple, e.g. *senf* 'mustard', *ovest* 'west'. The reduction of the word-final vowel is possible only after a sonorant and only when two words fuse into one (*bel canto* < *bello canto* 'beautiful singing', *buon giorno* < *buono giorno* 'good morning', etc.). Just as the French, Italians, in principle, cannot pronounce word-final consonants in the way they are pronounced, for instance, in Slavic languages. The Italian

[12] One-peak syllable is the so-called sonorous syllable, which means that the degree of the inherent sonority (relative audibility) of its components (segments) increases towards the peak of the syllable and decreases after the peak. This means that in word-initial clusters, a non-syllabic sonorant cannot occur before an obstruent, and in word-final positions, it cannot occur after an obstruent. A sonorant may occur only next to a vowel or another sonorant.

pronunciation of a word-final consonant is always precise and typically ends with a little quasi-vocalic sound. In southern Italian dialects, even a full vowel often emerges in such a context in borrowings: *lapisse* < *lapis*, *tramme* < *tram* 'tram', *gasse* < *gas* 'gas' (for more examples, see Rohlfs, 1966).

Also in Spanish and Portuguese, native words end in a vowel, less often in a single consonant, usually [r], [l], [n] or [s]. In addition, [θ], [d] or [x] may also occur at the end of a word in very careful articulation. The main source of potential word-final consonant clusters is formed by relatively recent borrowings, as is the case in the remaining Romance languages of the Mediterranean. However, the pronunciation of the final consonants is usually almost syllabic, and in Portuguese it is, generally, clearly syllabic, e.g. *klub* [klubə].

Similarly, in Aromanian, words usually end in a vowel, less often in a single consonant.

Such are the dominant structures in the northern peninsulas of the Mediterranean Sea, manifesting certain similarities to the dialects of the southern coast of this basin – in Arabic, words begin and end in a vowel or a single consonant.

South Slavic languages do have word-final consonant clusters, but they are less numerous and simpler than in North Slavic languages. The Italian influence on the structure of the Slavic syllable is particularly evident in the Chakavian dialect. This will be discussed in Chapter 12 on Balkan syllabic structures.

Other syllabic structures in the southern parts of the peninsulas of the Mediterranean Sea are exceptional and usually connected with the reductions of unstressed vowels, e.g. in the Bari dialect there occur forms such as [ʧipr] 'Cyprus', [sepwolkr] 'grave', with a non-syllabic or even voiceless word-final sonorant. In other dialects of southern Italy, Italian or Arbëresh, the forms are usually *Cipre*, *Cipri* or *Cipro*. In the south of Italy, syllable structures with word-final consonant clusters or even with the so-called non-sonorous (two-peak) syllables occur in isolated places, in the area of Bari, Lecce, Abruzzo and also in Arbëresh dialects (mostly in the provinces Catanzaro, Crotone and Taranto), where these structures are gradually disappearing (cf. Sawicka & Dargiel, 2018). Such structures most often constitute a short-lived transient state in the development of the syllable. They emerge after the loss of a final vowel and in time they disappear, usually as a result of the addition of a vowel.

On the other hand, in the northern parts of the peninsulas, closed syllables are commonplace as a result of regular vowel reductions (sometimes, there even occur the so-called two-peak syllables in word-final positions). This happens in Catalan and Occitan, in northern Italian dialects and in northern Greek dialects. This is also a frequent difference between Aromanian and Dacoromanian forms, e.g. Rom. *cînt* 'sing', *gust* 'taste' – Arom. *cânt^{u}*, *ngust^{u}* (examples come from Gołąb, 1984).

In some Greek dialects, the two-peak structures which emerged as a result of vowel reduction, nevertheless, sometimes disappear, e.g. [pateras mu]

'my father' > [paterazm] > [paterazum] (for more, see Chapter 12 on Balkan syllabic structures).

As mentioned above, vowel reductions, the tendency to open syllables, and lenitions of intervocalic consonants are commonplace facts which occur in the history of many languages. It is characteristic, however, that as a result of these facts, certain distinct restrictions persist in a relatively compact area of the southern parts of Europe. The prohibition of the occurrence of voiced stops between vowels (and also in certain consonant clusters including sonorants) is obligatory only in southern Greek, in Spanish it is common, and in Portuguese lenition is optional. It is the least regular in the south of Italy. A more characteristic feature of this area are open syllable structures. Both these features divide the language areas under discussion into the northern and southern language areas of particular languages. In northern languages/dialects, as a result of vowel reductions, there are closed syllables. In the north of Italy and Greece there is no restriction on the occurrence of voiced intervocalic occlusive either. This results from the lenition (voicing) of voiceless occlusives in Italian, and in Greek this is a result of the simplification (denasalisation) of the clusters "nasal sonorant + voiced occlusive".

3. THE PHONETIC CENTRE OF THE BALKAN SPRACHBUND[13]

West of the Eastern Balkan phonetic area, the Balkan dialects manifest opposite features, i.e. the pronunciation is more precise, there are fewer assimilations and neutralisations, fewer palatal consonantal segments. In this respect, as mentioned above, the west of the Balkans demonstrates associations with Western Europe, whereas the east of the Balkans shows associations with East Slavic languages and, in some respects, with the languages of the Turkic language family.

The phonetics of Greek does not fit in well with such a dichotomous division into the East and West. The northern Greek dialects have phonetic features characteristic of both the eastern and western parts of the Balkans, whereas the southern dialects also have "Mediterranean" features. The Greek dialects in Aegean Macedonia generally have both eastern features (consonantal palatality) and western features (the functioning of the clusters "nasal sonant + occlusive"). It seems that Greek vowel reductions (similar to the Albanian ones) are no longer a current phenomenon, although their phonetic consequence (the raising of unstressed vowels) can be associated with the reduction of the Bulgarian and south-eastern Macedonian dialects.

Neither the western nor the eastern part of the Balkans is in any way specifically related to the background of the greater language areas that surround them. There is, however, an area of the western part on which the features contrasting to those of the Eastern Balkans are concentrated or occur with greater intensity. The most characteristic Balkan phonetic phenomena concentrate in the area where Macedonian, Albanian, Greek and Aromanian dialects meet and exert influence also on Serbian and even Italian dialects. Long vowels often occur in this area (in Gheg-Albanian and most Shtokavian dialects; in Macedonian they occur as an optional realisation of very frequent vowel geminates); vowel groups have a significantly high frequency in texts; assimilative consonantal palatalisation is less present, consonant clusters are simpler. Additionally, one very specific Balkan phonetic feature occurs in this area – the only one, but extraordinarily elaborated and multi-faceted – namely, the complex of features connected with the functioning of consonant clusters consisting of "nasal sonorant + stop". Greek dialects fit in very well with this area.

---

[13] This chapter offers a brief summary of the most important Balkan phonetic features and constitutes an introduction to subsequent chapters, which review particular issues in more detail.

The phonetic centre of the Balkan League is characterised by a specific type of sandhi, consisting in voicing/devoicing of regressive assimilations of word-final obstruents before word-initial obstruents. Before vowels and sonorants, obstruents do not undergo modification. Additionally, this rule is applied in a very irregular way. Such sandhi occurs in Macedonian and northern Albanian (Gheg) dialects, whereas in southern dialects (Tosk),[14] and in Bulgarian relatively regular sandhi of the devoicing type occurs (which means that voiced obstruents undergo devoicing before vowels and sonorants). In the neighbouring Serbian, voicing sandhi does not occur at all, which associates Serbian with a few languages of Western Europe but distinguishes it from Slavic languages, all of which are characterised by the phenomenon of voicing/devoicing sandhi (there is no data on sandhi in southern Serbian dialects). In Greek, in principle, there are no conditions for the occurrence of voicing sandhi – the only obstruent which occurs word-finally is /s/. However, as a result of the reduction of unstressed high vowels, word-final consonants and consonant clusters emerged in northern Greek dialects. Voicing sandhi in these dialects differs from typical European voicing/devoicing and, additionally, it differs slightly from the Macedonian and north Albanian sandhi. In Greek, generally, the word-initial vowel in the following word constitutes the devoicing context for the word-final obstruents whereas the sonorant in the same position constitutes the voicing context (Korytowska, 2012; Margariti-Ronga, 1985; Savicka & Cihnerska, 2018; see also Chapter 14). It should be taken into consideration, however, that Greek sandhi is usually determined inside prosodic words, on the boundaries between proclitics and stress-bearing words. This issue requires a more detailed comparative examination. A preliminary examination was undertaken in Sawicka & Cychnerska (in press).

The second important feature of the Macedonian-Albanian-Greek area is the tendency for stress to fall on one of the last three syllables in a word. In each of these languages, the tendency is manifested in a different way, eventually leading to convergent results. Characteristic are also certain tendencies in the area of prosody concerning sentence intonation. The point in question is the weakening of the final fall in affirmative sentences and other terminated utterances. In closed questions (the so-called "yes-no" questions), there occur both final fall and final rise, also in Serbian. In other Slavic languages, this function is associated with either final fall (East Slavic, including Bulgarian) or final rise (West Slavic) (for more details on Balkan prosody, see Chapter 11; cf. also Nikolaeva, 1996; Sawicka, 1991a).[15]

---

[14] This is a generally received opinion; the dialects in question have not been examined in this respect.

[15] A specific Balkan feature, which connects the area of eastern Balkans with the central area is the occurrence of two stresses of the same level in a word. This concerns an isolated area, encompassing some dialects of south-western Bulgaria and south-eastern Macedonia. Double-stress occurs most often in longer words and is sometimes interpreted as an effect of rhythm and isochronism. It is connected with the so-called columnar stress in northern Greek

The next feature is a relatively high number of vowel groups, which distinguishes the southern Slavic element from North Slavic languages (and Slovenian, which bears similarities to North Slavic languages in many aspects). All South Slavic languages are characterised by a high number of VV groups (in the south, Macedonian has the highest number of VV groups, Bulgarian – the lowest). In Macedonian this results from the loss of iota in some positions (which is connected with the influence of Greek) and the loss of [x] and, in dialects, the loss of intervocalic [v] and a number of other lenitions of intervocalic consonants. The differences in the frequency of vowel groups between Slavic languages are strikingly large and they range from just a few groups in a sample to ca. 200 in an analogical sample of Macedonian. The frequency of vowel groups in Macedonian is several times higher than in other Slavic languages in the Balkans and much higher than in the remaining Slavic languages (cf. Korytowska, 2001). Lenitions are discussed in Chapter 9.

The lack of [x] is also a feature peculiar to this region, but it does not concern Greek. The loss or substitutions of [x] affect mostly Macedonian (e.g. Bulg. *хубава* [xubava] 'beautiful' – Mac. *убава* [ubava]) and Serbian (e.g. Serb. [uvo] – Croat. [uxo], especially in dialects and in everyday language, e.g. Serb. [xleb], colloquially [leb]),[16] and, in an incomplete form, in northern Albanian dialects, where, just as in Macedonian, [f] is a frequent substitute for [x], e.g. standard Alb. *njoh* [ɲox] '(I) know' but *njoftim* 'knowledge', Mac. [graf] 'peas, beans'. The range of loss or substitution of [x] in Macedonian, Serbian and northern Albanian dialects is very extensive. The occurrence of [x] increases gradually towards the east.

In connection with the process of restricting consonantal palatality, a number of distributional restrictions occur in this area (for the sonorants [ʎ] and [ɲ] in Macedonian; in some Macedonian dialects [ɲ] does not occur at all); the iota has an unstable phonological status in some positions (in Macedonian and Greek); however, the most typical for this area is the mixing of palatal and alveolar affricates, which consists in the loss of palatality and liquidation of the opposition (in dialectal speech, such expressions as Mac. *куќа* 'house' and *куча* 'dog' or Serb. *кућа* vs. *куча*, are often not distinct). Thus, in some Macedonian and Albanian dialects [c], [ɟ] change into [ʧ], [ʤ]; the same happens to South Serbian [ʨ] and [ʥ]. The same often happens in Turkish dialects of this Balkan area. Standard Greek does not have palatalised affricates, but in some northern dialects, palatalised affricates emerge as a result of combinatory palatalisations (mostly iotation) of velar stops. These may also lose palatalisation (see Sawicka, 1997, p. 43). For more details, see Chapter 9.

---

dialects, which is, in principle, the same phenomenon. Some Greek dialects have preserved only the primary stress, some have preserved the columnar stress (initial), but in some other dialects, both kinds of stress occur (Alexander, 2004; Savicka & Cihnerska, 2018).

[16] The phone /x/ was artificially restored in standard Serbian in the 19th century (Vuk Karadžić's reform).

Characteristic of the languages in this region is also proclisis of the short forms of personal pronouns and the short forms of auxiliary verbs. Macedonian, Albanian and Greek share this feature with all Mediterranean Romance languages and with Romanian. In Bulgarian, the feature developed only partially – it pertains mostly to verbal clitics.

In the centre of this area, there are no current vowel reductions of the Bulgarian type, i.e. such which result in the development of allophony. Albanian and Greek reductions are no longer current – they led either to the loss of unstressed vowels or changes into other phonemes.

The lack of consonantal gemination is also considered to be a Balkan feature, mostly because geminates in the neighbouring languages (Italian, Turkish and some Greek dialects) have a high frequency. Gemination is a highly exceptional phenomenon in the area under discussion and occurs only on clear morphological boundaries. The frequency of gemination constitutes a marked difference between Bulgarian and Macedonian (for details on geminates, see Chapter 13). These two languages constitute a rewarding field of comparison because, despite their close genetic relationship and similarities in grammatical structure, they belong to two distinct phonetic types (although the transition from one type to another is gradual).

The most important and specific characteristic of the central phonetic area of the Balkan Sprachbund (absent from other parts of Europe) is the set of features connected with the functioning of the consonant clusters "nasal sonorant + stop". The features include: the tendency not to distinguish these groups from (and the functional equivalence of these groups with) the corresponding voiced stops; mutual substitutability (i.e. prenasalisations of single etymological voiced occlusives or the simplification – denasalisation – of etymological clusters "nasal sonorant + occlusive"); voicing of stops after nasal sonorants; word-initial occurrence of these clusters; gemination (change of a cluster into a nasal geminate). These features characterise particular dialects to a different extent (see Chapters 6 and 7).

A similar functional equivalence characterises also some other consonant clusters, which is discussed in Chapter 10.

4. THE BALKAN SCHWA[17]

The central vocalic phoneme, the so-called schwa, appears in the Balkans in different phonetic variants, differing somewhat along the front-back and high-low parameters.[18] Since 1861, the phonological schwa has been widely considered as a Balkan feature (first proposed in Miklosich, 1861). In my opinion, this is not a Balkanism. A sound can be identified as a characteristic feature of a Sprachbund when it occurs in a compact language territory and when it emerged or was maintained as a result of language contact. These criteria, however, do not suffice. It is also important that the sound is not present in the territory neighbouring the Sprachbund. The phonological Balkan schwa does not meet this condition.

Indeed, the phonological schwa does appear in most Balkan dialects. Such a phoneme occurs in Bulgarian, in many Macedonian dialects, in Albanian, and in southern Serbian dialects. Romanian has even two vowels of this kind. The phonological schwa does not occur in Greek, however, such a sound is recorded in Greek Macedonia, where it is an allophone of /a/ in an unstressed position. In most Gheg dialects, this segment is not interpreted as a separate phoneme, either. It always occurs next to a sonorant and its occurrence is conditioned by the context of the sonorant. In Gheg dialects, schwa constitutes a fragment of the combinatory allophone of sonorants, e.g. the words *letër* 'letter, paper' (nom. sg.) and *letrën* (acc. sg. definite form) are phonologically interpreted as /letr/ and /letrn/. The phonemes /r/ and /n/ in these positions are pronounced as [ər] and [ən] – this results from the constraints imposed by the syllable structure. In most Gheg dialects, [ə] always accompanies a sonorant in the positions where the occurrence of a sonorant would disturb the required sonority structure of the syllable. The insertion of schwa eliminates this problem. Schwa does not occur in standard Macedonian and in some Macedonian dialects.

Thus, the phonemic schwa does not appear on a decisively compact area of the Balkans. In the Balkan Sprachbund territory, there exist dialects without this phoneme; moreover, there are dialects without such a segment at all, and this regards the areas where other phonetic Balkanisms are concentrated and where convergence phenomena are still current. This, however, is not the most

[17] A paper with this content was delivered at the meeting of the Balkan Linguistic Commission in Bucharest.

[18] These are the so-called reduced or centralised vowels, i.e. the vowels which in a vowel chart used for representing places of articulation are placed in the middle of the chart, not on its peripheries.

important factor disqualifying schwa as a Balkan feature. Sounds of a similar type are quite frequent in the languages of the world, especially in Europe and Asia. The Balkan area is directly linked to a large area of Asia, where such a sound appears regularly. Thus, the Balkans constitute the south-western periphery of the huge area where schwa occurs. A centralised, mid or high vowel of the schwa type exists in almost all languages of the Altaic language family – in Turkish, Chuvash, Uzbek, Tatar, Azerbaijani, Kazakh, Bashkir, Karaim, Buryat, etc. It occurs also in Mongolian and in the Manchu-Tungus family of languages. In addition, a comparable vowel also appears in the Slavic languages in the north of the Carpathian Mountains – in Polish (*y*), Russian (*ы*), Ukrainian (*и*), and Belarusian (*ы*). The northern Slavic schwa, especially the Polish one, seems to be identical with the reduced Romanian high schwa. In the remaining Balkan languages, the schwa-like segment is relatively low. In the Turkic languages, there exists a higher schwa (as in Turkish), as well as a lower variant, but sometimes there appears also a sound which in the IPA is marked with [ɯ], which is a kind of non-labial [u] (such a sound is described in Azerbaijani). In fact, this sound cannot be said to be the proper schwa (it is not centralised), but it must be taken into consideration that the centralised Slavic vowel [ɨ] has evolved from a similar vowel as a result of the delabialisation of the long [u].

Thus, the area where the sound in question occurs is quite compact, but it is not limited to the Balkans. Outside this area, the occurrence of similar reduced vowels is not as regular as, for instance, in the languages of Central Asia. According to Toporov, the Central Asiatic Sprachbund includes eastern and western Iranian languages, the Dumaki language (northern Pakistan), Indo-Aryan languages, Burush, and Dardic languages (Toporov, 1965). In the surrounding area, schwa appears less regularly and in some languages, e.g. in Tajik and in Kashmiri, it does not occur at all.

Schwa does not appear in most languages indigenous to the Caucasus – it is absent in Avar, Abkhaz and Georgian.

North of the discussed area, in Finno-Ugric languages, schwa is also missing.

I am not able to determine whether schwa has a phonemic value in all Altai languages. It is certainly an independent phoneme in most of these languages, for instance, in Turkish. In Slavic languages, [ɨ] (higher schwa) was in complementary distribution with [i] for several centuries, therefore, it was a combinatory allophone of /i/ occurring after a non-palatalised consonant. In the South Slavic languages, [ɨ] has disappeared – it shifted to [i], while in the North Slavic languages, a tendency towards its transformation into a separate phoneme has developed, because today the current rule is that whether the preceding consonant is palatalised or not depends on the vowel (front or back), and not vice versa, as it used to be in Old Slavic. In Polish, /ɨ/ certainly constitutes an independent phoneme.

In Bulgarian, as well as in some Macedonian and southern Serbian dialects, [ɨ] has disappeared, as in other South Slavic languages, but there is another

reduced vowel, a kind of lower schwa, with another etymology: it continues the Old Slavic back jer, which originates from the Proto-Slavic short [u]; in Bulgarian, it also continues the back nasal vowel or the syllabic liquids. In addition, in dialects, the same vowel develops in a number of positions as a secondary vowel (see Chapter 5).

In 1931, Roman Jakobson introduced the idea of the Eurasian Phonetic Sprachbund, which includes mainly the Altaic and Slavic languages (Jakobson, 1931, 1962). According to him, it is based on only two phonetic characteristics: the presence of the correlation of palatalisation and the lack of politony. We can certainly add to the list the special velar-dental articulation of the non-palatalised lateral sonorant and, perhaps, the presence of a schwa-like vowel.

Concluding, in my opinion, we should not consider the sound in question as a Balkanism.

Nasal schwa[19]

On the other hand, it needs to be mentioned that a kind of reduced nasal schwa certainly existed in the history of the main Balkan languages – in Bulgarian, Albanian, Romanian and Macedonian dialects – and it is this fact that can be considered as a historical Balkanism. The range of occurrence of nasal schwa is largely coextensive with the range of the Balkan morphosyntactic features. It is not, however, a present-day feature of Balkan languages. Nasal schwa is reconstructed for mediaeval Albanian, Romanian, Bulgarian and Macedonian. The segment might have arisen independently in each of these dialects because in each of them there were the conditions required for the development of such a sound. The time of emergence of this sound might have been different, too. However, it cannot be accidental that such a specific sound emerged in a compact territory. Undoubtedly, its occurrence was supported by the presence of a similar sound in contact dialects.

It is our opinion that Slavic languages maintained this sound under the influence of the substrate, and in the early Middle Ages, the substrate was constituted by the Romanian-Albanian dialects. The time of emergence of this Balkanism in Slavic languages is the period after the vocalisation of the strong jers and the loss of the weak jers, ca. 10th century. It is only with regard to the Slavic material that we can be certain of the relative time of the emergence of nasal schwa. Albanian researchers date the emergence of nasal schwa to an earlier period, i.e. before the 7th century. Certainly, the phenomenon must have existed before the emergence of the Albanian rhotacism, and in a sense,

[19] Nasal schwa was discussed in Sawicka, 2000, 2001 and Savitska, 2000.

it continues to exist at present in the dialects of northern Albania, where there is a distinct back nasal [ã].

This particular sound was supported by nasal vowels (with the phonological status of combinatory variants) which occurred both in Balkan Latin (and later in Romanian and Albanian) and in Slavic languages. Nasal vowels had developed under the influence of the positional assimilation to the following nasal sonorant. In Slavic languages the development took place in the contexts /VNC/ and /VN#/, i.e. when the group "vowel + nasal sonorant" occurred before a consonant or word-finally. In Albanian and Romanian, nasal vowels developed before a nasal sonorant in any position, also before a vowel. After the nasalisation of the preceding vowel, the nasal consonant was lost in Slavic languages, but it was preserved in the remaining Balkan dialects, especially when the group [ṼN] stood before a vowel. In Albanian, it was lost only in a limited number of positions, while in the southern Albanian dialects, intervocalic [n] changed into [r], which was conducive to the subsequent loss of nasalisation. Thus, nasal schwa was not a permanent phenomenon, it might have been ephemeral, but it left traces discernible in present-day phonetic systems of Balkan languages. In its further development, nasal schwa lost either its nasality (e.g. in Bulgarian) or nasality and centrality (e.g. in Macedonian).

In present-day Romanian, there are two centralised vowels: /ə/ (*ă*) and /ɨ/ (*î*, *â*). The vowel /ə/ emerged as a result of the reduction of the unstressed /a/, while /ɨ/ developed from every /a/ (less often from /e/) before /n/ or before the cluster /m + consonant/, irrespective of the position of the stressed vowel, e.g. *lână* < Lat. *lana* 'wool', *câmp* < Lat. *campum* 'field'. Probably, therefore, the Romanian high schwa was nasalised in the initial phase of its existence (such an interpretation can be found in Romanian historical phonetics). Thus, at some stage, Romanian [a], [ə] and [ã] (later /ɨ/) were combinatory variants: [ã] – before a nasal consonant, [a] – in the remaining contexts in stressed positions, and [ə] – in unstressed positions. The subsequent development of [ã] consisted in centralisation (influenced by strong synchronic nasality), followed by the loss of nasality (which became redundant in view of the emergence of the difference in place of articulation relative to [a]). Such an evolution assumes also the existence of a phase with optional nasality. Optional nasality makes it possible to transfer nasality to other centralised vowels or to centralise nasal vowels, which is observed in the history of Bulgarian and Macedonian phonetics, although the range of the phenomenon differs in each of these ethnolects (see below).

All vowels in Albanian underwent nasalisation before a nasal sonorant, at first, probably, in all positions. Nasal vowels have been preserved until the present day in Gheg only in stressed positions. In unstressed positions, the vowels underwent reduction and were often lost. In the present-day language material, the Romanian /ɨ/ (*î*, *â*) corresponds to the dialectal Gheg (north Albanian) nasal [ɑ̃] (*â*), and in Tosk (south Albanian), it corresponds to the stressed [ə] (*ë*), e.g. Rom. *mânz* – standard Alb. *mëz* 'colt'. In Albanian,

the nasal [ɑ̃] (which later became Tosk schwa) emerged from the group [an], and in Latin borrowings also from the group [en]. After the completion of rhotacism (the change of the intervocalic [n] into [r] in the Tosk dialect), nasality was no longer supported by the nasal context and was lost. Thus, the present-day stressed [ə] – (*ë*) in the Tosk dialect and in standard language corresponds to the Gheg long [ɑ̃] (with a back and slightly raised articulation), e.g. Tosk *është* [əʃt(ə)] – Gheg *âshtë* [ɑ̃:ʃt] 'is', Tosk *rërë* 'sand' [rər(ə)] – Gheg *rânë* [rɑ̃:n] < Lat. *arena*. In present-day Tosk, [ə] has two origins: the vowel in the stressed position originates from the nasal vowel; in unstressed positions, it may be a result of reduction or constitutes a new element, motivated by the phonetic structure of the syllable. Thus, the unstressed Tosk [ə] (*ë*) most often corresponds to the Gheg zero sound, less often to the phones [ə], [i] or [u], which occur secondarily as a buffer breaking consonant clusters which are not permissible due to the syllable structure. Typically, the Gheg [ə] does not have a phonological value; it is contextually conditioned and phonologically interpreted as a fragment of the combinatory realisation of the sonorant, e.g. *lopa* 'cow' – acc. sg. *lopën /lopn/* [lopən]. The rule is as follows: /S/ > [əS][20] between consonants or between a consonant and a juncture. In word-initial positions, i.e. between a juncture and a consonant, combinations with nasals are accepted (e.g. *mbret* 'king', *nga* 'from'), but not those with liquids, (e.g. *lëkurë* 'skin', where the first schwa is non-etymological).

Modern Bulgarian is the only standard Slavic language which preserves the old centralised vowel originating from the old back jer (*ъ). Significantly, the same vowel continues in Bulgarian as the back Old Slavic nasal vowel. The merging of *ъ ([ə]) and *[õ] was recorded in the Bulgarian area in the 11th century. In the remaining Slavic languages, the strong jers were already vocalised at that time (i.e. they changed into full vowels). It is possible that centralisation in Bulgarian was preserved under the influence of the optional, ephemeral nasality, transferred from the original nasal vowels. This means that the merging may have been a result of the association of centralisation with nasality (cf. the situation in the neighbouring and, probably, co-existing Romanian). In old Romanian texts and documents,[21] the symbol for a back nasal ѫ was used in place of the original jer – ъ (just as in the texts from the area of Bulgaria).

The merging of the back centralised vowel (jer) and the back nasal vowel took place also in the Macedonian area. Both these vowels have the same continuation [a] in modern standard language and in some western and central dialects. It is not, however, the original jer, but a secondary jer which appeared in the so-called two-peak syllables. Such syllables developed after the loss of the weak jers and they were not accepted in some Slavic languages. The undesirable consonant clusters which emerged after the loss of the weak jers were

[20] S – sonorant.

[21] Initially, Old Church Slavonic was used for writing in Romanian.

liquidated with the use of a non-etymological sound (cf. Old Slavic **větrъ* 'wind' > *větr'* – in present-day Polish *wiatr*, but in Macedonian: *ветер*, with the following development: **větrъ* > **větr* > *[vetr] > *[vetr̩] > *[vetᵊr] > *[vetər] > *[vetə̃r] > *[vetã̃r] > *ветер*; in Bulg. *ветър*, and in Serbian also *ветар*, but without the nasal phase in its development). The fact that the secondary schwa was originally nasal is corroborated, among other things, by the situation in some Macedonian dialects which have preserved nasality to this day.

The most interesting situation arose in some Macedonian dialects of Aegean Macedonia (and also in the Macedonian dialects in south-eastern Albania) in which the nasality of the Proto-Slavic nasal vowels was partially preserved in the form of a nasal sonorant, e.g. [dambi/dəmbi] 'oaks' (standard *дабови*), [zambi/zəmbi] 'teeth' (standard *заби*).[22] As demonstrated above, in contrast to Bulgarian, in Macedonian, the reflex of the back nasal vowel did not merge with the back jer (cf. Mac. *рака* 'hand' < **rõka*, but *сон* 'sleep' < **sъnъ*, whereas in Bulgarian we have *ръка*, *сън*). A different type of fusion took place instead: the back nasal vowel merged with the so-called secondary jer. It may be concluded that the primary jers in strong positions in the Macedonian area had been vocalised earlier, i.e. before the merging of nasality with centralisation took place. Secondary vocalism may have appeared in Slavic languages relatively late, certainly some time after the loss of the jers in weak positions. Serbian records even suggest that this happened ca. 14th century (cf. Ivić, 1974); in Macedonian, this probably happened earlier since secondary vocalism was affected by the merger with nasal vowels. Initially, secondary vocalism constituted an optional vocalic element, accompanying a syllabic sonorant. Later, it was strengthened and, generally, vocalised in the same way as the original jers. This, however, was not the case in Macedonian. In Macedonian, secondary vocalism vocalised in the same way as the back nasal vowel, e.g. *магла* < *mgla* < **mo̧gla* 'fog', as in *рака* < **rõka* 'hand'. How do we know, however, that this secondary schwa was nasal? Theoretically, the convergence of the reflex may be accidental or it may result from the Serbian influence. The evidence is provided by the aforementioned dialects of Aegean Macedonia, in which the nasality of this non-etymological vocalism (secondary jer) and the nasality originating from the back nasal vowel have been preserved to this day: [maŋgla]/[məŋgla] (standard *магла* 'fog'), [ɫandʒa]/[ɫəndʒa] (*лажам* '(I) lie'). The order of the subsequent stages of development of these forms must have been as follows: **mo̧gla* > *mgla* > [m̩gla] > [mᵊgla] > [məgla] > [mə̃gla] > [məŋgla] or [maŋgla], depending on the particular dialect. This situation constitutes conclusive evidence of the relationship between nasality and the centralised value of the vowel.

The merging of the back nasal vowel with the original jer occurs in Aegean Macedonia only exceptionally; only one attestation has been observed: the word **bъzъ* > [bənts] 'lilac', however, it occurs in a number of locations.

---

[22] For more on Macedonian nasal vowels, see Chapter 7.

As already mentioned, the Bulgarian back jer (ъ) originates from the same Old Slavic vowel, but it also continues the back nasal vowel, for example *сън* 'sleep' from **sъnъ* and *ръка* 'hand' from **rõka*. This fact also testifies to the relatively early differentiation of the Bulgarian and Macedonian dialects, in which such a fusion did not take place.

Slavic languages had their own conditions for merging the so-called reduced vowels with nasal vowels, but the fact that this happened and that such a rare sound as nasal schwa appeared in Balkan Slavic languages can be explained by the influence of the local Albanian and Romanian dialects. In the history of non-Balkan Slavic languages, such a sound did not appear (for details, see Sawicka, 2001b).

5. THE OCCURRENCE OF SCHWA IN MACEDONIAN DIALECTS AGAINST THE BACKGROUND OF NEIGHBOURING DIALECTS[23]

As mentioned in the previous section, at present the phonological schwa occurs in Bulgarian, Romanian, standard Albanian, in southern Albanian dialects and in a few sparse northern dialects (e.g. in the Kaçanik region on the Macedonian-Kosovo border), and in southern Serbian dialects – Prizren-Timok. Schwa (/ə/) occurs also in the phonological systems of most Macedonian dialects. It does not occur in standard Macedonian. It appears sporadically as a lexicalised phenomenon in borrowings from Turkish. In standard pronunciation of these borrowings, [a] should be pronounced in place of schwa. Schwa in Macedonian dialects is of native origin. In dialectological descriptions, it is marked as [ă], [ə], [å] or [ъ], which is sometimes connected with slight differences in the quality of the vowel. The origin of Macedonian schwa is diverse. The more numerous are the sources of schwa, the higher is its frequency. When [ə] occurs exclusively in borrowings from Turkish as a continuation of the Turkish vowel *ı*, its frequency is the lowest.

The Old Slavic back and front extra-short vowels (the so-called jers) often developed in different ways in different morphological positions. In the case of the so-called strong jers, non-native morphemes typically have reflexes different from those of the native morphemes; moreover, different continuations often occur even in the roots of Macedonian words. One of the reflexes is schwa.

The so-called centralised vowels in Macedonian dialects may originate from the so-called hard (back) jer (e.g. [sən][24] 'sleep', [dəx] 'breath'); from the back nasal vowel (e.g. [pət] 'road', [rəka] 'hand'); from the secondary, non-etymological vocalism (e.g. [məgła], [məŋgła] 'fog', [sedəm] 'seven', [ostər] 'sharp'); from syllabic liquid sonorants (e.g. [sərʦe] 'heart', [vəłna] 'wool', [słəntʦe] 'sun', [vək] 'wolf', [dəgo] 'long', [vəwnɑ], [vəvnɑ] 'wool', [ʒəft] 'yellow', [ərʒit] 'neighs'); from various stressed and unstressed vowels (most often [a], but not exclusively), whose articulation undergoes changes under the influence of the context, usually next to sonorants, especially nasal ones, and palatalised (or historically palatalised) consonants (e.g. [znəjt] '(they) know', [rəgove] 'horns', [negəf] 'his', [devər] 'the best man', [znəje] 'knows', [snəga] 'strength'); less often, from the so-called reduction of an unstressed

[23] Based on a number of descriptions of Macedonian dialects; a more comprehensive summary (and sources) can be found in: Savicka & Cihnerska, 2018.

[24] Macedonian examples excerpted from Savicka & Cihnerska, 2018 (based on a number of dialectal descriptions).

vowel (e.g. [zəjʧitsa] 'doe-hare', [məʌeʧko] 'little'); and from the Turkish *ı* in borrowings from Turkish (e.g. [kəsmet] 'kismet', [səndak] 'chest').

What is more, the centralised vowel may occur in a number of articulatory varieties. Also, combinatory allophones of the vowel may occur in one dialect. As regards the centralised realisations of unstressed vowels, they may be optional, which, given the presence of the same vowels not conditioned by the context and non-optional, caused certain difficulties for the phonological interpretation. Optional neutralisation must be assumed in such cases, at least at the level of the morphophoneme, whereas at the level of interpretation within autonomous phonology, optional phonological representations of lexemes are assumed.

Descriptions of particular Macedonian dialects always include distributional restrictions of the segment discussed (e.g. it does not occur word-initially or word-finally; it occurs only once in a word; it does not occur in vowel groups), however, exceptions to the restrictions are not infrequent, e.g. word-initial [ərɟɑ] 'rust', [ərʒit] 'neighs'; two occurrences in the word [gəłəp] 'pigeon'. Exceptions are not found only in the word-final position.

A special case is when [ə] occurs in a given dialect, but only conditioned by the context. In such a case it does not have the status of the phoneme. Such a situation was observed in the village Gratče, where the segment occurs only in the groups [ər] and [əł] which occur between two consonants or between a juncture and a consonant. In this dialect, the groups [ər] and [əł] should be treated as combinatory (syllabic) allophones of the phonemes /r/ and /ł/ in the contexts mentioned.

The situation in the village Izvor is similar, though not quite the same. Apart from the reflexes of the syllabic lateral consonant [əł] ([vəłk] 'wolf', [dəłk] 'long'), there are also reflexes without the liquid consonant, e.g. [ʒət] 'yellow', [səntse] 'sun', which is a fact that eliminates the contextual conditions on the occurrence of [ə]. If in a given dialect the only source of the occurrence of [ə] is the Old Slavic syllabic **l* and the continuation is not contextually conditioned, then it functions as an independent phoneme in the system, despite its relatively low frequency, as in the village Vitolište: [vək] 'wolf', [dəgo] 'long', [jabəka] 'apple', [məʧi] '(is) silent'.

