



SHEVCHENKO SCIENTIFIC SOCIETY, INC.
НАУКОВЕ ТОВАРИСТВО ІМ. ШЕВЧЕНКА В ЗДА
302-304 WEST 13TH STREET, NEW YORK 14, N.Y.

PAPERS  ДОПОВІДІ

Ч.
№ 33

Prof. P. K. KOVALIV, Ph. D.

Ukrainian Free University

SYSTEMS OF PHONEMES IN SLAVIC LANGUAGES

* *
*

Shevchenko Scientific Society

New York

1969

17. **Pap Michael S., Ph.D., Prof.:** Ukraine's Struggle for Sovereignty, 1917-1918. (1961)
18. **Smal-Stocki Roman, Ph. D., Prof.:** The Hetman Mazepa Traditions of the Ukrainian National Government of 1917-23. (In Ukrainian). (1961)
19. **Lysiak Roman, M.D.:** Role of Non-Tyroxive Protein-Bound Iodine in Idiopathic Erythema Multiforme. (1961)
20. **Kovaliuk Jeanette-Yaroslava, B.A.:** Shevchenko and Pan-Slavic Ideas. (1962)
21. **Holiat Roman S., Dr.:** Short History of the Ukrainian Free University (1964)
22. **Sokolysyn Alexander, Dr.:** The Appearance of the Apostol and the Primer 390 Years Ago in Lviv — Western Ukraine (In Ukrainian). (1964).
23. **Collection of Papers, honoring Prof. C. A. Manning** (1964).
24. **Smal-Stocki Roman, Ph. D., Prof.:** Beginning of Fight for Rebirth of Ukrainian Statehood. (1967).
25. **Ostapiak Mykola, Prof.:** The Synthesis of Prof. Volodymyr Brygider's Scientific Work. (In Ukrainian). (1968).
26. **Kysilewskyj Constantine, Ph. D., Prof.:** Peculiarities of the Shashkevych's Language. (In Ukrainian). (1968).
27. **Hordinsky Bohdan Z., Dr.:** Terpenes in the treatment of Cholelithiasis and Hypercholesterolemia. (1968).
28. **Smal-Stocki Roman, Ph. D., Prof.:** George Washington, Traditions in Ukraine. (1968).
29. **Caplenko Wasyl, Prof.:** Academic Achievements of Prof. P. Kovaliv. (1969).
30. **Tkaczuk Ivan Very Rev.:** Scholarly-Theological Activities of Prof. P. Kovaliv and his Participation in Religious and Public Life. (In Ukrainian). (1969).
31. **Kovaliv Pantaleymon, Ph.D., Prof.:** Certain Characteristics of Word-Building in the Ukrainian Language. (In Ukrainian). (1969).
32. **Barragy Terrence J.:** Francisco de Miranda and the Proposed Russian Invasion of Latin America in 1787. (1969.)
33. **Kovaliv Pantaleymon, Ph.D., Prof.:** Systems of the Phonemes in the Slavic Languages. (1969.)
34. **Powstenko Oleksa, Ph.D.:** The Cathedral of St. Sophia and the Fate of Architectural Monuments of the Princely Era. (In Ukrainian). (1969.)

Editor

Prof. B. Steciuk, Ph.D,

**This paper may be reproduced,
provided the source is cited.**

Prof. Pantelejmon KOVALIV, Ph. D.

**SYSTEMS OF PHONEMES
IN SLAVIC LANGUAGES**

INTRODUCTION *

Every language has its own characteristic system of phonemes, developed historically in conformity with the laws of sound evolution in each language. All Slavic languages have their individual systems of phonemes which have been developed after the disintegration of the Slavic unity, and perhaps, in some instances, had their initial stages on the common Slavic ground. Thus, for instance, the Polish language is characterized by a special system of vowel phonemes which includes the nasal phonemes ɔ̃ and ɛ̃ , the Russian, the Belorussian, as well as the Polish languages by the presence of the phoneme i and y , and the Ukrainian language by the presence of phoneme i ($< o, e$) which is not found in any other Slavic language. Though the Slavic languages have kept many common features of Proto-Slavic, both in the system of vowel and consonant phonemes, each has gone through individual phonetic processes which have been reflected in the formation of their systems of phonemes. Even such closely related languages as Ukrainian, Russian, and Belorussian have in the course of history developed their separate phonetic systems.

Some of these features unite Slavic languages into separate groups; for instance, the hardness and softness consonants as discussed by Mikhaľčuk ². Because of the lesser degree of softness in consonants, Mikhaľčuk groups Ukrainian with Czech and Slovak, placing them in the center between Russian, Belorussian, and Polish on one side and Bulgarian, Serbian, Croatian, and Slovene on other ³

* I wish to thank here Mr. E. Slavinsky for his assistance in the editing of the English language.

Some contemporary phonologists accept the nasal a as a separate phoneme but do not consider the e in Polish as a separate phoneme, believing it to be a variant of em , en . See S. K. Šaumjan, *Sistema glasnykh fonem pol'skogo literaturnogo jazyka*. Učenyje zapiski Instituta jazykoznanija AN SSSR, Vol. 3, 1951, p. 402.

² K. Mikhaľčuk, *K voprosu ob otverdenii soglasnykh v malorusskom*. Učenyje zapiski Kazanskogo universiteta, 1903, December, pp. 24-30.

This is confirmed though physiological data by O. Broch, *Očerki*

SYSTEMS OF VOWEL PHONEMES

1. The Proto-Slavic system of vowel phonemes is established by comparative-historical study of the Slavic languages. In this way science has established that in the Proto-Slavic period the system of vowel phonemes consisted of these 11 phonemes: *a, o, u, e, y, i, e, v, v*. The question arises whether all these phonemes were transferred into the area of the separate Slavic languages. To this historians of language predominantly answer in the affirmative, by carrying over wholly the Proto-Slavic system of phonemes into the period of the Slavic languages, especially in the East Slavic area¹. This is what I. Kovalyuk writes in his article "Istorija systemy holosnykh fonem v staroruskij i ukrajinskij movakh" (Pytannja ukrajinskoho movoznavstva, kn. I, Lvivskij deržavnyj universytet, 1959): "Na osnovi analizu movnykh materialiv staroruskykh pamjatok XI-XIII st., na osnovi staroslovjanskykh pamjatok (šljakhom porivnjannja) ta na osnovi zapysiv staroskhidnoslovjanskykh movnykh elementiv u vizantijskykh, arabskykh, i inšykh pamjatkakh prykhodymo do vysnovku, ščo v staroruskij movnij systemi v IX-X st. bulo 11 holosnykh fonem: *a, o, oy, u, v, e, u, v, a, a, a.*"

As we see, the Proto-Slavic system of vowel phonemes, shown to exist in Old Slavic monuments is carried over mechanically into the Old East Slavic area. In the same degree

fiziologii slavjanskoj reči. Enciklopedija slavjanskoj filologii, No. 5, St. Petersburg, 1910. Brooh writes: "Pčti vo vsakh soglasnykh velikoruskoj reči čeredujutsja ottenki "tverdye" i "mjagkie", otmečennye na písmě, kak isvestno, ne v samom znake soglasnogo, no, prjamo ili kosvenno, posredstvom sledujuščego znaka (p. 51). Sistema čeredovanija "tverdych" soglasnykh ottenkov s "mjagkimi" prinadlezit takže maloruskoj reči, khotja, kak isvestno, pri uslovijakh neskoľko ismenennykh sravnitelno so svojstvennymi velikoruskoj reči" (p. 54). Brooh writes even more distinctly about Czech: "Bolšinstvo nyněšni... češských soglasnykh predstavljajet, takim obrazom, principiaľno liš odin obšěij vid i ottenok. S točki zrenija bolšinstva soglasnykh daže neumestno polzovaťsja vyraženiem "tverdij" i "mjagkij", oni ni to, ni drugoe" (p. 63). About Slovak Brooh notes: "Vajakaja raznica meľdu "mjagkimi" i "tverdymi" soglasnymi ottenkami vpolne izgadilas... bolšinstvo soglasnykh možno okarakterizovať... "tverdye" (p. 66). The same is said about Serbian and Croatian: "Ob alternacii tverdych soglasnykh ottenkov s mjagkimi, vrede systemy, svojstvennoj ruskoj reči, v serbochorvatskom jazyke i reči net" (pp. 68-69). Even in the East-Bulgarian dialect which is close to Russian, the grade of palatalization is "povidinomu často niže velikoruskoj" (72). See also P. Kovaliv, Osnovy formuvannja ukrajinskoi movy v porivnjanii z inšymy skhidnoslovjanskyj movamy. Zapysky NTŠ, Vol. 168, New York, 1959, pp. 122-134.

¹ Cf. P. Černykh, Istorij. gram. 74; O. Bezpaľko and others, Istorij. hram., 75; F. Medvedjev, Istorij. hram., 78; T. Lomtev, Grammatika beloruskogo jazyka, 31; V. Ivanov, Kratkij očerok, 16.

we can speak of the other Slavic languages. But from this point of view of the historical development of the Slavic vowel phonemes, it is clear that we cannot say with certainty what system of vowel phonemes lay basically at the beginning of the separate life of each Slavic language, when that Slavic language ceased to be a dialect of Proto-Slavic. We have already seen that such unique phonemes as *q, ǫ, ь, ъ*, very early lost their original phonemic significance, although in writing, in the monuments they by tradition kept it for quite a long while. No Slavic language gives us concrete facts to prove the further preservation of the Proto-Slavic system of vowel phonemes. Theoretically it cannot be assumed that, e. g. phenomena as the loss of the nasal phonemes and of the reduced phonemes occurred in a parallel way in the area of the different Slavic languages, even with the view that these phenomena are the result of the working of one law natural to the one (Proto-Slavic) linguistic system. The law of closed syllables, which began to operate as a result of the loss of the weak reduced vowel phonemes appeared in place of the law of open syllables already in the Proto-Slavic linguistic system and caused a series of sound processes which developed further in the field of the separate Slavic languages in accordance with their own laws.

This gives us the basis for assuming that the Proto-Slavic system of vowel phonemes was destroyed still in the Proto-Slavic period, even before the disintegration of Slavic unity, and when each Slavic language began its own development, having at its base another, different system of vowel phonemes peculiar to itself. We can assume that in these systems there were already, except in certain languages, no nasal or reduced phonemes.

Later these systems of vowel phonemes in the Slavic languages developed in accordance with the laws of each language and the corresponding phonetic conditions which caused a whole series of changes which we have had the opportunity to review in the linguistic literature. As a result of all these changes - the fusion of old phonemes and the appearance of new - each Slavic language created its own separate and natural system of vowel phonemes.

2. In the modern Ukrainian language there has been established wholly a six-member system of vowel phonemes: *a, o, y, e, u, i*¹. The five other (*q, ǫ, ь, ъ*) which Proto-Slavic knew did not find room in the Ukrainian system

¹ In the dialects, especially the north Ukrainian, the system of vowel phonemes differs from the system of vowel phonemes in the literary language by the greater number of phonemes: besides *a, o, y, e, u, i* in the northern dialects there are the so-called diphthongs of sounds, of which one is basic and syllabic and other serves as a coloring of the first. See F. Žylko, *Govory ukrajinškoji movy*, 19-20.

