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THE PLACE OF THE SOUND [ř] IN THE STRUCTURES OF SLAVONIC LANGUAGES

Czech stands unique among the Slavonic languages in having not only developed, but also preserved, the consonant phoneme /ř/ as one of the fixed elements of its phonematic pattern. As is well known, Polish abolished its analogous phoneme /ř/ by merging it with /ž/ (or, respectively, /š/), maintaining only its graphical correlate, the digraph *rz*, whose occurrence in written words is indicative of the former distribution of the discarded phoneme in the corresponding spoken words. An analogous replacement of [ř] by a fricative seems to have occurred in both varieties of Lusatian; as, however, the Lusatian development presents some specific features (to be touched upon further below), it cannot be worded by a formula so concise as is the one used above for Polish. The common feature of both Polish and Lusatian is that the [ř]-sound has not survived in the phonic plane of any of them, while in Czech the phoneme /ř/ has not only survived but, in addition to this, does not show the slightest trace of a tendency aimed at its abolishment. The fact certainly calls for closer examination.

The exceptional status of the Czech /ř/, compared with that of its discarded counterparts in Polish and Lusatian, stands out as even more remarkable, if one examines the position of the sound [ř] in the phonic structure of Czech. It is commonly known that, for some time, the phoneticians of Czech did not find it particularly easy to classify the Czech [ř]-sound from the articulatory and acoustic standpoints, and that it was only in the second decade of this century that the trilled character of the sound was to be definitely established.[1] Even the present-day phonetician is rather puzzled by the unusual patterns of assimilation indulged in by the Czech [ř]-sound, patterns strikingly different from those characteristic of most of the other consonant phonemes of Present Day Czech.[2] He finds that „from the viewpoint of the assimilation of voice" the Czech [ř]-sound has preserved some of the qualities of a sonorous sound (such as [r, l, m, n]), while by some others of its qualities it ranks—together with [v] and [h]—as a member of a small, transitory sound-category. The characteristic feature of this last-mentioned category is that its members are subject to passive assimilation of voice when placed in word-medium positions. Thus, our category is found to occupy an intermediate place between two bigger sound-categories. One of the two comprises sonorous sounds, lacking any voiceless counterparts and, therefore, non-susceptible to passive assimilation of voice; the other one contains consonants paired according to voice (such as [p — b], [s — z], etc.), each of which, if followed by some other consonant of the same category, is always subject to such assimilation (cf. Zima, p. 41).

The results of the fine analysis performed by a present-day phonetician are valuable in so far as they reveal that the Czech [ř]-sound proves to be an exceptional element of the phonic plane not only when considered in isolation but also when the possibilities of its combination with other Czech sounds are taken into account.

But a still closer analysis of the matter shows that the Czech [ř]-sound is an even more exceptional element of the language than the phonetician believes. First, the progressive assimilation of *ř* > *Ř* (where [Ř] stands for voiceless [ř]), observable in words like *tři*, *přes*, etc., is common all over the Czech language territory, while the analogous progressive assimilations of the type *kvjet* > *kfjet*, *shoda* > *sχoda*, pointed out by Zima, can only be found in a part of that territory (the assimilation of *v* > *f* being, at that, a sub-standard phenomenon, while the assimilation of *h* > *χ* is found in one of the two main varieties of the standard pronunciation of Czech). Second, while the sounds resulting from the assimilations of *v* > *f* and *h* > *χ* implement phonemes different from those implemented by the original sounds, the voiceless sound resulting from the assimilation of *ř* > *Ř* has no independent phonematic status but only represents a positional allophone of the original sound [ř], with which it constitutes one and the same phoneme /ř/. It is thus obvious that the sound [ř] is even more isolated, from the structural point-of-view, among the other Czech consonants, than a phonetician is ready to admit.

The structural isolation of the Czech [ř]-sound becomes still more prominent if one attacks the whole problem from the phonematic standpoint. It has already been noted that in the assimilative processes discussed by the present-day phonetician the phonematic relation of the original and the resulting sounds markedly differs in the case of *ř* > *Ř* from the cases of *v* > *f* and *h* > *χ*. The two sounds, [ř] and [Ř], in fact, constitute the only existing Czech instance of an actually present but functionally irrelevant opposition of voice. The actual presence of its voiced and voiceless variants brings the phoneme /ř/ rather close to phonemes like /p/ — /b/, /s/ — /z/, etc., which, of course, differ from /ř/ by utilizing the difference of voice *vs.* voicelessness for functional purposes. On the other hand, the functional irrelevance of voice in /ř/ brings this phoneme to the close vicinity of sonorous phonemes like /r/, /l/, etc., which are marked by the same irrelevance but differ from /ř/ by the actual absence of the difference of voice *vs.* voicelessness in their implementations. Thus it cannot be regarded as quite appropriate if the Czech phoneme /ř/ is classed, together with /r, l/ etc., as a "sonorant phoneme", as is sometimes done;[3] one should rather denote it as a one-member class forming a sort of transition between two bigger phonematic classes, viz. the sonorant and the consonant phonemes.