The segment [ə] occurs in a very large area where Macedonian dialects are spoken. The area in which [ə] is not used at all is small – it is an area in the north-western part of the Republic of North Macedonia.

The region with schwa borders on the area where non-Slavic dialects are spoken, in which [ə] does occur, but it has a dubious phonological value.

Geographical context

In all Macedonian dialects in Albania, [ə] occurs as an independent phoneme and it has a high frequency. All these dialects are characterised by numerous reflexes of Old Slavic jers, one of which is [ə].

A separate issue is the range of neutralisation of the opposition /ə/ vs. /a/, and sometimes also the opposition with other non-high vowels. This issue should be resolved separately for each dialect. Neutralisations take place in unstressed positions (in all or in some unstressed syllables) in the area in which there occur reductions of unstressed vowels, i.e. in the eastern and central parts of Aegean Macedonia. The most common is the neutralisation of the opposition /ə/ vs. /a/, sometimes with the exception of the last, open syllable. Neutralisation takes place through a common variant, which is most often marked in Macedonian sources as [ạ] and which is one of the possible realisations of the phoneme /a/.

In the western part of Aegean Macedonia and a small south-western region of Vardar Macedonia, the opposition /ə/ vs. /a/ is neutralised (to varying degrees) to /ə/ next to sonorants, irrespective of the position relative to the stressed vowel. Sporadically, [ə] originates from stressed /a/ (in non-initial position), e.g. in the village Vrutok: [magəreto] 'donkey'. Neutralisation has the widest range in the context of nasal sonorants, especially after /n/, e.g. [znəm] '(I) know', [snåga] 'strength'.

In the eastern Macedonian dialects, schwa finds support in Bulgarian and in the western Macedonian dialects – in Albanian.

Due to the occurrence of /ə/ as an independent phoneme, a significant part of the Macedonian area relates in this respect to Bulgarian dialects. The segment [ə] (originating from the back jer) occurs on a regular basis in the eastern and north-western dialects of Bulgaria. According to Bulgarian dialectology (Stoĭkov, 2002, p. 202), in the south-western dialects, the back jer has undergone vocalisation to [a] (Botevgrad, Pirdop), to [o] or to [e]. In some cases, a particular development is limited to certain morphemes (e.g. the development into [o] in the Botevgrad dialect occurs only in derivational affixes), or in certain phonetic positions (e.g. in Kjustendilian or Blagoevgradian the development into [o] occurs only in closed syllables in mid-positions); the continuation [o] often occurs in the singular masculine article (Stoĭkov, 2002, p. 203).

Apart from [e] and [o], other related sounds are mentioned – the more peripheral varieties of [e] and [o]. It is difficult to determine the range of occurrence of /ə/ in Bulgarian dialects on the basis of the reflexes of the back jer, because this segment may have a different origin in Bulgarian too. On the basis of the dialectological data available, it is possible to single out the dialects in which, potentially, the phoneme does not occur (does not occur physically or has the allophonic status). The dialects which should be investigated in order to confirm the absence of /ə/ are those in which there are syllabic liquids, i.e. those in the region of Botevgrad, Elin-Pelin (western) and the eastern part of the Tetovo region. Attention should be paid to those western dialects in which the jer has undergone vocalisation, i.e. Botevgradian ones. The data from other dialects require verification too.

Among Serbian dialects, the phoneme /ə/ (stressed and unstressed) is found in the Prizren-Timok dialects. Its realisations are characterised by an exceptional variability. Pavle Ivić provides the following examples: *сь^{а}в* 'whole', *дь^{а}ска* 'plank', *ль^{е}жу* '(they) lie', *седь$_{у}$м* 'seven', *ось$_{о}$м* 'eight' (Ivić, 2001, p. 147). According to Peco, the prevalent value of the sound approximates [a] (Peco, 1991, p. 43).

Standard Albanian and its southern dialects have the phoneme /ə/ (*ë*), which has three origins: in stressed positions, it originates from nasal schwa; in unstressed positions, it results from the reduction of short vowels and from secondary vocalism, serving to break up unacceptable consonant clusters. In most northern Gheg dialects, schwa is much less frequent and does not have a phonological value – it occurs only in the context of sonorants and serves to eliminate two-peak syllables.

The fact that the phoneme /ə/ occurs on almost all the Macedonian area excludes direct Bulgarian or Albanian influence. The area without schwa is small – it encompasses a strip of land around Skopje and it is surrounded by a broader area (especially in the south east) where schwa is rare. The high frequency of this phoneme (i.e. several sources of origin) characterises the northern part of Vardar Macedonia, all Aegean Macedonia and Pirin Macedonia in Bulgaria and all the Macedonian dialects in Albania.

In the Greek phonological system (in standard Greek and in most dialects) such a phoneme does not occur.

Although a similar sound occurs in some Greek dialects in Aegean Macedonia, its systemic qualification is completely different. It is an allophone of the phoneme /a/ in unstressed positions.

Detailed data concerning the occurrence of reductions of /a/ in Greek dialects are not available. Such a sound (the unstressed variant of /a/) occurs, for instance, in Siatista, located south of Kastoria (Margariti-Ronga, 1985). Papanastasiou and Papadamou do not mention the reduction of /a/ in their description of the Kostur dialect (Papanastasiou & Papadamou, 2013). Marianna Margariti-Ronga and Christos Tzitzilis, on the other hand, claim (personal communication) that a variant of /a/ reduced to varying degrees occurs almost everywhere in Macedonia and it is the most frequent source of schwa in Greek dialects. Similar to Slavic dialects, /a/ is reduced either to a short variant of [a] or to the mid central (centralised) vowel. In both cases, it constitutes a realisation of the phoneme /a/. The most frequent Greek effect of the reduction of /a/ in Macedonia is the shortened and slightly heightened vowel [a]. Apart from this, [ə] in Greek dialects may originate from the Turkish *ı* in borrowings and (rarely) from the non-etymological vowel which develops from the syllabic variants of sonorants in order to redress the balance of the syllable structure disturbed after the elimination of the unstressed vowel, e.g. [pateras mu] 'my father' > [paterazm] > [pateraz^{ə}m] > [paterazəm] (typically, the sound in this position has an ephemeral nature and subsequently develops into [i] or [u]).

When it comes to similarities/convergences between Macedonian and Albanian, it should be remembered that most Macedonian dialects have contact with the Gheg variety of Albanian, in which *ë* [ə] does not have a phonological value in most dialects but merely constitutes a fragment of the syllabic realisation of sonorants, most often word-finally after a consonant, e.g. the forms *motër* 'sister', *lopën* 'cow' acc. sg. are pronounced as [motər], [ʎopən], but the phonological interpretation of these forms is /motr/, /ʎopn/ (similar as in Greek [pɑterɑzəm] /pɑterɑzm/). This sound rarely has a phonological value (e.g. in Kaçanik and in neighbouring villages on the border between Kosovo and North Macedonia). Physically, [ə] occurs in almost all Gheg dialects (except for the dialect spoken in Lugu i Drinit të Bardhë, see Zymberi, 1978), but its frequency is much lower than in Tosk dialects. Macedonian villages located in the region of Korça and on the shore of Lake Prespa have contact with the Tosk dialect.

Reductions

It is observed that the reductions of unstressed vowels constitute a frequent source of schwa. The presence of the vowel reduction affects the frequency of centralised vowels, in some way supports the occurrence of phonological schwa in contact dialects, the users of which do not judge its phonological value, but register only the sound itself.

The term "vowel reduction" is used with reference to various phenomena. A feature common to all these phenomena is the varied distribution of the vocalic phonemes in stressed and unstressed positions or varied phonetic realisation and/or phonemic representation of the vocalic morphophonemes in stressed and unstressed positions. Such definitions cover two kinds of phenomena: first, the changes of the articulation of unstressed vowels (allophony, neutralisations) as a result of less precise articulation (sometimes also shortened, depending on position) of unstressed vowels. These are current phenomena of lower regularity, sensitive to the current, changing conditions of articulation. Over time, such a situation transforms into morphophonological alternations – established, rigid rules of distribution of vowel segments in certain positions relative to stress. Such reductions (alternations) typically occur irrespective of the rate of delivery and are realised even in very careful speech.

We assume that in a situation of interlingual convergence, current phonetic reductions are transferred more easily. However, in the case of closely related languages, where the speaker is aware of the equivalence of morphemes, one should also take into account the emergence of morphophonological (i.e. fixed) reductions under the influence of neighbouring dialects. In such cases, the reductions are likely to be mixed, with current reductions predominating.

The Bulgarian norm describes vowel reductions as heightening (of varying degree, depending on the distance from the stressed syllable) of mid and low vowels, aimed at neutralising the opposition to the corresponding higher-level vowels, however, not reaching complete neutralisation in standard pronunciation. As a result, the pronunciation of the unstressed /e/ is realised with the segments which are intermediate between /e/ and /i/, the pronunciation of /o/ with the segments intermediate between /o/ and /u/, and the pronunciation of the unstressed /a/ with the segments intermediate between /a/ and /ə/ (ъ). Normative descriptions (e.g. Grammatika, 1982; Tilkov & Boiadzhiev, 1977) postulate various allophones for these intermediate sounds, depending on the distance from the stressed syllable and the position before or after the stressed syllable and also on the type of word-final syllable (open/closed). Such a precise determination of the allophones and their distribution suggests a morphophonological rule and not a phonetic process. However, it seems excessive to postulate a large number of different allophones, because the rate of delivery, dialectal background and individual speech habits can also modify to some extent the quality of the reduced vowel.

Certainly, the most salient auditively is the reduction of /o/, which is not labialised in stressed positions, however in unstressed positions it is strongly labialised.

As for dialects, according to Bulgarian dialectal descriptions, noticeable reductions occur mostly in the eastern dialects, in which the following oppositions are often fully neutralised /e/ : /i/, /o/ : /u/ and /a/ : /ə/; the neutralisation is in favour of the higher member of the opposition; the change of /o/ into /u/ in unstressed positions takes place more often than the neutralisation of the remaining two oppositions. A similar regularity has been observed with regard to those Macedonian dialects in which there are reductions. In addition, reductions also occur in the south of Bulgaria (the Rhodope Mountains, Rupa).

In Bulgaria, the reductions occur in particular:

- in Rupa dialects, where there is "partial" reduction (as in the standard form),
- in Thracian dialects and in some Rhodope dialects, where there is "partially full" reduction (as described by Stoĭkov, 2002), which consists in the neutralisation of the opposition /o/ : /u/ and /a/ : /ə/),
- in Balkan dialects, where there is full reduction, i.e. the neutralisation of the opposition /e/ : /i/, /o/ : /u/ and /a/ : /ə/ in unstressed positions; the neutralisation is in favour of the higher member of the opposition.

In western dialects, according to sources, reduction does not occur. It is also absent in eastern dialects adjacent to the so-called *yat* border.[25]

Thus, reductions occur in most of Bulgaria (in its eastern and central parts). As for Pirin Macedonia, the *BDA* (2001, map 85) records reduction only in some places. Most of the previously written texts from Pirin Macedonia

[25] Traditionally, Bulgarian dialects are divided into eastern and western ones on the basis of one feature – the continuation of the Proto-Slavic *yat*.

(Vidoeski, 2000a) do not record reductions. They appear in later records, especially the transitions [o] > [u] and [a] > [å] (e.g. village Bansko), or partial reductions (the heightening of unstressed articulations /o/ and /a/), e.g. [łaʒiʦå] 'teaspoon', [zemjå] 'earth' (village Elešnica). Full reduction of [o] to [u] occurs sporadically (in selected lexemes), e.g. [guʌem] 'big', [ʒɑlus] 'grief' (Vidoeski, 2000a).

In the Republic of North Macedonia reductions generally do not occur. They do occur in the area of Aegean Macedonia, which borders the Republic of North Macedonia.

The degree of the reductions in the dialects of Aegean Macedonia varies. They consist in the occurrence (in unstressed positions) of intermediate allophones or the higher members of the opposition. In reduction of the first type, unstressed /e, o, a/ have heightened allophones (e.g. [nekŏj] 'some', [dė̇seti] 'tenth'; in reduction of the second type, morphophonemes /e, o, a/ in unstressed positions are represented alternatively by heightened allophones of mid and low vowels [ė̇, ŏ, å] and by [i, u, ə], and neutralisation occurs more often in the case of the opposition /o/ : /u/ than in the case of the remaining two oppositions (e.g. [sė̇gaʃni] 'present', [ŏglidało] 'mirror', [brujovi] 'numbers', [orəł] 'eagle'); in reduction of the third type, /e, o, a/ do not occur in unstressed positions at all (e.g. [puʌetu] 'field', [murʲetu] 'sea', [poʌi] 'field', [sʲełu] 'village' – village Visoka). The strongest reductions (with full neutralisation) occur in the region of Thessaloniki.

Reductions sometimes occur also in Serbian, mainly in the east, and even in the pronunciation of Belgrade, but they are of a completely different nature – they are a feature of the southern pronunciation; sometimes, they are a feature of the standard pronunciation of the younger generation or of individual pronunciation; they are a current phenomenon and they more often consist in centralisation than in the heightening of the articulation of unstressed vowels. They are most strongly expressed in the Prizren-Timok dialects bordering Macedonia, in which both partial and full reductions (complete loss of a sound) take place – e.g. [səstru] 'sister', [koᵊʃuʌɑ] 'shirt', [zajdno] 'together'.

Despite the fact that Bulgarian reductions seem related to those occurring in Aegean Macedonia, the actual relationship or direct influence of the phenomenon is difficult, or even impossible, to determine because various reductions occur both in the neighbouring Slavic languages (Bulgarian, Serbian dialects) and in the non-Slavic dialects of the central Balkan phonetic area. It should be remembered that Macedonian reductions are also varied. There are regular reductions, sporadic reductions, and apparent reductions. The last phenomenon involves changes in the quality of vowels under the influence of neighbouring sounds, most often palatalised consonants and nasal sonorants. These changes resemble reductions, but they occur also in stressed syllables, e.g. [znəjt] '(they) know', [znəm] '(I) know'. Sporadic reductions involve the loss of unstressed vowels in short, frequently used words in all

Macedonian dialects, e.g. [naʃta] 'our', [vremto] 'time', and in proclitics, before the onset vowel of the host word, e.g. [d-ideme] (*да идеме*) 'let's go'. Sporadic reductions which consist in centralisations occur occasionally in the very North, in the dialects directly adjacent to the Prizren-Timok dialects, where such a phenomenon also occurs.

Proper Macedonian reductions, just as Bulgarian or Greek reductions, consist in the heightening of the articulation of mid and low vowels. They are concentrated in the eastern part of Aegean Macedonia and range from the heightening of articulation, to the transition to a segment with a higher articulation, to a complete loss of the unstressed vowel. This area forms a compact, uniform region with the Bulgarian and Greek areas, where the same types of reductions occur. It must be mentioned however at this point that in standard Macedonian and in the dialects of northern Macedonia, it is the stressed vowels that become heightened, while in Bulgarian the heightening affects the vowels in unstressed positions. In Macedonian, the unstressed varieties are slightly centralised, but not to the extent that would substantiate postulating reduction. Therefore, in the case of mid vowels, the stressed allophones are higher, which can be clearly heard in the pronunciation of some persons under phrase stress (cf. Savicka et al., 2021).

Reductions of unstressed vowels are the only feature which unequivocally differentiates the northern Greek dialects from the southern ones. The remaining features, usually distinguished as characteristic of a given group of dialects, occur throughout Greece with different intensity, concentrating occasionally in one or another group of dialects. Reductions of unstressed vowels occur in all northern Greek dialects, which does not mean, however, that they occur with the same intensity. In principle, they occur in three forms: (1) the full form, which consists in the loss of unstressed [i] and [u] and the heightening of [e] and [o] to [i] and [u], e.g. /poδari/ 'leg' > [puδar] – this type of reduction is characteristic of most rural dialects; (2) high unstressed vowels are lost, but mid vowels do not transform into high ones; at most, they are heightened to a certain extent, e.g. [poδar] (as in Thrace); (3) high unstressed vowels are preserved and mid vowels are heightened, e.g. [puδari]/[p̈öδari]. Reductions of the second and third types are rare; they occur sporadically, mainly in the southern reaches of the northern dialects (and, therefore, not in Macedonia). Apart from this, non-reduced unstressed high vowels are observed in the town of Naoussa, between Veria and Edessa, and also in Melnik – a Greek village in Bulgaria, where the reductions are related to Bulgarian reductions. Reduction of the second type can be found in the urban dialect of Aegean Macedonia, e.g. in Kastoria – probably under the influence of the standard (Newton, 1972).

Reductions of unstressed vowels in Bulgarian, Macedonian and Greek dialects are of the same nature: they consist in the heightening of the articulation of unstressed vowels. They are most strongly expressed in Greek dialects, where the mid vowels usually change into high ones and unstressed high

vowels are lost. In Bulgarian, due to standardisation, full reduction is rare; generally, there occurs the second or third reduction of the Greek type. It is characteristic that /e/ is reduced to a lesser degree than /o/; the latter often transforms into [u]. In the Slavic dialects of Aegean Macedonia, /e/ often changes into [i], e.g. [ǒglidɑlo].

Certain irregularities in the rules for the reduction of Greek vowels are usually motivated in a specific context: in terms of stress phenomena, morphological analogy, syllable structure, palatal context, sometimes also vocalic context (e.g. dissimilation). Details concerning reduction in Greek can be found in Newton (1972, pp. 182 *& passim*), although the author admits that there are numerous exceptions to the reduction rules which are difficult to explain.

Generally, secondary high vowels do not palatalise the preceding consonants and are not lost (the heightening took place when the processes of the reduction of high vowels and palatalisation were no longer active), however, such phenomena do happen in certain contexts.

As in Macedonian, unexpected reductions occur especially in the neighbourhood of liquid sonorants and nasal sonorants, for instance, in Thrace (Andriotis, 1944).

East Aegean Macedonia and its neighbouring areas in Bulgaria constitute an area of strong Macedonian-Bulgarian-Greek convergence of many phonetic features. When it comes to Macedonian-Greek relationships, the convergence is probably even stronger in the case of reductions and palatalisations in micro-regions. When it comes to Macedonian dialects in Bulgaria, it is difficult to assess which phonetics – Greek or Bulgarian – was more influential. At best, certain directions of convergence can be considered more or less likely in certain periods. It is difficult to separate these three sources of convergence in a given situation. Generally, it seems that Greek phonetics left its strongest mark on Slavic phonetics. The contemporary political situation and the fact that a dialect is spoken in a particular country clearly determine the direction of its development.

Reductions of unstressed vowels took place also in Albanian, however, they have a completely different character (Asenova, 1989). In the past, unstressed short vowels underwent reduction – they either disappeared completely or transformed into a short mid central vowel – a type of schwa. At present, reductions concern almost exclusively the schwa. In certain contexts, it is not certain whether this schwa represents a form of reduction or whether it is of a secondary nature – inserted after the loss of unstressed short vowels in the positions which imposed high articulatory demands or which did not satisfy the requirements for the syllable/morpheme structure in Albanian; it could also have been inserted as a result of morphological adjustments.

The unstressed schwa occurs in Albanian dialects in various scopes. The segment is the least frequent in the north, in Gheg dialects. Leaving aside minor exceptions, it can be concluded that in the northern Gheg dialects,

schwa has no phonological value. It occurs exclusively in the neighbourhood of sonorants, in places where its absence would lead to the creation of undesirable two-peak syllable structures. Thus, utterances such as *letër* [letər] 'letter', *lopën* [lopən] 'cow' acc. sg. are represented phonologically as /letr/, /lopn/, and schwa in these examples constitutes a fragment of the combinatory realisation of the sonorant. This applies to the word-final position. The structure of the onset differs across dialects. In some dialects, the occurrence of [ə] is optional and depends on a broader context (on the form of the onset/coda of the following/preceding word in the text). A complete absence of schwa, even in word-final consonant clusters with a sonorant in the final position, was observed only in one dialect in Kosovo (spoken in Lugu i Drinit të Bardhë) – if a necessity for breaking up a consonant cluster arises, a full vowel appears instead, cf. *leter*, *lopen*. On the other hand, in Kaçanik and in the surrounding villages, the schwa occurs in various contexts, as in the south of Albania, and therefore it has the status of a phoneme. In the southern Tosk dialects and in standard Albanian, the unstressed schwa occurs both in stressed and unstressed positions; there are also several unstressed positions in which the occurrence of schwa is optional, for instance, the word-final position. In the south of Albania and in Chameria, schwa occurs more frequently; it occurs with greater consistency even in the word-final position. Around Ohrid and Prespa, schwa occurs in the greatest number of contexts. Thus, *mutatis mutandis*, the schwa segment occurs in all Albanian dialects, but with very different frequencies. The frequency of occurrence of schwa decreases towards the north. Schwa has the greatest range of occurrence in nominal inflection, where as a result of adjustment to the accusative form (e.g. *lopën* [lopən] 'cow'), schwa can also appear in other grammatical cases (e.g. *lopës* [lopəs], gen., dat., abl. sg. – alternative forms are [lopes] and [lops]). The range of occurrence of schwa in various phonetic/morphological positions in Albanian dialects is shown in maps 88–99 in *Atlasi* (2007). The reductions of schwa are not a current phenomenon, despite the existence of certain options governed by context rules. This situation did not influence Macedonian phonetics in any way, despite the fact that in many Macedonian dialects schwa also occurs in various positions. Macedonian dialects coexist with or adjoin both Albanian dialects with and without schwa (these are mostly Gheg dialects, without a phonological schwa, but also those from the region of Kaçanik, where a phonological schwa occurs).

Summing up and referring to the preceding chapter, I am still inclined to disqualify the phonological schwa as a Balkanism. On the other hand, a compact area comes to the fore, characterised by a specific direction of reduction (generally speaking, consisting in the heightening of articulation). This area is located in the centre of the Balkan Sprachbund (cf. Friedman, 2011, p. 107). Specifically, it includes a significant number of Bulgarian dialects, the Macedonian dialects of Aegean Macedonia and the northern Greek dialects.

6. THE SPECIFICITY OF BALKAN PHONETICS – CONSONANT CLUSTERS "NASAL + STOP"[26]

The most important Balkan feature enumerated in the descriptions of the Balkan Sprachbund (apart from certain morphosyntactic features and the phonological schwa) is the occurrence in the word-initial position of consonant clusters of the type "nasal sonorant + homorganic occlusive". Such word-initial clusters are especially characteristic of Albanian. This feature is rare in Europe, however, the issue is not limited to this distributional property. The feature is more complex and multifaceted. It occurs in the central area of the Balkan Sprachbund and also in the southern Italian dialects. The multifaceted nature of this feature (or a set of various phonetically related features) concerns the differences in the functioning of these clusters and their diverse origins. The diverse aspects of the phenomenon are linked by the high frequency of these clusters in a relatively compact area and the mutual influence of the various constituent phenomena, which leads to a number of options of the type: [mb]/[mp]/[m]/[b], [nd]/[nt]/[n]/[d], [ŋg]/[ŋk]/[n]/[k]/[g]. The main donor languages of this feature are Greek and Latin, but there are also other contributors.

In Greek, at an early stage of its historical development, voiced stops in most positions changed into the corresponding fricatives. The stop quality was retained after the nasal and then later the word-initial nasal was dropped, leaving a plain voiced stop. This is why the present-day voiced stops occur only in the word-initial position or as elements of some consonant clusters. In this way, stops and fricatives are in complementary distribution. However, they cannot be considered as modern combinatory variants. The evidence against this comes from the colloquial forms of borrowings. Although voiced stops cannot occur between vowels in colloquial speech, intervocalic voiced stops in derivation and borrowings do not undergo lenition, they do not change into fricatives; on the contrary, they undergo fortition through prenasalisation. Moreover, in domestic and well assimilated words, there are very few such clusters with voiceless stops; typically, a stop becomes voiced in such a context, e.g. *menda* (< *mentha*) 'mint', *lamba* 'lamp'. Voiced stops in intervocalic positions usually automatically receive prenasalisation in vernacular speech e.g. [zamba] 'frog' (Slavic *žaba*) [paŋganini] (< *Paganini*), *γιουγκοσλαβία* [juŋgoslavija] < *Jugoslavia*, but *adio* 'goodbye' rather than *andio*. An average educated Greek does not differentiate forms with *mb*, *nd*, *ŋg* and

[26] I described this phenomenon for the first time in Sawicka, 1984 and then in 2002.

mp, *nt*, *ŋk* or *b*, *d*, *g*, and often does not even hear the differences. Thus, it can be assumed that ND[27] clusters constitute an opposing pair with respect to the corresponding voiceless occlusives. The opposition ND ~ T has come to replace the former opposition D ~ T, while ND and D remain combinatory allophones (medial position ~ initial position), or sometimes facultative variants. In colloquial Greek, ND clusters have, in principle, the value of a single phoneme. This is true for colloquial language and for the southern dialects. NT clusters and the voiced intervocalic occlusive occur exclusively in foreign words in the pronunciation of educated speakers. However, as far as the standard language is concerned, a shift has been signalled. ND reverts back to Arvaniti & Joseph (2000, 2004) noted that for younger speakers now, the plain stop pronunciation is almost universal.

The progressive voicing of stops after nasals and the regressive assimilation of the place of articulation are common Greek processes. Further changes (simplification, gemination, the behaviour of the clusters in question on morphemic borders) are already differentiated dialectally.

In a significant number of northern Greek dialects, ND clusters have undergone simplification to voiced occlusives. It is believed that the simplification of the "nasal + stop" clusters is a result of the simplification of the geminates, resulting from full regressive assimilation within these clusters, as well as similar clusters with a fricative obstruent, e.g. *κουμπι* 'button' [kumbi] (in western Macedonia) or [kubi] < [kubbi] (in eastern Macedonia), similarly, *νυμφη* 'fiancée' [niɱfi] > [niffi] > [nifi]. The denasalisation of ND clusters is a process that has stretched over the centuries. In ancient Pamphylian dialects, this process took place in antiquity; in some dialects of northern Greece, the process probably took place much later. It seems that now the range of the denasalisation of ND clusters is gradually widening from the north-east towards the west and south. In Athens, which is located in the area of southern dialects, both the literary form [menta] 'mint' and the colloquial forms [menda] and [meda] can be heard. Functional (morphophonemic) equivalence of voiced stops and the corresponding clusters, with various solutions regarding these clusters, and various substitutions prevent the stabilisation of concrete forms in the general Greek perspective.

Despite the simplifications of ND clusters in the northern dialects, both ND and NT clusters occur in these dialects at present. The latter ones are of a secondary nature: they emerge as a result of the reduction of unstressed vowels: *pente* 'five' > [pende] (voicing) > [pedi] (simplification of the cluster and heightening of the unstressed mid vowel); *fenete* 'occurs' > [fenti]; *fenunte* 'they occur' > [fenunde] (voicing) > [fenude] (simplification) > [fendi]) (loss of the high unstressed vowel and heightening of the unstressed mid vowel).[28]

---

[27] N – nasal sonorant, D – voiced stop, T – voiceless stop.

[28] The examples provided come from various studies and dictionaries of dialects which I used repeatedly in my works. Most examples from Greek come from Setatos, 1969 and New-

The above examples demonstrate that the voicing of stops after the nasal sonorant also took place in the north. In the newly formed "nasal + stop" clusters (created through the reduction of unstressed vowels), in most cases voicing did not occur inside words. In many dialects, however, voicing takes place on strong morphemic boundaries (proclitic ones) and is described as the Greek sandhi, for example, *ton pono* acc. sg. 'pain' > *tombono*, *ton ksero* 'I know it' > *toŋgzero*, *i porta* 'door' – acc. sg. *tin porta* > *tim borta* (voicing and assimilation of place of articulation) – and hence the reinterpretation of the basic form as *ti mborta*, then the simplification of the cluster *mb* > *i borta*. In this way, the monophonemic value of these clusters may emerge even when consonants are separated by the morphemic boundary, e.g. *tin* + *daksi* – acc. sg. 'order' > *ti* + *ndaksi* > *ti daksi*.

Undoubtedly, for a long time the systemic relationships pertaining to the issue under discussion were the same in the northern dialects and in the south. In fact, in some northern dialects the reduction of ND to D has not taken place.

The monophonemic nature of ND clusters has exerted an influence on the coexisting Slavic and Albanian dialects. The influence is systemic in nature and consists in the preservation of Proto-Slavic nasals (see Chapter 7) and the insertion of non-etymological nasal sonorants before occlusives, e.g. Slavic [baraŋga] 'barrack', [juŋguslavija] 'Yugoslavia', [fambrika] 'factory'. As already mentioned, the subsequent simplification of ND clusters affected only part of northern Greek.

At an early stage of the development of Albanian, just as in Greek, the lenition of voiced intervocalic obstruents took place, as a result of which the stop was completely lost, e.g. *mjek* 'physician' < Lat. *medicus*, *pyll* 'forest' < Lat. *padulem*, *diall* 'devil' < Lat. *diabolus*. However, this did not lead to the emergence of a permanent restriction on the occurrence of voiced stops between vowels and it is not related to the clusters under discussion. Despite this, there are numerous analogies between ND clusters in Albanian and Greek.

The source of ND clusters in Greek is the voicing of occlusives after nasal sonorants and the prenasalisation of intervocalic voiced occlusives. In Albanian, on the other hand, the main source of ND/NT clusters is the reduction of unstressed short vowels, probably originating from southern Latin, including the reduction of the vowel between a nasal sonorant and a stop or a word-initial vowel before ND/NT clusters. This is why these clusters can occur word-initially (e.g. [mbret] 'king' < Lat. *imperator*, *ngushtë* 'tight' < Lat. *angustus*). A large number of ND clusters were created in this way in Albanian and they began to manifest similar properties as those in Greek, i.e. ND clusters were occasionally identified with D. As a result, there are numerous (if irregular)

---

ton, 1972 (although they are not the only sources); most Italian examples come from numerous dictionaries of dialects and from Rolhfs, 1966. I provide references to specific sources mainly with the less obvious, usually isolated examples.

doublets and substitutions – not only D, but also N can change into ND, for instance, in the dialectal forms [mbrənda] < *brënda* 'inside', [pampor] 'ship' < *vapor*, [amberika], [aspirind].

The prenasalisation of voiced occlusives is regular only in rare Albanian dialects spoken in the area of Greece (e.g. [voŋgeʎ], [Ruŋga], standard *vogël* 'small', *rruga* 'street, road'), (examples from Leake, 1814).

Initially, in northern Albanian dialects (Gheg), NT clusters changed into ND clusters, just as in Greek. Then these clusters became even more similar, which finally led to gemination and, eventually, to simplification of geminates to [m] or [n], and in the case of the cluster [ŋg], mostly to [k], [g] or [n], or it remained unchanged (e.g. *mbret* 'king' > [m:ret] > [mret], *ndryshoj* 'to change' > [nryʃoj]). This phenomenon cannot, however, be associated with the convergence with the Greek language element because it was not in contact with Albanian in this area. The parallel is rather accidental, but the situation in northern Albanian may be related to the southern Italian dialects (the north of Albania was Catholic and the elite maintained close relations with Italy).

The high frequency of ND clusters in Greek and Albanian even results in a more or less regular transfer of systemic relationships, the basis of which is a tendency to the functional equivalence of ND clusters with the corresponding voiced stops. The equivalence is obvious because when the whole dialectal areas of the languages in question are taken into consideration, the morphemes can be seen to occur in variant forms (with ND or with D).

In contrast to Greek, in Albanian, as well as in Macedonian, these clusters undoubtedly have a biphonemic value and they occur both with voiced and voiceless stops, e.g. Alb. *dalë* 'exit' – *ndalë* 'rest', *besë* 'word of honour' – *mbesë* 'granddaughter'. Various options, however, are also frequent, as, for example, in the dialect of Leshnja: *prapa*/*mbrapa* 'behind', *mbrëmë*/*prëmë* 'evening', *lindin*/*lidin* '(they) rise, (they) are born' (IUlli & Sobolev, 2002).

There are certain similarities in the development of ND/NT clusters in Gheg and in the southern Italian dialects, where the occlusive also became voiced in NT clusters whereas the clusters with the occlusive that was originally voiced changed earlier into geminates, just as in Gheg (in which the cluster was, typically, first simplified to a long nasal sonorant, or rather a geminate, and then to a single sonorant). In Italian, this change must have taken place earlier, i.e. before the voicing of stops in NT clusters (contrary to Albanian) because the gemination did not affect secondary ND clusters, originating from NTs. This accounts for the following modern forms found in these southern dialects: *quando* 'when' > *quannu* and *quanto* 'how much' > *quandu*.

Unmotivated prenasalisations are also quite frequent in Italian dialects, e.g. [rimbresjun] < *repressione* 'repression', [sumportare] < *supportare* 'support' (Calabria). In addition, in southern Italian dialects there often occur initial ND/NT clusters with a non-syllabic sonorant, e.g. [mpetrunitu] < *impadronito* 'occupied', [mpamu] < *infame* 'infamous', [mbale] < *non vale* 'unimportant', [mbrellu] < *ombrello* 'umbrella' (Calabria). Such clusters emerge mainly through

the reduction of the vowel in the preposition/prefix *in* but sometimes also through the addition of a non-etymological nasal sonorant (e.g. [mbjatu] < *beato* 'blessed') or an occlusive, or as a result of assimilation, e.g. [nvetʃə]/[mmetʃə] < *invece* 'contrary' (Abruzzo). As can be seen, various phonetic variants of words are also possible.

Prenasalisations of occlusives take place also in Aromanian, in Slavic villages in the area of Albania and Aegean Macedonia, and also in Balkan Romani. Prenasalalisation occurs most often before labial occlusives, and least often before velar ones. It seems to be the rule in the case of Italian dialects. In Greek, prenasalisation occurs equally before all the occlusives.

The number of ND clusters in Albanian was also augmented by the insertion of the non-etymological *b* into the *mr* and *ml* clusters (e.g. [dimbri], [embri], [numbri], [zəmbra] – standard *dimri* 'winter', *emri* 'name', *numri* 'number', *zëmra* 'heart'). Clusters *mbl*, *mbr* with a non-etymological stop, which were earlier observed throughout the whole Albanian territory, are disappearing. Now they are recorded only in a limited south-eastern area (Atlasi, 2008, map 628).

The shift of *mr*, *ml* into *mbr*, *mbl* was also characteristic of the southern Italian dialects (cf. *mbrenna* < *merenda* 'snack' in Molise). Its source in Italian as well as in Albanian was probably Vulgar Latin but in the Balkans, it fused with other phonetically similar phenomena, especially with the Greek "buffer consonant" (see Chapter 10).

The consonant clusters under discussion are also frequent in Aromanian dialects. In Papahagi's works (especially in the dictionary of 1963) there are numerous word-initial ND/NT clusters (e.g. *ndreptu* 'erect', *mpartu* 'divided'). However, notations by other authors suggest that the situation is similar to Daco-Romanian, in which such clusters are absent from word-initial positions (the syllabicity of the sonorant is another possibility), for instance, the notations in Gołąb (1984) are exclusively as follows: *ᵃnkl'idu* < Lat. *includere* 'include', *ᵃmpartu* < Lat. *impartire* 'divide'; in a similar vein, in Dalametra (1906): '*mpartu*, '*ndires* 'business'. Such words in Daco-Romanian always correspond to the forms with the centralised word-initial vowel, e.g. Arom. *ntreb* – Rom. *întreb* 'ask', Arom. *ngrop* – Rom. *îngrop* 'bury', Arom. *mpartu* – Rom. *împart* 'divide' (Papahagi, 1963). Aromanian dialects spoken in Greece accept ND clusters in word-initial positions without an optional vocalic element.