Some of the Ukrainian scholars also in the literary language set another number of vowel phonemes. Thus O. Synjavskij (*Sproba svukovoji kharakterystyky literaturnoj ukrajinškoji movy. Naukovi zapysky Khar-*

of phonemes: they either merged with other phonemes ($q > u$, $q > a$, $\check{s} > i$, $\upsilon > o$, $\upsilon > e$ in a strong position) or completely disappeared as separate phonemes (υ , υ in a weak position). Of these six basic phonemes, the phonemes a , o , y , e etymologically are preserved from Proto-Slavic times with the sole difference that in their development they have undergone various phonetic processes; they have partly changed into other phonemes or they have been amplified through fusion with them of other phonemes; also these processes took place in different periods of history and prehistory of the development of these phonemes for which we cannot establish the precise date. The two other phonemes u and i have their own history of arising. The phoneme u , as we know, was formed as the result of the fusion of the two Pr.-Sl. phonemes y and i in a middle u . Thus the Ukrainian etymological phoneme u greatly widened its functions at the expense of two phonemes, causing the loss of the softness of the preceding consonants which in Proto-Slavic had this softness.

The phoneme i , which etymologically is not connected with Pr.-Sl. i , arose from o , e in new closed syllables as a result of the loss of the old reduced υ , υ and also from \check{s} . This phoneme is a special feature in Ukrainian which no other Slavic language has. Only in special cases has the phoneme i widened at the expense of the i which developed in Ukrainian in place of the etymological $i(y)$ as a result of the working of the morphological law of analogy or in words of foreign origin.

3. In Russian there is no standard agreement as to the number of vowel phonemes. There is a difference in the views whether to consider u a separate phoneme or not. In this connection some slavists count in Russian 6 phonemes and others 5. It is a very characteristic fact that in two university textbooks published in Moscow in the same year 1958, A. N. Gvozdev (*Sovremennyj russkij literaturnyj jazyk*, I, p. 12) and Je. M. Galkina-Fedoruk and others (*Sovremennyj russkij jazyk*, 137) give a different number of phonemes: Gvozdev - 6 and Galkina-Fedoruk and others - 5. This is explained by the fact that Galkina-Fedoruk along with her colleagues does not recognize u as a separate phoneme on the ground that the nature of vowel phonemes, in her opinion, is marked by their strong position, i. e. under the accent at the beginning of a word before a hard consonant: ax , $a\check{o}$, ex , yx ,

ukrajínskoj nauko-*do*slidžboj katedry novoznavstva, 1929, Vol. II) counts 12 vowel phonemes: 6 accented and 6 unaccented. O. Kurylo (Do ponjat-tja fonemy. Zbirnyk sekoij hramatyky ukrajínskoj movy, Ĺviv, 1931, No. 1) counts 11 vowel phonemes: 6 accented and 5 unaccented. Kurylo does not consider unaccented e a separate phoneme, for e , in her opinion, merges with u and forms one phoneme with it. See the criticism of V. Simovyč (Zapysky NTŠ, 1937, Vol. 155 and *Slavia*, 1937, R. XIV, S. 4.

See O. Synjavykyj, *Z verkhovyn novoi literaturnoi ukrajínskoj*

уѡ. And because ѡ is not used at the beginning of a word, the result is that it is not a separate phoneme but only a variant of the phoneme у. Because of this she counts 5 phonemes¹. A. Gvozdev recognizes ѡ as a separate phoneme and so he counts 6 phonemes.

On the other hand there is a difference in the views of ѣ: some regard this sound as a separate phoneme, others do not, including in the system of the vowel phonemes of Russian only the sound е. A. Gvozdev (Op. cit., 11) identifies е and ѣ, putting the latter in brackets. R. Avanesov (Očerki rus-skoj dialektologii, 4) considers only е as a phoneme. In the academic grammar (Grammatika russkogo jazyka, t. I, AN SSSR, Moskva, 1952, p. 52; 1960, p. 49) considers only ѣ a separate phoneme². This once again confirms the fact that in Russian linguistics there are not the methodologically correct ways to settle the question of the system of vowel phonemes.

We expressed (Slovjanški fonemy, § 118) our views on у and ѡ as two separate phonemes in Russian, we also stated (§ 76) that е (as iotacized) actually is not a separate phoneme. Only ѣ is such a separate phoneme. Taking all this into consideration we believe that this is the only methodologically correct way for definite decision of the scientifically true system of vowel phonemes. This system is composed of 6 phonemes: а, о, у, ѣ, у, ѡ. This system has been accepted in the above mentioned academic grammar³.

This system differs from the Ukrainian system. The first three are preserved etymologically from the past in Russian. The phoneme ѣ, which etymologically corresponds to the Ukrainian phoneme е, in Russian is very limited in its functions through the spreading in it of iotacism, which caused the palatalization of consonants before iotacized е(jѣ), which is represented by the letter е just as in Ukrainian iotacized е(je) is represented specifically by the letter ѣ. In this feature the two languages sharply differ from each other: in Ukrainian there is a depalatalization of the consonants before е, while in Russian in the same position there is a palatalization of the consonants. This is one of the definite features that separate the two languages.

The phoneme у in Russian etymologically goes back to the Pr.-Sl. phoneme i and corresponds to Ukrainian у. Likewise ѡ corresponds to the Ukrainian у, in which the two Pr.-Sl. phonemes i and y merged. Thus Russian phoneme у and the Ukrainian phoneme i are phonemes of a different origin,

novy. Juvilejnij zbirnyk na pošanu akad. Mykhaјla Hruševského. UAN, No. 766. U Kyjevi, 1928, pp. 207, 208.

¹ Cf. R. Avanesov, *Fonetika russkogo literaturnogo jazyka*, 88.

² See also N. Kondrasov, *Slavjanskije jazyki*, 86.

³ In the Russian dialects beside these phonemes, there are two others: 1) ѣ closed, which is pronounced as iě; it replaces the old ѣ: *ѣно, ѣло*; 2) ѣ closed, which is pronounced as iо: *кѣ, ѣлѣо, се-ѣо*. See R. Avanesov, *Očerki russkoj dialektologii*, 44-45.

although in pronunciation they are very close together. Cf. Rus. *ясоуице*, Ukr. *ясоуиць* (where *i* < *ě*).

4. In Belorussian the system of vowel phonemes is close to the system of vowels in Russian. Here there is also a six-member system of phonemes: *a*, *o*, *y*, *ɨ*, *u*, *ɯ*. Of these the phoneme *u* corresponds to the etymological *i*. The phoneme *ɨ*, as in Russian, is not a separate phoneme: it replaces iotacized *ɨ* (*јѣ*) and is used for softening the preceding consonants. Cf.: *пѣкі*, *ясо*, *дзясць*.¹

5. In Bulgarian there are counted 6 vowel phonemes: *a*, *o*, *y*, *e*, *u*, *ɨ* (K. Mirčev, *Istorič. gram.*, 66)². Some scholars of Bulgarian as, e. g. R. Ekblom says that in modern Bulgarian there are 15 vowel phonemes. Ja. Rozwadowski counts 8 phonemes. In the opinion of Mirčev, these scholars make the mistake of considering shades (variants) of phonemes as separate phonemes. Modern Bulgarian has no long and short phonemes. But on the basis of the data in old Bulgarian monuments *Kalina* ³, the historian of the Bulgarian language, assumes that formerly in Bulgarian there were long and short vowel phonemes as they now exist in the other South Slavic languages.

The phonemes *a*, *o*, *y*, in Bulgarian go back etymologically to the corresponding Proto-Slavic phonemes. The phoneme *e* partly goes back to etymological Pr.-Sl. *e*, partly (in the western dialects) comes from *ě* and from the nasal phoneme *ę* and from the reduced *ɨ* (see Slov. fonemy, §84). The phoneme *u*, as in Ukrainian, is a fusion of the etymological Pr.-Sl. *i* and *y* and in pronunciation resembles the pronunciation of the Ukrainian phoneme *u*, with the exception of a few cases with a soft pronunciation. A special feature in the system of Bulgarian phonemes, which occurs in no other Slavic languages, is "the broad use of the phoneme *ɨ*" (L. Andrejčičin and others. *Op. cit.* 110). This phoneme beside the basic, etymological origin (< *ɨ*, *ɨ*) has spread in Bulgarian as a result of phonetic changes of some other phonemes (e. g. from *q*) and of secondary origin. E. g.: *сѣн*, *сѣчманѣ*, *сѣдѣа*, etc. In general, as we have seen, the system of Bulgarian vowel phonemes has survived very complicated sound processes and holds a special place among the vowel phonemes of the other Slavic languages.

6. Of the other Slavic languages only Slovene, Serbian, Croatian, Czech and Slovak keep long and short vowel phonemes⁴. Especially Slovene counts 10 vowel phonemes. of

¹ See N. Kondrašov, *Slavjanskije jazyki*, 111. Cf. Ja. Stankevič, *Padručnik kryvičskas (Belaruskas) movy*, Part I-III. Regensburg, 1947, page 7.

² Cf. also L. Andrejčičin and others, *Svremeneni bulgariki ezik*, 109; N. Kondrašov, *Slavjanskije jazyki*, 179. See F. Koschmieder in *Die Welt der Slaven*, I, 1958, pp. 346-349.

³ A. Kalina, *Studyja nad historyjǎ jazyka bulgarskiego*, Kraków, 1891, p. 128.

⁴ Besides the preservation of the old long vowel phonemes, these

which 5 are short (à, ò, ù, è, ì) and 5 long (a, ó, ú, é, í). Long phonemes in Slovene are preserved only under the accent.

The phoneme *a* in Slovene reaches directly to the etymological Pr.-Sl. *a* but in some dialects (western) the *a* which comes from the former reduced vowels is broadened. The phoneme *o* comes from original *o* and *q*.

The phoneme *e* also comes from original *e* and from *q*, *ě*, *ь* and *ѣ*.

The phoneme *u* is a reflex of Pr.-Sl. *u* and *ǫ* (chiefly in the western and northwestern dialects).

The phoneme *ɨ*, as in some other Slavic languages, forms a fusion of the old phonemes *i* and *y*.¹

7. In Serbian and Croatian there are also counted 10 phonemes, and of these 5 are short (â, ô, û, ê, ï) and 5 long (ā, ō, ū, ē, ī). Some scholars, not taking into account length and shortness, count only 5 phonemes². P. Ivič in an article "Osnovnye puti razvitija serbokhorvatskogo vocalizma" (Voprosy jazykoznanija, no. 1, Moscow, 1958, p. 15) says that the basic part of the Serbian and Croatian dialects showed unusual conservatism. He claims that there have been no new changes since the vowel phonemes found in Proto-Slavic *q*, *q̄*, *y*, *ě*, *ь*, *ѣ*, changed³.

The phoneme *a* in Serbian and Croatian has the widest function: besides original *a*, there is the broadened *a* which developed from the reduced *ъ*, *ь* and from *o* in the forms *ra*, *la* (< *or*, *ol*).

The phoneme *o* also broadened at the expense of secondary *o* (< *ɨ*) in the middle and at the end of a word (кѣоуе, ну-сао).

The phoneme *u* spread as a result of the loss of the nasal phoneme *q* and the vocalization of the consonantal phon. *l*⁴.

The phoneme *e* spread at the expense of the loss of the nasal vowel *q* and the reflexation of the phonem *ě*.

Slavic languages preserve long vowel phonemes which arose later. E.g. the lengthening of *o* in the nom. sing. in closed syllables as a result of the loss of the reduced *ь*, *ѣ*. In Serbian *o* was lengthened only under the old accent: *о̀о̀*, gen. *о̀о̀а*, but: *о̀о̀*, gen. *о̀о̀а*. Besides this in Serbian and Slovene *e* is lengthened in the same conditions as *o*: Serb. (and Čakav.) *лѣо̀*, *лѣо̀а*; Slovene *lěa*, *lěa*. Besides the so-called prolongation led to the lengthening of vowel phonemes, e. g. in Serb. and Croat. dialects *pās* (< *pojas*); cf. Serb. *nojac*. See A. Meillet, *Obščeslavjanskij jazyk*, 86-87.