If Czech /ř/ is denoted as forming a one-member class, this amounts to saying that it is, in fact, structurally isolated in the Czech phonematic system. The adequacy of such a diagnosis is confirmed by some considerations of the acoustic quality of [ř]. Almost a quarter of a century ago it was shown[4] that the common feature possessed by the articulation of all liquids is some limitation of the passage of air current during their articulation. In the articulation of [l] the limitation is a spatial one (the passage of the air is closed in the middle of the alveolar region, but kept free at both sides of the barrier formed by the tongue), while in the articulation of [r] the limitation extends in time, i. e. the passage of the air current is repeatedly interrupted and released again by taps of the tongue, which result in the peculiar acoustic effect characteristic of the trilled [r]-sounds. On the other hand, in the pronunciation of [ř], with its increased number of interruptions and releases, the intensity of the taps is greatly diminished and the peculiar effect of the trilled sound thus becomes much less prominent, reminding one more or less of a fricative articulation. Consequently, the acoustic and articulatory band tying up the [ř]-sound with the other liquids becomes conspicuously loosened, and the [ř]-sound is thus getting, both physiologically and acoustically, nearer the domain of the fricative consonants,

particularly [š] and [ž]. And it is hardly due to a chance that it is exactly this type of fricatives that replaced the [ř]-sound in Polish and Lusatian.

Viewed phonematically, it appears obvious that in Polish the replacement of the phoneme /ř/ by /ž/ or /š/, as the case may have been, was due to the peripheral status of /ř/ in the Polish phonematic pattern. This conclusion is justified by the fact that what has been said above of the transitory nature of the [ř]-sound in Czech must have applied to Polish as well. In this connection, of course, the question emerges again why the Czech /ř/-phoneme was not eliminated from its phonematic pattern, too. In order to be able to answer this question adequately, at least a rapid glance must be thrown at the historical development that had led to the rise of [ř] in Slavonic languages.

As is commonly known, the source of both the Czech and the Polish [ř]-sounds was the original Slavonic [r']-sound. This [r'] had independent phonematic status in the early stages of the two languages, differing functionally from [r], just as [t'] did from [t], [d'] from [d], etc. After the loss of the final "weak" semivowels ъ, ь, that is, the word-final [r', t', d'), etc., could occur in the same position of the words as [r, t, d], etc., and so must have acquired phonematic status (cf. *dar* 'gift'—*pekar*' 'baker' and the like). It should be noted that before the beginning of the 14th century the Czech phonematic system possessed no fewer than eleven pairs of phonemes whose members were differentiated as "hard" vs. "soft" (i. e. patatalized vs. non-palatalized, or, sharp vs. plain, in the Harvard terminology).[5] In other words, the Early Old Czech /r'/-phoneme must have been very firmly integrated[6] in the Early Old Czech phonematic pattern (and the same must have been true of the position of /r'/ in the phonematic pattern of Old Polish). As the loss of the weak ъ, ь must have taken place in Czech in the course of the 10th century,[7] /r'/ must have been phonematically independent of (and correlative to) /r/ at least from the beginning of the 11th century.

The correlative relation of /r'/ and /r/ was propped up by the close articulatory and acoustic similarity of their phonetic implementations: both [r'] and [r] were trilled sounds, differing only in their palatalized *vs.* non-palatalized manner of articulation. In other words, the articulatory and acoustic relation of the two sounds must have been similar to that existing between the Present Day Russian sounds [r] and [r']. And it is exactly this analogy of Early Old Czech and most probably also Early Old Polish and the Present Day Russian sounds that may throw some light on the development of [r'] in Czech and Polish.