As already mentioned, ND clusters in standard Greek occur in principle inside words. In standard Demotic Greek in word-initial positions these clusters are simplified to occlusives. However, in emotionally marked colloquial speech, ND clusters appear also word-initially, e.g. *bes epitelus!* 'come on in' [mbes epitelus], *disu ipa!* 'get dressed' [ndisu ipa].

The voicing of the occlusive after the nasal sonorant is quite common – it occurs in numerous languages, but in the Balkans it is connected with other phenomena related to the clusters under discussion. Apart from Greek, southern Italian and northern Albanian, it occurs also in Aromanian, with

varying frequency, depending on the location of a dialect. In the area of Greece, the voicing is common. However, considering Aromanian as a whole, many options are found: with or without the voicing of the occlusive, with or without a non-etymological sonorant before the occlusive, e.g. [amintu]/[amindu] 'remember', [aprintu]/[aprindu] 'ignite', [munte]/[mundi] 'mountain', [dilikat]/[ndilikat] 'delicate'.

The Greek influence is also evident in some of the Slavic dialects in Aegean Macedonia and in some Macedonian dialects in Albania. This influence is not limited to the lexicon; some influence is also of a systemic nature. Under the Greek influence, the nasality originating from Old Slavic nasal vowels is preserved in these dialects. It is significant that nasality is preserved only before stops: [dambi/dəmbi] 'oaks', standard form *дабови*, [gołamp] 'pigeon'.

The contextual conditions of this phenomenon are twofold: firstly, nasality is preserved only before an occlusive (which is the result of Greek influence); secondly, if the nasal vowel is continued at a certain developmental stage by the nasal schwa (for more details, see Chapter 7).

In the remaining Slavic dialects (except for Polish and some Slovene dialects), nasal vowels have lost nasality and transformed into non-nasal vowels.

As already mentioned, in many Albanian dialects, a non-etymological consonant occurred in clusters *mr* and *ml*. As a result of the influence of Albanian, the same phenomenon occurs in Macedonian dialects in southern Albania, e.g. *млеко* > [mbleko] 'milk', *умри* > [umbri] '(he) died', [mbramor] 'marble', [mbravja] 'ant'. The examples make it evident that, under the influence of Albanian, word-initial ND clusters also occur in these dialects.

Thus, the problem of the functioning of ND clusters in the central area of Balkan phonetics is a complex of interacting phenomena of various origins, affected also by other Balkanisms, such as the "buffer consonant" (see Chapter 10) or the mixing of vowel-centrality with nasality (see Chapter 11). The reason for the mixing of different phenomena is, naturally, the fact that clusters of different origins, of different phonological values, and of different distributions sound the same. Some of these phenomena are common processes in Europe, for instance, the voicing of an occlusive after a nasal sonorant. In the Balkans, however, it combines with other related processes and contributes to the exceptionally high frequency of ND clusters. The phenomena related to ND clusters (the preservation of nasality, secondary nasality) are not observed in the east beyond the Macedonian area, i.e. they are not observed in Bulgaria (except for the dialects spoken by displaced people); similarly, the Latin reduction of unstressed short vowels, which affected Italian and Albanian and as a result of which word-initial ND clusters emerged, did not lead to the complete loss of these vowels in Daco-Romanian and in some Aromanian dialects. However, the phenomenon extends to the west.

Processes similar (if less intense) to those observed in the history of Albanian or Italian are also observed in the history of Iberian languages, e.g. Spanish *manica* > *manga* 'sleeve', *limitera* > *lindar* 'stop', *semita* > *senda*

'path', *bonitate* > *bondad* 'kindness' (plus vowel reductions and various assimilations in the newly created clusters); cf. also the buffer consonant: *humeru* > *(h)ombro* 'arm', *femina* > *hembra* 'woman', *tremulare* > *tremblar* 'tremble'. Some dialectal phenomena, for instance, the transformation *mb* > *mm* > *m* (analogous to the Italian development) are accounted for by Spanish linguists in terms of the Osco-Umbrian influence (Menéndez-Pidal, 1960). Perhaps, in this case, Latin is a more likely influence (both the Iberian Peninsula and the south of Italy were colonised by Rome more than once).

Thus, as can be seen, the problem is constituted by a set of phenomena of different origins, with different values and different phonological distributions. They sometimes merge with other related phenomena and contribute to the exceptionally high frequency of the clusters in question.

Summing up, the phenomenon under discussion is constituted by:

- the word-initial occurrence of ND clusters,
- the voicing of stops after a nasal sonorant,
- the simplification of ND clusters, usually to a sonorant,
- non-etymological prenasalisations of voiced stops,
- the addition of non-etymological voiced stops after nasal sonorants, also in clusters [mr], [ml],
- the occurrence of a number of options in a single dialect,
- functional and perceptual equivalence of the clusters ND and D.

The phenomena are concentrated in the Greek-Albanian-Macedonian area.

7. MACEDONIAN REFLEXES OF THE OLD SLAVIC NASAL VOWELS[29]

The so-called nasal vowels which occur in the southern Macedonian dialects are definitely part of the areal phenomenon discussed above. The term "vowel" is used customarily and only partly corresponds to the phonetic reality. In fact, these are two-segment groups of the type "vowel + nasal sonorant" which continue the Old Slavic nasal vowels. This phenomenon, characteristic of Macedonian dialects, has always attracted the attention of scholars and already has a substantial literature.[30] Initially, linguists focused on collecting examples and delimiting the geographical range of the phenomenon. The first observations were imprecise and the attempts to explain the phenomenon were not credible, e.g. Mazon (1923) maintained that **ǫ* is preserved before [b, g], and **ę* before [d]; Teodorov (1882) explained the form [grob] 'grave' with reference to the simplification of the group that occurs in the plural form [grombove]). Oblak was the first to connect the occurrence of nasals with the voicing of the following consonant (Oblak, 1894). Generally, the preservation of nasality was treated as an archaism, conditioned solely by intrinsic Slavic factors. However, the reasons or conditions that would favour the preservation of nasalisation were not formulated. Only Illich-Svitych formulated intra-linguistic conditions for the preservation of Old Slavic nasality (Illich-Svitych, 1962). As follows from his argumentation, he assumed that [ə] and nasal [ə̃] (later [ə + nasal sonorant]) were facultative allophones which could occur before a stop and also before a fricative. He did not consider the combinatory distribution of these sounds. In fact, in most cases nasality was not preserved before fricatives. Nearly all his examples concerned the position before an occlusive. The fact that nasality was preserved only before stops still remained unexplained. In several of my articles, I suggested that the reasons for the preservation of the Old Slavic nasal

[29] The text is a short summary of the conclusions drawn on the basis of extensive exemplification collected for the work by Savicka & Cihnerska, 2018. Primary sources include numerous works by Illich-Svitych, 1962; Ivić, 1981, and Božidar Vidoeski, 1998, 1999a, 1999b, 2000a, 2000b; as well as individual studies of the dialects spoken in particular villages, all cited in Savicka & Cihnerska, 2018. Longer versions of this text appeared as Sawicka, 2019a, 2021a (see also Sawicka, 2019b).

[30] Among others: Drinov, 1878; Illich-Svitych, 1962; Novaković, 1892; Małecki, 1934, 1936; Miletich, 1901; Mitskova, 2017; Shklifov, 1973; Teodorov, 1882; Velcheva, 1979. The relevant literature is ample. In addition, a large number of examples are also provided in descriptions of the dialects of particular villages and regions: Kuzov, 1921; Matov, 1889; Mirchev, 1932; Oblak, 1894; TSitsov, 1881; TSonev, 1904/1905, 1937.

vowels should be sought in the co-occurring non-Slavic dialects. All Macedonians in Aegean Macedonia are at least bilingual and in many villages they are multilingual – they may use Aromanian or Megleno-Romanian dialects or various Greek idioms: the standard dialect, the local dialect, the dialect of displaced Greeks from Asia Minor.

In the light of the situation described in the previous chapter, the matter seems clear. Nevertheless, according to my knowledge, the Greek influence has not been mentioned so far in the descriptions of Macedonian dialects, at least as far as the phonetics is concerned. The clusters of "nasal sonorant + homorganic stop" have often attracted the attention of linguists, but were considered only in the Albanian or Greek context and not linked with Slavic "nasal vowels".

The problem of the Macedonian reflexes of the old nasal vowels links with two other Balkan features. The first one is described in Chapter 6 on "nasal + stop" clusters; the second feature (nasal schwa) is described in Chapter 4. Macedonian nasality is preserved only if it continues a kind of nasal schwa that developed in all classical Balkan languages in the Middle Ages, for instance, in Macedonian. However, it is not possible to limit the explanation exclusively to Slavic factors – in Slavic, generally, nasalisation is preserved better before fricative consonants than before stops. The opposite is true in Balkan languages. In Slavic (Bulgarian and Macedonian), nasal schwa emerged from the fusion of nasal vowels and the back jer. Macedonian material provides direct evidence of such a merger. Illich-Svitych (1962), who analysed these facts in the Slavic context only, came to the correct conclusion that [ə] and nasal [ə̃] constituted variants of the same phoneme. However, he failed to notice their complementary distribution and considered them facultative allophones. In addition, the phenomenon under discussion also occurs in contexts which do not continue Old Slavic nasal vowels (in contexts in which nasal sonorants are non-etymological).

Thus, one of the conditions for the preservation of nasality was the value of the nasal vowel, approximating nasal schwa. In Bulgarian, the merger of jers in strong positions with nasal vowels was observed in the texts dating from the 11th century. The back jer and the back nasal vowel finally produced the same reflex in Bulgarian. Nasalisation was not preserved in Bulgarian. This was not the case in Macedonian, in which the jers in strong positions developed into full vowels before the merger of the schwa-segment with the nasal segment. Thus, the nasal vowel produced present-day Macedonian *рака* 'hand' < **rõka*, Bulgarian *ръка*. Macedonian [a] and Bulgarian [ə] constitute the reflexes of the back nasal vowels, whereas back jer in strong positions gave in standard Macedonian [o] and in Bulgarian [ə], e.g. Mac. *сон* 'dream' < **sъnъ*, Bulgarian *сън*. The back nasal vowel and the back jer have different reflexes in Macedonian. Thus, the merger of jers and nasal vowels did not occur in Macedonian. Nasal vowels fused with secondary non-etymological vowels – both gave the same reflex in Macedonian, e.g. *рака* < **rõka*, and *магла* 'fog' < **mgla* (< **mьgla*). The front jer here was in the so-called weak position

and was lost, the source of [a] is different – it continues a non-etymological vowel (secondary jer). Thus, the fusion concerned only secondary jers (wrongly considered to be the reflexes of the "original" Old Slavic jers).

The so-called Macedonian nasal vowels interact with various phenomena that sound similar. At the same time, the direct foreign influence should be attributed to Greek. However, in Greek, prenasalisation affected only voiced stops.[31] Nasal sonorants in Macedonian were generally also preserved before voiceless stops. In contrast to Greek, the clusters "nasal + stop" in Macedonian have an undoubted biphonemic value and they occur both with voiced and voiceless stops. The same is true about the groups "vowel + nasal sonorant", which continue nasal vowels.

The clusters "nasal sonorant + voiced stop" in Greek dialects have been undergoing gradual simplification. The nasal sonorant was lost in most northern dialects (especially the north-eastern ones). As a result of the loss of nasal sonorants before stops and the loss of unstressed high vowels, in northern Greek dialects (in contrast to the southern ones) there occur both non-prenasalised voiced stops in intervocalic positions and clusters of the type "nasal sonorant + voiceless stop". However, in the Greek dialects in western Macedonia, the original ND clusters remained unchanged and this situation affected the situation in the local Slavic dialects. The situation in local Slavic dialects confirms the picture of Greek dialects (Kontosopulos, 2001; Newton, 1972; Papanastasiou & Papadamou, 2013, and others). Macedonian "nasal vowels" are best preserved in western Aegean Macedonia; in central Macedonia, options were observed as late as in the middle of the 20th century; in eastern Aegean Macedonia, where the Greek clusters "nasal + stop" underwent simplification, nasals occur only sporadically. Earlier sources recorded a greater range of the preservation of nasal sonorants.

Nasality in Slavic combined with vowels of different origins, which in a particular dialect at a given time had a reduced, schwa-like pronunciation. Traces of nasalisation are observed not only in the reflexes of originally nasal vowels. Several varieties of this phenomenon are found in the Slavic dialects in Greece. The most common is the preservation of nasalisation from the Old Slavic nasal vowels before stops (and affricates). Generally, in the majority of the Macedonian dialects in Greece which preserved the nasality of the Old Slavic nasal vowels, nasalisation was preserved in the reflexes of back nasal vowels before voiced and voiceless stops. In these villages where the phenomenon occurred, it is characterised by a relative regularity.

---

[31] It is quite common for voiced stops to be prenasalised, as the lowering of the velum aids the maintenance of voicing. Neither non-prenasalised intervocalic voiced stops nor the clusters "nasal sonorant + voiceless stop" occur in standard Greek and the southern dialects of Greek. Progressive voicing can be observed live in the combinations of a proclitic with the stress-bearing word (e.g. dialectal [toŋ gzero] < *ton ksero* 'I know this' [tim bortɑ] < *tin porta* 'door' acc. sg.) and in colloquial pronunciation of foreign names (e.g. *μάνκο* [mɑŋgo] 'cash shortage').

The degree of the preservation of nasality in Macedonian dialects differs; the contextual conditions which guarantee the preservation of nasality are also different. The following situations are reported in the literature:

a) nasality is preserved only before stops; this is the most frequent situation, e.g. [də̃mbi]/[dãmbi] 'oaks' from **dǫbi* but [məʒi]/[maʒi] 'men' from **mǫžь*, also before etymologically voiceless stops, e.g. [zaenʦ] 'hare';
b) nasality is preserved only before voiced stops, e.g. [də̃mbi]/[dãmbi] 'oaks' but [dəp]/[dap] 'oak', [zəp] 'tooth' but pl. [zəmbi] 'teeth', [ret] 'row' but pl. [rendovi] 'rows'; it is observed that nasality is more often preserved before [b], [d], and less frequently before [g];[32] examples such as [kłomko] < **kłǫbъkъ* 'ball of thread' (Pol. *kłębek*) result from the simplification of a larger cluster **mbk*;
c) nasality is preserved before etymologically voiced stops, e.g. [də̃mbi] and [də̃mp], but [pət] 'road' from **pǫtъ*;
d) nasality continues only the back nasal vowel, e.g. [də̃mp]/[dãmp] from **dǫbъ* but [ʧedo] from **čędo* 'child'.[33]

However, it must be remembered that nasality continues also any back nasal schwa, including those which do not originate from Old Slavic nasal vowels, such as:

e) secondary vowels, e.g. [maŋgɫɑ] 'mgła' < **mgla* < **mьgla* 'fog';
f) vowels which continue etymological syllabic sonorants, e.g. [dɫəŋgu] 'long' (standard form *долгu* [dołgi]).

There are only a few words which have never been recorded with nasal sonorants in Aegean Macedonia: [stegnat] 'squeezed', [tegʲa] 'weigh', [ʒedna] 'thirsty' (Old Slavic **stęgnǫti*, **tęgliti*, **žędьn-*).[34] Evidently, the clusters [ŋgl], [ŋgn], [ndn] were not tolerated in these dialects. In the remaining lexicon where nasal vowels were preserved before stops, at least optional forms can be found. The forms with nasal sonorants not only represent an earlier stage of the development of nasal vowels, but also reflect the situation of Greek and/or Albanian dialects in contact with respect to the clusters "nasal + stop".

In a number of examples, nasalisation is also preserved before consonants which were originally fricative – the fact that again could call into question

---

[32] This constitutes a parallel to various unrelated situations in rather distant Albanian dialects, where the clusters [mb], [nd] are simplified to [m], [n], and the cluster [ŋg] to [g] or [k], e.g. *mbret* 'king' [mret] but *nga* 'from' [kɑ]. On the other hand, in Arbëresh and southern Italian dialects, [b] and [d] sometimes undergo prenasalisation and [g] undergoes lenition, e.g. Calabrian [rimbresjun] 'repression', Arbëresh *rruga* 'street' [ruɣɑ]. It is undoubtedly the implementation of articulatory preferences.

[33] Illich-Svitych, who examined only the reflexes of nasal vowels, added two more observations: nasalisation is preserved much more often in the case of the back nasal vowels than in the case of front nasal vowels; nasalisation is preserved much more often before stops than before fricatives (Illich-Svitych, 1962).

[34] Similarly, in contemporary Macedonian (and other south Slavic languages) clusters [stn], [zdn] are not really tolerated, cf. Serb. *bolestan* 'ill' masc. sg. and *bolesna* fem. sg. (from **bolestna*).

the Greek influence. In this case, we have to do with an even stronger Greek influence. It is related to another Balkanism – the so-called "buffer consonant". It consists in the insertion of a stop into a cluster of two sonorants or a sibilant and a sonorant. In most Macedonian dialects, this phenomenon became widespread in the clusters [sr], [zr], [ʃr], [ʒr], and [łz], [łʒ], [rz], [rʒ], e.g. [stram] < *срам* 'shame', [ʒdrebe] < *жребе* 'foal', [sołʒi] < *солзи* 'tears', [ołʤitsɑ] *лажица* 'spoon'. The buffer consonant is a widespread phenomenon in northern Greece (for more details, see Chapter 10).

If the phenomenon of the buffer consonant occurred in a given Macedonian dialect, then a stop was inserted into the reflexes of nasal vowels, between the nasal sonorant and the fricative. Thus, the combination of a stop and fricative emerged, which produced an affricate. This means that the phenomenon was current at the time when nasal vowels (or rather, the contexts with preserved nasality) probably still existed in all positions. As a result, a nasal sonorant appeared before occlusion, which secured its preservation, e.g. [gənts] < **gǫsь* 'goose' (**gǫsь* [gõs] > [gə̃s] > [gəns] > [gənts] > [gənts]); similarly: [mentsu] < **męso*, [məntʃ] < **mǫž*, etc. (examples from the area of Thessaloniki).

A similar development can be found in several words where nasal consonants do not originate from nasal vowels, for example: [bendzin] 'petrol' ([benzin] > [bendzin] > [bendzin]); similarly: [brondzɑ] 'bronze' from [bronza], [mendzɑ] 'canteen' from [menza], [dontsigu] 'bring him' (standard *донеси го* [donesi go]).

As far as the problem of nasalisation of the Old Slavic jers is concerned, the dialectal material from Greece provides evidence for an early differentiation of Bulgarian and Macedonian dialects. Generally, Old Slavic jers in strong positions did not acquire nasalisation in Macedonian dialects. There is only one example, encountered in many villages, evidently lexicalised: [bənts] 'lilac' < **bъzъ* (Duma, 1979). Nasalisation is absent from other occurrences of the reflexes of primary jers. This means that at the time when the merger of schwa with nasalisation occurred, the strong jers in Macedonian had already become full vowels. Secondary vocalism appeared in Slavic languages later, certainly some time after the disappearance of the jers in weak positions. As a result of the disappearance of the jers, the syllable structure changed. New consonant clusters emerged, for instance, initial clusters of the type "sonorant + obstruent" and final clusters of the type "obstruent + sonorant", and also the clusters of "obstruent + sonorant + obstruent". In the South Slavic languages, such clusters were not accepted and they were swiftly "repaired" through the emergence of a non-etymological vowel, in principle, through the syllabification of the sonorant, which soon resulted in the development of vocalism, initially of a central quality, Mac. *магла* 'fog' from **mgła* < **mьgła*, *добар* 'good' from **dobr* < **dobrъ*. Thus, the function of secondary vowels was to eliminate certain types of consonant clusters that emerged after the disappearance of the weak jers. Secondary vocalism – a kind of schwa – in most cases emerged from syllabic sonorants. Generally, later, in Slavic

languages it developed into the same vowel as the primary jers in strong positions. This, however, was not the case with Macedonian, where secondary vocalism developed in the same way as the back nasal vowels, e.g. *мака* [maka] 'torment' < **mõka* and *лаже* [łaʒe] 'lies' < [łʒe] < **łъže* (Pol. *łże* [wʒe]). We know that a nasalisation of this new schwa-like segment should occur before "full vocalisation", as the central character of the vowel constituted the natural preference for nasalisation. In dialects from Greece and southern Albania, nasality has survived to this day thanks to the convergent processes between Greek and Slavic, e.g. [maŋgła]/[məŋgła] 'fog', [łandʒa]/[łəndʒa] 'lies'; the development was as follows: **mьgla* > **mgla* > **ṃgla* > **mᵊgla* > *məgla* > *mə̃gla* > *məŋgla*/*maŋgla* – the standard form is *магла* [magła]. This proves with absolute certainty that there was undoubtedly a fusion of nasality and the back "reduced" vowel. At the time of this fusion, the primary jers did not yet exist as centralised vowels in Macedonian.

Another phenomenon associated with the clusters *mb*, *mp*, *nd*, etc., and Greek influence is the voicing of stops that happens (irregularly) in Macedonian dialects, e.g. [stəŋgłu] < **stъklo* 'glass' (Pol. *szkło* [ʃkwɔ]), [pajaŋgu] 'spider' (Pol. *pająk*).

Summing up, it seems that the Slavic element is not the main factor in the preservation of the Old Slavic nasality which originated from nasal vowels in the discussed dialects.

It is true that in most Slavic words containing the clusters "nasal sonorant + stop" these clusters continue the Old Slavic nasal vowels. It is also true that nasality has been preserved mainly in the cases in which the vowel segment is/was a central (schwa-like) segment and that nasals are preserved before stops. However, these are not the only situations in which a nasal sonorant occurs before an occlusion. Non-etymological occurrences of nasality are observed, too.

The factor that favours the preservation of the consonant clusters under discussion is their high frequency in other dialects of the western Balkans (Albanian, Aromanian), although here the origin of these clusters is different than in Slavic or Greek (see Chapter 6). They result from the reduction of the vowel separating the elements of the cluster (or the reduction of the initial vowel before the cluster "nasal sonorant + stop"), and also, occasionally, from spontaneous prenasalisation. Local language users are, thus, constantly exposed to particular sounds which they carry over into the native dialect. In my opinion, it may be assumed that it is the local Greek phonetics that has the decisive influence on the preservation of Proto-Slavic nasality, especially, the equivalence of these clusters and the corresponding single stops in general Greek perspective. The situation could have been similar if such a deep contact with Greek had occurred after the disappearance of Slavic original nasality, because prenasalisations of stops after a non-nasal vowel also occur in Slavic dialects. This, however, was not the case. The situation in Greek stopped the process of the disappearance of nasals, however, only

to a certain degree – only before occlusion. Still, Slavic elements would have been insufficient. Slavic phonetics merely secured the phonetic material necessary for the situation under discussion to arise. It seems, however, that the active role was played by Greek.

First, the process of the disappearance of the reflexes of the Slavic nasal vowels – i.e. the loss of a nasal sonorant before a stop – occurred in Aegean Macedonia in the same areas in which the Greek clusters "nasal sonorant + occlusive" were simplified to a stop. Nasality in Slavic examples was noted in studies from various periods, but in the oldest ones, nasality was noted most often – the withdrawal of nasality is characteristic of Greek dialectal phonetics too. In Macedonian, nasality was preserved in the areas in which it was also preserved in Greek (or Albanian). The loss of nasality confirms that the mechanism of the identification of phonological units does not have a surface character, and that what is first identified as functional units are morphophonemes and not phonemes or phones. Otherwise, it seems impossible for the clusters of the type "nasal sonorant + stop" not to undergo simplification.

Second, the emergence of nasal schwa is not a specifically Slavic feature. Although in Slavic languages there were the conditions for the emergence of such a segment (the presence of jers and nasal vowels), nasal schwa is reconstructed only in those languages which came under the influence of Romance dialects (Romanian and Albanian). The context of nasal schwa, instrumental in the preservation of nasality, seems to be a more important condition than the continuation of the Old Slavic nasal vowel, because each back schwa that existed in Macedonian dialects at that time assumed a nasal quality, even if the nasality was non-etymological, i.e. in the case of the so-called secondary vocalism (non-etymological jer), as in **mьgła* > **mgła* [məŋgła]/[mɑŋgła]/[mɑgła] 'fog', or [łəndʒa] 'lies' (cf. Pol. *mgła*, *łżе*), or sometimes in the reflexes of the old syllabic sonorants, e.g. [dłəŋgu] 'long' (standard *долгu*).

Third, in Macedonian dialects (as with Greek), there are examples of prenasalisation that do not continue anything. In addition, prenasalisation sometimes occurs after the vowels which are not reflexes of nasal schwa, e.g. [ʧuʧuʎiŋga] 'bird species', or in [baraŋga] 'barrack', [juŋguslavija] 'Yugoslavia', [fambrika] 'factory' (quotes from local colloquial Greek?). The Greek functional (and perceptual) equivalence enables mutual replacement of these contexts; it also enables the appearance of non-etymological nasals and the omission of the etymological ones. Options of the type [lamba]/[laba] 'lamp' are frequent in colloquial Greek speech. Especially informative are examples such as the 19th-century [gromb] 'grave' ~ pl. [grombove], observed by Teodorov (1882) in the speech of the displaced people from the area of Kastoria. In this case, the purely Greek phonetic habits are copied without any Slavic motivation (there was never a nasal vowel there).

Fourth, in principle, only voiced occlusives are prenasalised in Greek dialects, which finds confirmation in Slavic material in several dialectal

points. In northern Greek dialects, however, there also occur analogous clusters with a voiceless occlusive (as a result of vowel reductions), which rarely undergo voicing. Many Slavic dialects mirror such a distribution: the nasal sonorants which continue Slavic nasal vowels occur before voiced as well as voiceless stops.

Fifth, nasality is most often preserved only before occlusives; before fricatives, it disappears. The preservation of nasality before a fricative requires the insertion of a stop – which is also a Greek dialectal phenomenon: Newton's buffer consonant (Newton, 1972). I have found only one example with a non-etymological nasal before a fricative: [trpenza] 'table' (village Lazaropole).

Sixth, in Slavic material, there occurs sporadic voicing of occlusives or affricates after a nasal sonorant, e.g. [stəŋgłu] 'glass', [pajanʤina] 'cobweb', [pajaŋgu] 'spider'. This, too, may have resulted from the influence of Greek although such a process is frequently observed in other languages of the world, also in some Albanian dialects.

However, first, most of the examples concern the etymological Slavic nasal vowels. Second, in the same dialects in which the Old Slavic nasality was preserved before stops, the contexts with an intervocalic occlusive not preceded by a nasal sonorant are equally frequent – pronunciation options are not available in this case. Third, of decisive importance seem to be the contexts in which nasality was actually preserved due to the insertion of a stop, as in [mentsu] 'meat' or [gənts] 'goose'. Nasality must still have existed at the time of the appearance of stops within the clusters of the type "sonorant + sonorant" or "fricative + sonorant"; otherwise, the context enabling the insertion of a stop would not have existed and, therefore, the conditions for prenasalisation would not have arisen.

8. THE MERGING OF AFFRICATES[35]

The phenomenon of the fusion of palatal and alveolar affricates leads to a change in the phonetic characteristics of obstruental affricates and, consequently, to the removal of two phonemes from the phonological system. This is what happens in Shtokavian, Macedonian and Albanian dialects. In Greek, on the contrary, it often leads to the transformation of the allophones of velar consonants into independent phonemes through the depalatalisation and affricatisation of the front allophones of velar obstruents.

The palatalisation of /k/ and /g/ before front vowels is probably the only phenomenon common to all varieties of Greek. In most Greek dialects, the allophones of velar stops and fricatives before front vocoids ([e], [i] or [j]) are characterised by very strong palatalisation, leading to affricatisation. Palatalisation is sometimes weakened, which may result in the depalatalisation of a phone. The stages of this process are the following: [k] + front vocoid > [c] > [tɕ] > [tʲʃʲ] > [tʃʲ] > [ʦ]. Each of these stages is present in Greek dialects, in which the palatalised allophones of /k/ undergo affricatisation, fronting and then depalatalisation and dentalisation. The strongly palatalised pronunciation of velar allophones before front vocoids is characteristic of all Greek dialects spoken in Greek Macedonia; auditorily, they are identical to the Albanian *q*, *gj* (most often pronounced as [tɕ], [dʑ] or [c], [ɟ]), however, further transformations do not typically take place in the Greek dialects of Macedonia. Because of different distributional conditions, [g] undergoes this process less frequently. In other regions of Greece, dental and alveolar (palatalised or even non-palatalised) reflexes of **k* are observed, e.g. *καιρος* 'weather' > [ceros] on the Peloponnese, [tˢeros] on Rhodes, [tʃeros] on Cyprus and Crete (cf. Newton, 1972, pp. 126 *& passim*). This process affects also fricatives in Greek, e.g. *χερι* 'hand' > respectively [çeri], [seri] and [ʃeri], *γη* 'earth' > [ji], [ʒi].

In Macedonian, Serbian and Albanian dialects, there is a merger of [tɕ], [dʑ]/[c], [ɟ] with [tʃ], [dʒ], usually resulting in non-palatalised (or slightly palatalised) alveolar segments. Less frequently, the simplification results in palatalised segments. In any case, the phonetic difference is cancelled out.

The primary source of palatal affricates in Slavic dialects would be the continuations of the Proto-Slavic front occlusives in the context of the first and second iotation, i.e. the continuations of the Proto-Slavic **tj*, **dj*, **tьj*, **dьj*, which are very diverse in Macedonian dialects. What is more, in the same

[35] For details, see Savicka & Cihnerska, 2018, Chapter 9.

dialect there may be several reflexes, fixed in specific words, and in some words sometimes occurring as variants.

In northern Macedonia, the clusters **tj*, **dj* resulted in [c], [ɟ]. In southern Macedonia, apart from [c], [ɟ], there are a number of variant reflexes: [c], [ɟ] / [ʃc], [ʒɟ] / [ʃʧ], [jʒ] / [jc], [jɟ] and other, less frequent reflexes. The dialects in the south-eastern periphery have typically Bulgarian reflexes [ʃt], [ʒd], which also occur in the west – in the Macedonian dialects spoken in Albania. On the other hand, the dialects in the south-western periphery, in the area of Kastoria (Greece) have the reflexes [ʃʧ], [ʒʤ/ʒ]. Typically Serbian reflexes [ʦ], [ʣ] occur in Gora (Kosovo).

The second iotation resulted in less diverse reflexes. There are [c], [ɟ] in almost all dialects spoken in North Macedonia. Palatalised [tʲ], [dʲ] are preserved in the eastern part of Aegean Macedonia. In the western part of Greek Macedonia, the second iotation produced [kj]/[cj], [gj]/[ɟj], and in the central part there are reflexes with metathesis: [jc], [jɟ].

The Proto-Slavic clusters **stj*, **zdj* most often produced [ʃt], [ʒd] or [ʃʧ], [ʒʤ] (or related reflexes [ʃ], [ʃc], [jʒ], [ʒ]).

The western periphery (Macedonian dialects spoken in Albania) is the most diverse with respect to the reflexes of the first and second iotation. In Albanian Gora, for instance, the reflexes of **tj* include: [c], [ʃt], [ʃc], [ʧ], [ʃ], e.g. [kuca] 'house', [vruco] 'hot', [praʃcam] '(I) say goodbye, (I) forgive', [pomoʧ] 'help'. In the Golloborda region and in Boboshticë, there occur [ʃt], [ʒd] with the variant forms [c], [ɟ] (the same as in the area of Prespa), but in Vërnik, a multitude of reflexes are observed (the reflexes for **tj* include: [ʃʧ], [ʃt], [ʧ], [ʃ]).

The second iotation in Albanian Gora and in the Golloborda region produced [c], [ɟ], along with the less frequent [ʦ], [ʣ]. The situation in the southern part of the area of Prespa, on the other hand, parallels that of the region of Kastoria, where the second iotation did not take place. Thus, in the area of Korça, there occur [kj], [gj], less frequently [c], [ɟ] (e.g. [braca], [bracjata] 'brothers'), and in the area of Prespa – [tj], [dj] (e.g. [ʦvetja] 'flowers', [bratja] 'brothers').

The reflexes of the first and second iotations and the clusters **stj*, **zdj* discussed above occur in various configurations. For instance, in the north-western area, the prevalent type is that with [c], [ɟ] from the first and second iotations and [ʃt], [ʒd] from the clusters **stj*, **zdj*; the central band of North Macedonia is characterised by the type with [c], [ɟ] and the variant forms [ʃʧ], [ʒʤ] from the first iotation, [c], [ɟ] from the second iotation and [ʃʧ], [ʒʤ] from the clusters **stj*, **zdj*; the eastern part of Aegean Macedonia is characterised by the type with [ʃt], [ʒd] from the first iotation and from the groups **stj*, **zdj*, and [c], [ɟ] from the second iotation; in western Aegean Macedonia, there is the type with [ʃʧ], [ʒ] from the first iotation and from the clusters **stj*, **zdj*, and with [kj], [gj] from the second iotation. Some of these reflexes are non-palatalised, but they should be enumerated because the identification of the unit is often based in morphonological features.

For the issue under discussion, it is important whether the final results are non-palatalised or palatalised obstruents. Summing up, the dialects without palatalised obstruents in the Macedonian area include the dialects of the Kastoria region and the contiguous dialects in southern Albania, in which the second iotation did not take place, although sources usually also enumerate the palatalised forms [cj], [ɟj] alongside [kj], [gj], [tj], [dj] – the palatalised segments, in any case, are combinatory variants here and not independent phonemes. Contextually independent [c], [ɟ] occur in these dialects only in borrowings from Turkish.

The affricates in Macedonian dialects originate from **tj*, **dj*, **stj*, **zdj*, **tьj*, **dьj*, from contemporary palatalisations of [k], [g] before front vowels and from borrowings from Turkish. The palatalisation of velars is related to the strong fronting and affricatisation. The fronting involves the raising of the tip of the tongue and leads to the transformation of the sounds into [tɕ], [dʑ], which may then become non-palatalised alveolar affricates. The phenomenon has a historical aspect (cf. some reflexes of the clusters **tj*, **dj*, **stj*, **zdj*) as well as a contemporary aspect and is not limited to the depalatalisation of palatals. The main effect is the loss of the phonological opposition palatal vs. non-palatal in favour of the non-palatalised or slightly palatalised affricates. This issue has not attracted the attention of Macedonian dialectologists. The range of neutralisation between the palatal phonemes /c/, /ɟ/ and the velar phonemes /k/, /g/ before front vowels has not been examined, either. Such a neutralisation often occurs in standard Macedonian, but only if the phonemes /c/, /ɟ/ are realised neither as [tɕ], [dʑ], nor as [tʃ], [dʒ].

As far as the Albanian language is concerned, the situation is similar to that in Macedonian: the phones originate from **kl*, **gl*. According to the official standard (the version found in all descriptions of the grammar and phonetics of Albanian), the correct articulation of the segments marked in writing with *q* and *gj* are the front affricates [c], [ɟ]. However, the actual, widespread pronunciation is [tɕ], [dʑ] (with the tip of the tongue raised). Auditively, the difference is small and not always noticed by dialectologists. There are two maps in the atlas of Albanian dialects (Atlasi, 2007, maps 26 and 27), which show the merger of non-palatalised and palatalised affricates. The palatalised pronunciation of the affricates written down as *ç* and *xh* (which, according to the orthography of Albanian, corresponds to the pronunciation [tʃ], [dʒ]) was recorded in the area of Kosovo and in a small number of dialects in northern Albania (e.g. *çaj* [tʃaj] > [tɕaj]/[caj]).[36] This pertains mainly to borrowings

[36] Fricative forms of palatal sounds were also observed in several villages which are not in direct contact with Macedonian dialects. The dialects of northern Albania are quite diverse in this respect. Apart from the reflexes enumerated above, there are also non-palatalised variants and palatal fricatives (more or less front). The prevalent pronunciation in Kosovo is [tɕ], [dʑ]. Gjinari identifies several varieties of these palatalised affricates in Kosovo (Gjinari, 1988, pp. 56–57). According to Gjinari they are pronounced as [tʃ] and [dʒ] only in the very north of Kosovo.

because the Old Albanian **kl*, **gl* in this area produced [kj], [gj] or even [k], [g]. The affricates written down as *q*, *gj* (which corresponds to [c], [ɟ] or [tɕ], [dʑ]) have a palatalised pronunciation throughout southern Albania (and in a few villages scattered in the north, also in Macedonia), e.g. *qeni* 'dog' [ceni]. A non-palatalised pronunciation, i.e. [ʧ] and [ʤ] is observed in some Albanian dialects in Macedonia (in the regions of Gostivar, Krčovo, Dibër, and Prilep) and also in the region of Kaçanik in Kosovo (which borders on Macedonia), e.g. *qeni* 'dog' [ceni] > [ʧeni]). At the same time, however, palatalised pronunciation is recorded in Albanian villages in the region of Skopje.

