A purely typological assessment of Slavic phonetics does not seem particularly interesting as it would only demonstrate that Slavic languages are consonantal languages and are characterised by particular types of syllabic structures, particular prosodic features, etc., which link Slavic phonetics with other languages of the world. The only conclusions from such an overview would be modest and of a universal nature. A comparative analysis of two or three languages does not seem particularly attractive either, even though such an approach proved revealing in its time. The present-day significance of comparative analysis consists, in my opinion, in its pragmatic orientation as it serves informed preparation of textbooks used in foreign language teaching.

Today, areal analysis seems much more inspiring as it allows us to draw conclusions about the external history of languages, about past or present-day

---

1 This article is a summary of views that I have expressed in numerous works on Slavic and Balkan languages; see especially: Sawicka (2001, 2007a), Савицка и Цихнера (2018).

The work has been prepared at author’s own expense.
Competing interests: no competing interests have been declared.
Publisher: Institute of Slavic Studies, Polish Academy of Sciences.
This is an Open Access article distributed under the terms of the Creative Commons Attribution 4.0 International License (https://creativecommons.org/licenses/by/4.0/deed.en), which permits redistribution, commercial and non-commercial, provided that the article is properly cited. © The Author(s) 2023.
bilingualism, and, sometimes, we can draw conclusions about the mechanisms of interlinguistic convergence. I disagree with the views expressed by some linguists that areal analysis is the same as typological analysis. This is not to mean that the two are not related to each other; on the contrary, they have many points of contact, which entitles me to contribute to this volume of *Slavia Meridionalis*, which is devoted to the typology of Slavic languages.

Below, I briefly outline the main phonetic areas into which Slavic languages are broken up in my opinion.

It is widely believed that the holistic assessment of languages is not possible. However, in the case of Slavic languages, one can see a certain parallel between their phonetic and morphosyntactic systems: at the pole where the rich correlation of palatalisation has been preserved (both phonological and allophonic), nominal inflection has also been preserved to the highest degree. This is the case East Slavic languages. In contrast, at the other pole – on the south – the correlation of palatalisation is very limited and nominal inflection is significantly reduced or completely absent. On the other hand, verbal inflection has been preserved and even expanded.

Here, I will briefly present my views on the areal division of Slavic phonetics. The most important conclusion stemming from this synchronic overview of Slavic phonetics is that the classic division of Slavic languages into eastern, western, and southern ones is out of date. At present, this division is reflected only in the morphonological structures of morphemes. I also believe that the division of the South Slavic languages into the Shtokavian-Slovenian group and the Bulgarian-Macedonian group does not apply to phonetics.

Today, in my opinion, the most important line of division is the Carpathians, which separate the north-eastern Slavic phonetics from the south-western phonetics. The Carpathians end in Romania, but the Balkan Mountains constitute a kind of extension which divides Bulgaria into eastern and western parts. It is clear that the boundary between these areas cannot be clearly delineated because is constituted by a series of isophones. Especially in the Balkans, all linguistic boundaries are blurred and represent vast transition bands from one phonetic type to another and, in general, from one language to another. This internal Bulgarian boundary is also an internal boundary within the Balkan Sprachbund, and in the macro perspective it is also the boundary between the western and Eurasian phonetic types, as once postulated by Roman Jakobson (cf. Jakobson, 1931),

---

2 We discussed this at the meeting of the Balkan Linguistic Commission in Vienna in 2012.
who recognised the following main features which differentiate these two types: the lack of polytony and an elaborate correlation of consonantal palatalisation on the east of this boundary. These features can, of course, be debated, and a few other differentiating features can be added; however, in very general terms, this division – at least as regards palatalisation – seems documented, which endows languages with specific aural properties.