More than fifty years ago Olaf Broch very aptly pointed out[8] that even the Russian [r'], if pronounced with greater energy, may develop concomitant friction ("ein spirantisches Nebengeräusch"). The emergence of this friction is closely connected with the considerable reduction in space of that part of the tongue which remains free to perform the vibration. Still, in Russian this concomitant factor is found only exceptionally; as a rule, the Russian [r'] is a fully sonorous sound (Broch, p. 51). In Old Czech and Old Polish (and, in some specific positions, also in Lusatian), however, the friction was to become so prominent as to produce a sound of a quality distinctly different from [r'], viz. a [ř], in which a trilled articulation is inseparably accompanied, if not overshadowed, by marked friction and which already stands outside the domain of the sonorous sounds (cf. Broch, p. 52). If the process leading from [r'] to [ř] is carried still further, the trilled articulation may be lost altogether and the sound is thus merged with [ž] or [š], its voiceless counterpart; this, as Broch rightly notes, occurred in Polish (and, one may add, in Lusatian).

Broch's purely phonetic analysis of the process of $r' > \check{r} > \check{z}(\check{s})$ is certainly ingenious in so far as it elucidates the physiological and acoustic aspects of the changes. But it leaves untackled the very problem that is necessarily the primary concern of the linguist: why did Russian not proceed further along the line of development so masterly sketched by Broch, and why did Czech cover only the first half of the process, while Polish and Lusatian proved to be most radical, covering the whole of it? It appears that this problem can only be satisfactorily solved if the structural conception of language is applied as consistently as possible, i. e. if the structural peculiarities of each of the compared languages are duly taken into account.

There can hardly be any doubt that the preservation of /r'/ in the Russian phonematic pattern is due to its firm integration in that pattern, in other words, to the preservation in that pattern of the correlation of the softness of consonants.[9] This fact is indicative of the possibility of some causal nexus between the fate of /r'/ in Czech and Polish and the development of the correlation of consonantal softness in the two languages.

To take up the case of Czech first, it is well known that the beginning of the 14th century marks the definite abolishment of the said correlation in Czech (see Komárek, l. c., p. 144). If it is recalled that the Czech change of $r' > \check{r}$ must have taken place in the former half of the 13th century, the assumption of some mutual connection between the two historical events appears highly probable. It appears, that is to say, that owing to the impending abolishment of the correlation of consonantal softness[10] the physiological tendency driving towards the increased assertion of friction in the articulation of [r'] could no longer be kept within its original limits but was allowed full play. The assertion of that tendency resulted, of course, in the complete elimination of the correlative link between /r/ and /ř/, and, as has been shown above, in the virtual isolation of /ř/ in the phonematic pattern of Czech, in which it thus necessarily functions as a peripheral phoneme.

We are, then, again faced with the question already formulated above, viz. how this peripheral phoneme has managed to hold its ground in the language, despite the well-known tendency aimed at the discarding of such phonemes from the phonematic patterns of their languages.[11] This question can again be answered only if one consistently adheres to the structural conception of language. Here it should be stressed, however, that an analysis of the structural situation of the phonic plane of language alone will not yield a satisfactory explanation of the considered phenomenon. One should keep in mind that an adequate conception of language is one regarding the language—in the words of V. V. Vinogradov, though used in a different context[12]—as a system of systems (or, perhaps, sub-systems or levels), each of which has its own structural needs and wants but all of which constitute one bigger whole. The necessary consequence of this conception of language is that a change in one of the sub-systems may call forth (or, respectively, prevent) the existence of some other change (or changes) in another sub-system of that same language. This principle of interdependence of the sub-systems of language[13] may prove to be of some use in solving our present problem.

It may be regarded as quite certain that the preservation of /ř/ in the Czech phonematic pattern has not been motivated by the needs and wants of the phonic level of language, because these needs would rather have invited a total elimination of that phoneme, such as has taken place, e. g., in Polish. It appears, therefore, that the survival of /ř/ must have been motivated by the needs and wants of some other language level. A closer inspection of the situation in Present Day Czech

indeed appears to reveal that some such extra-phonematic motivation can be established.

A more detailed survey of the instances in which the Czech phoneme /ř/ occurs is bound to reveal that in a relatively high number of cases /ř/ alternates with /r/ within one and the same morpheme (cf., e. g., /hora/ : /hoř-e/, /dvor-u/ : /dvoř-e/, /dobr-í:/ : /dobř-e/, /star-í/ : /stař-e/, /var-u/ : /vař-it/, /pár-a/ : /pař-it/, /hor-kí/ : /hoř-et/, etc. etc.). It will be easily seen that such alternations appear to be closely parallel to those in which /t/ alternates with /t'/, and similarly, /d, n/ with /d', ň/, respectively (see, e. g., /pat-a/ : /pat'-e/, /plot-u/ : /plot'-e/, /zlat-í/ : /zlat'-í/, /lít-í/ : /lít'-e/, /pot-u/ : /pot'-it/, /not-a/ : /(za-)not'-it/, /let-u/ : /let'-et/, etc.; similarly, e. g., /vod-a/ : /vod'-e/, /hrad-u/ : /hrad'-e/, /mlad-í/ : /mlad'-í/, /tvrd-í/ : /tvrd'-e/, /hod/ : /hod'-it/, /vad-a/ : /vad'-it/, /(po-)hled-u/ : /(po-)hled'-et/, etc.; and, finally, /rán-a/ : /ráň-e/, /stan-u/ : /staň-e/, /jin-í/ : /jiň-í/, /lín-í/ : /líň-e/, /zvon/ : /zvoň-it/, /vin-a/ : /viň-it/, /han-a/ : /haň-et/, etc. etc.).