It is known that palatalised affricates often become non-palatalised. Albanian and Slavic dialectologists, however, are not always sensitive to this issue. Possibly, adequate data are not always recorded in dialectological records. There has been no research devoted specifically to this topic (except Vladisavljević, 1977, who, however, deals with the defectology of Serbian standard). Thus, there is no accurate data available concerning the transformation of Macedonian [c], [ɟ] into [ʧ], [ʤ]. Such a pronunciation certainly occurs in the west, in the same area in which non-palatalised [ʧ] and [ʤ] occur also in Albanian dialects. All in all, despite the lack of more accurate data, it can be concluded that the Macedonian-Albanian area characterised by the depalatalisation of palatalised obstruents is relatively compact and covers a wide area on both sides of the state border.

The depalatalisation of palatal affricates is also frequent in Shtokavian dialects. The phenomenon is almost universal in standard Croatian and it is present in colloquial Serbian. The problem is widely known, but there is little information on the subject, apart from general statements.[37] It is known that palatal affricates in the Torlak dialects became non-palatal (Sobolev, 1998). Internet sources connect the phenomenon mainly with Croatian and Bosnian dialects.[38] Interestingly, the voiced [dʑ] becomes more often non-palatal than [tɕ]. Almost everywhere in Bosnia and Herzegovina, [dʑ] becomes [ʤ] (except for a small central part), but the opposition [tɕ] vs. [ʧ] remains unchanged (cf. Halilović et al., 2020, pp. 232, 234, 238, 290 and elsewhere). The speakers of Croatian and Serbian have extensive discussions on this topic on internet forums.[39] The phenomenon has been explained either with reference to intra-systemic relationships or the influence of Turkish, but there is generally no literature on this subject. In the dialectal materials of the Slavic linguistic atlas (Ivić, 1981), the simplification of the system of affricates is recorded

[37] For instance, "Тежња ка упрошћавању консонантског система огледа се и у једном другом процесу распрострањеном у разним говорима. То је уклањање опозиције између два реда алвеоларних африката, другим речима изједначавање *ч* са *ћ* и *џ* са *ђ*" (Ivić, 2001b, p. 44). ["The tendency to simplify the consonantal system is visible in yet another process, widespread in various dialects, namely, the loss of the opposition between two series of alveolar affricates, in other words, the identification of *č* with *ć* and *dž* with *đ*"].

[38] See Voiceless alveolo-palatal affricate, n.d. and Serbo-Croatian phonology, 2015.

[39] See especially *Language Forums*, n.d. and Srpski jezik – Vokabular forum, n.d.

in very few points which do not constitute a compact area: neutralisation in favour of the non-palatalised (or less palatalised) segment is recorded in individual villages in Bosnia, Serbia and Kosovo. The authors present the phonological systems devoid of one pair of affricates in the descriptions of only five villages. Pavle Ivić, describing the Ekavian dialects of Serbia, considered the depalatalisation of palatalised affricates to be a characteristic feature of the Timok-Lužnica dialect (e.g. [notʃ] 'night', [medʒa] 'balk') (Ivić, 2001b, p. 155). The opposition is essentially maintained in the neighbouring Serbian Prizren-South Morava dialect (Prizrensko-južnomoravski); instead, according to Ivić, the neutralisation of the opposition [k], [g] vs. [tɕ], [dʑ] takes place, in favour of the palatalised variants before front vowels. The merging of affricates and the consolidation of the uniform, semi-palatalised pronunciation occur also in various places of the Serbian Kosovo-Resava dialectal area (Ivić, 1994, p. 222).

Thus, the analysis suggests that there is a south-western area (the so-called Western Balkans), not particularly compact, where the phenomenon of the depalatalisation of affricates is the most intense. The opposition is preserved in Bulgarian, in which it is supported by the elaborate correlation of consonantal palatalisation. The structure of the consonantal system of Bulgarian is different: only one type of affricates occurs in the native material – slightly palatalised /tʃ/, /dʒ/, which are not included in the correlation. In standard Bulgarian, palatalised /c/, /ɟ/ occur mainly in foreign words and have a low frequency whereas the less palatalised allophones of velars occur before front vowels (a stronger palatalisation occurs in the east, where it usually leads to the neutralisation of the opposition /c/, /ɟ/ vs. /k/, /g/ before front vowels).

Summing up, it should be assumed that the depalatalisation of palatal affricates is one of the phonetic features characteristic of the central area of the Balkan Sprachbund. It seems that (despite fundamental differences) parallels can be found with the related processes in Greek, but not with those in Bulgarian, whose consonantal system is saturated with palatality.

As far as Slavic languages are concerned, the depalatalisation of affricates can be considered as part of a more extensive process, namely, the gradual limitation (proceeding over centuries) of palatality (both as a phonological and combinatory feature). This process is partly responsible for the aforementioned division into eastern and western Balkan phonetics (see Chapter 1). As can be seen, in the south-west of the Slavic region, referred to in this study as the central area of Balkan phonetics, the process continues at the dialectal and colloquial levels, leading to the removal of palatal affricates from the phonetics of a given language. This is what happened a long time ago in Slovenian and it is happening now in Croatian and in the central Balkan area – in the southern dialects of Serbian, in Macedonian and Albanian dialects. The process is most advanced in Macedonian dialects, in which the phenomenon also affects other palatalised consonants. This is most evident in the case of /ɲ/, which is disappearing from certain posi-

tions and is being replaced with /n/. This applies to the word-final position, e.g. the forms which are common at present are *кон* [kon] 'horse' (Serb. *konj* [koɲ]) – the former description of the phonetics and phonology of Macedonian (Savicka & Spasov, 1997, p. 82) reported the occurrence of the following variant forms: [kon] and [koɲ]. Before a vowel, [ɲ] is rare. The limitation of palatality also takes place through the reduction of the degree of palatality. This applies to the iota, which is often lowered and elided when it occurs between vowels or after a vowel and before a consonant or word-finally after /i/. This applies also to [ʎ], which has a tendency to depalatalisation. This is also connected with a very low token frequency of all palatalised consonant segments except the iota. As is often the case, the phenomenon of depalatalisation interacts with other Balkan phenomena. When it comes to the unstable occurrence of the iota, Macedonian dialects undoubtedly manifest affinity with neighbouring Greek phenomena – especially the loss of the iota before a front vowel (which took place also in Bulgarian). In Macedonian and in Greek dialects, the instability in the pronunciation of the intervocalic iota is maintained due to the simultaneous formation of an analogous transient between the first vowel and the second front vowel. In this way, e.g. /oje/ changes into /oe/, and every /oe/ can be pronounced as [oʲe]. Pronunciation options are transferred to other contexts, with a back vowel in the second position, where (theoretically) the occurrence/lack of the iota has a phonological value (for details, see Savicka et al., 2021).

9. LENITION IN BALKAN LANGUAGES

The most frequent type of lenition which occurs in the histories of many languages of the world is fricativisation and the elimination of intervocalic voiced occlusives. This phenomenon is also observed in the histories of Balkan languages.

In Greek, voiced occlusives changed into the corresponding fricatives in most positions. The restriction on the occurrence of voiced occlusives between vowels is maintained to this day in standard Greek and in most southern Greek dialects. In some dialects, new voiced stops were created in the intervocalic position as a result of the simplification of the cluster "nasal sonorant + stop", in which the nasal sonorant was eliminated.

Also in the history of Albanian there occurred the lenition of voiced intervocalic occlusives, which disappeared in this position, e.g. *pyll* 'forest' < Latin *padulem*, *mjek* 'physician' < 'medicus', *djall* 'devil' < *diabolus*, etc. Currently, however, voiced occlusives can occur in this position in standard Albanian and in all Albanian dialects (except for Arbëresh, see below). Although there are occasional examples of later lenitions in Italian borrowings (*periudhë* 'period', *adhuroj* 'I love'), they may come from Italian lenitions (in Italian dialects, lenitions of voiced occlusives, especially /d/, are current).[40]

Fricativisations of intervocalic voiced occlusives as well as voicing of the voiceless ones are observed in Italian dialects. Moreover, in the languages referred to here as "Mediterranean", there are a number of lenitions which are current, which, together with the tendency to open syllables, gave rise to postulating the Mediterranean phonotactic type (cf. Chapter 2).

Lenitions of various sounds are current in the Balkans today. A particular concentration of these phenomena is undoubtedly present in Macedonian dialects. Lenitions of intervocalic and initial consonants are also frequent in Greek.

The phenomenon of lenition in Slavic languages is mainly associated with the change of [g] into [ɣ] in the Upper Sorbian-Czech-Slovak-Ukrainian-Belarusian area. On the other hand, in the Slavic perspective, the weakest consonant is [x], which is often substituted. This consonant is also weak in Balkan languages. It is often lost, especially in Macedonian, Serbian and Albanian.

The history and dialectology of Greek and Macedonian abound in the lenitions of intervocalic consonants, leading to the creation of numerous vowel

[40] The least frequent to undergo lenition is [b], which, on the other hand, is sometimes prenasalised, e.g. Calabrian [rimbresjun] < *repressione* 'repression', [mbjɑtu] < *beato* 'blessed'.

groups, although there are simultaneous processes which remove vowel groups, such as (1) diphthongisations, often preceded by a heightening of mid vowels, sometimes leading to monophthongisation (e.g. Peloponnesian [apiδea] 'pear tree' > [apiδia] > [apiδja] > [apiδja], [paleos] 'old' > [palios] > [paljos] > [paʎjos] > [paʎos], [voiθa] 'help!' > [vojθa], [δio] 'two' > [djo] > [dʝo], [elea] 'olive' > [elia] > [elja] > [eʎja] > [eʎa]); (2) liquidations of the hiatus through the insertion of intervocalic consonants, especially glides and fricatives (e.g. [akuo] '(I) hear' > [akuγo]; less frequently (3) contractions (cf. Newton, 1972, Chapter 2: "Vowel Sequences" and Chapter 3: "Secondary Hiatus"). The source of the original hiatus would mostly be Old Greek vowel combinations, some of which have not been preserved ([ai], [oi] > [e], [i], [au], [eu] > [av]/[af], [ev]/[ef]). The groups [ia], [ea], [eia], [io], [eio], [eo], [uo], [ae] have been preserved in standard Greek (Newton, 1972, pp. 28–29). The source of the secondary hiatus are the later lenitions of voiced intervocalic consonants (mainly [v], [γ], [δ] and the iota, and in some dialects also liquid sonorants and [s]). Contractions, which are a current phenomenon, occur mainly on strong morphological boundaries (with juncture value), but inside prosodic words (according to Greek terminology, these are word boundaries), e.g. *τα αδερφια* 'brothers', *το αλλο* 'different', *του ορφανου* 'orphan' gen. sg. are most often pronounced as: [taderfça], [talo], [torfanu]. Within a stress-bearing word, two identical vowels which were created as a result of the disappearance of an intervocalic consonant typically do not contract. Which groups undergo contraction depends on the quality of the vowels which constitute the group, and also on whether the "dominant" vowel is part of the clitic or the host word of the prosodic unit. For the vowels of northern Greek dialects, a special "hierarchy of domination" has been established (Hatzidakis, 1905), which, however, is sometimes questioned. The systematisation is complicated by the heightening of the mid unstressed vowels in northern dialects, as a consequence of which the results of contraction are not as clear and regular as in other dialects (Newton, 1972, p. 45).[41]

In terms of the occurrence of the processes mentioned above, Greek dialects differ significantly.

As for the occurrence of the phenomena discussed, the Greek dialects of Aegean Macedonia, and the northern Greek dialects in general, do not differ particularly from other Greek dialects. It even seems that the south-east of Greece is characterised by the greatest number of vowel groups. There is, however, one phenomenon that is especially common in the northern dialects and that has influenced the phonetics of Macedonian and Bulgarian dialects –

[41] In addition, a phenomenon characteristic of Aegean Macedonia (also Thessaly and Thrace) is the contraction of the group [ea] into broad [aᵉ], [æ] (Newton transcribes it as [ä], e.g. [milea] 'apple tree' > [milä] – elsewhere usually [milia], [miʎa]). In parts of Macedonia, there occur also vowels usually marked as [ö] and [ü], which developed from the fronting of [o] and [u] in a vowel group after [i] and [e], and also [j]. This is the case, for example, in Velvendos in western Macedonia (a rich literature on this subject is provided by Newton, 1972, pp. 48–49).

the disappearance of the intervocalic or initial iota before the front vowel. The iota that undergoes reduction can be of various origins (from /i/ or from /ɣ/), e.g. [laeɲ] < *λαγενι* 'south', [paiδa] < *παγιδα* 'trap').

As far as the Slavic languages are concerned, the weakest consonant in most dialects is [x]. However, its status is stable in standard Slavic languages. The only exception is standard Macedonian, in which [x] occurs only in a few loanwords. Native words do not have [x] – it has been lost or substituted. In addition, Macedonian dialects are also characterised by other lenitions, absent in other Slavic languages – lenition or loss of [d], less often [g], and the loss of [j] and [v] in a number of positions. As a result of intervocalic lenitions, vowel groups are extremely frequent in standard Macedonian and in Macedonian dialects (despite the fact that, alongside lenition processes, there occur the processes which eliminate the hiatus – contractions, diphthongisation and the elimination of the hiatus by the insertion of a consonant). The consonants most frequently used to eliminate the hiatus are [j] and [v] (which, if etymological, often undergo lenition).

The weakest position for [x] in Macedonian dialects (and also for other consonants that are lost) is the intervocalic position and the initial position before the vowel. In almost all Macedonian dialects, [x] is lost in these positions. On the other hand, before the consonant and in the word-final position, [x] is often preserved or substituted. In eastern dialects, it is preserved in these positions on a regular basis, e.g. [greota] 'sin', but [grex] 'sin', [vikaxme] '(we) cried out'. A palatal variety of [x] often occurs in analogous positions as a result of progressive assimilation, e.g. [piçme] '(we) drank'. Unmotivated [ç] (or, perhaps, motivated by analogy) occurs mainly word-finally and before the consonant, e.g. [beraç] '(I) collected' alongside [metox] '(I) put', [minax] '(I) passed'. At the same time, in the same dialects, there are examples with the complete loss of [x] in the intervocalic position, e.g. [snaa] 'daughter-in-law', [mua] 'fly'.

In the easternmost Macedonian dialects (outside the Republic of North Macedonia), [x] is preserved in all positions, and even the range of its occurrence increases due to the dissimilation in the cluster [ʃʧ], [stʃ], e.g. [extʃe] 'little hedgehog' (from *еж*), [noxtʃe] 'small knife' (from *нож*) (eastern Aegean Macedonia).

In the very east of North Macedonia a transitional stage of the loss of [x] was observed, i.e. the lenition to its voiced counterpart, e.g. [piγna] '(he) drank', [meγmet] 'Mehmed' alongside [piina] (the village of Berovo). The same realisations also occurred in the village of Elešnica (Pirin Macedonia in Bulgaria): [pekoγme] '(we) baked', [sekoγme] '(we) cut' alongside [peko:me], [seko:me], alongside the forms which preserved [x], and the forms with substitution: [kijna] '(he) sneezed', [pijme] '(we) drank', [nofti] 'nails'.

Such reflexes are probably transitional stages of the process of eliminating [x] and substitution: [γ] – lenition; a trace of the old [x] in the form of

compensatory lengthening – the next stage of lenition; [ç] – the transition into iota?

In the west of the Macedonian-speaking area, **x* is usually substituted by [f], e.g. [pif] '(I) drank', [siromafʧe] 'poor man'. Substitutions other than by [f] are sporadic, irregular, or related to individual lexemes. In the northernmost part of North Macedonia, substitutions by [j] and [v] are more frequent, probably under the influence of neighbouring Serbian, e.g. [prvut] 'dandruff', [dijanija] 'breaths'.

The loss of [x] is also characteristic of many Serbian dialects, but unlike in Macedonian (and Albanian), [x] is never substituted by [f] in these dialects, e.g. Prizren-Timok [streja] 'thatch' (Peco, 1991). The most frequent Serbian substitutions are [j], [v], [k] or there is no substitution, i.e. the hiatus resulting from the loss of /x/ is not filled in (for more details on the geographical distribution of the substitutions of **x* see Savicka & Cihnerska, 2018, maps 5 and 7).

In Macedonian dialects in Albania, [x] is often preserved in the south. In the Prespa area, [x] is preserved mainly in the word-initial position, e.g. [xrana] 'food, nourishment', [xubavo] 'beautiful', but in the word-final position [straf] 'fear', [gluf] 'deaf', and between vowels [suvi] 'dry', [uvoto] 'ear'; in several villages, [x] is optionally preserved, e.g. [iʎada] and [çiʎada] 'thousand', [raneme] '(we) feed' and [xranea] '(they) fed'; in several other villages of the region, [x] is lost more consistently, e.g. [uba] (< [xubava]) 'beautiful', [straf] 'fear', [siromaf] 'poor man', [rekoa] '(they) said'. In some villages, there are optional forms [straf] and [strax]. The main substitution, as everywhere in the west, is [f]. In the more northerly Macedonian villages in Albania, [x] is lost or substituted with greater consistency in all positions. The substitution in the word-final position and before the consonant is [f] and in other positions, it is [v], e.g. in the Golobrdo region: [ubo] 'beautiful', [lebot] 'bread', [suvo] 'dry', [orafme] '(we) ploughed', [graf] 'beans', [grafʧe] 'beans', [gravot] det. 'beans' and [graoi] pl. 'beans'.

Despite the clear difference between standard Macedonian and standard Bulgarian, the situation in the Bulgarian and Macedonian dialects is basically similar. There are cases of the loss of [x] in all Bulgarian dialects. The differences probably concern the frequency of occurrence of the phenomenon. The only Bulgarian dialects in which [x] is consistently preserved in every position are the Rhodope dialects and the Sliven dialect. On the other hand, the complete loss is observed in some western dialects, especially those which are referred to as transitional in the Bulgarian dialectological tradition (i.e. transitional between Bulgarian and Serbian, cf. [mə] 'moss', [gre] 'sin', etc.). In most Bulgarian dialects, [x] is lost in the word-initial position and between vowels. In some eastern dialects, the word-final [x] is sometimes substituted with [f], [w] or [j] (Stoĭkov, 2002, p. 215).

Somewhat different generalisations can be made on the basis of atlases. Although the atlas data cannot show the scope of the phenomenon because they concern selected words, they jointly provide some insight. In the *BDA* (2001),

the relevant maps are those from 132 to 141. They show that [x] is preserved in the word-initial position and between vowels in south-eastern Bulgaria (where, as in Macedonian dialects, voiced and palatal varieties also occur). The scope of the preservation of [x] in the word-final position is much wider – it covers almost all of Bulgaria.

Standard Serbian also contains [x], which is not true about its dialects, especially the southern ones.[42] As far as the problem under discussion is concerned, the Serbian dialectal area is associated with those dialects in which [x] has completely disappeared. [x] does not occur in Kosovo-Resava, Smederevo-Vršac, Prizren-Timok, and not in Šumadija-Vojvodina dialects, and is also rare even in the Ikavian Posava dialects. In the Shtokavian dialects outside Serbia, [x] is sometimes preserved – for example, in western Montenegro. In Eastern Herzegovinian, [x] also disappears, but much less consistently. Here, a certain parallel to Macedonian can be seen in the substitutions, which demonstrate that the strong position for [x] was at the end of the word or before a consonant. The substitutions are velar stops, e.g. [dodʑok] '(I) came', [ŋig] 'their', [grag] 'beans' (Ivić, 2001, p. 180). In Shtokavian dialects, [x] is most often substituted by [j] or [v], i.e. by fricative sonorants – natural fillers of the hiatus, natural transitions. On the other hand, the most frequent Macedonian substitution is [f], which is the weakest fricative. The area characterised by the substitution of [x] by [f] in the word-final position and before the consonant borders the area in which [x] is preserved only in these positions. This type of substitution/lenition can be considered as a transitional stage, leading to the complete loss; the preservation of the consonant in this position is probably guaranteed by morphonology.

The substitution of [x] by [f] is also typical of the Albanian language. Even in standard Albanian, [x] before the consonant [t] is often substituted in this way, e.g. *njoh* '(I) know' but *njoftim* 'knowledge'. In *Atlasi* (2007), [x] is presented on maps 21, 114, 115, 116, 117. The complete absence of [x] is recorded at several points along the border with North Macedonia in the area of Dibër and Ohrid, and in the south of Albania. In the intervocalic position [x] is absent or very weak in a large area of southern Albania, and also in the Albanian dialects in North Macedonia, especially around the great lakes and to the north along the state border with Albania, and also in isolated places in the Tetovo region, e.g. [laem]/[laˣem] *lahem* 'I wash myself'. The loss of [x] before the consonant (e.g. in *ndihmë* [ndime] 'help') pertains to a larger area – with some exceptions, it affects almost the entire Albanian-speaking area. In the area where Gheg is spoken, including Macedonia, there are isolated places where [x] in this position is substituted by [f] ([nifəm]/[nifm] '(we) know'). Word-finally (e.g. in *shoh* 'I am looking'), [x] was lost in the south of Albania, and in central Albania and in Macedonia it was replaced by [f]. Generally speaking, [x] (with varied articulation) is

[42] This is probably the result of the language reform implemented by Vuk Karadžić.

preserved mainly in the northern Gheg dialects (which is related to the situation in the neighbouring Montenegro) and in a small area in the very south, mainly in Chameria in Greece. [x] is disappearing over a large area throughout central Albania and in North Macedonia. However *Dialektologjia shqiptare* (Gjinari, 1988) indicates only three small regions in southern Albania where [x] does not occur at all: around Berat, Korça and Devoll. According to Gjinari, in two places (Kolonjë and Dangëllia in Përmet), [x] occurs exclusively word-initially. However, in the Kavajë region (central Albania), new sounds occur: [x] and [γ] (originating from /θ/ and /δ/).

The change of [x] into [f] before [t] is a characteristic feature of the Gheg dialect as used in the north (*i ftoft* 'cold' – standard *i ftohtë*). In the word-final position, [x] is preserved unchanged in the north (Gjinari, 1988, p. 61). The Macedonian change of [x] into [f] may be an independent process, although undoubtedly, the neighbourhood of the Gheg dialect may sustain this process or influence the choice of a substitute. It seems that the scope of the change of [x] into [f] in standard Macedonian is wider than what the spelling would indicate. Verb forms such as *бевме* 'we were', *видевме* 'we saw' are pronounced as [befme], [videfme], although, generally, devoicing does not occur in these positions. It is possible that in this case there is a direct change of [x] into [f].

In Greek dialects, [x] is stable. Additionally, palatalised variants, voiced and voiceless, originate also from the iota, e.g. [kluvia] 'cages' > [kluvja] > [kluvʝa], [kupia] 'oars' > [kupja] > [kupça] (in some Greek dialects, these phones undergo further changes – they change into occlusives or front fricatives).

The loss of /x/ is considered to be one of the main Balkan features in the area of phonetics. However, in the central area of the Balkans (as well as in the south of the Apennine Peninsula), we also observe the lenitions of other sounds.

In Macedonia, the lenitions of /d/ and /g/ are quite typical, even though they are not regular.

The lenitions of [d] between vowels are not recorded everywhere (which does not mean that they do not actually occur in a given dialect), e.g. *дадов* [daof] '(I) gave', *јаду* [jaj] 'eat!', *одам* [o:m] 'I am leaving' (Macedonian village of Dihovo). They are quite richly represented in dialectal texts. This lenition is more intense in the south-western part of the Macedonian dialectal area, including Macedonian dialects in Albania, e.g. in the Prespa area: [oji] < [odi] 'go', [sejte] < [sedite] '(you) sit', [jame], [jajme] < [jadime] 'we eat'. In Gora, [d] is usually lost after [j]: [najeʃ] < [najdeʃ] 'you will find', [dojem] < [dojdem] 'I'll come'. Even in the easternmost Macedonian dialects, several forms are observed in which [d] is lost, e.g. [guveo] 'bovine', [ograata] 'fencing', [cia] 'I will go' (< *ќе уда*), [dia] 'that I will go' (< *да уда*).

Lenitions of /d/ occur throughout the Macedonian-speaking language area, but they are much more frequent in the west than in the east, where they occur sporadically (for more details concerning the geographical distribution, see Savicka & Cihnerska, 2018).

Lenitions of [g] are less frequent. They occur in the same area as the lenitions of [d], e.g. [koa] (< [koga]) 'when', [nekoaʃ] 'once', [sea] (< [sega]) 'now'.

Occasionally, other consonants in the intervocalic position are also lost in some words in the entire Macedonian-speaking area, e.g. [pre:ʧit] < [preseʧit] 'cut through', [nemojt] < [ne moʒit] 'not possible', [preje] < [preɟe] 'spins (thread)', [zejgo] < [zemi go] 'take him', [izlejʃ] < [izleziʃ] 'you will come out', [kojʧka] < [koziʧka] 'little goat'.

Also the lenitions of [v] are characteristic of Macedonia. Similar to other lenitions, the loss of [v] between vowels is observed much more frequently in the western part of the Macedonian dialectal area, e.g. [gojdo] < [govedo] 'bovine', [bijoł]/[bioł] < [bivoł] 'buffalo', [połojna] < [połovina] 'half'.

In Macedonian dialects in Albania, [v] is the consonant which is the most frequently elided one in the intervocalic position, e.g. [lastoicite] < [lastovicite] 'swallows', [praeno] < [praveno] 'made', [prajeme] < [praveme] 'we make', [ʧoek] 'man', [glata] < [glavata] 'head'. In the word-final position, [v] is usually replaced by [f], e.g. [albanskof] 'Albanian'; of course, it is also replaced by [f] in the cluster **xv*, which is a well-known and common phenomenon in Macedonian dialects, e.g. [zafaʃtaʃe] '(they) embraced, caught', [fərlime] '(we) throw'.

In Macedonian dialects, the loss of [v] is also frequent in consonant clusters, especially after a consonant, and, of course, in suffixes [(v)ski], [st(v)o], e.g. [dor] < [dvor] 'yard', [zatori] < [zatvori] 'close!', [sak] < [svak] 'everyone', [nador] < [nadvor] 'to the yard'. In the south-east (in Aegean Macedonia), the loss of the word-initial and intervocalic [v] is observed only before labial vowels, e.g. [oda] < [voda] 'water', [prau] < [pravo] 'straight'; the transitional stage of the loss is also observed – [ʷoda], [ʷujko] 'uncle'. A similar phenomenon also occurs in Bulgarian dialects: [v] is lost before labial vowels in eastern Bulgaria and in a small area around the town of Gotse Delchev, directly adjacent to the Ser and Drama region in Aegean Macedonia, where [v] does not occur in this position, either.

In the neighbouring Serbian Prizren-Timok dialects, [v] is lost between vowels. Lenitions are also often observed in consonant clusters, e.g. [stori] < [stvori] '(he) did', [ostai] < [ostavi] '(he) left', [ropsto] < [ropstvo] 'slavery' (Ivić, 2001, p. 152).

As far as Albanian is concerned, at present, regular lenition affects only /g/ and it occurs in the Arbëresh dialect in Italy, e.g. *rruga* [Ruɣa] 'street'.

In present-day Greek dialects, a number of consonants undergo lenition. In the intervocalic position, as well as word-initially before a vowel, the hiatus is sometimes filled with a different consonant. Although voiced stops in many Greek dialects do not occur between vowels as a result of ancient lenitions, fricatives become weakened. In south-eastern dialects, lenition affects /v/, /ð/, /ɣ/, e.g. *φοβος* 'fear' > [foos], *ποδι* 'foot' > [poi], *λιγο* 'small' > [llio] (Cypriot Greek). Newly formed vowel groups with high vowels do not undergo diphthongisation, which may indicate that the process is likely to be

recent. Outside Cyprus, lenitions of voiced fricatives also occur, but are not regular – they occur sporadically, e.g. [ðʝaulus] 'devil' (Macedonia).

The hiatus is sometimes filled with other consonants, usually [v] or [ɣ], and before the front vowel – [j], e.g. [traɣuði] 'song' > [trauði] > [travuði], and vice versa: [perivoli] 'garden' > [periɣoli], [eɣo] 'I' > [eo] > [evo]. Such kinds of exchanges occur throughout the central Balkan area as well as in Italian dialects. These are ongoing processes. Consonants undergo lenition in the intervocalic position, and then the hiatus is filled in (or eliminated in another way: through diphthongisation or contractions). Also sonorants, especially the palatalised ones, undergo shifts, replacements and lenitions. There occur changes of [ɬ] into [w] and even the loss of [r].

In Albanian, the following alternations occur: [ʎ] ~ [ɲ] ~ [j], [c]/[t͡c] ~ [j] (e.g. *miqtë* 'friends' > [mijt], (Labëria and Chameria), standard *punoj* 'I work', older and dialectal [punoɲ], etc.

Another lenition is the loss of the iota. Unlike other lenition processes, the loss of the iota concerns almost all Macedonian dialects. It is lost fairly regularly before front vowels (this is mainly the intervocalic position and the word-initial position) and after [i], e.g. [ezero] 'lake', [spi] 'sleep!', [zmia] 'viper', [pie] 'drinks', [zaeno] 'together'. The iota, on the other hand, is sometimes used to fill in the hiatus before back vowels, e.g. [seja] < [sega] 'now'. The iota is lost somewhat less regularly in the dialects of Aegean Macedonia, and it is best preserved in the north-western part of North Macedonia, especially in Gora dialects, e.g. [ena] < [jena] 'one'; in Gora, after [u] there occur substitutions by [v], e.g. [svuva] < [svoja] 'her own', [muva] < [moja] 'my'.

In the Macedonian dialects in Greece, the iota is lost before front vowels; in other parts of the Macedonian-speaking area, the range of the loss of the iota is wider. The iota is often lost also in other intervocalic contexts, not only before front vowels, [brojam] > [bro:m] 'I am counting', [stojam] > [sto:m] 'I am standing', [pojas] > [poas] 'belt'. In Pirin Macedonia, the loss of the iota before the consonant is also associated with the progressive palatalisation of velar sounds, e.g. [maca] < [majka] 'mother', [ucu] < [vujko] 'uncle'.

Before word-initial front vowels and in the intervocalic position, the iota is lost fairly regularly in standard Macedonian and Bulgarian. At the same time, however, the transition between vowels is realised by a gentle formant transition. Thus, in the intervocalic position, the iota may appear secondarily as an occasional strengthening of the transition. As a result, forms with the more or less strongly articulated intervocalic iota may appear in pronunciation alongside forms without the intervocalic iota.

In Serbian dialects, the iota is well preserved. Lenitions are observed only in the Prizren-Timok dialects, directly adjacent to Macedonian ones, e.g. [svoju] > [svou] 'her own', [sejal] > [seal] '(he) sowed', [jede] > [ede] 'them' (Ivić, 2001a, p. 152). Thus, both the occasional loss of the iota in the southern parts of the Serbian area and the preservation of the iota in the northern parts

of the Macedonian area can be associated with language contact between Macedonian and Serbian.

The iota in Greek dialects behaves the same as in Macedonian. The loss of the iota after a vowel and before a front vowel or word-initially is most common in the northern Greek dialects, but it is not completely consistent, which results in similar options as in Macedonian (VjV ~ VV, or jV- ~ V-). In Greek dialects in Macedonia, the iota is lost before front vowels irrespective of its origin (from /i/ or from /ɣ/), but this sometimes depends on whether the following vowel is stressed or not, as in western Macedonia: [ilo] < [jelo] < [ɣelo] 'laughter' [jelasa] alongside [elasa] '(he) laughed', [aeras]/[ajeras] 'air'. In Greek dialects in Macedonia, the most common are forms with a weak, not fully articulated iota, such as [ʲelasa]. Apart from the forms with the lenition of the iota in the intervocalic position before a front vowel, there are often forms with the liquidation of the hiatus (through the insertion of a consonant or diphthongisation), e.g. [piɣene] > [piʝene] > [pijene] > [pijini] > [piini] > [pijni] 'go'.

The areal connection with the Macedonian and Bulgarian lenitions of the iota seems obvious, and Greek is the likely donor of this feature.

As a result of numerous lenitions in the Macedonian-speaking area, vowel groups become very frequent in texts.[43] As the majority of lenitions are concentrated in the western part of the Macedonian dialectal area, the frequency of vowel groups can be expected to be higher in the west than in the east. This is not the case, however, because the processes that eliminate the hiatus (consonant insertions, vowel contractions, diphthongisations of groups) operate simultaneously, which more or less equalises the frequency across the entire area (cf. Savicka & Cihnerska, 2018).

Lenitions are common processes which occur in various languages either as regular (one-time or ongoing, repeated) phenomena or as individual, incidental phenomena. Nevertheless, it seems that the range of occurrence of lenition and related phenomena in the central linguistic area of the Balkans entitles us to consider lenition as a phonetic Balkanism.

[43] Even standard Macedonian is characterised by a very high frequency of vowel groups, several times higher than in other Balkan Slavic languages, and in comparison with the languages that have preserved Proto-Slavic consonant prostheses – the frequency is almost a hundred times higher (Korytowska & Sawicka, 2007).

10. ON THE BUFFER CONSONANT[44]

In Slavic languages, there are rare examples in which non-etymological occlusives are inserted into the consonant group between the sibilant and the sonorant, e.g. the Czech *stříbro* 'silver'. These are single, isolated examples. Equally rare are the non-etymological nasal sonorants preceding occlusives, e.g. the Czech *angrešt* 'gooseberry'. However, this phenomenon is widespread in the central area of the Balkans. It is most frequent in Macedonian dialects, where it is associated with an analogous phenomenon in northern Greek dialects.

In northern Greek dialects, the buffer stop (referred to as the "buffer consonant" by Brian Newton, 1972) occurs mainly in groups consisting of a fricative and a sonorant, and in groups consisting of two sonorants, e.g. [elusa] (as a result of the reduction of unstressed high vowels) > [elsa] > [eltsa] > [eʦa] '(I) washed'; [θeʎis] (as a result of the reduction of unstressed high vowels) > [θeʎs] > [θeʎts] > [θeʎʦ] '(you) want'; [pukamiso] > [pkamsu] > [pkampsu] 'shirt'; [mulari] > [mlar] > [mblar] (and then, as a result of the simplification of the clusters "nasal sonorant + voiced stop") > [blar]) 'mule'; [xamomilo] > [xamomlu] > [xamomblu] 'camomile' (cf. Newton, 1972, p. 209).