So, while formerly every vowel could be long or short, it later developed that all vowels could be long and short, as we see in these Slavic languages.

¹ T. Florinskij, *Lekcii*, I, 408-409.

² Cf. T. Maretić, *Gramatika i stilistika hrvatskoga ili srpskoga kniževnog jezika*, Zagreb, 1931, p. 1; N. Kondrašov, *Slavjanskije jazyki*, 161.

³ P. Ivič counts as vowel phonemes the so-called "syllable-forming" *ɛ*, *ɨ*. Cf. also Z. G. Rozova, *Značenie serbskogo jazyka pri isušenju istoričeskoj grammatiki*, VSJa, kn. IV, 1955.

⁴ See T. Florinskij, *Lekcii*, I. 244-245

The phoneme *i* represents a fusion of the old phonemes *i* and *y*.

8. In Czech there are counted 10 vowel phonemes, of which 5 are short (*a, o, u, e, i*) and 5 long (*á, ó, ú, é, í*)¹. Besides this Czech has also the diphthong *ou*. Z. Stieber maintains that the difference between long and short vowel phonemes "jest w czeskiem jazyku fonologiczna"². This means that the length and shortness of vowel phonemes serves to differentiate the meaning of words and their forms. E. g.: *vada* "fault", and *váda* "quarrel", *dráha* "road", and *drahá* "dear", etc.³.

This system of vowel phonemes developed in Czech from the more complicated Old Czech system⁴. Especially the phoneme *a* goes back to the original Pr.-Sl. *a* and from the later nasal *ę*.

The phoneme *o* goes back to original *o*.

The phoneme *u* comes from Pr.-Sl. *u* and *ę*, and the phoneme *ú* long comes from Pr.-Sl. *ū* and *ō* and is denoted by the letter *ú*.

The phoneme *e* in Czech represents a fusion of old *e* and *ě* (now *ě* has only a graphical significance and is used to mark the softness of the preceding consonant). Besides, the phoneme *e* represents the reflex of the Pr.-Sl. reduced *ь, ъ*.

The phoneme *i* developed as a result of the fusion in one phoneme of the two old phonemes *i* and *y*⁵. Besides in the dialects (Moravian and Ljaš.) *i* (in long syllable *i*) comes < *ě* (*hřich* < *hřiech*).

The phoneme *ou* comes from *u* (*vous*, Old-Czech *vlus*)⁶.

9. In Slovak there are counted 10 vowel phonemes of which 5 are short (*a, o, u, e, i*) and 5 long (*á, ó, ú, é, í*)⁷. Cf.: *pas* "passport" and *pás* "belt". Ja. Stanislav (Českosl. ml., 227) assumes that the Pr.-Sl. 11-member system of vowel phonemes was kept also in Slovak till the Xth cent. In

¹ Some scholars (J. Gebauer, Hist. ml., 88) count in Czech 13 vowel phonemes, considering as a separate phoneme *y* (long and short) and *ú* (long). So there are 6 short and 7 long phonemes. Cf. N. Kondrašov, Slavjanskije jazyki, 133. It seems to us that there is no reason to consider *y* in Czech as a separate phoneme, which merged with *i* in one phoneme, as in many other Slavic languages. In the same way there is no reason to consider as a separate phoneme long *š* (*krušovaně*), which actually merged with the original long *š* (*čarkovaně*) and has only a graphic significance, corresponding in other Slavic languages (e. g. Russian) to the phoneme *o* (cf.: *dša* - *dos*, *mšj* - *moš*). See V. Mathesius, La structure phonologique du lexique du tchèque moderne. TCČ, I, 1929.

² See T. Lehr-Spiawinski, Z. Stieber, Gram. hist., 37-38.

³ N. Kondrašov, Slavjanskije jazyki, 134.

⁴ Cf. F. Trávníček, Hist. ml., 70.

⁵ See T. Lehr-Spiawinski, Z. Stieber, Gram. hist., 63-64.

⁶ A. Mazon, Grammaire de la langue tchèque, Paris, 1952, p. 14, 19.

⁷ A. Seliščev to this number adds also *ě*, a typical sound for the central Slovak dialects, although it is not found in all places. It enters the sound system of the literary language but only in a short syllable: *pěť*, *měso*, *žrieďa*. We do not think that *ě* in Slovak vocalism

the middle of the Xth cent., in his opinion, there disappeared the reduced phonemes in a weak position and changed into *o*, *e* (respr. *a*) in the strong. Then came the denasalization of the nasals *ę*, *ę*, i. e. *q* > *u*, *q* > *ä*.

The phoneme *ě* merged with *e*.

The phoneme *y* still in the XIth cent. lost the significance of a separate phoneme, by fusing with the phoneme *i*.

So the system of vowel phonemes in Slovak passed through almost the same processes of development as the system of vowel phonemes in Czech ¹.

10. In Polish we count 8 vowel phonemes: *a*, *o*, *u*, *e*, *i*, *y*, *ę*, *ę* (*barwa*, *głowa*, *pusty*, *Kraków*, *cena*, *myć*, *piwo*, *więzać*, *mięso*) ². The Proto-Slavic vowel phonemes *a*, *o*, *u*, *y*, *ę* (< *q*), *ę*, as Lehr-Splawiński says, "przyszły do języka polskiego w postaci zasadniczo nie zmienionej" ³. Some changes belong to later periods. Besides this, in Polish there were kept the old phonemes *i* and *e*; the latter phoneme spread at the expense of the reduced *ь*, *ь* which merged in a single phoneme with *e* ⁴ and with *ě*.

The phoneme *u* comes from original *u* and *o* in new closed syllables. See: P. Kovaliv, *Slovjański fonemy*, § 132.

11. In Serbo-Lusatian we count 6 vowel phonemes: *a*, *o*, *u*, *e*, *i*, *y* ⁵. These phonemes passed through a series of common and a series of separate processes in Upper Lusatian and Lower Lusatian dialects.

The phoneme *a* beside its original reflex, esp. in Low.-Lus. developed also from *e* (*pás* < *pъsvъ*) but in Up.-Lus. from *ę*.

The phoneme *o*, beside its original reflex, in the Up.-Lus. dialects in certain phonetic conditions developed from *ь* and *e*.

The phoneme *u* also in the process of its development spread especially by the fusion with it of the nasal phoneme *ę* (Up.-Lus. and Low.-Lus.).

The phoneme *e* in Serbo-Lusatian also spread: beside its basic etymological *e*, it comes also from *ě* (Up.-Lus. and Low.-Lus.), *ь* (Up.-Lus. before hard consonants and Low.-Lus. in all positions), *ę* (Up.-Lus. before soft consonants and Low. Lus. not under the accent) and also in certain conditions from *a*.

should be a separate phoneme, even if it had no iotacism; this *ä* can be only a variant of the phoneme *a*. Cf. J. Stanislav, *Iz istorii slovacckogo jazyka*. VJa. No. 3, 1960, p. 74.

¹ See J. Stanislav, *Dejiny slovenského jazyka*, I, 2-e vyd., Bratislava, 1958. There is the material for some basic phenomena of Slovak vocalism.

² W. Doroszewski, *Fodstawy*, 95.

³ T. Lehr-Splawiński, *Język polski*, 80.

⁴ Šaumjan in the above mentioned article expressed doubts as to the existence in Polish of separate *ę* and *y* so reduced the number of phonemes to 6. He has doubts also about *a*, *o*, *e*, *u*. See T. Benni, *Opis fonetyczny języka polskiego*. SP, II, 1923.

⁵ For different variants see A. Seliščev, *Slavjanskoe jazykoznanie*, I, 226. See also L. E. Kalnyń, *O nižnelužickom vokalizme*. *Serbo-Lužickij lingvističeskij sbornik*, AN SSSR, 1963, pp. 23-46.

The phonemes *i* and *y* as in Polish, were preserved in Serbo-Lusatian as two separate phonemes.

12. In Polabian, which no longer exists as a living language, the writing of examples in a not well maintained German transcription does not allow us with certainty to give the creation of certain phonemes. We can roughly assume for Polabian this system of vowel phonemes: *a*, *o*, *u*, *e*, *i*, *ɔ*, *ɔ̇*. Besides there is an entire series of variants and diphthongs: (A. Seliščev, Slavjanskoe jazykoznanie, I, 423) ¹.

We can state that in Polabian as in Polish, in some phonetic conditions there were preserved the nasal phonemes *ɔ̇* and *ɔ̇̇*.

The phoneme *a*, beside basic etymological *a*, forms a reflex of the reduced *ɔ*, *ɔ̇* (*dázd, dan < dǎmь*).

The phoneme *o*, beside the basic, in some phonetic conditions (before hard consonants) comes from *ě* (*loto < lěto*).

The phoneme *e* comes from the old *e* and from *ě* (not before hard consonants) (*bělet < běl-*).

The phoneme *i*, beside etymological *i*, can be formed from *e* before soft consonants ².

In general we can say that in Polabian the differentiation in the formation of vowel phonemes in a larger degree than in Polish, depends upon the character of the following consonants. The system of vowel phonemes in Polabian is not definitely determined.

13. We can now draw some general conclusions as to the systems of vowel phonemes in the Slavic languages.

a) The Proto-Slavic reduced vowels *ɔ*, *ɔ̇* in a weak position disappeared from all Slavic languages, and in a strong position they were vocalized, i. e. they merged with other vowel phonemes: 1) *ɔ*, *ɔ̇* merged in one phoneme: *e* (Pol. and Czech) and *a* (Serb., Croat. and Polab.); 2) *ɔ* > *o*, *ɔ̇* > *e* (Ukr., Rus., Belarus., north-west. Bulg., Slovene and Serbo-Lus.); 3) *ɔ* > *ɔ*, *ɔ̇* > *e* (north-east. Bulg.); 4) *ɔ*, *ɔ̇* > *ɔ* (Rupsk. dial. Bulg., Slovene - short syllable); 5) *ɔ* > *a*, *ɔ̇* > *e* (Slovene - long syllable) ³.

b) The Proto-Slavic nasal phonemes *ɔ̇*, *ɔ̇̇* in the Slavic languages (except Pol., Polab. and dialects of Bulg. and Slovene) merged with other vowel phonemes: 1) *ɔ̇* > *u*, *ɔ̇̇* > *a* (Ukr., Rus., Belarus., Czech, Slovak and Serbo-Lus.); 2) *ɔ̇* > *u*, *ɔ̇̇* > *e* (Serb. and Croat.); 3) *ɔ̇* > *o*, *ɔ̇̇* > *e* (Slovene); 3) *ɔ̇* > *ɔ*, *ɔ̇̇* > *e* (Bulg.). Polish and Polabian and some Bulgarian and Slovene dialects keep the nasal phonemes but with changes.

c) The Proto-Slavic phonemes *i* and *y* in some Slavic languages merged in a single phoneme *i* (Ukr., Bulg., Slovene, Serb., Croat., Czech, Slovak, Polab) and in others they were kept as two independent phonemes (Rus., Belarus., Pol., and Serbo-Lus.).

¹ T. Lehr-Splawiński, Przyczyunki do języka polskiego, 7-9.

² A. Seliščev, Slavjanskoe jazykoznanie, I, 423, 425, 429.