The confrontation of the four pairs of alternating phonemes shows quite conclusively that the phoneme /ř/ has become very firmly rooted in the Czech system of morphological alternations, its relation to /r/ being closely paralelled by the relations of /t', d', ň/ to /t, d, n/, respectively. Probably it has been exactly this very firm rooting in the Czech system of alternations that has so far prevented the elimination of the Czech phoneme /ř/, the elimination that might be urgently indicated by the needs and wants of the phonematic pattern of Czech, but certainly would run counter to the needs and wants of the Czech morphological system whose pattern of alternations would thereby lose something of its clearness and pregnancy.

To the above explanation it might be objected that in Slovak one can find most of the alternating types established above for Czech in the cases of /t/ : /t'/, /d/ : /d'/, /n/ : /ň/, and yet the phoneme /ř/ does not exist there. It appears, then, so it might be urged, that the existence of /ř/ in the language is not so essential for the pattern of morphological alternations as is supposed by the above-suggested explanation of its continued existence in Czech.

But the situation in Slovak cannot be mechanically compared or even identified with that existing in Czech. As is well known, no [ř]-sound did ever arise in Slovak from the palatalized [r']-sound, which, on the contrary, was to lose its palatalization and so to become merged with /r/. As a result of this merger, no phonematic difficulties with a peripheral /ř/-phoneme were ever to arise in Slovak, and the whole problem, so puzzling for the Czech pattern, was not to emerge in Slovak at all. Of course, a critic of the above-suggested explanation is fully entitled to ask why a /ř/-phoneme has never arisen in Slovak.

It seems that an answer to the above question can again be prompted by taking into account the interdependence of Slovak phonic and morphological planes. It appears that in Slovak the importance of the correlation of the softness of consonants became even more reduced than in Czech because on the morphological level the group of the so-called soft paradigms of Slovak (corresponding to Czech paradigms like *muž, stroj, nůše, soudce*) was to undergo a wholesale merger with the corresponding group of hard paradigms (of the Czech type *pán, hrad, žena, předseda*). This merger resulted in an almost complete unification of the two sets of inflexional endings in one set common to both, originally different groups. As a result, the difference in the morphological function of the "hard" and "soft" consonant phonemes was to become considerably effaced, and the way to the mergers of some of the originally correlative phonemes (like /r/ — /r'/) was to become relatively smooth.

Besides, one should also recall the fact that in Standard Slovak the phonemes /t, d, n/, when placed before /e/, are regularly replaced by /t', d', n'/. This fact again considerably reduces the functional yield of the opposition of those few pairs of consonant phonemes in which the original difference of "hard" *vs.* "soft" consonants survives, though in a modified form (the palatal implementation replacing the original palatalized one)[14]. The reduction of the functional yeild naturally involves the reduction of the functional importance of the few remaining holders of the discussed opposition.

In addition to all that has been said above it should be recalled that, in general, the range of phenomatic alternation in Slovak morphology had come to be perceptibly narrowed, if compared with the analogous range of phonematic alternation in Standard Czech (see Slovak instances like /ruk-a/ : /ruk-e/, /noh-a/ : /noh-e/, /matk-a/ : : /matkin/, etc., as opposed to Czech /ruk-a/ : /ruc-e/, /noh-a/ : /noz-e/, /matk-a/ : /matč-in/, etc. etc. These facts, too, show that the morphological function of phonematic oppositions (including the oppositions of "hard" and "soft" consonants) must stand out as palpably smaller in the structural context of Slovak than in the analogous context of Czech.

If all the above-enumerated points of Slovak morphological and morphonematic development are taken into consideration, one finds it easier to account for the non-emergence of /ř/ in Slovak and for the loss of palatalization of /r'/ and its subsequent merger with /r/ in that language. At the same time, our survey of the morphological situation in Slovak with its specific features will have revealed that the non-existence of /ř/ in Slovak phonematic pattern in no way contradicts our above theory suggesting a morphological motivation of the preservation of the Czech /ř/-phoneme despite the obviously peripheral status of the latter in the Czech phonematic pattern.