In Macedonian dialects, this phenomenon became common over a large area in the groups *sr*, *zr*, which changed into *str*, *zdr*, despite the fact that similar clusters in Slavic are typically simplified (e.g. *stn*, *zdn* > *sn*, *zn*: common South Slavic [bolest] 'illness' but adj. fem. [bolesna], [mast] 'fat' – adj. fem. [masna], etc.). The change of the etymological *sr*, *zr* into *str*, *zdr* occurs in almost all of Aegean Macedonia, in Pirin Macedonia and in the area encompassing more than half of the Republic of North Macedonia – the entire southwest, e.g. [strebro] 'silver', [streda] 'Wednesday', [zdreł] 'mature', [ʒdrebe] 'foal', [streca] 'happiness', [stramota] 'shame' (Vidoeski, 1998, 1999a, 1999b, 2000a). This phenomenon does not occur in the north-eastern part of North Macedonia and in the narrow northern band, where, however, options sometimes occur. The transition of [sr] into [str] is also observed in all Macedonian dialects in Albania, e.g. [strjeda] 'Wednesday', [nestreca] 'misfortune', [stram] 'shame', [stramota] 'shame', [strecata] 'luck' (cf. Steinke & Ylli, 2007, 2008, 2010, Sobolev & Novik, 2013).

The transition *sr*, *zr* into *str*, *zdr* also occurs in some Bulgarian dialects (in a restricted area in the vicinity of Sofia, Dupnitsa, Harmanli), e.g. [stram] 'shame', [streʃtu] 'fortunately', [strəkavi] (= *с ръкави*) 'with sleeves', [bezdrabota]

[44] Based on Sawicka, 2018, 2021a, and others.

'unemployment' (Stoĭkov, 2002, p. 218), as well as in the Shtokavian dialects, mainly in Bosnia (according to data from *Fonološki opisi*, 1981).

As a result of the change of *sr*, *zr* into *str*, *zdr*, a functional equivalence of both these groups must have occurred in the past, entailing the impression that since each *sr*, *zr* is equivalent to *str*, *zdr*, the change of the etymological *str*, *zdr* into *sr*, *zr* is another manifestation of the same phenomenon. Such a state was observed in the Macedonian village of Zvečan (e.g. [sesra] 'sister', [srina] 'aunt', [zravje] 'health') and in the village of Peštani (e.g. [sraf] 'fear', [sraʒa] 'guard') and in the very south of Bulgaria, in the Rup dialects, e.g. [srax] 'fear', [sriʒba] 'haircut', [zraf] 'healthy'.

The clusters "sonorant + sibilant", most often [łz], [łʒ], [rz], [rʒ], constitute another context for the buffer stop in Macedonian. The addition of a stop produces an affricate, e.g. [mołʤit] ([mołzit] > [mołʤit] > [mołʤit]) '(he) is milking', [sołʤi] 'tears', [ołʤitsa] 'teaspoon', [berʤa] 'quickly'. The same examples are observed in Macedonian dialects in Albania, e.g. [sołʤi], sometimes alongside [sołzi], [mołʤime] '(we) are milking', [izmołʤiʃ] '(you) are milking' alongside [izmołza] '(he) milked', [mołzeʃe] '(he) was milking', [nejʤino] 'her'.

In Albanian dialects, the buffer consonant became widespread only in the clusters *ml*, *mr*, e.g. [zəmbra] 'heart', [embri] 'name', [numbri] 'number' (standard forms: *zëmra*, *emri*, *numri*). The Albanian situation exerted a direct influence on the Macedonian dialects in southern Albania, where the same changes were observed: [mbleko] 'milk', [mbravja]/[mravje] 'ant', [mbramor]/[mramor] 'marble', [mbłado] 'young' (the village of Boboščica, based on Ivić, 1981). These are, however, older examples. In more recent recordings (Steinke & Ylli, 2007), such examples do not occur, although the authors also cite nineteenth-century materials, in which we find, for instance, [umbren] 'dead', [umbre] 'died'. Albanian examples also come mainly from an earlier period – they were observed in southern Albania and in the Arbëresh dialects in Italy. At present, the secondary cluster *mbr* is observed only in a dozen or so villages in southern Albania, for instance in Korça, in the immediate vicinity of Boboščica (*numburoj*, *numbroɲ*, *nəmbroɲ*, *nəmbroç*, *ðəmbroɲ*, *ðəmbəroɲ* = *numëroj* 'I am numbering', cf. Atlasi, 2008, map 628). Examples of these are also found in the southern Italian dialects in which we find a clearer reference to the Balkans, e.g. Calabrian [pensa] > [pentsa] > [pentsa] '(he) thinks', *Alfonso* > [alfondzu] 'Alfons', [sregolato] > [zdregolatu] 'unregulated' (examples from D'Andrea, 1886), [mbrenna] < [merenda] 'snack, afternoon tea' (Abruzzo). Similar examples are found even in the Iberian Peninsula, e.g. *humeru* > *(h)ombro* 'arm', *femina* > *hembra* 'woman', *tremulare* > *temblar* 'tremble'.

It seems that the mechanisms of phonetic convergence consist not only in the unification of equivalent (phonetically similar) segments, but also in the copying of whole structures, not necessarily identical, but structurally similar. In this case, the copied elements are consonant clusters with a specific structure – in contact languages the phenomenon of the buffer stop did not

always apply to exactly the same clusters.[45] In this situation, it is difficult to identify the donor language.

In one instance, however, the direct influence of Greek is certainly unequivocal. This is the preservation of the nasality originating from the Proto-Slavic nasal vowels not only before occlusives (as is the case in many Macedonian villages in Greece, see Chapter 7), but also before etymological fricatives, which then, in combination with the inserted stop, underwent affricatisation. This was only possible in places where the "buffer consonant" appeared. Nasality has been preserved in a large part of Macedonian dialects in Aegean Macedonia in the position before occlusives and basically only there, evidently under the influence of Greek. However, in a few villages, the phenomenon has a wider range and it occurred also before fricatives. This happened just because of the buffer occlusive, e.g. **męso* > [mensu] > [mentsu] > [mentsu] 'meat', **gǫsь* > [gəns] > [gənts] > [gənʦ] 'goose', [məntʃ] 'man', [indzik]/[endzik] 'tongue' (mainly eastern and central Aegean Macedonia). This phenomenon is quite limited in range, it occurs in those clusters of Macedonian villages in Greece in which nasality before occlusives has been preserved, but in a much smaller number of villages. Apart from the area east of Thessaloniki, it also occurs in the area of Kastoria (for details, see Duma, 1991; Illich-Svitych, 1962; Velcheva, 1979). In a similar way, thanks to an inserted consonant, in several south-western villages of Aegean Macedonia and Vardar Macedonia, the groups of "nasal consonant + spirant" developed, in which the nasal consonant does not originate from the Old Slavic nasal vowel, e.g. [brondza] 'bronze', [mendza] 'canteen', [bendzin] 'petrol', [dontsigu] (= *донеси го*) 'bring him'.

A phenomenon related to the buffer consonant is the addition of a nasal sonorant before every occlusive, especially a voiced one, which seems to be a Greek influence and a result of the functional equivalence of the groups "nasal sonorant + occlusive" and single voiced occlusives (cf. Chapter 6). In such a situation, it is legitimate to ask whether the preservation of the nasality originating from Proto-Slavic nasal vowels is, in fact, a direct continuation of Slavic nasality or whether this nasality is a more recent addition, only accidentally coinciding with the former state. Perhaps a proper reconstruction would be as follows: *ṼD/T > VD/T > VND/T? Most likely, however, the Greek influence exerted an influence during the loss of nasality in Slavic dialects and in some contexts, it inhibited the loss. This is evidenced by the fact that most etymological voiced occlusives in Macedonian dialects did not acquire pre-nasalisation, and Slavic nasality was preserved not only before voiced stops but also before voiceless ones (cf. Chapter 7).

Affricatisations resulting from the insertion of a stop (and, therefore, occlusion) are extremely frequent in Macedonian dialects and they also concern consonant clusters other than those that usually evoke the occurrence

[45] On the other hand, the very fact of inserting an occlusive into a cluster is probably motivated by some natural preferences related to the rhythmic structure of a language.

of the "buffer consonant". The clusters *ps*, *pš* often change into *pc*, *pč*. As far as these phenomena are related, the transition phase *pts*, *ptš* should be assumed. This transition takes place throughout the area where Macedonian dialects are spoken, also in Albania, e.g. [ptʃenitsa] 'wheat', [ptsi] 'dogs', [ptsałtir] 'psalter' [teptsija] 'pot', [ptseta] 'dogs'.

The same phenomenon includes simplified forms of these clusters, not especially characteristic of Slavic languages,[46] which occur in several Macedonian villages, e.g. [tʃenica] 'wheat', [tsi] 'dogs', [tsuvisa] 'curse', [tsałtir] 'psalter'.

The change from *ps* to *pc* also occurs in a large, relatively compact area where Serbian dialects are spoken – it extends in a wide belt from Kosovo to the vicinity of Belgrade; it also occurs in the very south of Montenegro. This phenomenon does not occur in the north of Serbia, in the west and east along the border with Bulgaria (based on Ivić, 1981).

What speaks against the relationship between the phenomena discussed above with the phenomenon of the "buffer consonant" is their different range and the fact that the first element of the cluster is an occlusive (the context which, although possible, is not typical for inserting a "buffer consonant"), as well as the undoubted relationship of the change of *ps*, *pš* into *pc*, *pč* and *ts*, *tš* into *tc*, *tč* with other affricatisations common in Macedonian dialects in contexts of a different kind. On the other hand, affricatisation is a common effect of the insertion of a buffer occlusive in Greek dialects as well.

An analogous change of *ts*, *tš* into *tc*, *tč* was observed mainly in western Macedonian dialects (not in all of them), mostly on strong morphological boundaries, e.g. [otsega] > [ottsega] 'from now', [nadzira] > [naddzira] '(he) oversees', [nadʒiveja] > [naddʒiveja] '(they) survived', [odzadi] > [oddzadi]. This is somewhat reminiscent of the assimilation known in standard varieties of Slavic languages, in which the first segment of the consonant cluster undergoes affricatisation (the same examples in standard Macedonian are pronounced as [otssega], [nadzzira], [odzzadi]). In all the villages where the second segment of the consonant cluster is affricated, there are also examples without affricatisation.

As for the latter affricatisations, as mentioned above, they seem connected with other affricatisations, frequent in Macedonian dialects (in the absence of a structural relationship with the "buffer consonant") – when the spirant in the first position in the cluster undergoes affricatisation, e.g. [tskara] 'grill', [tʃkoła] 'school', [bugartsci] 'Bulgarian', [ʒentsci] 'feminine', also in Albania: [sełtsci] 'rural', [turtsko] 'Turkish'. All the villages where these kinds of affricatisation occur are southern locations and most of them are in Aegean Macedonia (cf. also the affricatisations of *z* and *ž*, generally common in Mace-

[46] Clusters consisting of two occlusives (including affricates) and an occlusive with a fricative in the second position belong to the least frequent clusters in Slavic languages, cf. very frequent simplifications of such clusters, e.g. frequent Shtokavian *tica* 'bird' (< *ptica*), *ćerka* 'daughter' (< *kćerka*), *čenica*, *šenica* 'wheat', etc.

donian, in various contexts, not only in consonantal clusters). Also in Greek dialects, *s* and *z* are often affricated, although in this case there is no territorial connection with Macedonia. According to Newton, this phenomenon occurs in south-eastern dialects, in which, moreover, we observe more phonetic parallels with Macedonia (Newton, 1972, p. 92). It is possible, however, that this knowledge is the result of a better description of the south-eastern Greek dialects than the Greek dialects of Macedonia.

It should be mentioned at this point that both Greek and Albanian are among those very few European languages in which consonant clusters consisting of two occlusives are frequent. Probably for this reason, the groups that are regularly simplified in other Macedonian dialects are preserved in the Macedonian dialects of the Albanian-speaking area, e.g. [noʃtni straʒa] 'night watch', or [edna] 'one'. The forms which are regular in Macedonian dialects are [noʃni], [ena]. The closeness of Greek may also aid the aforementioned affricatisations.

Conclusion: As a result of the above mentioned phenomena, there have emerged a huge number of optional forms and a huge number of clusters with a nasal sonorant and a homorganic stop, and in many Slavic, Greek and Albanian dialects they started to behave as single phonemes equivalent to single stops (in colloquial Greek) or single nasal sonorants (in colloquial northern Albanian). Thus, the Balkan specificity consists in the functional equivalence of the etymological phonetic form and the form changed under the influence of dialects in contact. As a result, we often observe an absolutely unmotivated emergence of similar clusters, as, for example, Albanian [amberika] 'America', [aspirind] 'aspirin', Slavic [juŋguslavija] 'Yugoslavia', etc. In the general central Balkan dialectal perspective, the clusters "nasal sonorant + stop" function as facultative (or sometimes combinatory) allophones of single stops, and this is due to Greek. The same can be said about the clusters with and without the "buffer consonant".

Some people, depending on the dialectal background, automatically simplify the clusters in question, others do just the opposite – they add the nasal sonorant or the buffer consonant. They do not even hear the difference. As a proof, consider the following situations: years ago in Sofia, a Greek suggested that we should meet in [grandina]. What he had in mind was Bulgarian *градина* [gradina] 'garden'. In the famous Bulgarian film *Whose Is This Song?*, a Greek musician calls the great violinist Paganini: [paŋganini]. But the most convincing material comes from Polish. In an Albanian manuscript from the very beginning of the 19th century, written in the original Todhri alphabet, *The Notebook of Simon Kazanxhiu* (for details, see Elsie, 2017; Karasiński & Sawicka, 2018), a short list of Polish words (230 words) has been identified. The author did not know Polish, he just listened to a Polish speaker during his visit to Poland and wrote down the words. Among them, there are two words with the buffer consonant – forms that he could not have heard during his journey to Poland. The first one is: *mbliko* [mbʎiko] 'milk' (the present-day

standard form is *mleko*). The possible explanation is that he contaminated the form heard in Poland [mʎiko] with the Slavic form [mbleko], known to him from southern Albania, where he had spent some time. The second word is *zdrobiç* [zdrobiʧ] 'to make', with the typical Macedonian change of *zr* into *zdr*. He could have heard this word neither in Poland (where it exists only in the form [zrobiʨ]), nor in Albania or Macedonia, where this verb does not exist (putting aside *работа* 'work'). Thus, the only explanation is that he treated [zr] and [zdr] as equivalent and possibly was not even conscious of the phonetic difference. The phenomenon could have been known to him also from Slavic dialects of Southern Albania, where this change is common.

These changes are currently receding. Both in Macedonian and Albanian dialects, forms with the prenasalisation of stops and with a stop inserted in the middle of the consonant cluster are rarely observed. The same examples recorded in the first half of the 20th century and earlier were supplemented with the added consonants in question. This constitutes further evidence of the equivalence of the etymological contexts under discussion which changed under the influence of the phenomenon in question. If these contexts were not equivalent, the withdrawal of the changes would not have occurred. This also proves that the identification of phonological units is based on morphonology.

11. PROSODIC ISSUES

When it comes to word stress, the Balkans are very diverse. The rules for stress placement differ, and the physical determinant of prominence is not the same everywhere. On the other hand, in the central area (Macedonian-Albanian-Greek) there are clear convergences, despite the formally different principles of stress placement.

There are two ways in which word prominence is manifested physically in the Balkans. The first is tonic accent, involving manipulations of the pitch of the voice. Moreover, the so-called rising and falling[47] intonation has a distinctive function. This is the case in most of the Shtokavian area, where, moreover, stress can fall on either long or short vowels.[48] This area is related to the area of the Slovenian language, which does not have Balkan features. In the remaining area of the Balkans, stress is implemented by lengthening the vowel. This feature is sometimes contextually modified: initial syllables are strengthened, and final syllables (especially open ones) are intensely lengthened. Thus, the decisive factor is the duration ratio between the stressed syllable and the non-initial pre-stress syllable, and the non-final post-stress syllable. Overall, the rule is that the first long syllable in a word is stressed.

In all Balkan languages except Macedonian, stress is regulated on the morphological plane. This means that stress is related to a particular morpheme, not to a syllable. Generally, stress is movable, however, a clear tendency can be observed for stress to stabilise on the same morpheme, especially in nominal inflection. Stress is determined on phonetic principles only in standard Macedonian, where stress falls on the third syllable from the end of the word.

All of these stress systems involve exceptions. Influences from other planes occur commonly. For instance, in standard Serbian, the restriction concerning stressing the last syllable is of phonetic nature. On the other hand, the fact that stress is no longer shifted to proclitics[49] is an influence from the morphological plane; similarly, the disappearance of the so-called

---

[47] In fact, both are rising, but in falling intonation, F0 rises and falls in the same syllable, and in rising intonation, the fall occurs in the next syllable, which is why these kinds of stress cannot occur in the final syllable (consequently, single-syllable words cannot have rising stress).

[48] This is why four kinds of stress are distinguished in the Serbian and Croatian linguistic tradition: short rising, short falling, long rising and long falling.

[49] It is the lexeme, not a phonetically defined word, that becomes the unit for which stress is determined.

akcentski celosti in Macedonian[50] occurs under the influence of morphological factors. The requirements of maintaining a particular rhythm of speech also influence the way in which the dominant stress rule is implemented.

In addition, between the areas characterised by various types of word stress, there are huge transitional areas, for example, in southern Serbia and parts of eastern Serbia there are no longer tonal differences, and stress is probably also realised by lengthening (stress in these dialects has never been experimentally tested). It is assumed that stress in the Prizren-Timok dialects is the same as in Bulgarian, and that the Kosovo-Resava dialects have a tonic stress without the rise/fall opposition.

The Macedonian dialectal area is a small universe that reflects the situation in the entire Balkans.

Macedonian dialects can be roughly divided into those where the place of stress is determined on morphemes (eastern dialects) and those where stress placement is determined on a given syllable (counted from the end of the word). In many dialects with "morphological" stress, there is a strongly marked tendency for place of stress to stabilise in paradigms of nominal inflection. In verbal inflection, stress is mobile, probably because stress placement has distinctive functions, e.g. [v'ikax], [vik'a], [vik'aa] – aorist 'call, shout' (1 person sg., 2, 3 person sg., 3 person pl.) vs. [vik'ax] [v'ika], [v'ikaa] – imperfectum, while in nominal inflection, stress is often consistently stable, e.g. [ʧov'ek] 'man', [ʧov'eko] det., [ʧov'etsci] pl., [ʧov'etsite] pl. det. (examples come from the village of Radoviš). In addition, there is a significant area where stress on the last open syllable is restricted (the area encompassing central Aegean Macedonia and the neighbouring villages in Vardar Macedonia). However, in every village there are a number of exceptions to this rule, which mainly concern stress in verbal forms, mainly aorist and foreign words [vik'a] 'called', [dojd'e] 'came' (Radoviš). In addition, Ser and Drama dialects (eastern Aegean Macedonia) are distinguished by such a strong secondary stress that researchers found it necessary to include this fact in the language description (Vidoeski, 2000a). In this area, double stress is regular in four-syllable words and in longer ones, e.g. [g'əsiɲ'itsa] 'caterpillar', [gr'adov'eto] 'cities', [ł'astuvʲ'itsa] 'swallow', [b'ivoʎ'itsa] 'buffalo', etc. Secondary stress also occurs in other Macedonian dialects, but it is rare and limited to certain morphological categories.

Dialects with "phonetic" stress cover two-thirds of the territory of the Republic of North Macedonia – the western part. We divide them into those with the predominance of proparoxytonesis and those with the predominant paroxytonesis. In fact, proparoxytonesis encompasses proparoxytonesis and

[50] *Акцентска целост* 'stress unit', among others, refers to two stress-bearing words which are combined into one word and, following the Macedonian rule for stress placement, become stressed on the third syllable from the end of the word, e.g. *кисел'а вода* instead *к'исела в'ода* 'soda water'.

paroxytonesis,[51] where paroxytonesis is a manifestation of imperfection or obsolescence of the processes governing stress placement. It occurs mainly in those words in which phonetic changes have led to the reduction of one of the final three syllables. Most often, it is the loss of the intervocalic vowel and changes in the resulting vowel group (merging into one vowel or the diphthongisation of the group), e.g. [trud'ojna] < [trud'ovina] 'work', [bogor'ojʦa] < [bogor'oditsa] 'Mother of God'. The north-western part of Macedonia is distinguished in this respect because the principle of stressing the antepenult seems more consistent in this area, also in the case of syllable reduction due to vowel contraction or desyllabification of one of the vowels in the group. Another manifestation of the weakness of the system regulating stress placement on the third syllable from the end of a word is the incomplete mobility of stress in prosodic words containing clitics. Stress shifts are not always consistent. Stress shifts related to attaching clitics often depend on the morphological category of the clitic, e.g. stress is shifted in prosodic words containing pronominal clitics (e.g. [dones'ete gi] 'bring them', [ʃto m'i ideʃ] 'what are you going for', but it does not shift to prepositions, e.g. [na g'osti] 'as guests', [na p'azar] 'to the market' – the village Ljubanci). In the village of Lazaropole, the situation is opposite: there are forms ['ot ʦrkof] 'from the church', [v'o voda] 'in water', but stress is not shifted in constructions with pronominal and verbal clitics, e.g. [me z'ede] 'took from me', [si d'oʃoł] 'you came', unless the clitic is in postposition, e.g. [v'ikni go] 'call him', [vikn'ite go] 'call him' (plural). Stress is always shifted in structures with a negation particle, e.g. [ne beʃ'e doʃoł] '(he) did not come', [ne g'o vikna] '(he) did not call him'. In the west, nominal groups usually have one stress on the third syllable counting from the end of a word, e.g. [presn'o mleko] 'fresh milk', similar to the forms with clitics in postposition, e.g. [brat'uʧed mi] 'my cousin', [bratuʧ'edi mi] 'my cousins'.

In principle, paroxytonic stress occurs outside the Republic of North Macedonia. Paroxytonesis occurs consistently around Korça in Albania.

In the western part of Aegean Macedonia (and a small section in south-central Vardar Macedonia) there is also free stress, but with a strong tendency to stabilise on the penultimate syllable, e.g. [g'ołup] 'pigeon', [guł'ombi] 'pigeons', [ʧ'ovek] 'man', [ʧov'eʦi] 'people'. On the other hand, there also occurs the phenomenon of some morphemes attracting stress, mainly suffixes (which is chiefly characteristic of the Albanian language), e.g. [maʧar'ok] 'little tomcat', [guvend'ar] 'shepherd', or the stabilisation of stress in lexemes with a specific morphological structure in certain Macedonian dialects, such as the antepenultimate stress in words containing the suffix *-ov* – ['oftʃovo] '(related to) sheep', [d'ambuva] '(made of) oak'.

---

[51] Macedonian dialectologists define paroxytonesis as distinguishing the third mora from the end of a word. This is justified only when a long vowel occurs in one of the last two syllables, e.g. [g'oto:] < [gotovo] 'ready', but for a large number of dialects this is true only from the historical perspective, because paroxytonesis very often occurs in words in which the last two syllables (vowels) are short.

Each type of stress in Macedonian dialects is related to stress types in the neighbouring areas. The morphologically regulated stress covers the eastern part and connects to the territory of Bulgaria with the same type of stress.

On the other hand, there is a clear typological boundary between the north-western part of Macedonia (with antepenult) and Serbian stress type. None of the Serbian dialects has a stress stabilised on a particular syllable.

To sum up: roughly one third of North Macedonia (the eastern part) and almost all of Aegean Macedonia are characterised by free stress. In the western part of Aegean Macedonia (and in the neighbouring villages in Vardar Macedonia), there is a clear tendency for stress to stabilise on the penultimate syllable. On the other hand, in the east of Aegean Macedonia and in the neighbouring large area of Bulgaria, there are dialects with double stress (for more details and more precise locations, see Savicka & Cyhnerska, 2018).

Thus, Macedonian dialects make use of almost all types of stress found in the Balkans. Moreover, even in the standard language with proparoxitonic stress, around 20% of lexis is stressed on a particular morpheme, not on a particular syllable. At the same time, stress in standard Macedonian and in western dialects, along with stress in Greek and Albanian, is one of the specific features of the central area of the Balkan Sprachbund.

In both Greek and Albanian, word stress also falls on one of the last three syllables, although the rules for selecting the stressed syllable differ. It is not possible to determine unequivocally the plane on which this choice is made in either of these two languages.

In most Macedonian dialects (western and central ones), it is the phonetic plane (a specific syllable of a prosodic word is chosen), but there are a number of exceptions, most often regarding the principle of stress shifting connected with attaching clitics. This is the result of the fact that it is not unequivocally clear whether the stress unit is a prosodic word or a lexeme. In the east of this area, stress placement is related to the morphological structure of the word, but there are also cases in which the phonetic plane intervenes (this applies in particular to the restrictions on stressing certain syllables).

In Albanian, stress is most often placed on the last syllable of the stem, but there are also a number of exceptions; most often they are related to the fact that many suffixes attract stress, e.g. *punët'or* 'worker', *sport'ist* 'athlete'. In inflectional paradigms, stress is stabilised on a particular morpheme. In Gheg dialects, paroxytonic stress often occurs in words in which southern, Tosk dialects have oxytonesis (this especially applies to words borrowed from Turkish), e.g. *xh'ami* vs. *xham'i* 'mosque'.

Also in Greek, stress is related to a particular morpheme, but there are a number of restrictions related to the fact that only one of the last three syllables of a word can be stressed. This fact (together with other factors) promotes the mobility of stress in the paradigm, despite clear stabilisation tendencies (for instance, in verb conjugation, stress tends to stabilise on the third syllable counting from the end of a word, not on a particular morpheme). Changes

in stress placement are caused not only by attaching inflectional endings, but also by attaching clitic morphemes.

The occurrence of the so-called columnar stress is characteristic of Greek dialects in Aegean Macedonia. This is initial stress that developed as a reaction to very long feet (the distance between the prominent syllables), i.e. in words longer than three syllables, usually with paroxytonic stress (e.g. ['exas'ami] '(we) lost').[52] The further development of such words was threefold: (1) both stress types have been preserved, (2) the original (movable) stress has been preserved, (3) the initial stress has been preserved. According to Ch. Tzitzilis and M. Margariti-Ronga (personal communication), the columnar stress (i.e. the preservation of both stresses or only the secondary columnar stress) is essentially characteristic of almost all of Aegean Macedonia, although other options also occur. It is positively confirmed for the region of Kastoria (Papanastasiou & Papadamou, 2013). A similar effect is caused in most Greek dialects by joining an enclitic, for example, if the host word has proparoxytonic stress, then after joining the clitic form of a personal pronoun, it receives an additional stress on the last syllable, e.g. the phrases *σκοτωσε τον* 'kill him', *το αλογο μου* 'my horse' are usually pronounced [sk'otos'eton], [t'aloɣ'omu].

As already mentioned, a similar double word stress was also found in some Macedonian dialects in Aegean Macedonia. Such strong secondary stress was observed in the Macedonian dialects of the Drama and Ser regions. Double stress is regular in four-syllable words and in longer ones, e.g. [g'əsiɲ'itsa] 'caterpillar'; in Pirin Macedonia it is quite frequent even in three-syllable words, e.g. [kl'aden'ec] 'well', [k'azvam'e] '(we) speak'. Double stress also occurs in Bulgarian dialects in a large area of south-west Bulgaria, in the western Rup dialects (in some Rhodope dialects), and in the whole of Pirin Macedonia, e.g. [gr'adov'ete] 'cities', [s'inov'ete] 'sons' (BDA, 2001, maps A 51, 32 and 55). Both Stoĭkov and Alexander describe this prosodic type as involving two main stresses in a word (Alexander, 2004; Stoĭkov, 2002, p. 224). The reasons for the occurrence of the phenomenon of double stress are obvious: the linguistic rhythm requires the rhythmic stressing of certain syllables (the phenomenon of isochronism), which are separated from each other by similar periods of time (separated by a similar number of syllables). Convergence with Greek dialects also seems beyond doubt. According to Alexander (1995), the columnar stress is certainly an areal phenomenon. The phenomenon of double stress has a very rich literature in Bulgarian linguistics (cf. Kolev, 2004, where the views of Bulgarian linguists on this subject are collected). Among the reasons for such a state of affairs considered by Kolev (2004), two deserve serious treatment in our opinion (and they are not mutually exclusive). The first is the Greek influence and the second is the transitional stage between the morphologically regulated stress and the stabilisation of stress on a specific syllable. It is also

[52] The full paradigm of this form is as follows: 1 sg. ['exasa], 2 sg. ['exasis], 3 sg. ['exasi(n)], 1 pl. ['exas'ami], 2 pl. ['exas'eti], 3 pl. ['exasan].

believed that in the mid-19th century the area with double stress was larger and that now it is evidently shrinking.

Double stress even occurs in the north-east of Bulgaria, however, it is not the same as in the areas adjacent to the Greek and Macedonian regions with double stress. Therefore, Ronelle Alexander (2004) distinguishes two main systems with double stress: (1) double stress with two main stresses, the placement of which is determined by the syllabic rhythm (south-western Bulgaria) – most examples are expressions with every second syllable stressed; (2) secondary stress, which is associated with specific morphological forms (certain clitics) included in the prosodic word. This type occurs in different variants across Bulgaria and has nothing to do with the type of double stress discussed here (for example, in many dialects, including the common standard, if a clitic is preceded by a negation particle, then this clitic is stressed: [ne g'o pozn'avam] 'I don't know him'; in Erkech in north-eastern Bulgaria, the article receives additional stress, e.g. [d'oktorit'e] 'doctors'.

Thus, in general, in Macedonian, Greek and Albanian, as well as in the local Aromanian dialects, stress placement is limited to the last three syllables, even though the stress rules are of different kinds. In the case of the rules of a morphological nature, there is almost always a strong interference from the phonetic plane, which definitely dominates in the south-western and central Macedonian dialects. The interference from the phonetic plane is also clearly visible in Greek dialects. It is also observed in Albanian. The morphological principle of stress is dominant in the eastern part of the Macedonian language area; however, it is there that double stress is indisputably observed, which is also the result of the phonetic influence. It is difficult to assess whether the phenomena discussed are manifestations of the process of departing from stressing a particular morpheme in favour of stressing a specific syllable.

Summing up, we find Macedonian-Greek-Albanian areal relations in the western part of the central area of the Balkan Sprachbund in terms of word stress, but also Macedonian-Bulgarian-Greek relations in the eastern part of this area. The Macedonian-Bulgarian relations concern the dialects in which stress placement is regulated on the morphological plane. In a significant number of these dialects, there is a tendency to stabilise the place of stress, especially in nominal inflection paradigms. In addition, stressing the word-final open syllable is often avoided.

On the other hand, in most of the territory of the Republic of North Macedonia (western and central parts), stress is regulated on the phonetic plane – it is mainly paroxytonic and proparoxytonic stress. The remaining Macedonian-speaking areas are characterised by a similar placement of stress in the word, although decisions may come from different planes. In any case, the difference between phonetically regulated stress and morphologically regulated stress is not clearly delineated, because in each type there are interferences, often significant ones, from a different plane. Only around Korça in Albania and in the neighbouring Albanian dialects, the mechanism of paroxytonesis seems to be in operation

and works consistently, which is manifested in the shift of stress when two syllables are contracted (when a consonant is lost due to lenition and a vowel group transforms into a single vowel), and in more consistent stress shifts connected with the joining of proclitics and enclitics.

Thus, in summary, the dialects of western and central Vardar Macedonia, Greek, Aromanian and Albanian dialects represent a similar stress type, even though the mechanisms for regulating stress placement are not identical. Compare:

> македонскиот е поблизок до неговите соседни несловенски балкански јазици, т.е. албански, влашки и грчки [than to Bulgarian – I. S.], имено поместувањето на клитики пред глаголот и појава на третосложниот акцент. Овие две појави можеме да ги споиме. Во грчкиот и влашкиот постојат правила според кои акцентот не може да паѓа по далеку од третиот слог од крајот на зборот, додека во албанскиот јазик склоноста на акцентот да паѓа на последниот слог на основата доведува до фактичко ограничување на акцентот на последните три слога. (Friedman, 2011, p. 101)[53]

R. Alexander (1995) and V. Friedman (2011) believe that limiting stress to the last three syllables of a word probably caused clitics to be moved from the end of the phrase, or from the second position in the phrase, before the stress-bearing word.

In prosody, certain tendencies in sentence intonation are also characteristic of this region. First of all, there is the weakening of the final fall in affirmative sentences and other "terminated" utterances. We often hear incomplete final fall, progredience or even weak final rise. Such types of affirmative intonation have been observed in Macedonian, Albanian and Greek (cf. Sawicka, 1991a). It is difficult to assess whether this is a characteristic feature of the region, but even if it is not, this type of intonation can be heard more often here than in other Slavic areas. At least to my ears (I am not a native speaker of any of these languages) affirmative statements with this intonation sound like questions, which sometimes leads to confusion.

There are also parallels between colloquial Greek and colloquial Macedonian, as well as Albanian and Serbian, in the intonation of certain types of non-terminated phrases. Namely, in closed questions ("yes-no" questions), there occur both final fall and final rise (while in West Slavic languages there is only final rise in this type of questions, and in East Slavic languages, including Bulgarian – only final fall).

---

[53] "[…] Macedonian is more closely related to its non-Slavic Balkan neighbours, i.e. to Albanian, Aromanian and Greek [than to Bulgarian – I. S.], because of the shifting of clitics before the verb and the occurrence of the antepenultimate stress. These two phenomena can be linked together. In Greek and Aromanian, there are rules according to which stress cannot fall on a syllable before the third syllable from the end of a word, while in Albanian the tendency to stress the last syllable of the stem effectively limits stress placement to the last three syllables."

In Balkan languages, in short questions, the choice of intonation at the end of a question may be related to the morphological composition of the question (lack or presence of interrogative morphemes) (cf. Lehiste & Ivić, 1980; Ivić & Lehiste, 1963–1972; Sawicka, 1991b; Sawicka, 1991c).

12. SYLLABLE STRUCTURES IN THE BALKANS[54]

Syllabic structures in the Balkans are a feature worth mentioning here, although the syllable structures of individual Balkan languages are subject to universal tendencies that aim at achieving the so-called one-peak syllable rather than to areal convergence processes. A one-peak syllable is a structure in which the order of individual segments is consistent with the so-called sonority scale, i.e. in a one-peak syllable, the successive segments form the sonority line low-high-low (rising and then falling).[55] A one-peak syllable is an optimal structure due to its acoustic properties and it is more stable than a two-peak syllable. It is characterised by a rising and falling inherent sonority of consecutive segments, forming the sonority line without distortions; it is easy to produce and does not disturb the natural rhythm. It is an optimal and most common structure.

The same phenomena in the development of the syllable are repeated in the languages of the world: the loss of the final consonants (open syllables are formed in this way), reductions of unstressed vowels (closed syllables and two-peak syllables are formed), simplifications and reformulations of consonant clusters, syllabifications of sonorants, vowel insertions (one-peak syllables are formed). Most of the Balkan dialects have passed through the stage of the reduction of unstressed vowels, the formation of two-peak syllables, and a return to the one-peak syllable model. The great diversity of Balkan syllabic structures results from the fact that individual dialects are at different stages of this development. Due to the syllable problem, the Balkans are particularly interesting, because rare structures can be found in this area and there are enclaves which still represent residual transitional phases.

In the Balkans, several models of the syllable can be distinguished with regard to the way in which the sonority scale is respected in the distribution of the segments in the syllable. In addition, we can distinguish a type that allows closed syllables and a type that favours open syllables.

All Balkan Slavic languages have the so-called one-peak syllable model. It occurs in Macedonian, Serbian, Croatian, Bosnian, Montenegrin and Bulgar-

---

[54] Based on a number of detailed works of mine, cf. especially Sawicka, 1974, 1980, 2005; Sawicka & Dargiel, 2018 and many more.

[55] The most sonorous are vowels, then glides, liquid sonorants, nasal sonorants and the least sonorous are obstruents. Thus, two-peak syllables are those in which there occur initial consonant clusters of a "non-syllabic sonorant + obstruent", final clusters "obstruent + non-syllabic sonorant" and the clusters "obstruent + non-syllabic sonorant + obstruent" in any position in the word.

ian. If a two-peak syllable is formed as a result of the phonetic development, derivation or in loans, then the processes changing it into a one-peak syllable are immediately initiated.