³ R. Nahtigal, Slavjanskije jazyki, Moskva, 1963, pp. 145-146.

d) The Proto-Slavic phoneme \check{e} in the Slavic languages lost its significance as a separate phoneme by fusing as a further reflexation with other vowel phonemes: 1) $\check{e} > i$ (Ukr.); 2) $\check{e} > e$ (Rus., Belorus., Bulg., Slovene, Serb. and Croat.); 3) $\check{e} > e$ and i (Czech, Slovak and Serbo-Lus.); 4) $\check{e} > 'a$ and e (Pol.); 5) $\check{e} > 'o$ and e (Polab.).

e) The other Proto-Slavic phonemes a , o , u , e were kept etymologically in all Slavic languages. Of these o , e in Ukrainian in new closed syllables changed into i , as a result of which in Ukrainian there was formed a new phoneme i , which in other Slavic languages has its corresponding diphthongal or monophthongal forms, which have been preserved also in northern Ukrainian dialects.

f) Almost all the vowel phonemes in the Slavic languages in their development have been enlarged by fusion with those Proto-Slavic phonemes (ϱ , ϱ , \check{e} , υ , υ) which now in the majority of the Slavic languages have not been preserved, and so the number of vowel phonemes in the system of each Slavic language is significantly smaller in comparison with the Proto-Slavic system.

1) Thus with the phoneme a merged the phonemes: ϱ (Ukr., Rus., Belorus., Czech, Slovak, Serbo-Lus.), \check{e} (Bulg., Pol.) and υ , υ (Slovene, Serb., Croat., Polab.).

2) With the phoneme o there merged the phonemes: υ (Ukr., Rus., Belorus., Bulg., Slovak, Serbo-Lus.), ϱ (Slovene) and \check{e} (Polab.). Only Serb., Croat., Czech and Pol. preserve the basic etymological o .

3) With the phoneme u merged the phoneme ϱ in some languages (Ukr., Rus., Belorus., Serb., Croat., Czech, Slovak, Serbo-Lus.) and in others (Bulg., Slovene, Pol., Polab.) there has been preserved only the original etymological u . In Polish there is also o in the new closed syllables.

4) with the phoneme e merged the phonemes: υ (Ukr.), \check{e} , υ (Rus., Belorus., Slovak, Serbo-Lus.), \check{e} , ϱ , υ (Bulg.), ϱ , \check{e} , υ , υ (Slovene), \check{e} , ϱ (Serb., Croat.), \check{e} , υ , υ (Czech, Pol.) and \check{e} (Polab.).

5) The phoneme i comes from three sources: from o , e in new closed syllables (Ukr.), from \check{e} (Ukr., Czech, Slovak, Serbo-Lus.) and from etymological Pr.-Sl. i (Rus., Belorus., Pol.) with which merged the phoneme y (Ukr., Bulg., Slovene, Serb., Czech, Croat., Slovak).

6) With the phoneme υ which was formed as a result of the fusion of υ and υ merged the phoneme ϱ (Bulg.).

g) Of all the vowel phonemes only the nasal phonemes ϱ , ϱ were not enlarged but on the contrary they merged with other phonemes in all the Slavic languages, except Polish and Polabian, where they were preserved as separate nasal phonemes.

h) With their original etymological significance there were preserved in the different Slavic languages the phonemes: o (Serb., Croat., Czech, Pol.), u (Bulg., Slovene, Pol., Polab.), i (Rus., Belorus., Pol.), y (Rus., Belorus., Pol., Serbo-Lus.) and ϱ , ϱ (Pol., Polab.).

THE SCHEME OF THE HISTORICAL DEVELOPMENT OF THE VOWEL PHONEMES

I.-E.	PR.-SL.	UKR.	RUS.		BELOR		BULG.	SLOV.		SERB.	CROAT.		CZECH	SLOVAK	POL.	S.-LUS.		POLAB.		
			1	sh	1	sh		1	sh		1	sh				1	sh		1	sh
-	ā, ȃ	-	a	1	a	1	a	1	á	1	á	1	á	1	a	1	a	1	a	1
ǎ, ǝ	-	o	-	o, 1	-	o	o	-	ó	-	ó	-	ó	-	o	-	o	-	o	-
-	oŭ, eŭ	-	u	u	-	u	u	-	ú	-	ú	-	ú	-	u	-	u	-	u	-
ě	-	e	-	e, 1	-	e	e	-	é	-	é	-	é	-	e	-	e	-	e	-
-	ī, eī	-	i	y	-	i	y	-	í	-	í	-	í	-	i	-	i	-	i	-
-	ū	-	y	-	-	y	-	-	ý	-	-	-	-	-	y	-	y	-	-	-
-	ē, oi	-	ě	1	-	e	e	-	ě	-	ě	-	ě	-	e, a	-	e, 1	-	o, e	-
-	on	-	o	u	-	u	u	-	ó	-	ó	-	ó	-	o	-	o	-	o, ǝ	-
-	en	-	q	'a	-	a	a	-	é	-	é	-	é	-	ǝ, ǝ	-	a	-	ǝ, ǝ	-
-	-	r	-	o	-	o	o	-	á, é	-	á, é	-	á, é	-	-	-	o	-	a	-
ī	-	r	-	e	-	e	e	-	á, é	-	á, é	-	á, é	-	-	-	a	-	-	-

THE SCHEME OF THE VOWEL PHONEMES ACCORDING TO THEIR ORIGIN

Ukr.	Rus.	Belorus.	Bulg.	Slovene	Serb.	Croat.	Czech	Slovak	Pol.	S.-Lus.	Polab.
a(<a, q)	a(<a, q)	a(<a, q)	a(<a, ě)	a(<a, ʔ, ɸ)	a(<a, ʔ, ɸ)	a(<a, ʔ, ɸ)	a(<a, q)	a(<a, q)	a(<a, ě)	a(<a, q)	a(<a, ʔ, ɸ)
o(<o, ʔ)	o(<o, ʔ)	o(<o, ʔ)	o(<o, ʔ)	o(<o, q)	o(<o, ɪ)	o(<o, ɪ)	o(<o)	o(<o, ʔ)	o(<o)	o(<o, e, ʔ)	o(<o, ě)
u(<u, q)	u(<u, q)	u(<u, q)	u(<u)	u(<u)	u(<u, q, ɪ)	u(<u, q, ɪ)	u(<u, q) ú(<ú, ɔ)	u(<u, q) ú(<ú, ɔ)	u(<u, o)	u(<u, q)	u(<u)
e(<e, ʔ)	e(<e, ě, ɸ)	e(<e, ě, ɸ, ɸ)	e(<e, ě, ɸ, ɸ)	e(<e, ě, ɸ, ʔ, ɸ)	e(<e, ě, ɸ)	e(<e, ě, ɸ)	e(<e, ě, ʔ, ɸ, ɸ)	e(<e, ě, ʔ, ɸ, ɸ)	e(<e, ě, ʔ, ɸ, ɸ)	e(<e, ě, ʔ, ɸ, ɸ)	e(<e, ě)
ɪ(<o, e, ě)	ɪ(<ɪ)	ɪ(<ɪ)	ɪ(<ɪ, ʔ)	ɪ(<ɪ, ʔ)	ɪ(<ɪ, ʔ)	ɪ(<ɪ, ʔ)	ɪ(<ɪ, ʔ, ɸ)	ɪ(<ɪ, ʔ, ɸ)	ɪ(<ɪ)	ɪ(<ɪ, ě)	ɪ(<ɪ, ʔ)
ʏ(<ɪ, ʔ)	ʏ(<ʏ)	ʏ(<ʏ)	-	-	-	-	-	-	ʏ(<ʏ)	ʏ(<ʏ)	-
-	-	-	ʔ(<ʔ, ɸ, ɸ)	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	a(<o, q)	-	q(<q)
-	-	-	-	-	-	-	-	-	q(<q, q)	-	q(<q)

SYSTEMS OF CONSONANT PHONEMES

14. In the systems of consonantal phonemes in the Slavic languages there occurred changes and transformations as in the vowel systems: some disappeared, others appeared. Not a single Slavic language has fully preserved all the Proto-Slavic consonantal phonemes. The equilibrium between the hard and soft consonants has been lost as a result of depalatalization and the transformation of soft phonemes into hard phonemes.¹

In the history of the consonantal phonemes the basic role was played by the loss of the reduced *ʋ*, *ʋ̄*. Thanks to this process the category of hardness and softness in the consonantal phonemes was deformed. The hardness and softness of the consonantal phonemes have an independent phonemic importance only because the consonants, thanks to the loss of the reduced *ʋ*, *ʋ̄* are no longer connected with the quality of the following vowel phoneme. The phonemic significance of the soft phoneme was separated.²

These were the basic changes in the system of consonantal phonemes. As a result of all these changes the number of consonantal phonemes increased, while the number of vowel phonemes was diminished. But in the separate Slavic languages this number of consonantal phonemes developed unevenly, by producing different systems of phonemes. Yet with all this at the basis of every Slavic language in one or another measure lies the Proto-Slavic system of consonantal phonemes. Later in the Slavic languages there appeared one other consonantal phoneme *f*.

15. At the end of the Proto-Slavic period there was formed a system of phonemes which consisted of 24 phonemes. Of these 14 were hard: *k, g, ch; b, p, m, v; d, t, s, z; r, l, n*; 10 were soft: *č, ž, š; ć, dź, ś; ǫ, ǭ, ń, j*.

In the modern Ukrainian language there are 32 consonantal phonemes, of which 22 are hard (*κ, ʀ, ʃ, x; u, x, w, dʒ; y, c, ʒ, dʒ; d, m, p, n, h; ó, n, u, s, ʒ*) and 10 soft (*č, ć, š, dź; d, ń, ǫ, ǭ, ń, j*). In comparison with the Proto-Slavic system of consonantal phonemes which counted 24 consonantal phonemes, there came these changes in Ukrainian: 1) the number of hard phonemes increased by the arising of new (*ϕ, dʒ, dʒ, ʃ*)³ and by depalatalization of the soft (*u, x, w, dʒ, ǭ*)⁴; 2) the number of soft phonemes increased by the further development of the category of hardness and softness (*ð-ð, m-ń, c-ć, ʒ-ž*) and at the same time their number was reduced by the depalatalization (*u, x, w, dʒ*). The pho-

¹ Cf. I. Sreznevskij, *Myali*, 47.

² See V. Ivanov, *Kratkij očerk*, 40, 117; P. Nahtigal, *Slavjanskije jazyki*, Moskow, 1953, pp. 144-156.

³ The phoneme *ʃ* is of later origin, for the old *ǰ > h*.

⁴ The phoneme *ǭ* was depalatalized only in certain phonetic position, i. e. before *e, u*: *кууе, бѣлоууиѣ*.

neme *u*, after developing the category of hardness and softness, passed by the category of hardness into the hard phonemes and under the category of softness was left in the group of softs. Thus the number of soft phonemes, after the corresponding changes and transfers was left the same (10), as it had been in Proto-Slavic. Under the category of hardness and softness in the modern Ukrainian literary language are divided the phonemes: *u-ú, c-č, z-ž, dz-dž, d-đ, m-ň, p-ř, l-ľ, k-č*. The palatal phoneme *j*, usually has no hard mate. All the other phonemes (*k, t, s, x, u, x, ŋ, dʒ, ó, n, m, e, ʃ*) do not have a soft companion¹.

16. The softness of the consonantal phonemes in Ukrainian is limited by certain phonetic conditions, i. e.: before *e, u* and *i* (< *o*) (See: Slovjański fonemy, §§ 197, 252). We will not stop here on the question of the depalatalization of consonants before *e, u*. Besides, this is a completely separate theme, to which a large scientific literature is devoted.² We will stop briefly on the question of the quality of the consonants *đ, m, z, c, l, k* before *i* (< *o*) in new closed syllables.

In works on the history of the Ukrainian language and Ukrainian dialectology there is a general idea that the consonants *đ, m, z, c, l, k* before a secondary *i* (< *o*) are softened only in the southeastern dialect; in the northern and southwestern dialects they kept their hard pronunciation.