The most important feature that distinguishes the two main areas of Slavic phonetics is the extensive consonantism north-east of the Carpathians, which developed at the expense of vocalism. Such a characteristic results from a greater involvement of palatalisation in the creation of phonological and phonetic systems. East Slavic and some West Slavic languages (those north of the Carpathians) have additional pairs of palatal sibilants (fricatives and affricates), and Bulgarian has a complete set of palatalised consonant phonemes. Additionally, combinatory palatalisations of consonants before front vowels occur in all languages of this area (to a different extent): in all the languages before [i], and in Russian also before [e]; in Bulgarian before [i] and [e], but mostly in eastern dialects. Although the Bulgarian norm also mentions such palatalisations in standard pronunciation, they are so weak in standard Bulgarian that they do not lead to the neutralisation of the palatal vs. non-palatal consonant opposition. In the contrasting Slavic phonetic area, vowel inventories are more elaborate as a result of the presence of the phonological opposition of length, which doubles the number of vowel phonemes. These languages, however, do not have the schwa in their vowel inventories. The schwa is characteristic of the languages of the north-eastern area (and of many languages spoken further east, cf. Тоноров, 1965), with its articulation approximating the values of [ɨ] (y, ы, и) or [ə] (а). The boundary between these two areas is gradually becoming blurred because the Slavic Eurasian type is the withdrawing type, which is manifested in restricted palatalisation: depalatalisation of consonants and restricted range of combinatory palatalisation, which is accompanied by the phonologisation of [ɨ], which originally functioned as an allophone of /i/ in Slavic languages. Bearing in mind Jakobson's division, we can call this process “Europeanisation”.

---

3 It is worth mentioning that a different assimilation is characteristic of the languages spoken south of the Carpathians (and in part of Poland), namely the change of [n] into [ŋ] before [k, g]. This assimilation is absent in the north-east. The progressive nasalisation of vowels is also more intense in the south.
This is the most important contrast within Slavic phonetics, but it cannot be said that it is a typological difference on a macro scale.

On the basis of comparing phonological inventories, Slavic languages can be divided into consonantal and vocalic ones (which, as indicated above, is mainly related to the contribution of palatalisation in consonant systems, on the one hand, and to the occurrence of length opposition in vocalic systems on the other hand). Nowadays, however, the typological division into consonantal and vocalic languages is established not on the basis of the features of phonological inventories, but on the basis of the frequency of segments. In this respect, all Slavic languages should be classified as consonantal ones, which is not surprising as all Slavic languages inherit the same morphemes. There are also differences in frequency, but they are not significant (cf. Korytowska & Sawicka, 2007). They are, however, accompanied by certain detailed distribution-frequency differences: geminates have a much higher frequency in the “more consonantal” languages (see, for instance, Kozyra, 2015); consonant clusters are also more frequent in such languages and are more complex (there are fewer restrictions on the combination of consonants). On the other side of the borderline, Slavic languages are characterised by a high frequency of vowel groups, especially the Balkan Slavic languages (for details, see Korytowska, 2001).

The division of Slavic languages is different if prosody is taken into account: word stress, phrase intonation and syllable structure.

The division of Slavic languages (except for BCMS) according to the physical correlate of stress does not seem to make sense because, in most cases, stress does not have a phonological function, so any kind of prominence would work. In fact, prosodic features are subject to very strong contextual modification; so, depending on the position, they can serve the prominence of a syllable in complementary ways. The only things that can be said with certainty is that

---

4 Vocalic languages are those in which the ratio of vowels to consonants in text is greater than 1; the consonant type is one in which this ratio is less than 1, and the balanced type occurs when the ratio is approximately 1 (see Majewicz, 1989, p. 186).

5 For more data, see Sawicka (2007a).

6 The Macedonian language stands out especially in this respect because the frequency of vowel groups in Macedonian is sometimes even ten times higher than in some northern languages. On the other hand, the lowest frequency of vowel groups is observed in languages in which there are consonant protheses before morpheme-initial vowels (Belarusian, Ukrainian, the Sorbian languages).
the length of articulation clearly dominates as a physical correlate of stress in the East, and the melodic factor prevails in the West (cf. Sawicka, 2007b).

In the Serbo-Croatian-Slovenian group, the change of pitch still has a distinctive function. Rising and falling tones are distinguished (with some distributional restrictions and different dialectal variants). In Slovenian, this opposition is realised in a residual way only in long syllables.