The most common phenomenon that impairs the relative symmetry of the sonority line in a syllable is the loss of short unstressed vowels. Old Slavic had only open syllables. Closed syllables (the two-peak syllables among them) were created as a consequence of the full reductions of extra-short vowels, the so-called jers. The two-peak syllables are most often repaired by syllabification of a sonorants in "wrong" positions, followed by the emergence of a vowel in the place where the etymological vowel was lost or elsewhere in the undesirable cluster or after the cluster, cf. Common Slavic **dobrъ̑* > *dobr* > Serb. and Mac. *добар*, Bulg. *добър* 'good', **mь̑gla* > *mgla* > Serb. and Mac. *магла,* Bulg. *мъгла* 'fog', just as in loanwords where a non-etymological vowel was inserted into the consonant cluster: Serb. and Mac. *литар* 'litre', *реализам* 'realism', Bulg. *литър*, *реализъм*. Other, less common syllable repair phenomena include syllabification of sonorants, simplification of consonant clusters, or metathesis. In the historical perspective, a non-etymological vowel usually emerges from a syllabic sonorant, but in loans it is directly inserted when series of a morphonological nature are created, e.g. in a series of loanwords ending in **-tr* or **-sm*.

Because the secondary vowel in Slavic languages was, in general, the same as the one that developed from the so-called strong jer (which did not undrgo reduction), researchers in Slavic historical grammar long believed that the so-called weak jer also underwent vocalisation in some contexts, e.g. **mь̑gla* – where the jer was in the weak position and should have disappeared – today, there are Serb. *магла* and Bulg. *мъгла*. Only the analysis of the distribution of segments within the syllable and the examination of old texts made it possible to revise this view (see, for example, Ivić, 1974, who provides examples of 14th- and 15th-century texts from the Slavic south without a vowel in similar contexts). The fact that the secondary vowel developed in the same way as the Old Slavic jers in the strong position is not surprising. Both are derived from a short, reduced, central vowel with a poorly defined quality. However, the secondary vowel also developed in the positions in which the jer never occurred, e.g. Common Slavic **dobrъ̑* – Serb. *доб**а**р*, Bulg. *доб**ъ**р*. The development was as follows: the final jer disappears in the weak position in the Old Slavic short form of the adjective **dobrъ̑*. A two-peak syllable is formed, the word becomes monosyllabic. A two-peak syllable makes it difficult to achieve regular rhythm. Over time, there is a return to the pronunciation which satisfies this need – the final sonorant becomes syllabic, the word becomes again two-syllable. A vocalic element emerges from the syllabic form of the sonorant; over time, the vocalic element develops into a distinct, extra-short vowel of the schwa type. In further development, the schwa transforms into a full vowel. In most contexts in Slavic dialects, the secondary vowel developed in the same way as the back jer in the strong position. However,

in most of Macedonian dialects, the secondary vowel developed into [a] and the back jer into [o], e.g. **cъ̊нъ̊* > *сон* 'dream' but **dobrъ̊* > *добар*.

Similar examples are known from other languages: Albanian *teatër* 'theatre' was created in a similar way. In the word *theatrum*, borrowed from Greek via Latin, the word-final consonant disappeared, then short unstressed vowels in some positions were reduced and in some positions they completely disappeared. The form **teatr* was produced as a result. Then, the final sonorant in the two-peak syllable became syllabic and with time, a non-etymological vowel of the schwa type developed, whose quality resembled the etymological reduced vowel *ë*: *teatrum* > *[teatr] > [teatr̩] > [teatᵊr] > [teatər]. Similarly, the acc. sg. form of *motra* 'sister' (< **mater* 'mother') was previously spelled *motërnë*, today's form is *motrën* (*motërnë* > *motrn* > *motrën*). See also various dialectal solutions, in which the quality or position of the inserted vowel is usually motivated not etymologically but only phonetically, such as *tepër/teprë*[56] 'also, too', *katrë/katër/katr* 'four', *hekër/hekur* 'iron', *mjegëll/mjegull* 'fog', *popëll/popull* 'nation', *vetum/vetëm* 'only'. The vowels inserted are the shortest ones – schwa or high vowels – and their value depends on the context; see also the northern Greek dialectal [paterazum] < [paterazm] < [pateras mu] 'my father'.

In this way, the syllable structure regains its desired one-peak form.

A variant of the one-peak syllable is the model with the open syllable, less often closed with a single sonorant. This is the pattern typical of the Mediterranean peninsulas, including some Balkan dialects (see also Chapter 2). This pattern admits only very simple consonant clusters in syllable onsets. The coda usually consists of a vowel, while rare words end in a single consonant, usually a sonorant. Final consonant clusters are extremely rare (they are more frequent in loans), cf. Italian *ovest* 'west'. Such a syllable pattern is characteristic of Greek, Romance Mediterranean languages (standard forms and a large part of dialects), Balkan Romani, and perhaps Aromanian.

Greek words usually end with a vowel, or with [n] or [s] and [n] is usually omitted in colloquial speech. In Grecano (a Greek dialect in southern Italy), the final [s] is also lost.

In Italian and in most of the southern Italian dialects, there occur consistently only open codas. In fluent speech, the loss of the final vowel is possible after a sonorant within a group of words connected by a close syntactic link, which phonetically fuse into one prosodic unit (as *buon giorno* < *buono giorno* 'good morning'). In loans, the pronunciation of final consonants is always precise and final consonants usually end with a small quasi-vocalic segment.

---

[56] In principle, I use italics for orthographic forms or the forms used traditionally (as in the case of Common Slavic forms), whereas present-day phonetic examples are written in various ways: in italics – following the source text, or in phonetic transcription – in the case of my own material.

In principle, most Aromanian dialects should also be included in this syllabic type. Usually, a reduced vowel occurs after the final consonant cf. *sund*^{u} '(they) are', *cânt*^{u} 'when', *ngust*^{u} 'taste', *mpart*^{u} 'divide', *ncarc*^{u} 'load', while Rom. *sînt*, *cînt*, *gust*, *împart*, *încarc*.

Other syllabic types found in the Balkans show some deviations from the one-peak syllable model.

Deviations in the structure of the coda occur in Romanian, where the distribution of nasal sonorants at the end of words does not respect the order required by the sonority model, cf. *malign* 'malignant', *istm* 'isthmus', *ritm* 'rhythm', *sadism* 'sadism', *regn* 'reign'. However, liquids in the same position cannot occur, cf. Rom. *litru* 'litre', *teatru* 'theatre', *titlu* 'title'.

Similar deviations are also observed in Turkish *atawizm* 'atavism', *dinamizm* 'dynamism'. In Turkish dictionaries, one can also find words with final consonant clusters ending with liquids, cf. *fötr* 'felt hat', *monokl* 'monocle', *albatr* 'alabaster', *sömestr* (and *sömester*) 'semester'. These words are usually modified in pronunciation (a vowel is added or inserted).

Deviations in the structure of the onset occur in Albanian and Aromanian and they also concern nasal sonorants, e.g. Albanian *mbret* 'king', *ngushtë* 'tight', *nxënës* [ndʒənəs] 'student', *nga* 'from'. The same happens in local Slavic dialects (*mbleko* 'milk', *mbravja* 'ant'), in the emotionally marked Greek utterances ([mbes epitelus], [ndisu ipa] instead of the "regular" [bes epitelus] 'come in', [disu ipa] 'get dressed'), in Italian dialects (*mpetrunitu* < *inpadronito* 'occupied', *mbrellu* > *ombrello* 'umbrella'), and in numerous Aromanian dialects (*ndreptu* 'in front', *mpartu* 'divide', *ndires* 'business'). Balkan Romani also accepts such onsets, although generally they are not frequent in Romani (mainly in loans, cf. *ngarav* 'I carry', *nderja* 'honour'). In Aromanian, the pronunciation of the initial clusters "nasal consonant + obstruent" is syllabic. Gołąb transcribes such examples as follows: *ᵊndreptu*, *ᵊmpartu*, while the transcription proposed by Dalametra is *'ndreptu, 'mpartu*, *'ndires* (Gołąb, 1984; Dalametra, 1906). Only Papahagi consistently proposes: *ndreptu*, *mpartu* (Papahagi, 1963). The pronunciation of these clusters probably depends on the location of a given dialect – the Greek and Albanian environment favour the non-syllabic pronunciation of nasal sonorants in this position while the geographical context of other Balkan languages bolsters the syllabic pronunciation. For more details on the Greek and Albanian situation, see Chapter 6 (on ND).[57]

Thus, it can be assumed that in the **standard varieties** of Balkan languages, there occur the following variants of the one-peak syllable pattern:

- the symmetrical form of the syllable – all languages except Greek,
- the asymmetrical form of the syllable. Open or relatively open syllables (closed with a sonorant) occur in Greek (and in the neighbouring Italian).

[57] I use the following symbols: C – consonant, V – vowel, S – sonorant, O – obstruent, N – nasal sonorant, L – liquid sonorant, D – voiced stop, T – voiceless stop.

In some languages, nasal sonorants behave distributionally like obstruents:
- word-finally – Romanian (and Turkish),
- word-initially – Albanian, colloquial Greek.

The most interesting situations in the Balkans are those that result from mutual influences – when languages or dialects with a lower linguistic prestige than some other dominant idiom accept phenomena that are foreign to a given language. For example, under Albanian influence, the Macedonian dialects in southern Albania accept the same unusual consonant clusters in the onset, e.g. in the Boboščica dialect [mbleko] 'milk', [mbravja] 'ant'.

However, throughout the Albanian-Greek area, including the local Slavic and Romance dialects, the acceptance of the onset consisting of a nasal sonorant and an occlusive can be considered as an areal feature and an effect of convergence, even though such clusters in these languages have different origins.

In Dalmatia, however, the external language – Italian, probably Ventian (see Sawicka, 2022) – influenced the form of a Croatian dialect (Chakavian) in such a way that the same restrictions as in the Italian language came to determine the structure of Chakavian consonant clusters (and thus syllable onsets and codas) (cf. Moguš, 1977). The changes are as follows:
- the simplification of the coda, e.g. [milo/milos] < *milost* 'mercy', [pe] < *pet* 'five', [riba/ribar] 'fisherman',
- no clusters of two stops, e.g. [vojka] < *voćka* 'fruit', [polkova] < *potkova* 'horseshoe',
- no clusters of a stop and a fricative, e.g. [liʃi] < *lepši* 'prettier'.

It seems that certain distributional restrictions in Spanish and Turkish also result from foreign influences: there are some traces of the restriction on the distribution of the consonant [s] which might be related to Arabic. I am talking here about the fact that the initial clusters of the type "[s] + obstruent" are not tolerated, which is associated with the relatively high sonority of [s],[58] cf. Spanish *espada* 'sword', *escuela* 'school', Turkish colloquial *spor/ıspor/sıpor* 'sport', *sfenks/isfenks* 'sphinx', *istasyon* 'station', *istatistik* 'statistical' where a vowel is added.

In addition to the syllabic structures discussed above, some Greek and Albanian dialects still have vestigial "transitional" syllabic structures. They represent the state after the loss of unstressed vowels, i.e. the phonotactic forms containing two-peak syllables before they were removed.

In some northern Greek dialects, after the loss of high unstressed vowels, two-peak syllables emerged and were accepted ([paterazm] 'my father', [xtipizn] '(they) will beat (somebody)', [alefrʲ kalamciʃ çu] 'cornflour'.[59] Such rare structures can sometimes also be found in Arbëresh, both in Italy (in the regions of Catanzaro and Taranto), and in Greece (cf. [bukr] 'beautiful', [katr] 'four',

[58] Generally, the contrast in sonority between spirants and other obstruents is not relevant to European languages.

[59] The transcription in the source (Margariti-Ronga, 1989) has been changed to the international transcription.

[vogl] 'small' – the standard forms are: *bukur*, *katër*, *vogël*); similarly, in several Italian dialects, e.g. in the dialect of Bari, also in Abruzzo, where forms such as [ʧipr] 'Cyprus' or [sepwolkr] 'grave' are observed.

In the remainder of the chapter, I will present the situation in Albanian dialects, which represent the greatest variety of syllabic structures. Particular attention will be paid to the Albanian dialects in Italy, in which significant changes have been observed over the last fifty years, aiming at eliminating two-peak syllables.[60]

Initial two-peak clusters "nasal sonorant + obstruent" are accepted in standard Albanian and in all Albanian dialects. It is believed that in Gheg dialects, the occlusives in the clusters *mp*, *nt* and *nk* are commonly voiced, while the clusters *mb*, *nd*, *ng* undergo simplification. This opinion is greatly exaggerated. These clusters are sometimes preserved. They are often preserved on certain morphological boundaries without changes in all dialects (e.g. *qenka* admirative 'was', *veçantë* 'special'). Moreover, in Gheg dialects, there are many secondary clusters of this type, the realisations of which depend on the specific phonetic, morphological and prosodic contexts and on the pace of speech. The contexts in question are, for instance, *n'pyll* 'in the forest' or *n'kopsht* 'in the garden'. At a slower delivery, the word-initial *n* is usually pronounced syllabically. At the average pace of speech, the pronunciation is usually connected, but assimilations usually do not occur, which should be treated as an exponent of the morphological boundary. It is difficult to imagine the occurrence of assimilations even in fast speech – then *n'pyll* would be [mbyɫ] or [myɫ], and *n'kopsht* [ŋgopʃt] or even [gopʃt] or [kopʃt]. Thus, in Gheg dialects the clusters with the word-initial nasal sonorant occur in combinations with both voiced and voiceless occlusives, which is important for the structure of the Albanian syllable, because the monophonemic interpretation of these clusters can be considered in the cases where there is the voicing of the occlusive after the nasal sonorant (similarly to southern Greek dialects and to the colloquial variety of standard Greek). In addition, simplifications of the clusters of the type "nasal sonorant + occlusive" also occur in the Tosk dialect, e.g. *mbrëmë* and *prëmë* 'evening', *lindin* and *linin* '(they) were born' in the same Tosk dialect of Leshnja. In Gheg, there are also clusters which are not uniform with respect to the place of articulation e.g. [mʃefʃin] '(they) hid', [mʃtjeR] 'lamb', [msyj] 'attack somebody (mostly verbally)'. In such clusters or in secondary clusters such as [nkosof] *në Kosovë* 'in Kosovo' (examples from the village of Morava e Epërme) the reduction of any segments of the cluster does not usually take place and the pronunciation of each segment is precise.

Thus, all Albanian dialects admit a two-peak syllable onset with a nasal sonorant in a position that disrupts the sonority line. The pronunciation

[60] For details concerning the phenomena and examples presented below, see Sawicka & Dargiel, 2018. This publication also provides further references to sources and more dialectal examples.

of these clusters varies depending on the specific phonetic composition and morphological position, but there are also a number of options. For instance, *m'ka* in [mka bãn] '(he) made me' in Morava e Epërme is usually pronounced fluently as one syllable, despite the perceptible morphological boundary (e.g. in [mka ʃku: nitali] '(he) went to Italy', [taʃ mka ʃku:] '(he) just left'). On the other hand, in the expression *n'kaçanik* 'in Kaçanik' in the same dialect, the preposition creates a separate syllable: [ᵊn katʃanik]. In the records from Shala e Bajgorës (north-western Kosovo), single-consonant proclitics in various contexts are pronounced either syllabically or non-syllabically, e.g. [nᵊ sarã:n] 'in Saranda', [nᵊ Rug] 'in the street', [nᵊ gojə] 'in the mouth' (alongside [nmitrovitѕ] 'in Mitrovica', [nburg] 'in the prison'). The realisation is independent of the ending of the previous word, although it can be seen that in certain contexts the expected realisation prevails, that is, the non-syllabic realisation occurs after the word-final vowel of the previous word, and the syllabic realisation occurs after the final consonant. Also the proclitic *t* (= *të* – the exponent of the grammatical categories of the noun and moods) was more often realised syllabically in Shala e Bajgorës, e.g. [mã tᵊ məɲ] 'younger', [pun tᵊ ʃtetit] 'work for the state', alongside the less frequent realisations of the type [kta jaᵉn ʃum tvarfər] 'they are very poor'.

In Lugu i Drinit të Bardhë (Kosovo), the regular pronunciation of most examples with the initial morpheme *n* or *m* does not include a vowel component, e.g. [jam nkatundin] 'I am in the village', [mfaɾ] 'forgive me', [e kam npoɾitѕi] 'is in the police'. The exceptional examples in which the nasal consonants are syllabic do not suggest a dependency on the context, e.g. [nᵊ ʃkoɬ] 'at school', [e ka ᵊn ʤdo vend] '(they) are in every place', [nᵊ Rug ʦka bõjm] 'what are we to do in the street'.

In the east of Kosovo, however, context seems to play a key role. This means that after the word-final vowel of the previous word, there occur both syllabic and (more often) non-syllabic realisations of the preposition, while after a word-final consonant or after a pause, only syllabic realisations occur (usually in the form of an added weak vocalic element), cf. [nᵊ dreɲitѕən] 'in Drenica', [pər ʃeməɬ nᵊ ʃpi:n e tina] 'for instance in his house', [ʃkijet nᵊ sikur ma kan] 'as if they were Slavs' (pejoratively), [nᵊ maretѕ] 'in Marec'. After a vowel we find primarily non-syllabic realisations, pronounced jointly with the word-final vowel of the previous word, e.g. [eðeˬn taʃti] 'also now', [eˬn dreɲitѕ] 'and in Drenica', [eðeˬn maretѕ] 'and in Marec'. However, in rare examples, after the word-final vowel of the previous word, *n* is realised syllabically: [atje nᵊ daɾ] 'there, if you want', [kur i pa nᵊ dʌʃt] 'when (he) divided', [i ka Ra nᵊ sy] '(she) noticed'. Such a pronunciation of the prepositions is consistent with the realisation of the word-initial clusters of the type "obstruent + liquid" in those dialects in which the realisation depends on the ending of the preceding word. In the case of the non-syllabic pronunciation of the sonorant, it forms a syllable with the word-final vowel of the preceding word.

Syllables consisting of single obstruents occur in all Albanian dialects in Albania and Kosovo (i.e. an occlusive represents the full syllabic structure – onset, nucleus and coda), e.g. *t'bëjmë* 'that we do, let's do', *t'zotët* 'lords, gods', *ç't't'them* 'what am I to tell you' (examples from Leshnja, IUlli & Sobolev, 2002). It is characteristic that also in such examples the voicing of [t] does not always occur, which signals the existence of a strong morphological boundary and suggests syllabic pronunciation of *t*. The apostrophe used in sources in such examples in dialectological records not only marks the morphological boundary, but sometimes may symbolise also the syllabic pronunciation of the preceding consonant, e.g. *t'zotët* – probably [tᵊzotət]. However, numerous clearly non-syllabic realisations are also found and rare records with complete assimilation have been found, too, e.g. *z ban* 'does not do' (Puka) (Topalli, 1974), *d'but* 'soft', (Anadrini) (Pajaziti, 2008), *z'bani* '(you) do not do', *z'dyti* 'second', *d'buta* 'soft', *d'vogla* 'small', *d'gjitha* 'all' (Ana e Malit) (Ahmetaj, 2006).

Proclitics composed of a single obstruent are everywhere more often pronounced non-syllabically regardless of the context, which is understandable in the absence of special restrictions on the combinations of obstruents in this position, e.g. [i kan ba: ata jaᵉt t zi] '(They) beat them up pretty badly' (Morava e Poshtme), [ŋga t peje] 'from the city of Peć', [zot t ʃpije] 'god of the house', [kemi pa:s t mi:r] 'we have done well', [kanun t ʎek dukadʒiɲit] 'Law Code of Lekë Dukagjini', [ʃum eðe t padʒetun] 'still many not found' (Lugu i Drinit të Bardhë). The syllabic pronunciation is rather exceptional, e.g. [i kam tᵊxapun] '(I) opened them', [kanun tᵊ ʎek dukadʒiɲit] 'Law Code of Lekë Dukagjini', [kto tə dyja] 'these two' (Morava e Poshtme).

Initial clusters of the type "liquid + obstruent" are very rare in the Tosk dialect. In the analysed Tosk material, I have found individual occurrences of the clusters of this type, without information whether they occurred after a word-final vowel or a consonant of the previous word: *lçonte* '(he) peeled', alongside *lëpihëshin* 'they licked themselves' in the same dialect – Leshnja (IUlli & Sobolev, 2002), *rpara* 'in front' (Çameria) (Haxhihasani, 1974). By contrast, in most Gheg dialects, initial clusters of this type occur regularly, e.g. *lshon* 'he lets go', *rrxu* [Rʤu] 'fallen', *t'lshoj* 'that I let go', *t'lku:n* 'of leather' (Shala e Bajgorës) (Mulaku, 1968), *ltarin* 'altar' acc. sg. (Luzina) (Beci, 1974), *lgjyr* 'lick', *rrgost* 'rub' (although *livdoj* '(I) praise') (Hasi) (Gosturani, 1975), *lmeza* 'thorns' (Kavaja, Çeliku, 1974), *lshō jm* '(we) let go' (Bujanovc) (Ajeti, 1969), *lpizë* 'lollipops', *lvadhe* 'meadow', *ltar* 'altar', *rrgjosa* '(I) sighed', *i lgushem* 'I am getting wet', *lkura* 'leather' (Mirdita region) (Beci, 1982), *lkuqe* 'red leaves', alongside the forms with secondary vowels: *luvizje* 'movement', *livrua* 'freed' in the same dialect (Rranxhat e Mbishkodrës) (Shkurtaj, 1982), *lshoj* '(I) let go' (Tropoja region) (Gosturani, 1982) and many more such examples from the territory of northern Albania. Almost everywhere, these forms are independent of the context. Many such clusters were observed also in the dialects adjacent to Serbian dialects (Sandžak and Montenegro): *kish me rrnua* '(he) ruined me' (Peshteri) (Mulaku & Bardhi, 1978). Word-initial LO- clusters were observed

in all Albanian dialects, but in more southern areas they were more often observed in the material from the 19th century.

The present-day Gheg material provides many initial clusters of the type "liquid + obstruent", which occur both after the vowel and after the consonant at the end of the preceding word. This means that syllables with a two-peak onset are accepted in most Gheg dialects, cf. [po t ʎʃoj n buna:r] '(I) leave you at the well', [eðe ja kiʃ ʎʃue ɲi ʃpi:] '(he) brought (it) home for her', [i ʎʃue] 'abandoned', [ɲeri mson sa Rnon] 'man learns while he lives', [me Rʤue] 'to fall down'. In the texts from Shala e Bajgorës (western Kosovo – eastern Albania) not a single example was found of the realisation of the cluster [LO-] with an inserted vowel. Insertions of a vowel occur in some other Gheg dialects, e.g. in the Kaçanik dialect, there are both realisations without an inserted vowel: [ʎʃoje] '(you) let go', [me Rʤue] 'to fall down', and (rarely) with the inserted [i]: [ʎikun] 'leather'.

As it seems, in south-eastern Kosovo, insertions of [ə] (or another vowel) in word-initial LO- clusters are context-dependent, similar to the realisations of the proclitics *m* and *n* (see above), e.g. *rrmit* 'digs', with variant forms *ërrmit*, *rrëmit* or *rremit* – depending on the preceding context (Morava e Epërme, Halimi,1978). It seems that the pronunciation with a word-initial non-syllabic sonorant is possible in these dialects after the word-final vowel of the previous word, e.g. *me lshu* 'to let', *m u rrxu* 'to fall'. In the remaining contexts, i.e. after a final consonant or in absolute onset, a word-initial consonant cluster is eliminated in one way or another – in the given dialect, either a word-initial vowel is added or a vowel is inserted in the middle of the initial cluster. In the realisations of the clusters with a lateral sonorant that we recorded in this dialect, they were usually broken up by the full vowel [i], e.g. [krejt ʎikura] 'the skin itself', [ja repi ʎikuren] '(he) skinned him' (significantly, in older records, the forms with the initial cluster [ʎk] are frequent in this word) [ja ʎiʃoe veɲin ja maje si duχet] '(he) left her a seat in front of the room', [i kena ʎivru: krejt arat] '(we) ploughed all the fields', [me ʎikũ:n] 'with skin'. Mehmet Halimi provides several examples of the realisations of the above clusters without an inserted vowel (Halimi, 1978). The lack of a vowel may result from a favourable phonetic environment, and not from the actual admissibility of word-initial two-peak clusters – in almost all the examples I excerpted, the cluster "liquid + obstruent" occurs after a vowel ending the previous word, e.g. [me ʎkũ:n] 'tear out', [e ʎʃune] 'left behind', [m ka ʎʃu:] '(he) set me free'. In a few of the examples recorded, the sonorant was realised syllabically, e.g. [ʎ̩vað] 'meadow', [ʎ̩vaði te guri] 'rocky meadow' (alongside [ʎivaðet] 'meadows'), [me ʎ̩kun] 'with skin'. In the records by Halimi, the apostrophe is used in such cases. In total, a vowel was inserted in about half of the recorded examples with the word-initial cluster lO- ([ʎiC-]), and in several examples, the syllabic [ʎ̩] occurred. The form [ʎC-] with a non-syllabic sonorant occurs after a vowel, and the forms [ʎiC-] and [ʎ̩C-] usually follow a word-final consonant. The realisation is, therefore, motivated by a specific phonetic environment. However, there are also some

variant forms which are not contextually motivated. This is most often due to the generalisation of the cluster with an inserted vowel to other contexts, i.e. the spread of the form with the one-peak syllable, which does not change the fact that this type of two-peak onset (with initial [ʎC-]) after a consonant or pause is not acceptable in the village of Morava e Epërme. Also the realisation of the clusters rrO- and rO- in this dialect depends on the ending of the preceding word, cf. [mu Rʤu: ʎisi] '(I) cut down an oak', [me Rʤu:] 'cut down, fell', [u Rʤova] '(I) fell down'. Apart from [ə], also [e] comes to be inserted into this cluster: *rrëmit* or *rremit*, *errmit, ërremit*. It seems that the one-peak form with an inserted vowel is becoming more common and it occurs in any context. For the structure of the syllable, it is important that initial clusters without an inserted vowel do not occur after the final consonant. This is a context analogous to the context with the cluster OLO within a word, which also needs to be broken up by a vowel.

Thus, it must be assumed that in the Morava e Epërme dialect, unlike as in most Gheg dialects, SO- clusters with a liquid sonorant do not occur in the syllable onset. The occurrences described above most often concern the positions after the final vowel of a proclitic, with which the stress-bearing word forms one prosodic word – in such a situation, the division into syllables does not respect morphological boundaries, e.g. [me Rʤu:] > [meR-ʤu:] 'overturn', [u Rʤova] > [uR-ʤova] '(I) overturned', [m ka ʎʃu:] > [mkaʎ-ʃu:] '(he) set me free'. The situation in the dialect of Morava e Epërme is, therefore, *mutatis mutandis*, similar to that in standard Albanian. What is different in comparison with the standard is that some phonetic phenomena characteristic of the positions inside stress-bearing words also occur on word boundaries, although usually it is a position inside prosodic words (i.e. inside a group of lexemes integrated by common stress).

The situation in the neighbouring Morava e Poshtme is similar, although initial clusters with a lateral sonorant in the first position are more often broken up by the vowel [i]: [ʎiku:r] 'leather', [me ʎiʃu:] 'to set free', [me ʎikũ:n] 'with leather'. Only a few examples of the realisation of the cluster lO- without an inserted vowel were found in the position after the word-final vowel of the preceding word [me ʎkũ:n] 'with leather', [e ʎʃune] 'abandoned'. The form of the word initial clusters rrO- in Morava e Poshtme depends on the ending of the preceding word: [me Rʤu:] 'fall, overturn', [e Rʤune] 'overthrown', but [kan eRnu:] '(they) lied'.

In several villages of the Tetovo region where the word-initial LO- clusters are not accepted, the problem is also solved by adding the prosthetic *ë*, which in this region occurs regardless of the ending of the preceding word: *ërma* 'high up there', *ërrmoj* 'dig', *ërz* 'honour', *ërfundi/ërfujti* 'underneath', or by the insertion of [i]: *liviz* 'to move' (Nesimi, 1987). However, in most of the dialects of the Tetovo region, LO- clusters are acceptable: *lkur* 'leather', *lshoj* 'set free', etc.

In conclusion, most Gheg dialects accept word-initial clusters of the type LO-. Alternative forms sometimes occur, such as *lishoja/lshoja* '(I) set free', *rrmit/ërrmit/rrëmit/rremit* 'digs', etc. Depending on a given dialect, these forms are in complementary distribution, or they are optional forms in a given position, or they are optional forms independent of the context. The clusters of the NO- type are present in all Albanian dialects without any distributional restrictions.

The word-initial position of the sonorant before a consonant is a context analogous to the position of the sonorant between two obstruents. The inserted [ə] thus also breaks the cluster /OSO/. If the sonorant is a nasal occlusive, the insertion is optional; if it is a liquid, the insertion is obligatory, cf. [katərʦin] 'four hundred', [ʃtete tᵊmða] 'large states'. Also in this position, as in the standard variety, nasal sonorants and liquid sonorants behave differently. The nasal sonorant is permissible in this context – its occurrence does not have to result in the creation of an additional syllable, whereas liquid sonorants cannot occur in this position – the sequence of phonemes /OLO/ is modified by adding the vowel [ə], e.g. [mərðim] 'freezing', [i pərditʃum] 'daily', [i mərzitʃəm] 'boring', [vjetərʦina] 'antiquities', [pərpara] 'before', [kərkoe] '(he) asked' (Morava e Poshtme), but [ʎe t mson] 'let (him) teach', [kndena] 'this way' (in some regions realised as [knena], because the non-syllabic /n/ in this position is necessarily very weakened). The phonological status of the added [ə] depends on the particular dialect. In most Gheg dialects, [ə] is inserted before a sonorant in the phonological contexts /OSO/ and in the word-final /-OS/, which are pronounced [OəSO] and [-OəS]. These contexts, together with the word-initial [SəO-], are the only contexts in which this vowel occurs, so it belongs to the combinatory pronunciation of the sonorants.

One-peak syllables occur commonly at the end of words in all dialects of Albania and Kosovo. Final clusters of the type [-OS] are not accepted. Instead, [-OəS] clusters are realised, even if the phoneme /ə/ does not exist in the given dialect.

Thus, in the north, [ə] should be treated as a fragment of the contextual realisation of the sonorant, while in the southern dialects the same pronunciation represents the phonological contexts /OəSO/, /SəO-/, and /-OəS/.

In the Gheg dialects, the non-phonological [ə] is usually found in acc. sg. of the definite forms of the noun (before /n/), in the nom. sg. ending of the words that end with the cluster /-OS/, and in the clusters /OLO/. Because morphological unifications may occur within the paradigm, the vowel *e* may appear instead of the inserted *ë* in accusative. Besides, variant forms are frequent, e.g. in Shala e Bajgorës there are forms such as *lugën* and *lugen* 'spoon' acc. sg. In other case forms, there is usually [e] or there is no vowel at all, which can be regarded as morphonological unification to the accusative form (since [ə] in accusative does not represent an independent phoneme). As a result, there are the forms: *luges* 'spoon' gen. sg., *udhes* 'way' gen. sg. or *lugs*, *udhs* (Shala). The forms **lugës* and **lugn* are not acceptable (they

are systemically excluded). In the first example – because the occurrence of *ë* in the form *lugës* has no motivation and the phoneme /ə/ does not exist. The form *lugn* is not possible because of the two-peak structure that is not accepted in the syllable coda. In turn, due to the influence of analogy in this position (acc. sg.), apart from [ə], [e] appears relatively often, e.g. [uðen]/[uðən] 'way', [ðeʎpen] 'fox', or in some verbal forms, e.g. [erðen] '(they) have come' (Morava e Epërme).

Thus, word-final [-OS] clusters are generally absent in either Gheg or Tosk. However, they are possible in a special context: before the word-initial vowel of the next word, provided that both words are closely related semantically (e.g. as in the nominal group) and are pronounced jointly, e.g. *në gjuhn e vjetër* 'in the old language', *ësht gjysm e dimrit* 'it is half of winter', *për ditn e verës* 'on a day of spring', *ditn e parë* 'on the first day', alongside *ditën e verës*, *ditën e par* (Leshnja) (IUlli & Sobolev, 2002), *djaln e shitur* 'son sold' acc. sg. (Çameria) (Haxhihasani, 1974), *lopn e kuqe* 'red cow' acc. sg. (Rranxhat) (Shkurtaj, 1982), *n rrugn e Shkodërs* 'in the street of Skadar' (Puka) (Topalli, 1974), *n ato kohn e hershem* 'in the old days' (Lugu i Drinit të Bardhë) (Zymberi, 1978). As a result of joint pronunciation, one prosodic word is created and the syllabic structure undergoes reorganisation, e.g. *gjysm e dimrit*: *gjys-me-di-mrit*, *në gjuhn e vjetër*: *në-gjuh-ne-vje-tër*, *n ato kohn e hershem*: *na-to koh-ne her-shem*.

The important fact is that the reduction of [ə] does not take place before the word-initial consonant of the next word. In such a case, the occurrence of the schwa receives the motivation suggested above. This applies to many Albanian dialects.

The fact that some morphological boundaries within prosodic words are phonetically irrelevant is also evidenced by other facts, cf. e.g. the desyllabification of [i] and the formation of a diphthong that occurs on the boundary between words, e.g. *baba͡j vet* 'father himself', *po͡j thon* '(they) ask him' (Puka, Topalli, 1974). As far as phonetics is concerned, the more important boundaries are the boundaries between phonetic phrases and syntactic groups.

In several dialects, including both Gheg and Tosk, sporadic occurrences have been observed of the word-final [-ON] clusters and even [-OL] clusters in the positions in which non-syllabic pronunciation is not justified by context, as well as [OSO] clusters. Such clusters have been observed, *inter alia*, in Lugu i Drinit të Bardhë: [katr θmi:] 'four children', [per d͡zys sobn n naʎt] 'half room upstairs', [bjen n d͡zakn besa] 'besa is made with blood', [katrðet] 'forty', [katrt͡sind] 'four hundred'; cf. also *hudhn* '(they) threw', *metn* '(they) stayed' (Kavaja) (Çeliku, 1974), *iŋgn* (*ikën*) '(they) left', *imn* (*jepnin*) '(they) give', *ishn* '(they) were', *kishn* '(they) had' (the region of Konispol, Chameria) (Muça, 1987). Similar, context-independent endings of syllables/words were recorded in the area of Debar in Macedonia in the final phase of Turkish rule: *dazm* 'wedding', *dhondrr* 'groom', *mats e egr* 'wild cat', *motr* 'sister', *kundr* 'against', *lepr* 'bunny', however, without any information on the pronunci-

ation[61] (Doda, 2007). In the same dialect, there are other combinations of the type *prpar* 'before' in which the segment order is not consistent with the sonority scale. The forms *đarpn* 'snake', *krmbi/krmbaill* 'snail' and similar ones were recorded by Petar Skok near Skopje (Skok, 1978). It is possible that the actual pronunciation was not properly recorded by the researchers, but there are records where we know for sure that two-peak structures actually do exist/ did exist (see below).

The same contexts also appear in Arbëresh (Italo-Albanian). Final two-peak syllables occur most frequently in the acc. sg. form of the definite inflection, where vowel reduction created the *[-On] cluster, and in the nom. sg. of the indefinite inflection, mainly in [-Or/l] clusters. In these positions, a vowel is required. In other case endings, the loss of an unstressed vowel did not create two-peak syllables, therefore, a reformulation of the final syllables is not necessary; as a result, various solutions emerge, e.g. dat. sg. [buks] 'bread', [dits] 'day', etc., but in acc. sg. [bukən] 'bread', [ditən] 'day' (in the dialect of Firmo). More often, however, we find options, as, for example, in Portocannone, where there are the gen. forms [uδs] 'way' but [jəməs] 'mother', but in acc. sg. only the forms with a vowel occur – [məmən] 'mother'.