¹ Cf. Ju. Šerekh, *Narys, 379*. Our system of consonantal phonemes basically differs from systems which some Ukrainian scholars, especially O. Synjavský and O. Kurylo, have set up. O. Synjavský (*Sproba zvučkovojj charakterystyky literaturnojj ukrajinškoj movy. Naukovi zapysky kharkivškoj naukovo-doslidčojj katedry movoznavstva, 1929, Vol. II*) counts 90 consonantal phonemes: 22 hard, 22 soft with the addition of a soft *j*, or 45. This number he doubles, for he assumes the existence in Ukrainian of short and long phonemes. So, in all - 90 phonemes. This great number of phonemes with Synjavský is explained by his incorrect understanding of the concept of a phoneme, the confusion of a phoneme with a sound. By confusing a phoneme with a sound, Synjavský needlessly created a large group of long phonemes. E. g.: "наш шум" and "наша шум", as if in the first case the phoneme *ш* is long, in the second - usual. Really in the first case, there are two *ш* phonemes, in the second one. The sound phenomena sandhi cannot be a basis for the establishing of phonemes. Besides Synjavský artificially softens constantly hard phonemes (*k, t, s, x, u, x, ŋ, ó, n, m, e, ʃ*) which have no soft mate.

O. Kurylo (*Do posjattja fonemy. Zb. Sekciji hramatyky ukrajinškoj movy, Kiev, 1930, part I*) counts only 44 consonantal phonemes: 22 hard, 10 soft (*č, č, č, š, dž, ú, ř, ľ, ŋ, ů*) and 12 long (*č, č, č, š, ů, ř, ř, ř, ř, ř, ř*). Kurylo with the long phonemes makes the same mistake as Synjavský: in Ukrainian there are only long sounds which are composed of two identical phonemes, which R. Jakobson (*Travaux du Cercle linguistique de Prague, 1931*) cleverly pointed out. Long sounds in a phonemic system are separated as two separate phonemes. So the lengthening of the consonants in Ukrainian is really a feature of morphology, and not of phonetics. See Ju. Šerekh, *Narys, 380-381*. A criticism of Synjavský and Kurylo see in V. Simovyč (*Zapysky NTS, 1937, Vol. 155 and Slavica, 1937, R. XIV, S. 4*).

² See P. Kovaliv, *Osnovy formuvannja ukrajinškoj movy, 122-134*.

The hard pronunciation of consonants is shown even by monuments: *тільки* (Perestoroha XVIIth cent.), *тылько* (Polt.act. XVIIth cent., Radivil., Ohorodok 1676) ¹. Thus the hardness of these consonantal phonemes before *i* (< *o*) is considered dialectic phenomenon which "slużył dla rozróżnienia semantyki słów". E. g.: *диї* (*доїти*) - *диї* (*діяти*), *ніс* (*носа*) - *ніс* (*нести*), etc. ². But in the literary language before *i* (< *o*) all consonants are softened

It seems to us that these statements of historians of language and dialectologists have no sound scientific basis. It is not explained why there is taken as the basis of the literary pronunciation the soft pronunciation of the consonants *д, т, з, с, л, н* before *i* (< *o*), and not the hard, the more as this latter is spread on an important part of the linguistic territory and has beneath it historical bases. Yet the scientific data, based on historical facts, support the correctness of the idea that the hard pronunciation of these consonantal phonemes before *i* (< *o*) should lie also at the base of the literary pronunciation, which is properly pointed out by Ju. Serekh (Narys, 378), who connects the hardness or softness of the pronunciation of consonants before *i* (< *o*) with its origin, i. e. before *i* (< *o*) there can be only a hard pronunciation and before *i* (< *e, ѣ*) - a soft ⁴. Cf.: *сік* (*соку*) - *сік* (*сікти* < *сѣк-*), *ніс* (*носа*) - *ніс* (*нести*), *ліз* (*лоза*) - *ліз* (*лізти* < *лѣз-*). This law, which has its historical bases gives the possibility of separation hard *i* (< *o*) and soft *i* (< *e, ѣ*), which form now one phoneme and arise from different phonemes, which have left behind them traces of hardness and softness; these traces influence the quality of the preceding consonants *д, т, з, с, л, н*, which acquire the significance of a phonemic hardness or phonemic softness.

17. In Russian there are 27 consonantal phonemes, of which 18 are hard (*к, г, х, ж, ш; ч, с, з; д, т, п, л, н; ц, п, ж, в, ф*) and 9 soft (*ќ, џ, љ, њ, р, ѝ, џ, џ, џ*)

In comparison with the Proto-Slavic system of consonantal phonemes there have been in Russian these changes: 1) the number of hard phonemes has increased by the arising of the new phoneme *џ* and the depalatalization of *ж, ш, љ*; 2) the number of soft phonemes increased by the further development of the category of hardness and softness (*д-ѡ, т-ѡ, с-ѡ, з-ѡ*) and

¹ O. Bezpaľko and others, *Istorična hramatyka*, 164.

² F. Žyľko, *Hovory ukrajinškoji movy*, 52.

³ Cf. I. Petlyčnyj, *Do pytannja pro systemu holosnykh fonem v sučasnij ukrajinškej literaturnij movi. Pytannja ukrajinškoho movoznavstva*, kn. I, Lviv, 1956, p. 120.

⁴ It was not accidental that in the 70's of the XIXth cent. in Western Ukraine there was introduced into the orthography the letter *і* for the soft pronunciation of the consonants before *i* (< *e, ѣ*) and the letter *ї* to mark the hard pronunciation of the consonants before *i* (< *o*): *ніс* (*носа*), *ніс* (*нести*), *сіль* (*соли*), *сільський* (*село*).

at the same time their number was diminished by the depalatalization of \acute{x} , \acute{u} , \acute{y} .

Under the category of hardness and softness in modern Russian are separated the phonemes: $\text{c}-\acute{c}$, $\text{z}-\acute{z}$, $\text{d}-\acute{d}$, $\text{m}-\acute{m}$, $\text{p}-\acute{p}$, $\text{l}-\acute{l}$ $\text{n}-\acute{n}$. The phonemes \acute{u} , \acute{y} have no hard companion. All other phonemes (k , r , x , x , w , u , ó , n , m , e , f) have no soft companion.

18. Our system of consonantal phonemes in Russian in some points disagrees with the systems of other students especially as to the number of consonantal phonemes in Russian. Thus, e. g. the authors of "Grammatika ruskogo jazyka", t. I, fonetika i morfologija (AN SSSR, 1952, 1960) have this system: 15 phonemes, which differ according to hardness and softness (k , r , x ; d , m , c , z ; p , l , n ; ó , n , m , e , f). Of these 3 are only hard (x , w , u) and 2 are only soft (\acute{u} , \acute{y}). In all the academic grammar counts 35 consonantal phonemes, including in this number the soft velar phonemes \acute{k} , \acute{i} , \acute{x} and excluding from the list of phonemes the soft alveolars, the so-called long phonemes \acute{x} , \acute{u} . The authors of the grammar maintain completely the position of L. Šerba (Izbrannye raboty, 166).

R. I. Avanesov (Fonetika sovremennogo ruskogo literaturnogo jazyka, 136) directly opposite includes in the list of soft phonemes \acute{x} , \acute{u} but does not consider as separate phonemes the soft \acute{k} , \acute{i} , \acute{x} , and only variants of hard k , r , x , basing his position on the fact, in his opinion, the phonemes \acute{x} , \acute{u} especially the latter "vstrečaetsja v boľšom količestve i pri tom široko upotrbitelna imenno kak dolgaja mjagkaja šipjaščaja" and that inclusion of the soft phonemes \acute{k} , \acute{i} , \acute{x} , in the number of separate phonemes "po meňšej mere netočno, kak protivopostavlenie mjagkikh zadnezjučnykh tverdym, suščestvenno otličaetsja ot protivopostavlenija po tverdosti-mjagkosti drugikh soglasnykh i polnostju otsutstvuet v naibolee pokazatelnoj pozicii - na konce slova". R. Avanesov counts 34 consonantal phonemes, of which 12 are paired, which are separated by hardness and softness (d , m , c , z ; p , l , n ; ó , n , m , e , f), 6 only hard (x , w , u , k , r , x) and 4 only soft (\acute{x} , \acute{u} , \acute{u} , \acute{y})¹.

A somewhat different position is taken by A. N. Gvozdev (Sovremennyj russkij literaturnyj jazyk, 15). He counts 37 consonantal phonemes, of which 15 are separated according to the category of hardness-softness (k , r , x ; d , m , c , z ; p , l , n ; ó , n , m , e , f), 3 are only hard (u , x , w) and 4 only soft (\acute{u} , \acute{x} , \acute{u} , \acute{y}). In this increased number of phonemes of Gvozdev there are the soft, velar phonemes \acute{k} , \acute{i} , \acute{x} .

The differences in the views of scholars on the system of consonantal phonemes in Russian concern two disputed groups of phonemes: the recognition or non-recognition as separate phonemes of the so-called long \acute{x} , \acute{u} and the recognition or

¹ Cf. Galkina-Fedoruk and others, Sovremennyj russkij jazyk, 124.

non-recognition of the soft group of velar phonemes \acute{k} , i , \acute{s} . These disputed groups of phonemes have not entered our system of the consonantal phonemes in Russian, for there are no scientific bases for them. Likewise for the same motives there have not been included in our system of soft phonemes the labial and labial-dental \acute{b} , \acute{n} , \acute{m} , \acute{c} , \acute{f} , which are only variants of the corresponding hard phonemes.

19. In Belorussian there are counted 29 consonantal phonemes, of which 22 are hard (κ , γ , ι , χ ; υ , π , ψ , $\partial\pi$; υ , c , $\partial\partial$; ∂ , m ; p , l , n ; \acute{o} , n , μ , ϵ , ϕ) and 7 soft (\acute{u} < \acute{m} , $\partial\acute{s}$ < δ , \acute{c} , \acute{s} , \acute{i} , \acute{n} , \acute{v}).

In comparison with the Proto-Slavic system of consonantal phonemes in Belorussian there have come the following changes: 1) the number of hard phonemes has increased by the appearance of new ϕ , ι and by the depalatalization of the soft \acute{u} , \acute{x} , \acute{w} , \acute{y} , $\partial\acute{s}$, \acute{s} ; 2) the number of soft phonemes has increased by the further development of the category of hardness and softness (∂ - $\acute{\partial}$) and at the same time their number has been diminished by the depalatalization of the previously soft phonemes.

Under the category of hardness and softness in modern Belorussian only the phonemes c - \acute{c} , ∂ - $\acute{\partial}$, l - \acute{l} , n - \acute{n} are separated. The phoneme \acute{v} is only soft and has no hard companion. The phonemes \acute{u} (< \acute{m}), $\partial\acute{s}$ (< δ) developed later in certain phonetic conditions, creating the "cekaŋje" and "dzekaŋje" natural to Belorussian. Historically as in Polish they might be considered positional variants of m , δ ¹. All other phonemes (κ , γ , ι , χ ; υ , π , ψ , $\partial\pi$; υ , $\partial\partial$, ∂ , m , p ; \acute{o} , n , ϵ , μ , ϕ) are only hard and do not have a soft mate.

As we see, the Belorussian language is characterized by a significant depalatalization (transfer from the soft category to the hard) of phonemes, even more than in Ukrainian, e. g. ∂ , m , p (which in Ukrainian are separated under the category of hardness and softness).