On the basis of word stress placement, Slavic languages can be divided into languages in which stress placement is associated with a specific morpheme, and languages in which stress placement is determined by the phonetic plane. All East Slavic and South Slavic languages belong to the group with morphologically determined stress, with the exception of most of the Macedonian language area. In this group of languages, stress shifting is also gradually disappearing (this process is more advanced in the south than in the east of the Slavic area). These are languages in which stress placement may have a distinctive role. Additionally, in the Shtokavian-Slovenian group, different melodic variants of accent (rising and falling) have a distinctive role.

The languages in the second group can be divided into those in which the stressed syllable is counted from the end of the word and those with initial stress; there is no need to enumerate these languages in particular groups as this is common knowledge.

However, it is worth mentioning that the main difference is constantly being reduced because the regulation of stress placement is affected by influences from a different plane. This is manifested in the fact that phonetic restrictions occur in languages with stress on a specific morpheme. For instance, in BCMS, rising stress cannot fall on the last syllable (and it cannot occur in one-syllable words, either), because the rising stress needs two syllables to be realised, and the last syllable cannot be stressed in some south-eastern Macedonian dialects with essentially ‘morphological’ stress. The ongoing process of changing stress type can be observed in eastern North Macedonia and in the neighbouring dialects of Aegean Macedonia. There is a clear tendency for stress to stabilise on the penultima. The influence of the morphological and semantic planes on the way of stressing is observed mainly in prosodic words composed of separate word forms. For instance, according to the earlier rule that applied to Polish, in a combination of a one-syllable word with a preposition, stress should be shifted to the preposition. Although it used to be like that, now the shift occurs only in fixed constructions. Similarly, the rule that obtains in Macedonian provides for shifts of stress when proclitics, or even
enclitics, and are added, but in practice there are fewer and fewer such shifts. The famous Macedonian ‘complex stress units’ are also disappearing (units of the type кисеˈла вода ‘mineral water’).

Thus, an area can be distinguished in which stress is placed on a specific syllable; this encompasses all West Slavic languages and an isolated area in the very south of the Slavic region.

In Slavic languages, yes/no questions are signalled prosodically in two ways: a. by marking the word in focus with the low-high-low intonation pattern – this is the case in East Slavic languages and Bulgarian; b. by the final rise on the last word of the question – this is the case in West Slavic languages. The remaining languages, namely South Slavic ones except Bulgarian, make use of both intonation contours in yes/no questions.

As for the structure of the syllable, it is undergoing gradual transformation, therefore the ranges of particular areas are changing over time. A compact South-Slavic area can be distinguished that is characterised by the so-called ‘one-peak’ syllable, which means that due to the inherent sonority of the segments, they are arranged in the syllable they are arranged from the less to the more sonorous, and after the nucleus they are arranged in reverse order. A distinct, relatively isochronic rhythm is ensured in this way, which affects the precision of articulation and the persistence of the structure.

Two-peak syllables have been preserved in the north of the Slavic region. Such syllables emerged after the disappearance of the weak yers in the Slavic languages. Two-peak syllables are characterised by non-syllabic increases in sonority. This is related to richer phonemic inventories and a higher frequency of consonant clusters. On the other hand, the accumulation of consonants is conducive to the occurrence of numerous assimilations, which mitigate the ambiguous increases in sonority.7 Polish is the most archaic in this respect because sonority disturbances can occur in it in every position in a syllable (compare Polish examples in which the position of the sonorant in onset or coda groups disturbs the falling or rising sonority contour: wiatr ‘wind’, realizm ‘realism’ cykl ‘cycle’, łże ‘lies’; and Serbian examples, vetar, realizam, ciklus, laže, in which this disturbance has been eliminated).

The processes of returning to the one-peak syllable model are strongly evident in North Slavic languages. This is achieved, for example, by the alternation [v]-[w]-[u] in the onset groups ‘sonorant + obstruent’. This alterna-

---

7 I refer to them as ambiguous because they are not strong enough to create a nucleus.
ation depends on the coda of the preceding word and occurs in Belarusian, Ukrainian, and Slovenian. It can be assumed that this process has already been completed in Belarusian, Slovak, and Sorbian, in which the spelling suggests the occurrence of two-peak syllables, but the pronunciation is different (Sorbian), or such words are simply avoided (Slovak). In Czech and Russian, two-peak syllables no longer occur word-finally (the final sonorants are either pronounced syllabically or a non-etymological vowel appears before the sonorant), but two-peak syllables are accepted word-initially (for details see, e.g., Sawicka, 2020).