Thus, the syllable coda, both in Arbëresh and in Balkan Albanian, admits only one-peak representations. The same applies to medial structures – clusters of a sonorant (nasal or liquid) between two obstruents usually receive a vowel accompanying the sonorant, e.g. *përgjegj* 'answer', *këndoç* '(you) sing' conjunctive, *pëlqen* 'is liked', *kërkon* 'asks'.

However, there are locations in which vestigial transitional stages can still be observed – the state after the loss of a short vowel, with two-peak syllable endings maintained. This is still the case today in the provinces of Catanzaro, Crotone and Taranto, e.g. *njetr* 'nights' (S. Nicola), *nietr* 'nights', *vogl* 'small' (Marcedusa), *njetr*, *motr* 'sister' (Vena di Maida), *njetr*, *katr* 'four' (Zangarona), *njetr*, *ikr* '(he) left' (Andali). In other regions of Calabria, analogous examples with nasal sonorants were recorded only in older records, e.g. *dashm* 'wedding' (Shën Kostandini), *vetm* 'only', *ndritm* '(we) shine' (examples from Bonaparte, 1884; Camarda, 1866). Unfortunately, we usually have no information on the context and pronunciation. In the region of Catanzaro, final sonorants in final clusters even today are not only non-syllabic, but often voiceless, irrespective of the type of the initial segment of the following word. Two examples of this type were recorded in an electronic format: *ngushr* 'tight' and *motr e vullezër* 'sisters and brothers' (Caraffa di Catanzaro) (Altimari, 2011). This made it possible to see the spectrograms of these sounds. The word-final sonorant is non-syllabic and clearly voiceless. In the spectrograms, the final [r] is hardly visible, it is short and not only voiceless, but also devoid of the sonorant characteristics (it has a noise structure, not a formant

[61] It would be especially important to know if there was a pause after the final consonant group.

structure). Similar structures are recorded by researchers in San Marzano di S. Giuseppe, e.g. *kkambr* 'room', *mještr* 'foreman, master', *ńetr* 'nights', *ńńostr* 'our' alongside *ńńoštrə*, *nesər* 'tomorrow', *tjetrə* 'different', *i škurtərə* 'short' (De Padova, 1987).

A significant fact is that most of the words with the [-OS] clusters discussed above were recorded earlier: at the end of the 19th century (Turano, 2001), and in the middle of the 20th century (Miracco, 1984). In the most recent recordings (Altimari, 2011), the same words are usually represented by forms with "repaired" final syllables, e.g. in Zangarona we have *katr* 'four' (Miracco, 1984) but *katrë* and *katru* in Andali (Altimari, 2011), and numerous other such pairs of examples.

Two-peak onsets are less frequent. From the texts from San Marzano, I excerpted only one such example: *rpara* 'before' (De Padova, 1987). Regular occurrences of the initial LO- clusters were recorded in San Costantino Albanese: *rrshiq* 'slip', *lkur* 'leather', *ltisht* 'in Italian' and numerous similar examples (Scutari, 2002). Vestiges of similar structures occur also in Arvanitika in Greece, cf. *rpara* alongside *rëpara* 'before', *rposh* 'lower', *rdhi/rrdhi* 'vineyard', but exclusively *ljikurë* 'leather' (Jochalas, 2010).

Thus, Albanian dialects provide a variety of syllabic structures which illustrate the various development phases of the syllable. As can be seen, the dialects distant from the main language complex (Italy, Greece) have retained to a greater extent the elements of the earlier stages of syllable development – i.e. two-peak syllables – the state after the loss of short unstressed vowels. However, the examples from the south of Italy, recorded at considerable intervals, show that these structures are being fixed and at present they are only vestigial (at least, they were present at the time of the most recent recordings).

13. GEMINATES

It is commonly believed that the lack of geminates is one of the features of South Slavic and Balkan phonetics. This is not entirely true. In South Slavic dialects, geminates occur very rarely, on the strongest morphological boundaries (usually in compound words, on the boundary with the article, less often on the boundary with the prefix). Against the background of South Slavic, the Bulgarian language stands out, in which many more geminates have been preserved in writing on the morphological boundaries and most of them are pronounced in careful speech. Kozyra demonstrates that the number of geminates in Bulgarian text is six times greater than in a sample of the same size in Macedonian (Kozyra, 2015). The frequency of geminates in Bulgarian is also much higher than in Serbian, although in a less careful pronunciation, geminates are often contracted, also in Bulgarian. Moreover, in Bulgarian, unlike in Macedonian, geminates in loans from Turkish do not always undergo simplification, e.g. Bulgarian *гюлле* 'bullet', Macedonian *гу́ле*. It seems that this feature also differentiates Macedonian dialects. Geminates are more frequent in texts from eastern Macedonian dialects, especially from Pirin Macedonia, than in other Macedonian dialects. Also the dialectal descriptions (see Vidoeski, 2000b) provide many more examples of geminates in the description of the phonetics of Pirin Macedonia than in the descriptions of other Macedonian dialects. In the geographical perspective, this feature changes gradually from east to west. In the description of the south-eastern Macedonian dialects (in Vardar and Aegean Macedonia) there are many more examples with gemination than in the remaining Macedonian territory (for details and figures, see Savicka & Cihnerska, 2018).

The greater number of words with gemination in the east is, among other things, the result of the loss of unstressed vowels, e.g. [imme] < *имаме* '(we) have', or assimilation in certain consonant clusters, e.g. [sʲenna][62] (< *седна*) '(he) sat down', [panna] < *падна* '(he) fell'. The greatest number of words with geminates were found in Pirin Macedonia and not only on morphological boundaries, e.g. [akəʎʎija] 'smart person', [pʎeʃʃes] (alongside [pʎeʃʧes]) 'a man with a broad back', [nuʒʒa] 'need', [viʒʒa] 'sees' (alongside [nuʒa], [viʒa]), [nigga] 'never' [segga] 'always' (the village of Eleshnitsa).

Thus, there is no gemination in North Macedonia itself, apart from those on strong morphological boundaries. All geminates recorded in Macedonian

[62] The transcription of these words is greatly simplified, e.g. there are irregular, weak reductions of back vowels, which I do not mark; I do not mark the slight palatality of alveolar consonants or different realisations of geminates, either.

occur in the intervocalic position on perceptible morphological boundaries, e.g. *пролет* 'spring' – *пролетта* (definite form), *одделни* 'separate', however, if a single consonant is added to the group, the geminate is removed, cf. in analogous positions, i.e. with the article: *болест* 'disease' + *та* > *болеста*, or with the prefix: *бес* + *смислени* > *бесмислени* 'pointless'.

The Macedonian area, where generally geminates do not occur, is geographically linked with the Albanian area, where geminates are also absent, except for those on strong morphological boundaries (prepositional constructions, compound words, e.g. *kundërrevolucion* 'counterrevolution', *flokkuq* 'red-haired', *për Robertin* 'for Robert').

In contrast, in Greek, consonant geminates are abundant. The occurrence of gemination is characteristic, in particular, of the Grecano dialect (where the preservation of geminates is undoubtedly an Italian influence), and of the south-eastern dialects (mainly on the Aegean islands and in Kymi), where the geminates can be associated with Turkish, which also accepts geminates.

In those Greek dialects that accept geminates, there are many double consonants. They occur between vowels and even word-initially. The realisation of geminated occlusives varies depending on the position: it consists in a prolonged occlusion or in a clear aspiration. The sources of Greek geminates are: (1) lack of the simplification of old gemination (except for /rr/ and /kk/, which were universally simplified), e.g. *φυλλα* 'leaves'; (2) assimilation in consonant clusters of the type "nasal sonorant + fricative", e.g. *αν δωκη* 'if (he) gives' > [addoci]; (3) loans with geminates, e.g. /tteli/ [t^{h}eli] 'wire' from Turkish *tel*; (4) spontaneous gemination *κυμα* 'wave' > [ʧimma] (all examples are from Cypriot and come from Newton, 1972, p. 90).

Thus, geminates are indeed uncharacteristic of most of the central area of Balkan phonetics (Macedonian, Serbian, Albanian). The same is true of Greek dialects, as a particularly high degree of gemination occurs only in those peripheral dialects that are/were more strongly influenced by Italian or Turkish (Grecano in Italy and Cyprus) whereas in continental Greece gemination is rare.

However, as it seems, gemination is the feature that is the least readily assimilated in interlingual contact. For example, in the Croatian dialect of Acquaviva Collecroce in Italy, or in Arbëresh, there is essentially no gemination, despite several hundred years of Italian-Albanian symbiosis. At least there are no geminates with phonological value. The only Albanian dialect with geminates in Italy is the disappearing dialect in the village of San Marzano di S. Giuseppe, in which gemination is absolutely spontaneous, without any etymological motivation. Sporadic occurrences of gemination in the Acquaviva Collecroce dialect also lack any phonological function. Gemination is also absent in Chakavian, although other features of Italian phonotactics[63] are well absorbed (see Chapter 12).

[63] However, one has to know that gemination in the Venice dialect is restricted.

14. SANDHI[64]

By sandhi I understand the neutralisation of the voicing opposition of obstruents on the inter-word boundaries and on certain morphological boundaries – those of which the speaker is aware. This is how the phenomenon is usually understood in Slavic and Balkan linguistics. Other sandhi phenomena will be ignored here, the more so because they are diverse and specific to individual Balkan languages.

Inter-word sandhi in the area of the entire Balkan Sprachbund is varied. However, the central region is distinguished in this diversity because of specific deviations from the most common rules and their inconsistent application. It is these deviations that are the feature uniting the western dialects of North Macedonia, standard Macedonian, the northern Albanian dialects and perhaps the dialects of western Macedonian in Greece.

What unites the area in question is the lack of full regularity of sandhi processes, which means that these are not phenomena governed by language rules, that they are not morphologised, they are not automatic; instead they are sensitive to the actually occurring phonetic contexts. Therefore, they depend on the pace of speech and on the implementation of pauses, on the implementation of the so-called fluent or not-fluent linking between words.

In neighbouring Bulgarian, on the contrary, the sandhi rules are complete and applied relatively consistently. This is also true of most Slavic languages, which means that sandhi is a petrified phenomenon and sandhi rules are not dependent on the current conditions of production. In Bulgarian, there is the so-called devoicing sandhi. This means that voiced obstruents at the end of the word undergo devoicing before the initial voiceless obstruents of the next word and before resonants (vowels and sonorants), as well as in the so-called absolute coda,[65] and voiceless obstruents undergo voicing before the initial voiced obstruents, e.g. Bulg. *Беше млад* [...młat] 'He was young', *Блокът беше затворен* [błɔkəd bɛʃe...] 'The block was closed', *Беше млад човек* [...młat ʧɔvek] 'He was a young man', *Беше млад лекар* [...młat lɛkər] 'He was a young doctor', *Беше млад учител* [...młat uʧitɛł] 'He was a young teacher'. It is the same in Tosk – the southern variation of the Albanian language, although it has never been verified on more extensive material, e.g. *Ky është*

[64] Similar content can be found in Sawicka & Cychnerska, in press.

[65] Such are the dominant rules in many other Slavic languages, e.g. in north-eastern Polish, Russian, Belarusian, or Czech. The so-called voicing sandhi (i.e. the voicing of obstruents before initial resonates) occurs on a much smaller area.

Bardh [...barθ] 'This is Bardh', *Drejtori ishte Rexhep Berisha* [...reʤeb beriʃa] 'Rexhep Berisha was the director', *Drejtori ishte Bardh Kastrati* [...barθ kastrati] 'Bardh Kastrati was the director', *Drejtori ishte Bardh Rugova* [...barθ rugova] 'Bardh Rugova was the director', *Drejtori ishte Bardh Ismajli* [...barθ ismajʎi] 'Bardh Ismajli was the director'.

These rules are severely restricted in Macedonian, north Albanian and north Greek phonetics, whereas in most Shtokavian dialects voicing/devoicing sandhi phenomena do not occur at all.

In northern Albanian and in Macedonian, sandhi is identical. Extensive research was carried out only in Slavic Macedonian (Korytowska, 2012). The Albanian Gheg voicing/devoicing sandhi was examined several times but only preliminarily (Korytowska, 2009; Przybylska, 2006; Rybicka, 2008; Sawicka, 1983).

The dominant rules relevant to the area in question are as follows: voicing/devoicing does not occur before resonants. There are only regressive assimilations of obstruents before obstruents. There is neither voicing nor devoicing before vowels or sonorants, thus, it can be concluded that, in fact, inter-word sandhi does not occur in this area because consonants between words behave in the same way as inside words. In the so-called absolute final positions, obstruents undergo devoicing. Only the lack of full regularity distinguishes this kind of sandhi from internal sandhi,[66] e.g. Mac. *Тој повика Ненад* [...nenat] 'He called Nenad', *Станот беше затворен* [stanod beʃe...] 'The flat was closed', *Млад човек* [młat ʧovek] 'young man', *Млад лекар* [mład lekər] 'young doctor', *Во институтот работеше* [vo institutot raboteʃe] 'He worked in the institute', *Млад учител* [mład uʧiteł] 'young teacher', *Наставникот учи* [nastavnikot uʧi] 'The teacher is teaching'; Gheg Alb. *Ky ishte Bardh* [...barθ] 'That was Bardh', *Rexhep Berisha* [reʤeb beriʃa] 'Rexhep Berisha', *Bardh Kastrati* [barθ kastrati] 'Bardh Kastrati', *Bardh Rugova* [barð rugova] 'Bardh Rugova', *Rexhep Rugova* [reʤep rugova] 'Rexhep Rugova', *Bardh Ismajli* [barð ismajʎi] 'Bardh Ismajli', *Rexhep Ismajli* [reʤep ismajʎi] 'Rexhep Ismajli'.

Sandhi is a contemporary phenomenon here, which means that there may be a number of deviations from the dominant rule, which result from the sensitivity to the actual conditions of speaking. This means that in fast speech with less careful pronunciation final obstruents may undergo lenition before initial resonants. Significantly, the lenition in this case always involves devoicing, as in Bulgarian and southern Albanian.

Thus, the main feature of this type of sandhi is that it is a current phenomenon, which belongs, according to the terms of natural phonology, to processes, not to rules. The area where this type of sandhi occurs was recognised as

[66] More irregularities concern the obstruent /v/ in Macedonian. As in all Slavic languages, this is a consequence of the origin of this consonant, which earlier belonged to the class of sonorants. It may seem strange but certain irregularities also concern /d/ in Macedonian, and /ð/ and /d/ in Albanian, which tend to retain voicing in any position.

the centre of the phonetic Balkan Sprachbund, the centre of Balkan convergence in any field. Numerous other common features characterise the area.

This area is bordered to the north by a large area characterised by the lack of sandhi. It includes most of the Shtokavian dialects. In Serbian and other post Serbo-Croatian languages, at the end of words there appear voiced as well as voiceless obstruents, regardless of the context that follows. Therefore, it can be said that in some respects this area is connected to the distinctive Macedonian-Albanian type, where sandhi is "incomplete".[67] The situation in the Balkans differs from the Shtokavian situation in that in most of the Shtokavian dialects, groups of obstruents undergo regressive assimilation only within words, while in the central Balkan area, assimilation occurs both within words and on inter-word boundaries.

In the south, Macedonia borders on Greece. Unfortunately, on the basis of the literature on sandhi, it is not possible to compare sandhi phenomena in Slavic languages and in Albanian with sandhi phenomena in northern Greek. The problem of sandhi is, in general, very poorly researched, not only in Greek. The material available is limited and I do not have much information about the frequency of the phenomenon. Some descriptions of sandhi are available for other Greek dialects (e.g. Baltazani, 2006; Eftychiou, 2008; Tserdanelis, 2005), but very few concern Aegean Macedonia. Moreover, the main context in which sandhi is usually described in Greek sources is the boundary between clitics and the stress-bearing words. This means that the description is not comparable with the Slavic and Albanian sandhi, which is described as a phenomenon occurring between stress units. The boundary between the stress-bearing word and a clitic is subject to the so-called internal sandhi operating within the frames of stress units.

The Greek sources concerning common Greek describe mainly vowel contractions,[68] consonant degemination, affricatisation, and the only context which could interest us here is /s/-voicing – the only final obstruent occurring in standard Greek in the domestic lexicon. In Greek sources, attention is also paid to the devoicing of sonorants. This phenomenon also occurs in Slavic and Albanian languages. We omit it here because it does not produce phonological effects. We focus on the neutralisation of phonological oppositions between prosodic words.

Thus, Greek descriptions concentrate on the phenomena which take place on intra-word boundaries. There are very few contexts in contemporary Greek which create conditions for the neutralisation of the opposition voiced vs. voiceless on inter-word boundaries. It is, however, different in the northern dialects, in which, due to the reduction of the unstressed high vowels, there

[67] It should be noted, however, that sandhi was not thoroughly studied in those Serbian dialects which border directly on the area in question (Prizren-Timok and Kosovar-Resava dialects).

[68] Early descriptions concentrate mainly on vowel sequences (e.g. Triantaphyllidēs, 1941).

appear a number of final obstruents – the fact that creates conditions for the occurrence of voicing/devoicing sandhi.

As far as Macedonian Greek is concerned, more detailed descriptions of two places are available – Siatista and Katafigi in western Macedonia – where voicing/devoicing sandhi is taken into consideration (Margariti-Ronga, 1985, 1989). Numerous other works on the dialects of the neighbouring Kastoria region do not contain any material that could allow us to say anything about voicing/devoicing sandhi.

The dominant rules concerning the boundaries of prosodic units in the Katafigi dialect are the following:[69] with respect to the voiced/voiceless distinction, word-final obstruents assimilate to the initial obstruent of the following word. In the absolute final position, the devoicing of the obstruent is optional. Final voiceless obstruents become voiced before initial sonorants whereas before initial vowels of the following word no changes take place – either voiced or voiceless obstruents can occur word-finally before a vowel, e.g. /xalaʒ/ 'hail' [xalaʃ]/[xalaʒ],[70] /δeftirus ɣamus/ 'second wedding' [δeftiruz ɣamus], /δa fíj̩ fandarus/ 'he is going to do his military service' [δa fíç fandarus], /tu vraδʲ mazoxkami/ 'in the evening we gathered' [tu vraδʲ mazoxkami], /ekʃ lukaŋka/ 'six sausages' [egʒ lukaŋka], /tu xalaʒ itan xundro/ 'the hail was big' [tu xalaʒ itan xundro], /ekʃ aδirfes/ 'six' sisters' [ekʃ aδirfes].

These rules are characteristic of many other Greek dialects, even if in most of them the only final obstruent is [s] (see Newton, 1972, pp. 105 *& passim*). However, there are differences between Greek dialects as far as the context before resonants is concerned. For example, there is no voicing of final obstruents before sonorants in the neighbouring Siatista, in Velvendos; in Thesaly, there is no voicing either (Margariti-Ronga, 1989, p. 162), e.g. /ekʃ lukanka/ 'six sausages' [ekʃ lukaŋka]; /ikuʃ meris/ 'twenty days' [ikuʃ meris] (Siatista).

In this short comparison, we have ignored the progressive voicing after nasal sonorants, which is associated with the functioning of the clusters "nasal sonorant + stop" not only in the context of inter-word sandhi.

Both in the northern Greek dialects and in the Albanian dialects, there are the so-called two-peak syllables, i.e. those in which the order of the segments in the syllable does not follow the principle of increasing and decreasing sonority in the syllable.[71] These are the contexts in which you can expect the greatest number of irregularities. In Albanian, such syllables occur at the beginning of words – in such a situation, it is the initial sonorant that determines the value of the final obstruent of the preceding word. However, in northern Greek

---

[69] Based on the two descriptions and consultations with Professor Marianna Margariti-Ronga. I received all the examples from Katafigi and Siatista directly from her, for which I am very grateful.

[70] Instead of the orthographic form, I provide Marianna Margariti-Ronga's reconstructed morphonological transcription – I have only changed the transcription to the international one.

[71] The occurrence of the two-peak syllable means that word initially there occur the clusters "sonorant + obstruent" and vice versa at the end of the word.

dialects, two-peak syllables occur in any position in the word, therefore, also word-finally. Final clusters of the type "obstruent + sonorant" are relatively frequent.[72] In such a context, there are two solutions: either the obstruent preserves its morphophonemic value because it stands before a sonorant and not in the final position, or sandhi operates between this obstruent and an initial obstruent of the next stress unit, ignoring the sonorant that stands between them. In Katafigi, sandhi operates fairly regularly between obstruents – the sonorant separating them is not an obstacle, e.g. /aʎevrʲ kalamciʃ çu/ [aʎefr̥ʲ kalamciʃ çu] 'cornflour'.

As already mentioned, the main differences between the Greek descriptions on the one hand and the Slavic and Albanian descriptions on the other is that Slavic sandhi is defined on the boundaries between prosodic units, i.e. stress units. This term corresponds to Nespor and Vogel's phonological word (Nespor & Vogel, 1986). Such a unit can also be represented by a "clitic group". In phonetic descriptions, Greek sandhi is described mainly on morphological boundaries with the value of the internal juncture, usually on the boundaries between free morphemes and stress-bearing words – most often between the article or pronoun and the stress-bearing word, thus, not between stress units (phonological words).

Based on information about such contexts, we cannot conclude that the sandhi between stress units (external sandhi), and the sandhi within the stress unit (internal sandhi) are different. If we assumed that the phenomena occurring on certain morphemic boundaries within the stress unit represent the regular sandhi (i.e. external sandhi), it would be a major difference in comparison with Slavic sandhi, where sandhi within stress units (between proclitics and the stress-bearing word) is the same as inside the morphemes. This means that the sandhi unit in Slavic is the stress unit (prosodic word), whereas in Greek, each morphological boundary with the value of phonetic juncture would constitute a context where sandhi operates. However, this is not the case.

In northern Greek dialects, as elsewhere, sandhi processes occur on morphemic boundaries inside stress units and their scope is not the same as between stress units. It includes, among other things, the assimilation of the combination of nasals with stops (voicing and the assimilation of the place of articulation), cf. /tin porta/ 'door' acc. sg. > [timborta] (consequently, nom. sg. may become /i borta/ – Setatos, 1969). In the northern dialects inside words there are combinations of nasal sonorants with voiced as well as with voiceless stops. In primary groups, there are only clusters with the voiced ones. In secondary groups, voicing occurs rarely. At the boundaries with proclitics, such combinations behave as primary groups and this is understandable, because, in a way, these are primary groups, even though they emerge *ad hoc*.

---

[72] Such clusters occur also in some rare Albanian dialects, but they are gradually disappearing (see Chapter 12).

In Slavic, as in northern Greek, boundaries between proclitics and the stress-bearing words are usually characterised by internal sandhi, the same as inside morphemes, whereas the sandhi between enclitics and the stress-bearing word is either as inside words (rarely) or as between words (more often) – this depends on the particular Slavic language. Boundaries with suffixes and most grammatical endings are not marked as junctures[73] in any Slavic language.

As far as the sandhi between stress units is concerned, Slavic and Albanian voicings and devoicings can be compared only with the sandhi in northern Greek dialects where similar conditions exist. As can be concluded from a reasonable amount of dialectal data, the most important difference consists in the fact that in Greek, but not in Slavic and Albanian, vowels and sonorants constitute different contexts. Before the initial vowel, final voiced obstruents more often undergo devoicing, while before the sonorant, they undergo voicing. The common feature is that, as in Macedonian and northern Albanian, sandhi is not very regular, not fully automatic, unlike, for example, in northern Slavic languages, where it is, in fact, grammaticalised (i.e. it constitutes a morphophonemic rule) and operates almost without exception.

A common feature in the Albanian-Macedonian-Greek area under discussion is, thus, a certain degree of irregularity in sandhi phenomena. Fallon, Arvaniti & Pelekanou and others consider the Greek sandhi as a probabilistic process that depends on a variety of local and prosodic factors (Arvaniti & Pelekanou, 2001; Fallon, 1994). These opinions are also relevant to Macedonian and Albanian.

Both the Greek and the Macedonian-Gheg types of sandhi are unusual in comparison with European languages in general, where either devoicings of final obstruents do not occur or they occur before voiceless obstruents as well as before sonorants and vowels. However, everywhere, except in Greek, the contexts of the vowel and sonorant interact in the same way.

What we have observed in Slavic texts from the region of Kastoria is that, evidently under the Greek influence, there occur optional devoicings of final voiced obstruents before initial vowels, while before sonorants, obstruents never undergo voicing, e.g. *сив орал* [sif oraɫ] ‘grey eagle’, *убав о-направиле* [ubaf onapraile] ‘they made him beautiful’, along with *е послаб от мено* [e posɫab ot meno] ‘he is weaker than me’, *маж и жена* [maʒ iʒena] ‘husband and wife’ and *јас не-го*… [jas nego] ‘I did not him…’, *гулап разбуден бил* [guɫap razbuden biɫ] ‘the pigeon was awakened’ (Vidoeski, 2000a). In western Slavic Macedonian, final obstruents usually maintain their basic morphophonemic value before sonorants as well as before vowels. On the other hand, devoicings may happen both before vowels and before sonorants.

[73] We postulate junctures when the speakers are aware of the existence of a caesura.

CONCLUDING REMARKS

Most of the phonetic phenomena discussed in this study occur in the area of the so-called Western Balkans. This is understandable, given that it is still a multi-ethnic and multi-lingual area. The local dialects are still well preserved here and phonetic convergences are intense despite the influence of standard varieties of local languages. At least they were intense not so long ago. In North Macedonia alone, there are 25 official ethnic (linguistic) minorities, and the influence of the standard varieties is two-way (Macedonian-Albanian).

I have divided Balkan phonetics into two main, opposing complexes: eastern (generally speaking, associated with eastern features, cf. Jakobson's Eurasian Language League), and western ("simpler", corresponding, in general, to the phonetics of Western Europe) (Jakobson, 1962). Within the western area, I have determined the centre which is characterised by a particular concentration of specific features that should be considered Balkan. The centre includes western North Macedonia, Albania along with Kosovo, western and central Macedonian dialects and Greek dialects of Aegean Macedonia. North Macedonia seems to be the centre of the Balkan Sprachbund.

The boundaries of these areas are not clearly delineated, nor is it possible to determine the boundaries between the various South Slavic languages on the basis of linguistic criteria. The boundaries of each of these areas are fuzzy. Most of the features which characterise the central area are concentrated in south-western Macedonia, but each has a different extent. For instance, the merging of affricates associates Macedonian with Albanian and many Shtokavian dialects. The type of word stress connects Greek, the majority Macedonian dialects and Albanian. The type of sandhi links Macedonian and northern Albanian. The specific functional value of the cluster "nasal sonorant + occlusive" connects Greek, Albanian and south-western Macedonian, although in each of these languages the cluster has different origins and functions somewhat differently.

The status of Greek is ambiguous. On the one hand, Greek phonetics constitutes part of the Mediterranean phonotactics (lenitions), especially southern dialects (lenitions and syllable structure). On the other hand, it participates in the phenomena characteristic of the central area (cf. especially the functioning of the clusters "nasal sonorant + stop"). Finally, it also shares some features with the eastern Balkan area, in particular, the range of occurrence of palatalised consonants. The inventory of palatalised consonants is large throughout Aegean Macedonia and they occur in any segmental context. This feature is also present in Macedonian dialects, but only in eastern Aegean Macedonia and in

neighbouring Bulgarian dialects. Progressive palatalisation is a characteristic Greek feature, which is often transferred to the local Macedonian dialects. Progressive palatalisation is essentially alien to Slavic languages.

The original clusters of the type "nasal sonorant + occlusive" have been preserved only in the west of Aegean Macedonia. Such clusters came to be accepted in local Slavic dialects as a result of the influence of Greek dialects, although traces of their earlier occurrence can also be found in eastern Aegean Macedonia, both in Greek and Macedonian. As can be concluded from the above, in the area under consideration, especially in its central part, micro-areas are formed, depending on the features of the coexisting dialects. For example, progressive palatalisation is a feature of the micro-area located in the south-eastern part of Aegean Macedonia – it is the Greek-Bulgarian-Macedonian micro-area. The local Greek dialects are undoubtedly responsible for this feature (which in Slavic languages is optional, non-functional and chaotic in distribution). Although palatalisation is common in all Greek dialects of Macedonia, the Slavic dialects of western Macedonia have not acquired it.

Another feature of this south-eastern micro-area is the double stress in words consisting of more than three (sometimes more than two) syllables. It could have arisen independently in each of the languages as a reaction to difficulties in maintaining the rhythm in longer words. Again, this feature cannot be found in the Slavic dialects of western Aegean Macedonia, even though it is common in the local Greek dialects. The western micro-area, on the contrary, is characterised by restrictions on palatalisation, modifications of certain types of consonant clusters and the high frequency of the clusters "nasal sonorant + stop". These features unite southern Albania, western Aegean Macedonia and western North Macedonia, and some of them extend to all of western and central North Macedonia, and even to the Serbian area. More such micro-areas can probably be postulated, especially when we consider other features, such as interdental fricatives, which are transferred from Greek or Albanian to some local Aromanian and Macedonian dialects, or the merger of [s] and [ʃ] in local Romani influenced by Greek, or the borrowing of [y] from local Albanian or Turkish dialects, etc. (see Friedman, 2008).

I have also quoted numerous Italian examples here. The south of Italy (especially Calabria and Terra d'Otranto) constitutes, in fact, the periphery of the Balkan Linguistic League. The dialects of southern Italy have many Balkan features, not only phonetic ones, including classical Balkanisms (cf. Rohlfs, 1967). The background of this state of affairs is obvious – the same empires – Rome and Greece – conquered these areas in similar periods and they left their own linguistic imprint. The difference to the Balkans is that Italy did not experience the rule of the third empire – Turkey. The influence of the Turkish language on the Balkan languages and culture was also very important. Unfortunately, it is underestimated in Balkan linguistics.

Mutual convergences between Balkan dialects are evident. I do not wish to speculate on which language is the donor of a particular feature. It

happens that there are several donors, as in the case of the continuation of Proto-Slavic nasal vowels, the reflex of which in south-western Macedonian dialects is conditioned by both Greek and Slavic phenomena. In general, clusters of the type "nasal sonorant + occlusive" emerged from various sources, but their occurrence is maintained thanks to the high frequency of these clusters in dialects in contact.

It happens that determining the main donor is complicated by social situations, when in one settlement different languages are used in different spheres of social life – one dialect is used in the bazaar, another in the church, another in the office, yet another in the street or at home, and pupils at school are taught the standard official language (cf. Drettas, 1981). The strong influence of the local official language does not mean that there have been no other donors in the past. The overall conclusion that emerges when one considers the synchronic state of affairs is that the most important features of this area are reciprocity, feedback, and general "panchronicity".

The mechanisms of phonetic convergence are varied, ranging from a very superficial mechanism, which consists in full unification of phonetically similar segments. For example, in some Greek dialects in western Macedonia, there is a transition of [a] into [ə] in the unstressed position – probably under the influence of coexisting Slavic dialects, in which /ə/ is usually a separate phoneme. Often the whole structures are copied: sequences of segments from the same categories, although not necessarily the same segments. What is reproduced is the structural layout, for example, insertion of an occlusive between certain consonants, or addition of a nasal sonorant before an occlusive. This, in turn, leads to deeper convergence – the distributional relations of one language affect the functioning of equivalent structures in the contact languages. For example, the Greek groups "nasal sonorant + voiced occlusive" function like phonemes and are functionally equivalent to voiced occlusives. This is favoured by the loss of nasal sonorants in some Greek dialects. The identification of a semantic unit takes place not only at the phonetic level, but mainly at the morphological level, therefore, it is easy to consider expressions such as [lamba] and [laba] 'lamp' as optional representations of the same morphological unit. Also, variants are often found, for example, in the colloquial speech of Athens. The users of those systems in which clusters with nasal sonorants are preserved, in foreign names for example, automatically add a nasal sonorant before each voiced occlusive (I've heard this on numerous occasions, e.g. [pɑŋgɑnini] for *Paganini*, [zɑndɑr] for *Zadar*). The situation is similar in the Albanian language, in the northern dialects of which the analogous groups have undergone simplification. See also (quoted in Chapter 10) the Polish examples *mleko* 'milk', *zrobić* 'to do' written by an Albanian speaker as [mbʎiko] and [zdrobiç]. The influence of standard forms promotes the identification of the morphemes containing the cluster and the same morphemes with the simplification. Uneducated speakers simply cannot hear the difference and automatically add or omit the sonorant before

a voiced occlusive. And exactly the same situation applies to structures with the so-called buffer consonant. For instance, in Macedonian dialects either each group [sr], [zr] may be replaced by [str], [zdr], or any etymological [str], [zdr] may be replaced by [sr], [zr]. I do not know if such a phenomenon can be classified as functional – the variants mentioned are not distinctive in nature, however, in other languages they do not occur so frequently. Certainly, the distinctive value depends on the morphology, on the specific word: in some words, the difference will be distinctive, in others it will not.

The morphonological equivalence and, when we take into account all dialects and all standard variations, the constantly occurring options have made it possible to return to etymological forms. In the case of some dialects, linguistic material from different periods is available. For instance, in the Slavic dialects of southern Albania in the 19th century and at the beginning of the 20th century, the forms with [mbr], [mbl] were common instead of the etymological [mr], [ml]. Later, only forms without an added occlusive were observed. This is the case, for example, in Boboščica (cf. Steinke & Ylli, 2007), where there was clearly no influence of the standard Macedonian language, but these groups are also beginning to return to their etymological forms in the neighbouring Albanian dialects. The same is true for reflexes of the Old Slavic nasal vowels.

All known mechanisms of linguistic convergence are attested here also on the phonetic level. They confront articulation tendencies of particular languages, formed by historical development and articulation preferences and, especially, by the requirements imposed by the rhythm, with the phonetics of contact. It is characteristic that phenomena such as code-copying consist not only in the unification of individual sounds, but also in the copying of structural models, which are filled with different segments in each contact language (cf., for instance, Chapter 10). It is also characteristic that such modified structures containing non-etymological sounds (such as the so-called buffer consonant or non-etymological nasals before stops) function as equal to the unmodified structures. Moreover such mechanisms as code mixing or code copying, which are observable in the Balkans, are often reciprocal processes.

Thus, as can be seen, over longer periods of time these phonetic features which are the result of mutual influences of dialects in contact and which are not fixed in standard varieties of local languages are not stable. This applies in particular to the above-mentioned non-functional features. Therefore, it is worth recording them as a testimony to the past, because such phenomena are disappearing in Europe as there are fewer and fewer such small multilingual communities. Instead, the global influence of English leaves its mark on all languages. This situation does not endanger the Balkan Sprachbund. This is because it is based on morphosyntactic features, most of which have been fixed in standard Balkan languages. Moreover, the Balkanisation processes in the central area are constantly progressing.

Abbreviations

Atlasi, 2007 – *Atlasi dialektologjik i gjuhës shqipe*

Atlasi, 2008 – *Atlasi dialektologjik i gjuhës shqipe*

BDA – *Bŭlgarski dialekten atlas (obobshtavasht tom)*, 2001

Gramatika – *Gramatika na sŭvremeniia bŭlgarski knizhoven ezik*, 1982

Bibliography

Ahmetaj, M. (2006). *E folmja e Anës së Malit*. Instituti Albanalogjik i Prishtinës.

Ajeti, I. (1969). Rreth disa veçorive të të folmeve të shqiptarëve të rethit të Preshevës dhe të Bujanovcit. *Gjurmime albanologjike*, *2*, 37–61.