20. In Bulgarian there are counted 31 consonantal phonemes, of which 21 are hard (κ , ι , χ ; υ , π , ψ , $\partial\pi$; υ , c , ∂ , $\partial\partial$, ∂ , m ; p , l , n ; \acute{o} , n , μ , ϵ , ϕ) and 10 soft (\acute{u} , \acute{c} , \acute{s} , $\partial\acute{s}$, δ , \acute{m} , \acute{p} , \acute{l} , \acute{n} , \acute{u}).

In comparison with the Proto-Slavic system of consonantal phonemes in Bulgarian there have come the following changes: 1) the number of hard phonemes has increased by the arising of new phonemes ϕ , $\partial\partial$ (< ∂) and by the depalatalization of the soft \acute{u} , \acute{x} , \acute{w} , $\partial\acute{x}$, \acute{y} ; 2) the number of soft phonemes has increased by the further development of the category of hardness and softness (∂ - $\acute{\partial}$, m - \acute{m}) and at the same time the number has been diminished by the depalatalization of \acute{u} , \acute{x} , \acute{w} , $\partial\acute{x}$.

Under the category of hardness and softness in Bulgarian there are differentiated the phonemes υ - \acute{u} , c - \acute{c} , ∂ - $\acute{\partial}$, $\partial\partial$ - $\partial\acute{\partial}$, ∂ - $\acute{\partial}$, m - \acute{m} , p - \acute{p} , l - \acute{l} , n - \acute{n} . The phoneme \acute{v} is only soft and can-

¹ T. Lomtjev, Grammatika, 48.

not have a hard mate. All the other phonemes ($x, z, x; u, \varkappa, \varkappa, \partial x, \acute{o}, n, \mu, \theta, \phi$) have no soft mate. The phoneme \acute{u} as a result of the depalatalization acquired a special significance of the category of hardness and softness ¹.

21. In Slovene there are counted 23 consonantal phonemes, of which 19 are hard ($k, h (<g), ch; \check{c}, \check{z}, \check{s}; c, s, z; d, t; r, l, n; b, p, m, v, f$) and 4 are soft ($\acute{r}, \acute{l}, \acute{n}, j$).

In comparison with the Proto-Slavic system of consonantal phonemes in Slovene there have come the following changes: 1) the number of hard phonemes has increased by the appearance of the new phoneme f and the depalatalization of the soft $\check{c}, \check{z}, \check{s}, \acute{c}, d\check{z}, \acute{s}$; 2) the number of soft phonemes has diminished by the depalatalization of the previously named soft phonemes.

Under the category of hardness and softness in Slovene there are separated only the phonemes $r-\acute{r}, l-l, n-\acute{n}$. The phoneme j is only soft and has no hard parallel. All other phonemes ($k, h, ch; \check{c}, \check{z}, \check{s}; c, s, z; d, t; b, p, m, v, f$) have no soft parallel.

22. In Serbian and Croatian there are counted 25 consonantal phonemes, of which 20 are hard (k, g, h (instead of ch); $\check{c}, \check{z}, \check{s}; d\check{z}; c, s, z; d, t; r, l, n; b, p, m, v, f$) and 5 are soft ($\acute{c}, \acute{z}, \acute{l}, \acute{n}, j$) ².

In comparison with the Proto-Slavic system of consonantal phonemes there have come changes in Serbian and Croatian: 1) the number of hard phonemes has increased by the appearance of the new phoneme f and by the depalatalization of soft $\check{c}, \check{z}, \check{s}, d\check{z}, \acute{c}, d\check{z}, \acute{s}$; 2) the number of soft phonemes has increased by iotacism (the fusion with the following j) the consonants $\acute{r}, \acute{d}, \acute{l}, \acute{n}$ and the formation of new soft phonemes, which in Serbian and Croatian in connection with the phonetic orthography have separate signs ($\acute{c}, \acute{d}, \acute{l}, \acute{n} = \kappa, \eta, \mu, \varkappa$); at the same time their number has diminished through the depalatalization of $\check{c}, \check{z}, \check{s}, d\check{z}, \acute{c}$.

Under the category of hardness and softness in Serbian and Croatian there are differentiated only the phonemes $l-l, n-\acute{n}$. The phonemes $j, \acute{c} (<tj), \acute{d} (<dj)$ are only soft. All other phonemes ($k, g, h; \check{c}, \check{z}, \check{s}, d\check{z}; c$ (original), $s, z, t, d, r; b, p, m, v, f$) are only hard.

23. In Czech there are counted 26 consonantal phonemes, of which 22 are hard ($k, h, g, ch; \check{c}, \check{z}, \check{s}, d\check{z}; c, s, z, d, \acute{t}, dz; r, l, n; b, p, m, v, f$) and 4 are soft ($\acute{a}, \acute{r}, \acute{n}, j$) ³. In comparison with the Proto-Slavic system of consonantal phonemes, these changes have taken place in Czech: 1) the

¹ Cf. Prof. St. Stojkov, Palatalnité soglasni v bulgarski knižoven ezik. Izvestija na Instituta za bulgarski ezik, kn. I, Sofija, 1952, pp. 5-63; Ivan Lekov, Nasoki v razvoja na fonologičnite sistemi na slavjanskite ezici, Sofija, 1960, p. 33.

² Cf. T. Maretić, Gramatika, 2. See A. Belić, Suvremeni srpsko-khrvatski knižni jezik, Beograd, 1951, p. 101.

³ Cf. A. Mazon, Grammaire de la langue tchéque, Paris, 1952, p. 25; T. Lehr-Splawinski, Z. Stieber, Gram. hist., 94. See also M. Komárek, Historická mluvnice česká, 1958, p. 142 and more.

number of hard phonemes has increased through the appearance of the new *f* and through the depalatalization of the soft *č*, *ž*, *š*; *ć*, *ś*, *ź*; *ř*, *ł*; 2) the number of soft phonemes has increased by the development of the category of hardness and softness (*a-â*, *t-t'*) and at the same time their number greatly diminished through the depalatalization of the previously named soft phonemes. In addition, there were depalatalized also such phonemes as *ć* (*< t, j*), and *ź* (*< dź < dj*).

Under the category of hardness and softness in Czech there are differentiated only the phonemes *a-â*, *t-t'*, *n-ň*. The phonemes *j* is has no hard parallel. All other phonemes (*k, h, ě, ch; č, ž, š, dž; c, s, z; r, l; b, p, m, v, f*) are only hard and have no soft parallel ¹.

The unique feature of the Czech language is that it has no soft *l*. The loss of soft *l*, goes back, in the opinion of Gebauer (Hist. ml., I, 327), to prehistoric times.

24. In Slovak there are counted 27 consonantal phonemes, of which 22 are hard (*k, h, ě, ch; č, ž, š, dž; c, s, z, dz; d, t; r, l, n; b, p, m, v, f*) and 5 soft (*â, t, l, ň, j*).

In Slovak in the system of consonantal phonemes there occurred almost the same changes as in Czech. The only difference is that the Slovak literary language preserves the category of hardness and softness of the phoneme *l* (*mlyn, lípa*), which Czech does not have ². Beside this, there is preserved in Slovak *dz* (*meďza*) which corresponds in Czech to *z* (*meze*). So under the category of hardness and softness the Slovak language differentiates the phonemes *a-â*, *t-t'*, *l-l'*, *n-ň* ³

25. In Polish there are counted 28 consonantal phonemes, of which 21 are hard (*k, ě, ch; č, ž, š, dž; c, s, z, dz; d, t; r, l, n; b, p, m, v, f*) and 7 are soft (*ć < t, dź < d, ś, ź, ł, Ń, j*) ⁴.

In comparison with the Proto-Slavic system of consonantal phonemes these changes have taken place in Polish: 1) the number of hard phonemes has increased by the appearance of the new phoneme *f* and by the depalatalization of the soft *č*, *ž*, *š*, *dž*, *ć*, *dź*, *ř* ⁵; 2) the number of soft phonemes has diminished by the depalatalization of these given soft phonemes and at the same time the number of soft phonemes has increased by the development of *t > ć*, *d > dź*.

Under the category of hardness and softness in Polish there are differentiated only the phonemes *s-ś*, *z-ź*, *l-l'*, *n-ń*. The phoneme *i* is only soft and has no hard parallel. The

¹ For more details on the depalatalization of consonants in Czech, see F. Trávníček, Hist. ml., 196-199.

² See A. Seliščev, Slavjanskoe jazykoznanie, I, 69.

³ See Lud. Novak, Fonologia a štúdium slovenčiny. Slovenska reč, II, 1933-1934.

⁴ Cf. Doroszewski, Podstawy, 99.

⁵ S. Słofski, Hist. jez. pol., 41. Cf. A. Seliščev, Slavjanskoe jazykoznanie, I, 329.

phonemes \acute{c} ($< t$) and $d\acute{z}$ ($< a$) which developed in certain phonetic conditions also have no hard parallel. Historically they could be considered positional variants of d , t as in Belorussian. All other phonemes (k , g , ch ; \acute{c} , \acute{z} , \acute{s} , $d\acute{z}$; d , c , r ; t ; b , p , m , v , f) have no soft parallel: a strong positional palatalization of the velars k' , g' , ch' and of the labial and labial-dentals b' , p' , m' , v' , f' in Polish as in Russian, is not phonemic; it produces only positional variants of hard phonemes and not separate soft phonemes¹.

26. In Serbo-Lusatian there are counted 29 consonantal phonemes, of which 19 are hard (k , h , g , ch ; \acute{z} , \acute{s} ; c , s , z , d , t ; r , l , n ; b , p , m , v , f) and 10 are soft (\acute{c} , \acute{z} , \acute{s} ; $\acute{c} < \acute{c}$, $d\acute{z} < \acute{a}$; $\acute{s} < \acute{c}$, $\acute{z} < d\acute{z}$; \acute{l} , \acute{n} , j)².

In comparison with the Proto-Slavic system of consonantal phonemes these changes have occurred in Serbo-Lusatian: 1) the number of hard phonemes has increased by the appearance of the new phoneme f and the depalatalization of the soft \acute{z} (Up.-Lus.) \acute{s} (Low.-Lus.), \acute{c} , \acute{s} , f ; 2) the number of soft phonemes increased by the development of $\acute{c} < t$ (Up.-Lus.), $d\acute{z} < \acute{a}$ (Up.-Lus.) and $\acute{s} < \acute{c}$ (Low.-Lus.), $\acute{z} < d\acute{z}$ (Low.-Lus.).

Under the category of hardness and softness in Serbo-Lusatian there are differentiated only the phonemes $l-l'$, $n-n'$. The phoneme j is only soft, and has no hard parallel. Also the originally soft \acute{z} , \acute{z} , \acute{s} in the Upper-Lusatian dialects have no hard parallel. The phonemes \acute{c} ($< t$) and $d\acute{z}$ ($< \acute{a}$) and \acute{s} ($< \acute{c}$), \acute{z} ($< d\acute{z}$) which developed in certain phonetic positions have also no hard parallel. Historically, they as in Polish and Belorussian could be considered positional variants of d , t . All other phonemes (k , h , g , ch ; \acute{z} (Low.-Lus.), \acute{s} (Low.-Lus.), c , s , z ; d , t , r ; b , p , m , v , f) are only hard and have no soft correlative. Likewise the depalatalized phonemes \acute{z} , \acute{s} in Lower Lusatian dialects have no soft correlatives. The phoneme $\acute{c} > c$ is hard in the Low.-Lusatian dialects³.