As for the voicing/devoicing sandhi, it is quite regular in Russian, Belarusian, northeast Polish, Czech, Upper Sorbian, and Bulgarian, in all of which the so-called devoicing sandhi occurs, and in Slovak, southwest Polish and Lower Sorbian, which are characterised by the voicing sandhi. In the Ukrainian area, which neighbours on the area of voicing sandhi, sandhi is less regular (voicing is more frequent than devoicing). In BCMS, there are no assimilations on word boundaries; in Macedonian, assimilations of obstruents occur before initial obstruents, but not before resonants. Macedonian sandhi is less regular, with a tendency to become the devoicing type.

It is difficult to determine clearly delineated typological boundaries between Slavic languages on the basis of the most important isophones mentioned above. Language areas constitute fuzzy sets almost everywhere in the world and are the result of internal development and external influences (interlinguistic convergences). The Carpathians form a fairly definite boundary running from west to east, although this borderline does not apply to all phonetic features. The Russian language is characterised by the most archaic phonetics, especially in terms of palatalisation. The Polish language, on the other hand, has the most archaic syllable structure.

The south began to evolve earlier and faster towards a more western-type phonetics: it evened out the structure of the syllable and lost assimilative palatalisation, while retaining the melodic accent differences. This is the case in the western part of the Slavic south which seems to have earlier found itself in a multilingual environment. It can be assumed that this state of affairs is caused by different contexts of other languages than in the north. Throughout

---

8 In these languages, a regressive assimilation of obstruents occurs on word boundaries. Obstruents are devoiced before initial resonants in the case of the devoicing sandhi, and they become voiced in the case of the voicing sandhi.
the Slavic area, the influence of western phonetics is evident, although the east still retains the older phonetics, which are more akin to Old Slavic phonetics. The Bulgarian language, especially its eastern dialects, has also maintained the eastern phonetic type in many respects.

though multilingualism comprised different sets of dialects at different geographical points in the Balkans. The changes in the phonetic structure in the south were further strengthened by the formation of the Balkan Sprachbund and multilingualism widespread throughout the Slavic south, even though multilingualism comprised different sets of dialects at different geographical points in the Balkans. This situation also gave rise to various micro-areas characterised by local phonetic features. The most diverse in this respect is the south, i.e., the Macedonian language area, in which several non-Slavic languages are also spoken. The greatest influence should be attributed to the Greek language, due to its formal position and prestige (especially in Aegean Macedonia). It is interesting to observe that the Slavic dialects in the eastern part of Aegean Macedonia acquired different Greek features than those in the western part. This, too, is probably related to the influence of other dialects. In the eastern part, a certain Macedonian-Bulgarian-Greek micro-area has formed, characterised by frequent palatalisation (including progressive palatalisation), incomplete reductions of unstressed vowels, and double stress in words. Double stress, which provides a more perfect isochronism of the feet, is undoubtedly related to the so-called Greek columnar stress, which is essentially the same as double stress and occurs in Greek dialects throughout Aegean Macedonia; however, in its western part it did not affect the local Slavic dialects. Progressive assimilative palatalisation also characterises all Greek dialects of this area, yet it does not occur in the Slavic dialects of the western part of Aegean Macedonia. The western part has the typical ‘western’ phonetics, and when it comes to the most important differential feature of Slavic languages, namely palatalisation, the Macedonian dialects of western Aegean Macedonia have an even more limited inventory of palatal phonemes, and combinatorial palatalisations are absent from them. This micro-area is, however, characterised by a feature which is completely unique in the Slavic south, namely the partial preservation of nasality originating from the old nasal vowels and the irregular occurrence of the prenasalisation of stops. This feature is undoubtedly related to multilingualism and to the Greek language, in which the consonant cluster of the ‘nasal sonorant + voiced stop’ type is a functional (and phonetic) equivalent
of the voiced stop itself. The previously widespread prenasalisation is now declining. The equivalence of ‘nasal + stop’ clusters and single stops persists because this withdrawal is spread over time and occurred in various Greek dialects at different times. Hence, for a Greek, [menta], [menda] and [meda] ‘mint’ are the same, and [dambi] and [dabi] ‘oaks’ are the same for a local Macedonian. In the eastern part of Aegean Macedonia, the simplification of the Greek clusters of the ‘nasal sonorant + voiced stop’ type has already taken place and only a few traces of earlier nasality can be found in the local Slavic dialects (for details, see Sawicka, 2019). In the western part of Aegean Macedonia, this feature is sustained in Albanian dialects, in which groups of the ‘nasal sonorant + voiced stop’ type have a very high frequency (they also appear word-initially) and spontaneous prenasalisations of stops also occur. In this way, the Macedonian language participates in the most important phonetic Balkanism, and although the Macedonian dialects in Greece are slowly disappearing, intense convergence processes are still taking place in the Macedonian-speaking area. It can be said that the still multi-ethnic North Macedonia is now the very centre of the Balkan “melting pot”. In the remaining areas of the Balkan Sprachbund, the creation of nation states largely inhibited convergence processes, and the standard forms of national languages strongly influence the local dialects.