Ajeti, I. (2017). Pamje historie e ligjërimit shqip të Gjakovës në fillim të shekullit XIX. In E. Basha (Ed.), *Studime për gjuhën shqipe: Vepra të zgjedhura* (pp. 223–309). Akademia e shkencave dhe e arteve të Kosovës.

Alexander, R. (1995). The Balkanization of Wackernagel's law. *Indiana Slavic Studies*, *7*, 1–8.

Alexander, R. (2004). The scope of double accent in Bulgarian dialects. In R. Alexander & V. Zhobov (Eds.), *Revitalizing Bulgarian dialectology* (pp. 193–210). Published in association with University of California Press.

Altimari, F. (Ed.). (2011). *Lessico delle parlate albanesi del catanzarese*. Ufficio di Presidenza-Catanzaro; Università Della Calabria-Cosenza.

Andriotis, N. (1944). Ta oria tōn boreiōn ēmiboreiōn kai notiōn Ellēnikōn idiōmatōn tis Thrakis. *Archeion tou Thrakou laographikou kai glossikou thisarou*, *10*, 131–185.

Arvaniti, A., & Joseph, B. (2000). Variation in voiced stop prenasalization in Greek. *Glossologia: A Greek Journal for General and Historical Linguistics*, *11/12*, 131–166.

Arvaniti, A., & Joseph, B. (2004). Early Modern Greek /b d g/: Evidence from rébetika and folk songs. *Journal of Modern Greek Studies*, *22*(1), 73–94. https://doi.org/10.1353/mgs.2004.0003

Arvaniti, A., & Pelekanou, T. (2001). Postlexical rules and gestural overlap in a Greek spoken corpus. In C. Clairis (Ed.), *Proceedings of the 5th International Conference on Greek Linguistics* (pp. 71–74). L'Harmattan.

Asenova, P. (1989). *Balkansko ezikoznanie: Osnovni problemi na balkanskiia ezikov sŭiuz*. Nauka i izkustvo.

Atlasi dialektologjik i gjuhës shqipe (Vol. 1) [Atlasi]. (2007). Universita degli studi di Napoli L'Orientale; Dipartimento di studi dell'Europa orientale.

Atlasi dialektologjik i gjuhës shqipe (Vol. 2) [Atlasi]. (2008). Universita degli studi di Napoli L'Orientale. Dipartimento di studi dell'Europa orientale.

Baltazani, M. (2006). On /s/-voicing in Greek. In *Proceedings of the 7th International Conference on Greek Linguistics* (pp. 1–12). University of York Press.

Beci, B. (1974). E folmja e Luzinës së Dibrës. *Dialektologjia shqiptare*, *2*, 223–282.

Beci, B. (1982). E folmja e Mirditës. *Dialektologjia shqiptare*, *4*, 26–144.

Bednarczuk, L. (2005). Dwa przyczynki do ligi bałkańskiej. In J. Rusek (Ed.), *Mieczysław Małecki, człowiek, uczony, organizator, w setną rocznicę urodzin* (pp. 207–213). Wydawnictwo Uniwersytetu Jagiellońskiego.

Bonaparte, Prince, L.-L. (1884). Albanian in Terra d'Otranto. *Transactions of the Philological Society*, *19*(1), 492–501. https://doi.org/10.1111/j.1467-968X.1884.tb00095.x

Camarda, D. (1866). *Appendice al. Saggio di grammatologia Comparata Sulla Lingua Albanese*. Tip. F. Alberghetii T. C. Prato.

Çeliku, M. (1974). Të folmet e Kavajës. *Dialektologjia shqiptare*, *2*, 133–223.

Cychnerska, A. (Ed.). (2013). *Sandhi w językach słowiańskich*. Wydawnictwo Uniwersytetu Mikołaja Kopernika.

Dalametra, I. (1906). *Dicţionar macedo-român*. Ediţiunea Academiei Române.

D'Andrea, A. (1886). *Saggio di nomenclatura Calabro-Italiana ad uso delle scuole elementari do Calabria Citeriore*. R. Riccio.

De Padova, K. (1987). Anketa gjuhësore për të folmen e San Marcanos. *Dialektologjia shqiptare*, *5*, 372–414.

Doda, B. E. (2007). *Albanisches Bauernleben im oberen Rekatal bei Dibra (Makedonien)* (F. B. Nopsca, Cooperation; R. ELsie, Ed.). Lit.

Drettas, G. (1981). Tant que les grands-mères parlent…: Approche sociolinguistique du bilinguisme actuel dans un village de l'Almopie. *The Greek Review of Social Research*, *1981*(Numéro Spécial), 143–157. https://doi.org/10.12681/grsr.572

Drinov, M. (1876). Soobshchenie o nosovykh v s. Komanichevo. *Periodichesko spisanie*, *11/12*, 163.

Duma, J. (1979). *Wokalizacja jerów słabych w rdzennej sylabie nagłosowej w południowo-wschodniej Słowiańszczyźnie*. Ossolineum.

Eftychiou, E. (2008). *Lenition processes in Cypriot Greek* [Doctoral dissertation, University of Cambridge].

Elsie, R. (2017). *Albanian alphabets: Borrowed and invented: Albanian studies* (Vol. 35). Centre for *Albanian Studies*.

Fallon, P. (1994). Naturally occurring hiatus in Modern Greek. In I. Philippaki-Warburton, K. Nicolaidis, & M. Sifianou (Eds.), *Themes in Greek linguistics: Papers from the First International Conference on Greek Linguistics, Reading, September 1993* (pp. 217–224). John Benjamins. https://doi.org/10.1075/cilt.117.31fal

Feuillet, J. (1968). *La linguistique balkanique*. Publications langues'O.

Friedman, V. (2008). Macedonian dialectology and Eurology: Areal and typological perspectives. *Language Typology and Universals = Sprachtypologie und Universalienforschung*, *61*(2), 139–146. https://doi.org/10.1524/stuf.2008.0013

Friedman, V. (2011). *Makedonistički studii*. Makedonska akademija na naukite i umetnostite.

Georgiev, M. (1905). Arnautite i mŭrvatsite v s. Bratsigovo. *Izvestiia na Seminara po Slavianska Filologiia*, *1*, 117–140.

Gerazov, B. (2011). Sistem za sinteza na govor na makedonski jazik baziran na kvazidvoglasi [Master's thesis, Universitet „Sv. Kiril i Metodij" vo Skopje].

Gjinari, J. (1988). *Dialektologjia shqiptare*. Shtepia botuese e librit universitar.

Gołąb, Z. (1984). *The Arumanian dialect of Kruševo in SR Macedonia, SFR Yugoslavia*. Macedonian Academy of Sciences and Arts.

Gosturani, Xh. (1975). E folmja e Hasit. *Dialektologjia shqiptare*, *3*, 211–270.

Gosturani, Xh. (1982). E folmja e Çeremit dhe e Valbonës (rrethi i Tropojës). *Dialektologjia shqiptare*, *4*, 279–345.

Halilović, S., Kardaš, M., Ljevo-Ovčina, A., & Mešanović-Meša, E. (2020). *Bosansko-hercegovački lingvistički atlas: Vol. 1. Fonetika*. Slavistički komitet.

Halimi, M. (1978). Disa tipare të së folmes së Moravës së Epërme. In M. Halimi, *Kërkime dialektologjike* (pp. 31–203). Instituti Albanologjik i Prishtinës.

Hamp, E. (1977). On some questions of areal linguistics. In K. Whistler & R. Van Valin (Eds.), *Proceedings of the 3rd Annual Meeting of the Berkeley Linguistics Society* (pp. 279–282). Berkeley Linguistics Society. https://doi.org/10.3765/bls.v3i0.3295

Hatzidakis, G. (1905). *Die Sprachfrage in Griechenland*. Typ. Sakellariu. [Reprint: Kessinger Publishing 2010].

Havránek, B. (1933). Zur phonologischen Geographie (Das Vokalsystem des balkanischen Sprachbundes). In Proceedings of the International Congress of Phonetic Sciences: First Meeting of the Internationale Arbeitsgemeinschaft für Phonologie. Amsterdam 3–8 July 1932. *Archives néerlandaises de phonétique experimentale*, *8–9*, 28–34.

Haxhihasani, Q. (1974). Vështrim e përgjithshëm mbi të folmene banorëve të Çamërisë. *Dialektologjia shqiptare*, *2*, 3–133.

Hinrichs, U. (1999). *Handbuch der Südosteuropa-Linguistic*. Otto Harrassowitz.

Hoxha, Sh. (1975). Vëzhgime mbi të folmen e Vilë e Kalisit të Lumës. *Dialektologjia shqiptare*, *3*, 130–211.

Hualde, J. I., & Nadeu, M. (2011). Lenition and phonemic overlap in Rome Italian. *Phonetica: International Journal of Phonetic Science*, *68*, 215–242. https://doi.org/10.1159/000334303

Illich-Svitych, V. M. (1962). O stadiiakh utraty rinezma v iugozapadnykh makedonskikh govorakh. *Voprosy slavianskogo iazykoznaniia*, *6*, 76–88.

IUlli, Dzh., & Sobolev, A. (2002). *Albanskiĭ toskskiĭ govor sela Leshnia*. Biblion Verlag.

Ivić, P. (1968). Liens phonologiques entre les langues balkaniques. In E. Georgiev et al. (Eds.), *Actes du premier Congrès international des études balkaniques et Sud-Est européennes* (pp. 133–143). Académie bulgare des sciences.

Ivić, P. (1974). O uslovima za čuvanje i ispadanje poluglasa u srpskohrvatskom. *Zbornik za filologiju i lingvistiku*, *17*(2), 37–47.

Ivić, P. (Ed.). (1981). *Fonološki opisi srpskohrvatskih/hrvatskosrpskih, slovenačkih i makedonskih govora obuhvaćenih Opšteslovenskim lingvističkim atlasom*. Akademija nauka i umjetnosti Bosne i Hercegovine.

Ivić P. (1994). *Celokupna dela: Vol. 3. Srpskohrvatski dijalekti: Njihova struktura i razvoj*. Matie srpska.

Ivić, P. (2001a). *Celokupna dela: Vol. 2. Dijalektologija srpskohrvatskog jezika: Uvod u štokavsko narečje*. Matica srpska.

Ivić, P. (2001b). Srpski dijalekti i njihova klasifikacija. *Zbornik Matice srpske za filologiju i lingvistiku*, *44*(1–2), 175–209.

Ivić, P., & Lehiste, I. (1963). Prilozi ispitivanju fonetske i fonološke prirode akcenata u savremenom srpskohrvatskom jeziku (1). *Zbornik Matice srpske za filologiju i lingvistiku*, *6*, 33–74.

Ivić, P., & Lehiste, I. (1965). Prilozi ispitivanju fonetske i fonološke prirode akcenata u savremenom srpskohrvatskom jeziku (2). *Zbornik Matice srpske za filologiju i lingvistiku*, *8*, 75–117.

Ivić, P., & Lehiste, I. (1967). Prilozi ispitivanju fonetske i fonološke prirode akcenata u savremenom srpskohrvatskom jeziku (3). *Zbornik Matice srpske za filologiju i lingvistiku*, *10*, 55–93.

Ivić, P., & Lehiste, I. (1969). Prilozi ispitivanju fonetske i fonološke prirode akcenata u savremenom srpskohrvatskom jeziku (4). *Zbornik Matice srpske za filologiju i lingvistiku*, *12*, 115–165.

Ivić, P., & Lehiste, I. (1970). Prilozi ispitivanju fonetske i fonološke prirode akcenata u savremenom srpskohrvatskom jeziku (5). *Zbornik Matice srpske za filologiju i lingvistiku*, *13*(2), 225–246.

Ivić, P., & Lehiste, I. (1972). Prilozi ispitivanju fonetske i fonološke prirode akcenata u savremenom srpskohrvatskom jeziku (6). *Zbornik Matice srpske za filologiju i lingvistiku*, *15*(1), 95–113.

Jakobson, R. (1931). Über die phonologische Sprachbünde. *Travaux de cercle linguistique de Prague*, *4*, 234–240.

Jakobson, R. (1962). K kharakteristike evroaziĭskogo iazykovogo soiuza. In R. Jakobson, *Selected writings* (Vol. 1., pp. 144–202). Mouton de Gruyter.

Jochalas, T. (2010). *Andros: Arbanites kai Arbanitika*. Ekdoseis Typōthētō.

Karasiński, A., & Sawicka, I. (2018). Polski język w albańskim „damaskinie" z XIX w. *Linguistica Copernicana*, *15*, 291–309.

Kochev, I. (Ed.). (2001). *Bŭlgarski dialektem atlas (obobstavasht tom)* [BDA]. Knigoizdatelska kŭshta "Trud".

Kolev, V. (2004). Dialectal accent shifts and double accent in the Bulgarian linguistic region. In R. Alexander & V. Zhobov (Eds.), *Revitalizing Bulgarian dialectology* (pp. 215–226). University of California Press. http://books.library.upenn.edu/webbin/book/lookupid?key=olbp46045

Kontosopulos, N. (2001). Dialektoi kai idiōmata tēs neas ellēnikēs. Ekdotēs.

Korytowska, A. (2001). *Grupy samogłoskowe w językach słowiańskich*. [Unpublished doctoral dissertation, Nicolaus Copernicus University].

Korytowska, A. (2009). Sandhi w literackim języku albańskim na Kosowie. *Linguistica Copernicana*, *1*, 223–229.

Korytowska, A. (2012). *Sandhi w standardzie języka macedońskiego*. Wydawnictwo Uniwersytetu Mikołaja Kopernika.

Korytowska, A., & Sawicka I. (2007). Uwagi na temat ilościowej charakterystyki fonetyki słowiańskiej. In I. Sawicka (Ed.), *Komparacja współczesnych języków słowiańskich: Fonetyka i fonologia* (pp. 199–219). Uniwersytet Opolski.

Kozyra, A. (2015). Geminaty w językach słowiańskich. *Slavia Meridionalis*, *15*, 206–219. https://doi.org/10.11649/sm.2015.017

Kuzov, A. (1921). Kosturskiiat govor. *Izvestiia na Seminara po Slavianska Filologiia*, *4*, 86–125.

Language Forums. (n.d.). WordReference.com. Retrieved December 24, 2015, from https://forum.wordreference.com/

Leake, W. M. (1814). *Researches in Greece*. J. Booth.

Lehiste, I., & Ivić, P. (1980). The intonation of yes-or-no questions – a new Balkanism?. *Balkanistica*, *6*, 45–53.

Małecki, M. (1934). Drobiazgi z Macedonji: O rozwoju samogłosek nosowych w Kosturskiem. *Lud Słowiański*, *3*(2), 66–287.

Małecki, M. (1936). *Dwie gwary macedońskie (Suche i Wysoka w Sołuńskiem)*. Księgarnia Gebethnera i Wolffa.

Margariti-Ronga, M. (1985). *Phōnologiki analēsi tou siatistinou idiōmatos*. Aristoteleio Panepistēmio.

Margariti-Ronga, M. (1989). Aphomoiōseie ēchērotētas sto idiōma tou Katphidigiou. In *Studies in Greek linguistics. Proceedings of the 10th Annual Meeting of the Department of Linguistics* (pp. 151–168). Aristotle University.

Marotta, G. (2008). Lenition in Tuscan Italian (Gorgia Toscana). In J. Brandão de Carvalho, T. Scheer, & P. Ségéral (Eds.), *Lenition and fortition* (pp. 235–272). De Gruyter. https://doi.org/10.1515/9783110211443

Marotta, G., & Sorianello, P. (1992). Lenizione e sonorizzazione nell'italiano cosentino: Un'analisi sperimentale. *L'Italia dialettale*, *55*, 65–122.

Martinet, A. (1952). Celtic lenition and Western Romance consonants. *Language*, *28*, 192–217.

Matov, D. (1889). Ostatŭtsi ot zvukovete *ŭn*, *ŭm*, *en*, *em* v kosturskiia govor. In *Knizhitsi za prochit 1* (pp. 21–26). Скоропечатница На С. Муратори И С-Ие.

Mazon, A. (1923). *Contes slave de la Macédoine sud-occidentale*. É. Champion.

Menéndez-Pidal, R. (1960). Dos problemas iniciales relativos a los romances hispánicos. In M. Alvar et al. (Eds.), *Enciclopedia lingüistica hispánica* (Vol. 1). Consejo Superior de Investigaciones Científicas.

Miklosich, F. (1861). Die slavischen Elemente im Rumunischen. *Denkschriften der Kaiserlichen Akademie der Wissenschaften. Philosophisch-historische Klasse*, *1861*(12), 1–70.

Miletich, L. (1901). Arnautite v silistrensko i sledi ot nosovki v tekhniia ezik. *Periodichesko spisanie*, *9*, 623–666.

Minissi, N. (1982). The vowel system of Macedonian within the framework of the vowel system of the Balkan languages. In N. Minissi, N. Kitanovski, & U. Cinque, *The phonetics of Macedonian* (pp. 47–51). Bibliopolis.

Miracco, E. (1984). *Osservazioni sulle parlate delle comunità Albanesi della provincia Catanzaro*. MIT. Cosenza.

Mirchev, K. (1932). Za niakoi sledi na nazalizŭm v tsentralni makedonski govori. *Makedonski pregled 7*.

Mitskova, M. (2017). Ostatŭtsi na nazalizŭm v bŭlgarskite govori (Po opisaniia ot vtorata polovina na XIX v.). *Nauchni trudove* (Plovdivski universitet „Paisiĭ Khilendarski"), *55*(1), 147–160.

Moguš, M. (1977). *Čakavsko narečje*. Školska knjiga.

Muça, F. (1987). E folmja e krahinës së Konispolil. *Dialektologjia shqiptare*, *5*, 281–363.

Mulaku, L. (1968). *Govor Albanaca Bajgorske Šalje*. Zajednica naučnih ustanova Kosova i Metohije.

Mulaku, L., & Bardhi, M. (1978). Mbi të folmen shqipe të Peshterit. In I. Ajeti (Ed.), *Studime gjuhësore: Vol. 1. Dialektologji* (pp. 275–321). Instituti Albanologjik

Nesimi, R. (1987). Mbi disa veçori të sistemit lokalik të së folmës shqipe të rrethit të Tetovës. *Dialektologjia shqiptare*, *5*, 176–206.

Nespor, M., & Vogel, I. (1986). *Prosodic phonology*. Foris Publications.

Newton, B. (1972). *The generative interpretation of dialect: A study of Modern Greek phonology.* Cambridge University Press.

Nikolaeva, T. (1996). *Prosodiia Balkan*. Indrik.

Novaković, S. (1892). Beträge zur Erforschung der macedonischen Dialekte. *Archiv für slavische Philologie*, *15*(44/45), 37–46.

Oblak, V. (1894). Prinos kŭm bŭlgarskata gramatika. *Sbornik za narodni umotvoreniia, nauka i knizhnina*, *11*, 518–624.

Pajaziti, N. (2008). *E folmja e Anadrinit*. Instituti Albanologjik i Prishtinës.

Papahagi, T. (1963). *Dicţionarul dialectului aromîn general şi etimologic*. Editura Academiei.

Papanastasiou, G., & Papadamou, E. (2013). The position of the northern Greek dialects of Kastoria among the Modern Greek dialects. In M. Janse, B. Joseph, A. Ralli, & M. Bağriaçik (Eds.). *Studies in Modern Greek dialects and linguistic theory:*

Proceedings of the 5th International Conference of Modern Greek Dialects and Linguistic Theory. Ghent 20–22 September 2012 (pp. 389–401). University of Patras.

Peco, A. (1991). *Pregled srpskohrvatskih dijalekata*. Naučna knjiga.

Penny, R. (2002). *A history of the Spanish language* (2nd ed.). Cambridge University Press. https://doi.org/10.1017/CBO9780511992827

Perlin, J., & Sawicka, I. (1987). Balkan-Romance parallels in distribution of phonemes. In *Proceedings of the XIth International Congress of Phonetic Sciences* (Vol. 1, pp. 350–353). Academy of Sciences of the Estonian S.S.R.

Piotrovskiĭ, R. G. (1968). O palatalizatsii balkanoromanskikh soglasnykh. In E. Georgiev et al. (Eds.), *Actes du premier Congrès international des études balkaniques et Sud-Est européennes* (pp. 699–711). Académie bulgare des sciences.

Pritsak, O. (1983). The Slavs and the Avars. In *Gli Slavi occidentali e meridionali nell'alto medioevo* (pp. 353–432). Centro Italiano di studi sull'alto medioevo; Fondazione CISAM.

Przybylska, B. (2006). *Reguły sandhi w dialekcie szkodrańskim języka albańskiego* [Unpublished master's thesis, Nicolaus Copernicus University].

Rohlfs, G. (1966). *Grammatica storica della lingua italiana e dei suoi dialetti*. Giulio Einaudi editore.

Rohlfs, G. (1967). Problèmes de linguistique balkanique et ses rapports avec l'Italie méridionale. *Studia Albanica*, *1*, 169–177.

Rybicka, A. (2008). *Sandhi w literackim języku albańskim mieszkańców miasta Szkodra* [Unpublished master's thesis, Nicolaus Copernicus University].

Saramandu, N. (1972). *Cercetări asupra aromânei vorbite în Dobrogea*. Editura Academiei.

Savicka, I. (2014). *Fonetskite problemi vo arealnata lingvistika (vrz osnova na jazičnata situacija vo jugoistočna Evropa)*. Makedonska akademija na naukite i umetnostite.

Savicka, I., & Cihnerska, A. (2018). *Mestoto na makedonskata fonetika vo ramkite na slovenskiot i balkanskiot jazičen svet*. Makedonska akademija na naukite i umetnostite.

Savicka, I., Gerazov, B., Labroska, V., Cihnerska, A., & A. Travinjska. (2021). *Fonetika i fonologija na sovremeniot makedonski standarden jazik: Suprasegmentalna fonetika i fonologija*. Makedonska akademija na naukite i umetnostite.

Savicka, I., & Spasov, Lj. (1997). *Fonologija na sovremeniot makedonskiot standarden jazik* (Vols. 1–2). Detska radost.

Savitska, I. (2000). Ob odnom srednevekovnom balkanizme. In *Materialy XXVIII Mezhvuzovskoĭ konferentsii prepodavateleĭ i aspirantov: Vol. 21. Balkanskie issledovaniia* (Pt. 3). *Mart 1999* (pp. 25–28). Universitet Sankt Peterburg.

Savitska, I. (2002). Funktsionirovanie grupp soglasnykh tipa ND v balkanskikh iazykakh. In N. N. Kazanskiĭ (Ed.), *Materialy konferentsii posveshchennoĭ 90-letiiu so dnia rozhdeniia Agnii Vasil'evny Desnitskoĭ* (pp. 195–198). Rossiĭskaia akademiia nauk; Institut lingvisticheskikh issledovaniĭ.

Sawicka, I. (1974). *Struktura grup spółgłoskowych w językach słowiańskich*. Ossolineum.

Sawicka, I. (1983). Tipi i sandhit në shqipën letrare në Kosovë. *Seminari Ndërkombëtar për gjuhën, letërsinë dhe kulturën shqiptare*, *8*, 168–175.

Sawicka, I. (1984). Edhe një herë për grupet e bashkëtingëlloreve të tipit nazal+okluziv në gjuhën shqipe. *Gjurmime albanologjike*, *13*, 79–92.

Sawicka, I. (1986). *Struktura sloga u balkanskim jezicima*. Ossolineum.

Sawicka, I. (1991a). Some remarks on the intonation of yes-or-no questions in Southern Slavonic. In I. Sawicka & A. Holvoet (Eds.). *Studies in the phonetic typology*

of the Slavic languages (pp. 125–153). Instytut Slawistyki PAN (Slawistyczny Ośrodek Wydawniczy).

Sawicka, I. (1991b). The problem of prenasalization of stops in Southern Slavic. In I. Sawicka & A. Holvoet (Eds.), *Studies in the phonetic typology of the Slavic languages* (pp. 113–125). Instytut Slawistyki PAN (Slawistyczny Ośrodek Wydawniczy).

Sawicka, I., (1997). *The Balkan Sprachbund in the light of phonetic features*. Energeia.

Sawicka, I., (2000). A medieval phonetic Balkanism. *Folia Linguistica Historica*, *21*(*1–2*), 155–158. https://doi.org/10.1515/flih.2000.21.1-2.155

Sawicka, I. (2001a). *An outline of the phonetic typology of the Slavic languages*. Wydawnictwo Uniwersytetu Mikołaja Kopernika.

Sawicka, I. (2001b). Lidhje midis hundoresisë dhe reduktimit në gjuhëve ballkanike. *Seminari ndërkombëtar për gjuhën, letërsinë dhe kulturën shqiptare*, *19*, 283–286.

Sawicka, I. (2005). Sylaba turecka. *Studia Turcologica Cracoviensia*, *10*, 373–380.

Sawicka, I. (2018). O spółgłosce buforowej. In A. Dobaczewski, A. Moroz, & P. Sobotka (Eds.), *Sens i konwencje w języku* (pp. 281–291). Wydawnictwo Uniwersytetu Mikołaja Kopernika.

Sawicka, I. (2019a). Greek 'nasal + stop' clusters and the Greek-Macedonian convergence. In Ch. Tsitzilis & G. Papanastassiou (Eds.), *Language contact in the Balkans and Asia Minor* (Vol. 1, pp. 73–81). Aristotle University; The Triandafilidi Neohellenic Institute.

Sawicka, I. (2019b). Macedonian reflexes of the Common Slavic nasal vowels as products of Balkan convergence. In V. Latifi, V. Friedman, & M. Markovikj (Eds.), *Multiculturalism and language contact* (pp. 25–38). Southeast European University in Tetovo.

Sawicka, I. (2019c). Nieznany polsko-albański słowniczek z początku XIX wieku. *Rocznik Slawistyczny*, *68*, 103–124.

Sawicka, I. (2021a). The origin of nasality in Macedonian dialects. In P. Arkadiev, J. Pakerys, I. Šeškauskienė, & V. Žeimantienė (Eds.), *Studies in Baltic and other languages* (pp. 334–352). Vilniaus universiteto leidykla.

Sawicka, I. (2021b). The phonetic convergence in the Balkans. In C. Vătăşescu (Ed.), *New perspectives on Balkan linguistics* (pp. 81–89). Editura Istros a Muzeului Brăilei "Carol I".

Sawicka, I. (2022). Konwergencje włosko-słowiańskie w zakresie fonetyki. *Rocznik Slawistyczny*, *71*, 187–201. https://doi.org/10.24425/rslaw.2022.142762

Sawicka, I., & Cychnerska, A. (in press). The Balkan sandhi (preliminary observations). *Language contact in the Balkans and Asia Minor* (Vol. 2). Aristotle University, The Triandafilidi Neohellenic Institute.

Sawicka, I., & Dargiel, K. (2018). *Struktura e rrokjes shqipe*. Akademia e shkencave dhe e arteve të Kosovës.

Sawicka, I., & Grzybowski, S. (1999). *Studia z palatalności w językach słowiańskich*. Wydawnictwo Uniwersytetu Mikołaja Kopernika.

Sawicka, I., & Sujecka, J. (2015). *Wprowadzenie do bałkanologii: Etnosy – języki – areały – konceptualizacje*. Instytut Slawistyki PAN (Slawistyczny Ośrodek Wydawniczy).

Schaller, H. (1975). *Die Balkansprachen: Eine Einführung in die Balkanologie*. Winter.

Scutari, P. (2002). *Il lessico della parlata arbëreshe di San Costantino Albanese*. Università Della Calabria.

Serbo-Croatian phonology. (2015). In *Wikipedia*. Retrieved December 24, 2015, from https://en.wikipedia.org/wiki/Serbo-Croatian_phonology#%20Consonants

Setatos, M. (1969). *Phonological problems of Modern Greek* koine. http://ins-bibl.lit.auth.gr/setatos/files/Setatos_2.pdf

Shklifov, B. (1973). *Kosturskiiat govor*. Sofiia.

Shkurtaj, Gj. (1975). E folmja e Kelmendit. *Dialektologjia shqiptare*, *3*, 5–130.

Shkurtaj, Gj. (1982). E folmja e Rranxave të Mbishkodrës. *Dialektologjia shqiptare*, *4*, 144–279.

Simeonov, B. (1977). Obshchie cherty fonologicheskikh system balkanskikh iazykov. *Balkanskoe ezikoznanie*, *20*, 53–99.

Skok, P. (1978). Humultime gjuhësore të popullsisë josllave të Luginës së Shkupit. *Studime gjuhësore I. Dialektologji*, 81–103.

Sobolev, A. (1998). *Sprachatlas Ostserbiens und Westbulgariens (I): Problemstellung, Materialien, Kommentare, Kartenanalyse*. Biblion Verlag. https://doi.org/10.3726/b12867

Sobolev, A., & Novik, A. (2013). *Golo Bordo (Gollobordë)*, *Albania*. Verlag Otto Sagner; Nauka.

Srpski jezik – Vokabular forum. (n.d.). Retrieved December 24, 2015, from http://www.vokabular.org/forum/index.php?topic=2169.0

Steinke, K., & Ylli, Xh. (2007). *Die slavischen Minderheiten in Albanien: 1. Teil. Prespa-Vërnik-Boboshtica*. Verlag Otto Sagner.

Steinke, K., & Ylli, Xh. (2008). *Die slavischen Minderheiten in Albanien: 2. Teil. Golobrdo-Erbele-Gorni Krčišta*. Verlag Otto Sagner.

Steinke, K., & Ylli, Xh. (2010). *Die slavischen Minderheiten in Albanien: 3. Teil. Gora*. Verlag Otto Sagner.

Stoĭkov, S. (2002). *Bŭlgarska dialektologiia*. Akademichno izdatelstvo "Prof. Marin Drinov".

Teodorov, A. (1882). Prinos kŭm vŭprosa za bŭlgarski nosovki. *Periodichesko spisanie*, *3*, 142–143.

Tilkov, D. (Ed.). (1982). *Gramatika na sŭvremenniia bŭlgarski knizhoven ezik: Vol. 1. Fonetika i fonologiia*. Bŭlgarska akademiia na naukite.

Tilkov, D., & Boiadzhiev, T. (1977). *Bŭlgarska fonetika*. Nauka i izkustvo.

Topalli, Xh. (1974). Disa vërejtje për të folmen e krahinës së Pukës, *Dialektologjia shqiptare*, *2*, 282–333.

Toporov, V. N. (1965). Neskol'ko zamechaniĭ o fonologicheskoĭ kharakteristike central'no-aziatskogo iazykovogo soiuza. In S. Drewiak (Ed.), *Simbolae linguisticae in honorem Georgii Kuryłowicz* (pp. 322–328). Ossolineum.

Triantaphyllidēs, M. (1941). *Neoellēnikē Grammatiki*. Organismos ekdoseths didiaktikon biblion. https://www.greek-language.gr/greekLang/files/document/modern_greek/grammatiki.triantafyllidi.pdf

Tserdanelis, G. (2005). *The role of segmental sandhi in the parsing of speech: Evidence from Greek* [Doctoral dissertation, Ohio State University].

TSitsov, N. (1881). Zametka o nosovykh v s. Komanichevo, *Sbornik" za narodni umotvorenija, nauka i knizhnina*, *4*, 109–110.

TSonev, B. (1904/1905). Klasifikatsiia na bŭlgarskite knizhovni pametnitsi ot najstaro vreme do kraja na XVI vek. *Godishnik na Sofiĭskiia universitet*, *1904–1905*.

TSonev, B. (1937). *Istoriia na bŭlgarskiia ezik* (Vol. 3). Nauka i izkustvo.

Turano, G. (2001). *Tratti linguistici e culturali dell'Arbëria crotonese*. Università Della Calabria.

Velcheva, B. (1979). Nazalizmŭt v bŭlgarskite govori na Sukho i Visoka. In *Izsledvaniia vŭrkhu istoriiata i dialektite na bŭlgarskiia ezik* (pp. 78–83). Bŭlgarska akademiia na naukite.

Vidoeski, B. (1998). *Dialektite na makedonskiot jazik*. (Vol. 1). Makedonskata akademija na naukite i umetnostite. http://dijalekti.manu.edu.mk/pdf

Vidoeski, B. (1999a). *Dialektite na makedonskiot jazik* (Vol. 2). Makedonskata akademija na naukite i umetnostite. http://dijalekti.manu.edu.mk/pdf

Vidoeski, B. (1999b). *Dialektite na makedonskiot jazik* (Vol. 3). Makedonskata akademija na naukite i umetnostite. http://dijalekti.manu.edu.mk/pdf

Vidoeski, B. (2000a). *Fonološki bazi na govorite na makedonskiot jazik*. Makedonskata akademija na naukite i umetnostite. http://ical.manu.edu.mk/index.php/publications

Vidoeski, B. (2000b). *Tekstovi od dialektite na makedonskiot jazik*. Makedonskata akademija na naukite i umetnostite. www. http://dijalekti.manu.edu.mk/pdf

Vladisavljević, S. (1977). *Nepravilan izgovor srpskohrvatskih afrikata*. Jugoslovenska knjiga.

Voiceless alveolo-palatal affricate. (n.d.). In *Wikipedia*. Retrieved December 24, 2015, from http://en.wikipedia.org/wiki/Voiceless_alveolo-palatal_affricate

Zymberi, A. (1978). Vezhgime mbi të folmën e fshatravet të Lugut të Drinit të Bardhë. *Dijalektologjia shqiptare*, *5*, 481–501.

Volume 48 of the series *Język na Pograniczach*
[Borderland Languages]

Studies in Balkan Phonetic

Author of the volume:

Prof. dr hab. Irena Sawicka
Instytut Slawistyki Polskiej Akademii Nauk
ORCID: https://orcid.org/0000-0003-1426-8211
E-mail: irena.sawicka@ispan.edu.pl

Competing interests: The author declares that she has no competing interests.

Abstract

This work is devoted to phonetic phenomena occurring in the languages and dialects which belong to the so-called Balkan Language League. The author accentuates, firstly, common phenomena, i.e. those that can be referred to as Balkanisms, and, secondly, the mechanisms of convergence in a multilingual environment. The work also identifies the centre and periphery of the Balkan Language League in terms of phonetics. The central area of Balkan phonetics overlaps with the area where convergence processes are still ongoing, also in the domain of morphosyntactic features, but the periphery is different. It is the only comprehensive study of Balkan phonetics from an areal perspective, although, due to the specificity of the phenomena under discussion, it focuses on areas with the strongest convergence.

Keywords: Balkan Language League; Balkan phonetics; convergence

Tom 48 serii „Język na Pograniczach”
[Borderland Languages]

Studia z fonetyki bałkańskiej

Autorka:

Prof. dr hab. Irena Sawicka
Instytut Slawistyki Polskiej Akademii Nauk
ORCID: https://orcid.org/0000-0003-1426-8211
E-mail: irena.sawicka@ispan.edu.pl

Autorka deklaruje brak konfliktu interesów.

Abstrakt

Praca jest poświęcona zjawiskom fonetycznym występującym w językach i dialektach należących do tzw. Bałkańskiej Ligi Językowej. Autorka kładzie akcent, po pierwsze, na zjawiska wspólne, tj. takie, którym można nadać miano bałkanizmu, oraz, po drugie, na mechanizmy konwergencji w sytuacji wielojęzyczności. W pracy wyznacza również centrum i peryferie Bałkańskiej Ligi Językowej w zakresie fonetyki. Obszar centralny fonetyki bałkańskiej pokrywa się z terenem, na którym wciąż żywe są procesy konwergencyjne również w zakresie morfoskładni, ale ramy zewnętrzne są inne. To jedyne opracowanie całościowe fonetyki bałkańskiej w aspekcie arealnym, choć ze względu na specyfikę opisywanych zjawisk, również koncentruje się na areałach o najsilniejszej konwergencji.

Słowa kluczowe: Bałkańska Liga Językowa; fonetyka bałkańska; konwergencja