27. In Polabian there are counted 27 consonantal phonemes, of which 17 are hard (k , g , ch ; c , s , z , $d\acute{z}$; d , t ; r , l , n ; b , p , m , v , f) and 10 are soft (\acute{c} , \acute{s} , \acute{z} , $d\acute{z}$, \acute{a} , \acute{t} , \acute{r} , \acute{l} , \acute{n} , j)⁴. In comparison with the Proto-Slavic system of consonantal phonemes, there have occurred these changes in Polabian: 1) the number of hard phonemes increased by the arising of the new phoneme f and by the depalatalization of the soft \acute{c} , \acute{z} , \acute{s} and their transformation into c , z , s ; 2) the number of soft phonemes increased by the further development of the category of hardness and softness ($z-\acute{z}$, $d-\acute{d}$, $t-$

¹ Cf. T. Lehr-Spiławiński, *Język polski*, 82-83; S. Szober, *Gramatyka języka polskiego*, II, Warsaw, 1931.

² Cf. A. Seliščev, *Slavjanskoe jazykoznanie*, I, 226, 227.

³ See L. Ščerba, *Vostočnolužickoe narečie*, I, Petrograd, 1915; G. Kral, *Grammatik der vendischen Sprache in der Oberlausitz, Bautz*. 1925.

⁴ Cf. A. Seliščev, *Slavjanskoe jazykoznanie*, I. 423.

ʃ) and at the same time decreased through the depalatalization and change of č, ž, š.

Under the category of hardness and softness in Polabian there are differentiated the phonemes *c-ć, ɣ-ś, z-ž, dz-dź, d-ď, t-ť, r-ř, l-ľ, n-ň*. The phoneme *j* is only soft and has no hard correlative. All other consonantal phonemes (*k, ɡ, ch, b, p, m, v, f*) are only hard and have no soft pair.

The special feature of the system of consonantal phonemes in Polabian is the loss of the old alveolars č, ž, š through their change into *c, z, s*, a phenomenon known in no other Slavic languages.

28. We will now give a general resumé of the systems of consonantal phonemes in the Slavic languages.

a) The Proto-Slavic velar phonemes *k, ɡ, ch* in their further development in the separate Slavic languages went along different ways. If *k, ch* kept their original characters, *ɡ* in some Slavic languages (Rus., Bulg., Serb., Croat., Pol., Polab., and Low.-Lus.) was preserved, in other (Ukr., Belarus., Slovene, Czech, Slovak, and Upper-Lusatian) changed into a pharyngal *h*. In these last languages beside the pharyngal *h*, there exists also chiefly in borrowed words also *ɡ*.

Besides this, the velar phonemes *k, ɡ, ch*, which in Proto-Slavic were used only before vowels of the rear series (*ɔ, y, o*), in the Slavic languages began to be used before vowels of the frontal series and thus they ceased to be constantly hard.

b) The Proto-Slavic alveolar phonemes č, ž, š which originally were palatalized, were totally depalatalized in the Slavic languages except the Upper-Lusatian dialects and in part in Russian where č preserves its softness. In Polabian the depalatalization came about through the change of č, ž, š > *c, z, s*.

The phonemes č, ž, š were enlarged chiefly in the East and South Slavic languages as a result of the development of these new phonemes: č (< *tj, kt, ɡt*) (Ukr., Rus., Belarus., Bulgarian, Serb., Croat., Slovene), ž (< *dj*) (Ukr., Rus., Belarus., Bulg., Serb., Croat., Slovene), š (< *zj*) (Ukr., Rus., Belarus., Bulg., Serb., Croat., Slovene, Pol., Czech, Slovak), ž (< *ř*) (Pol., Czech), š (< *sj*) (Ukr., Rus., Belarus., Bulg., Serb., Croat., Pol., Czech, Slovak), š (< *r*) (Serbo-Lus.), š (< *ch*) as a result of the second palatalization (Pol.), dž (< *dj*) (Ukr., Belarus., Serb., Croat., Pol.).

c) The Proto-Slavic phonemes ć, đ, ś, which arose as a result of the second and third palatalizations (the transitional softening) and were in the beginning palatalized, in the various Slavic languages developed in different ways.

1) First we must mention that the affricate dž in the Slavic languages (except Bulgarian) lost its explosive component and changed into ž(*z*).

2) The process of the second palatalization in morphological formations did not include the majority of the dialects and the literary languages of Russian and Slovak (Rus.

рука - руке, нога - ноги; Slovak *ruka - ruke, noha - nohe*).

3) The most noticeable phenomenon in the further development of the phonemes *č, dž(ž), ś* is their depalatalization, which took in almost all Slavic languages. The process of depalatalization of these phonemes produced a change of their phonemic significance: from constantly soft they became constantly hard or were preserved in the categories of hardness and softness. Thus the phoneme *č* in some Slavic languages (Ukr., Bulg., Polab.) developed in the category of hardness and softness, in others (Rus., Belarus., Serb., Croat., Slovene, Pol., Czech, Slovak, Serbo-Lus.) it developed only in the category of hardness. The phonemes *ž (<ǰ), ś (<ch)* along with the originally hard phonemes *z, s* developed in some Slavic languages (Ukr., Rus., Belarus., Bulg., Pol., Polab.) in the category of hardness and softness, in others (Serb., Croat., Slovene, Czech, Slovak, Serbo-Lus.) by the depalatalization developed only in the category of hardness. Usually dialectic variations are possible.

This group of phonemes in the hard or soft category were amplified primarily in the West-Slavic languages as a result of the development of new phonemes of the same character: *c (<tj)* (Pol., Czech, Slovak, Serbo-Lus., Polab.), *c (<č)* (Low.-Lus.), *c (<ktb, gtb)* (Pol., Czech, Slovak), *č (<t)* (Belorus., Pol., Up.-Lus.), *z (<dj)* (Czech, Slovak, Serbo-Lus.), *ž (<dž<đ)* (Low.-Lus.), *az (<aj)* (Pol., Serbo-Lus.), *dz (<gtb)* (Pol.), *az (<zz through dissimilation)* (Ukr., Belorus., Bulg.), *dž (<a)* (Belorus., Pol., Up.-Lus.), *ś (<č <ř)* (Low.-Lus.).

d) The Proto-Slavic phoneme *j* was preserved in all Slavic languages, where it was amplified still more as the result of the reduction of the unaccented *i*. In all East-Slavic and South-Slavic languages *j* changed into epenthetic *l*.

e) The Proto-Slavic labials and labial-dentals *b, p, m, v* later in all Slavic languages were amplified by a new labial-dental *f*, borrowed from other Indo-European languages. Beside this, *v(μ)* in certain conditions developed from *l* (Ukr. Belorus., Serb., Croat., Slovene, Slovak, Serbo-Lus., Polab.) and secondarily before *i (<o)* (Ukr.). These phonemes which in the Proto-Slavic language were not used before vowels of the rear series, in the Slavic languages began to be used before all vowels; being in certain phonetic conditions semi-soft, they preserved this quality also in the life of the separate Slavic languages.

f) The Proto-Slavic phonemes *d, t, s, z*, passed into the Slavic languages only in the hard category. Of these *s, z*, as we have said above, along with *ś (<ch), ž (<ǰ)* passed through a further development.

The phonemes *d, t* in their development in the separate Slavic languages either preserved their original hard category (Belorus., Serb., Croat., Slovene, Serbo-Lus.) or were palatalized, creating the category of hardness and softness (Ukr.,

Rus., Bulg., Pol., Czech, Slovak, Polab.). The South-Slavic languages were the most limited in the palatalization of *d*, *t*.

g) The Proto-Slavic phonemes *r*, *l*, *n*, which preserved original character of hardness and softness, nevertheless underwent in certain phonetic conditions certain changes.

1) The phoneme *r* > *ž*, *š* (Pol., Czech, Serbo-Lus.) and in one or another measure was depalatalized (Ukr., Belarus., Bulg., Serb., Croat., in part. Slovene, Pol., Czech, Serbo-Lusatian).

2) The phonemes *t*, *l*, *ʎ* were preserved in categories: hard, middle and soft (Ukr., Bulg.), in hard and soft (Rus., Belarus., Serbo-Lus., Polab.), in hard and middle (Pol.), in middle and soft (Serb., Croat., Slovene, Slovak), only in middle (Czech).

3) In certain conditions *l*(*t*) > *υ*(*μ*) (Ukr., Belarus., Serb., Croat., Slovene, Slovak, Serbo-Lus., Polab.) and into *o* (Serbian, Croat.).

4) In the East-Slavic and the South-Slavic there developed also an epenthetic *l* (< *j*).

5) By the category of hardness and softness there are differentiated *r-f*, *l-ʎ*, *n-ň* in some Slavic languages (Ukr., Rus., Bulg., Polab.), *l-ʎ*, *n-ň* in others (Belorus., Serb., Croat., Slovene, Pol., Slovak, Serbo-Lus.) and *n-ň* in a third group (Czech). Of all these three phonemes only the phoneme *n* kept the category of hardness and softness in all Slavic languages. The phoneme *r* lost this category in the majority of the Slavic languages, and *l* lost it only in Czech.

h) In general by the category of hardness and softness there are differentiated these phonemes: *c-ć* (Ukr., Bulg., Polab.), *s-ś* (Ukr., Rus., Belarus., Bulg., Pol., Polab.), *dz-dź* (Ukr., Bulg., Polab.), *d-d'* (Ukr., Rus., Bulg., Pol., Czech, Slovak, Polab.), *t-t'* (Ukr., Rus., Bulg., Pol., Czech, Slovak, Polab.), *r-f* (Ukr., Rus., Bulg., Slovene, Polab.), *l-l'* (in all Slavic languages except Czech), *n-ň* (in all Slavic languages). Other consonantal phonemes are preserved either in the hard category (the overwhelming majority), or in the soft.

1) The so-called velar phonemes *k*, *g*, *h*, *ch* and the labial and labial-dentals *b*, *p*, *m*, *v*, *f* in all Slavic languages were preserved only in the hard category; through their positional palatalization before *j* and vowels of the frontal series they are only variants of hard phonemes, and not soft phonemes.

2) The alveolar phonemes *č*, *ž*, *š*, *dž* were preserved only in the hard category (except in Low.-Lus.). But the Russian phoneme *ú* and the Low.-Lus. *č*, *ž*, *š* were preserved only in the soft category.

3) The phonemes *ć* (< *t*), *dź* (< *d*) (Belorus., Pol., Up.-Lus.) exist only in the soft category.

4) The phoneme *j*, being by its nature palatal, was preserved in all Slavic languages only in the soft category.