Since the most typical Balkan phonetic features are found in the south-west of the Balkan Peninsula, I assume that the western phonetic type distinguished above (south-west-Slavic, European) is more representative of Balkan phonetics than east-Bulgarian phonetics, but Pavle Ivić, among others, was of a different opinion (Ivić, 1968). As a matter of fact, there is little ground for contention, since both Balkan and Slavic phonetics seem to be subject to a more overarching, albeit blurred and changing division into east and west. Phonetic features considered to be Balkan, such as the merging of palatal and alveolar affricates, the restricting of palatalisation, the absence of [x], the high frequency of vowel groups, specific sandhi, stress restricted to the last three syllables, etc., are also south-west-Slavic features. However, these features are much more clearly expressed in Macedonia, Albania, and northern Greece, which is why I treat this area as the centre of Balkan phonetics (and not only phonetics). In this area, too, there are features that are absent in other Balkan dialects, such as the aforementioned prenasalisation of stops, or the insertion of a stop in the middle of some consonant clusters (for details, see Савицка & Цихнерска, 2018).
BIBLIOGRAPHY


Савицка, И., & Цихнерска, А. (2018). Местото на македонската фонетика во рамките на словенскиот и балканскиот јазичен свет. Македонска академија на науките и уметностите.

BIBLIOGRAPHY

(TRANSLITERATION)


Arealno-typologiczne rozczłonkowanie słowiańskiej fonetyki

Artykuł krótko omawia najistotniejsze cechy fonetyczne słowiańskiego obszaru językowego i ich dystrybucję arealną. Prezentuje arealno-typologiczne podejście do tematu, sugerując w konkluzji inne współczesne podziały niż te, jakie wynikają z faktów historycznych (tj. podział na grupy zachodnio-, wschodnio- i południowosłowiańską).

Słowa kluczowe: fonetyka; języki słowiańskie; klasyfikacja arealna

Areal clustering of Slavic phonetics

The article succinctly discusses the most important phonetic features of Slavic languages and indicates their geographical distribution. It briefly presents an area-typological view of the contemporary phonetics of Slavic languages and suggests a different division than the one resulting from historical facts (into eastern, western, and southern groups)

Keywords: phonetics; Slavic languages; areal classification


Irena Sawicka (irena.sawicka@ispan.edu.pl) – researcher at the Institute of Slavic Studies of the Polish Academy of Sciences. She is also professor emeritus at the Nicolaus Copernicus University of Toruń. Her research focuses on the phonetics of Slavic and Balkan languages, as well as phonetic convergence in the Balkans.

Publication History: Received: 2022-10-01; Accepted: 2023-04-17; Published: 2023-12-31