THE SCHEME OF THE CONSONANTAL

UKRAINIAN		RUSSIAN		BELORUSSIAN		POLISH		SLOVENE		SERBIAN	
hard	soft	hard	soft	hard	soft	hard	soft	hard	soft	hard	soft
k(<k)	-	k(<k)	-	k(<k)	-	k(<k)	-	k(<k)	-	k(<k)	-
b(<g)	-	-	-	b(<g)	-	-	-	b(<g)	-	b(<oh)	-
g(<g)	-	g(<g)	-	g(<g)	-	g(<g)	-	-	-	g(<g)	-
oh(<oh)	-	oh(<oh)	-	oh(<oh)	-	oh(<oh)	-	oh(<oh)	-	-	-
δ(<δ, t _j , kt, gt)	-	-	δ(<δ, t _j , kt, gt)	δ(<δ, t _j , kt, gt)	-	δ(<δ, t _j , kt, gt)	-	δ(<δ, t _j , kt, gt)	-	δ(<δ, kt, gt)	δ(<t _j)
š(<š, d _j , z _j)	-	š(<š, d _j , z _j)	-	š(<š, d _j , z _j)	-	š(<š, z _j)	-	š(<š, d _j , z _j)	-	š(<š, d _j , z _j)	-
š(<š, z _j)	-	š(<š, z _j)	-	š(<š, z _j)	-	š(<š, z _j)	-	š(<š)	-	š(<š, z _j)	-
dš(<dš)	-	-	-	dš(<dš)	-	dš(<dš)	-	-	-	dš(<dš)	dš(<dš)
o(<δ)	δ(<δ)	o(<δ)	-	o(<δ)	o(<t)	o(<δ)	δ(<δ)	o(<δ)	-	o(<δ)	-
z(<z)	z(<δš, z)	z(<z)	š(<z)	z(<z)	š(<z)	z(<z)	š(<δš, z)	z(<δ, z)	-	z(<δš, z)	-
z(<z)	š(<δ, z)	z(<z)	š(<z)	z(<z)	š(<δ, z)	z(<z)	š(<δ, z)	z(<δ, z)	-	z(<δ, z)	-
dz(<z)	dš(<dš)	-	-	dz(<z)	dš(<dš)	zš(<z)	dš(<dš)	-	-	-	-
-	j(<j, i)	-	j(<j, i)	-	j(<j, i)	-	j(<j, i)	-	j(<j, i)	-	j(<j, i)
b(<b)	-	b(<b)	-	b(<b)	-	b(<b)	-	b(<b)	-	b(<b)	-
p(<p)	-	p(<p)	-	p(<p)	-	p(<p)	-	p(<p)	-	p(<p)	-
m(<m)	-	m(<m)	-	m(<m)	-	m(<m)	-	m(<m)	-	m(<m)	-
v(<v)	-	v(<v)	-	v(<v)	-	v(<v)	-	v(<v)	-	v(<v)	-
f(<f)	-	f(<f)	-	f(<f)	-	f(<f)	-	f(<f)	-	f(<f)	-
d(<d)	š(<d)	d(<d)	š(<d)	d(<d)	-	d(<d)	š(<d)	d(<d)	-	d(<d)	-
t(<t)	š(<t)	t(<t)	š(<t)	t(<t)	-	t(<t)	š(<t)	t(<t)	-	t(<t)	-
r(<r)	š(<r)	r(<r)	š(<r)	r(<r, š)	-	r(<r)	š(<r)	r(<r)	r(<r)	r(<r, š)	-
l(<l)	š(<l)	l(<l)	š(<l)	l(<l)	š(<l)	l(<l)	š(<l)	l(<l)	š(<l)	l(<l)	š(<l)
n(<n)	š(<n)	n(<n)	š(<n)	n(<n)	š(<n)	n(<n)	š(<n)	n(<n)	š(<n)	n(<n)	š(<n)
22	10	18	9	22	7	21	10	19	4	20	5

PHONEMES ACCORDING TO THEIR ORIGIN

CROATIAN		CZECH		SLOVAK		POLISH		SERBO-LEBANIAN		POLABIAN	
hard	soft	hard	soft	hard	soft	hard	soft	hard	soft	hard	soft
k(<k)	-	k(<k)	-	k(<k)	-	k(<k)	-	k(<k)	-	k(<k)	-
b(<ob)	-	b(<g)	-	b(<g)	-	-	-	b(<g)	-	-	-
g(<g)	-	g(<g)	-	g(<g)	-	g(<g)	-	g(<g)	-	g(<g)	-
-	-	oh(<oh)	-	oh(<oh)	-	oh(<oh)	-	oh(<oh)	-	oh(<oh)	-
š(<š)	š(<ṣ̌)	š(<š)	-	š(<š)	-	š(<š)	-	-	š(<š)II	-	-
š(<š, ṣj)	-	š(<š, ṣj)	-	š(<š, ṣj)	-	š(<š, ṣj)	-	š(<š, ṣj)II	š(<š, ṣj)II	-	-
š(<š, ṣj)	-	š(<š, ṣj)	-	š(<š, ṣj)	-	š(<š, ṣj)	-	š(<š)II	š(<š)II	-	-
dš(<dš)	dš(<dš)	dš(<dš)	-	dš(<dš)	-	dš(<dš)	-	-	-	-	-
o(<o)	-	o(<o, ṭj, kt, gt)	-	o(<o, ṭj, kt, gt)	-	o(<o, ṭj, kt, gt)	o(<o)	o(<o, ṭj, šj)	o(<o)	o(<o, šj, ṭj)	o(<o)
u(<u, u)	-	u(<u, u)	-	u(<u, u)	-	u(<u, u)	u(<u, u)	u(<u, u, šj)	u(<u, u, šj)II	u(<u, u, šj)	u(<u)
u(<u, u)	-	u(<u, u)	-	u(<u, u)	-	u(<u, u)	u(<u, u)	u(<u, u)	u(<u, u)II	u(<u, u)	u(<u)
-	-	du(<du, ṣj)	-	du(<du, ṣj)	-	du(<du, ṣj)	du(<du)	-	du(<du)	du(<du)	du(<du)
-	j(<j, i)	-	j(<j, i)	-	j(<j, i)	-	j(<j, i)	-	j(<j, i)	-	j(<j, i)
b(<b)	-	b(<b)	-	b(<b)	-	b(<b)	-	b(<b)	-	b(<b)	-
p(<p)	-	p(<p)	-	p(<p)	-	p(<p)	-	p(<p)	-	p(<p)	-
m(<m)	-	m(<m)	-	m(<m)	-	m(<m)	-	m(<m)	-	m(<m)	-
v(<v)	-	v(<v)	-	v(<v)	-	v(<v)	-	v(<v)	-	v(<v)	-
f(<f)	-	f(<f)	-	f(<f)	-	f(<f)	-	f(<f)	-	f(<f)	-
d(<d)	-	d(<d)	ḍ(<d)	d(<d)	d(<d)	d(<d)	-	d(<d)	-	d(<d)	ḍ(<d)
t(<t)	-	t(<t)	ṭ(<t)	t(<t)	t(<t)	t(<t)	-	t(<t)	-	t(<t)	ṭ(<t)
r(<r, ṛ)	-	r(<r)	-	ṛ(<r, ṛ)	-	r(<r)	-	r(<r)	-	r(<r)	ṛ(<r)
l(<l)	ḷ(<l)	l(<l, ḷ)	-	l(<l)	ḷ(<l)	l(<l)	ḷ(<l)	l(<l)	ḷ(<l)	l(<l)	ḷ(<l)
n(<n)	ṇ(<n)	n(<n)	ṇ(<n)	n(<n)	ṇ(<n)	n(<n)	ṇ(<n)	n(<n)	ṇ(<n)	n(<n)	ṇ(<n)
20	5	22	4	22	5	21	7	19	20	17	17

ISSUES OF "PAPERS" PUBLISHED:

1. Bohachevsky Daniel, J. U. Dr.: Problems of Ukrainian Learning Abroad. (In Ukrainian).
Lew Vasyl, Ph. D., Prof.: Folklore in the Almanac "Rusalka Dnistrova". (In Ukrainian). (1958).
2. Ostapiak Mykola, Prof.: Isolating the Virus of Asian Influenza from Samples of Gargling the Throat and Autopsy Material. (In Ukrainian). (1958).
3. Smal-Stocki Roman, Ph. D., Prof.: The Impact of the "Sputnik" on the English Language of the U.S.A. (1958).
4. Bohachevsky Daniel, J. U. Dr.: The Ideological Fundamentals of "The November Awakening". (In Ukrainian). (1959).
5. Jaszczun Vasyl, Ph. D.: Religious and Moral-Ethical Tenets of Taras Shevchenko. (In Ukrainian). (1959).
6. Smal-Stocki Roman, Pg. D., Prof.: J.S.C. De Radius, an Unknown Forerunner of Comparative Slavic Literature. (1959).
7. Nazarko Ireneus, OSEM, Ph. D.: Metropolitan Julian Aas-Kuilovsky. (1826-1900). (1959).
8. Smal-Stocki Roman, Ph. D., Prof.: Shevchenko and the Jews. (1959).
9. Mackiw Theodore, Ph. D., Prof.: Mazepa (1632-1709) in Contemporary German Sources. (1959).
10. Vytanovych Illia, Ph. D., Prof.: Social and Economic Tendencies in State Policies of Ivan Mazepa. (In Ukrainian). (1959).
11. Luciw Luke, Ph. D.: Academician Prof. Stephen Smal-Stockyj..(In Ukrainian). (1959).
Wozniak Michael, Acad., Prof.: Stephen Smal-Stockyj and Franko (In Ukrainian). (1959).
12. Manning Clarence A., Ph. D., Prof.: The Role of Mazepa in Eastern Europe. (1960).
13. Kamenetsky Ihor, Ph. D.: Origins of the the New British Imperialism. (1960).
14. Krawciw Bohdan: Fedkovych in the Latest Literary Publications (In Ukrainian). (1961).
15. Pavlovych Petro: The Shevchenko Heritage and M. Kotsiubynsky (In Ukrainian). (1961).
16. Smal-Stocki Roman, Ph. D., Prof.: Discrimination and Bias in Two UNESCO Publications. (1961).
17. Pap Michael S., Ph. D., Prof.: Ukraine's Struggle for Sovereignty, 1917-1918. (1961).

18. Smal-Stocki Roman, Ph. D., Prof.: The Netman Mazepa Traditions of Ukrainian National Government of 1917-23. (In Ukrainian). (1961).
19. Lysiak Roman, M. D.: Role of Non-Tyroxine Protein-Bound Iodine in Idiopathic Erythema Multiforme. (1961).
20. Kovaliuk Jeanette-Yaroslava, B.A.: Shevchenko and Pan-Slavic Ideas. (1962).
21. Holiat Roman S., Dr.: Short History of the Ukrainian Free University. (1964).
22. Sokolyshyn Alexander, Dr.: The Appearance of the Apostol and the Piner 390 Years Ago in Lviv - Western Ukraine. (In Ukrainian). (1964).
23. Collection of Papers honoring Prof. C. A. Manning. (1964).
24. Smal-Stocki Roman, Ph. D., Prof.: Beginning of Fight for Rebirth of Ukrainian Statehood. (1967).
25. Ostapiak Mykola, Prof.: The Synthesis of the Prof. Volodymyr Brygider's Scientific Work. (1968).
26. Kysilewskyj Constantyn, Ph. D., Prof.: Dialect peculiarities of the Language of Shashkevych. (In Ukrainian). (1968).
27. Hordynsky B.: Terpenes in the Treatment of Cholelithiasis and Hypercholesterolemia (1968).
28. Smal-Stocki Roman, Ph. D., Prof.: George Washington Traditions in Ukraine. (1968).
29. Chaplenko Vasyl, Prof.: Scholarly activities of Prof. P. Kovaliv. (In Ukrainian). (1969).
30. Tkaczuk Ivan, Very Rev.: Scholarly-Theological activities of Prof. P. Kovaliv and his Participation in religious and public Life. (In Ukrainian). (1969).
31. Kovaliv P., Ph. D., Prof.: Certain characteristics of word-building in the Ukrainian language. (In Ukrainian). (1969).

*
*
*

CONTENTS

Introduction.....	1
Systems of vowel phonemes.....	2
The scheme of the historical development of the vowel phonemes....	12
The scheme of the vowel phonemes according to their origin.....	13
Systems of consonantal phonemes.....	14
The scheme of the phonemic correlation of hardness and softness of the Slavic consonantal phonemes.....	25
The scheme of the consonantal phonemes according to their origin...	26
The scheme of the historical development of the consonantal phonemes	28
Issues of "Papers" published	29

ЗМІСТ

Вступ.....	1
Системи голосних фонем.....	2
Схема історичного розвитку голосних фонем.....	12
Схема голосних фонем відповідно до їх походження.....	13
Системи приголосних фонем.....	14
Схема фонематичної кореляції твердості і м'якості слов'янських при- голосних фонем.....	25
Схема приголосних фонем відповідно до їх походження.....	26
Схема історичного розвитку приголосних фонем.....	28
Список опублікованих "Доповідей".....	29