Another very important point concerning the Slovak situation should not be left unnoticed here: by not developing the /ř/-phoneme Slovak managed to avoid the rise of an awkwardly peripheral element in its phonic plane, and so to achieve greater clarity of mutual relations linking individual elements of that plane. This greater clarity could be achieved in Slovak because the situation in the morphological plane of the language was drifting towards distinct simplification consisting in a marked syncretism of inflexional types.[15] This syncretism, naturally, involved a considerable reduction of the grammatical functioning of consonant phonemes. Such abundant functioning was no longer felt necessary in a language that was clearly, even if not very radically, drifting away from the neat inflexional type, such as is still exemplified by Present Day Standard Czech.[16] It will be only too obvious that in the latter language the grammatical functioning of the consonant phonemes is still found most useful and therefore widely employed to help characterize individual word-forms as belonging to this or that morphological category.

The above confrontation of the Czech and Slovak morphological and morphonematic situations thus appears to endorse the above-suggested theory that the preservation of the /ř/-phoneme in Czech was probably motivated by the situation on the morphological level of the language, whose needs and wants seem to have outweighed here the needs and wants of the phonic plane, which would rather have favoured the elimination of /ř/, constituting one of its peripheral, anomalous elements.

After this brief scrutiny of the position of /ř/ in Czech we want to attempt, though very briefly, an answer to the question of what was the motive that was to cause the elimination of /ř/ in Standard Polish.

Our above analysis of the morphological situation in Slovak seems to suggest, at

least in part, the answer to the Polish problem. It will be admitted, that is to say, that, compared with Czech, both Slovak and Polish have considerably restricted the number of inflexional paradigms, and that, at the same time, the ultimate shapes of the phonematic patterns of both these languages have done without the inclusion of the phoneme /ř/, so firmly rooted in the phonematic pattern of Czech. There is, of course, a difference between the two languages, inasmuch as Slovak has never developed the /ř/-phoneme, while in Polish the /ř/-phoneme did arise on lines parallel to those described above for Czech, but only to be discarded (i. e. replaced by /ž/ or /š/) later on; only the traditional spelling marks its former distribution in Polish words.

Thus it might appear that the present-day absence of /ř/ in Polish is in full conformity with the morphological situation prevailing in that language. But the actual Polish situation is not quite so simple. In Polish, that is to say, even after the elimination of /ř/, the alternation of its successor phonemes /ž/ or /š/ with the /r/-phoneme remains a morphonematic fact of the language, while in Slovak the "hardening" of /r'/ into /r/ has led to a total dismissal of morphonematic alternation in those positions where /r/ and /r'/ used to be opposed to one another — cf., e.g., Polish *góra* : *górze* — Slovak *hora* : *hore*, Pol. *morze* : *morski* — Slk. *more* — *morský*, etc. etc. The new Polish alternation, besides, is characterized by the fact that the two alternating phonemes /r/ and /ž/ are qualitatively much more remote from one another than members of the original alternation, /r/ and /ř/, used to be. If, in addition to this, one realizes that, for the greatest part, Polish has maintained the correlation of consonantal softness in its phonematic pattern while Slovak has lost it, then the ways of development taken by Slovak and Polish appear to be not only non-analogous but, in some respects, exactly the opposed ones. And yet, one can establish an important feature common to the development of both language structures in the examined situation.

The common feature may be defined as an increasing tendency aimed at the disengagement of the correlation of consonantal softness from functioning in the morphological paradigms of the two languages. It deserves to be noted that in pursuing this aim the two languages stand in sharp contrast to Russian in which the role of the correlation of consonantal softness is still fully used for morphonematic purposes, and partly also to Czech. This language, it is true, no longer possesses the correlation of consonantal softness in the full sense of the word but still clings to the alternation of the phonematic pairs /t/ : /t'/, /d/ : /d'/, /n/ : /ň/, and /r/ : /ř/, whose members are acoustically close enough to each other to give prominence to their common morphonematic functioning.

In confronting the manner in which Slovak and Polish pursue their above-stated common aim, it will be found that they try to achieve the same goal by methods directly opposed to one another. While Slovak, as noted above, completely abolished the said correlation (in most cases by merging the soft member of the pair with the hard one, in three instances, /t/ : /t'/, /d/ : /d'/, /n/ : /n'/, by changing the palatalized phoneme into a palatal one), Polish employed an altogether different method. It managed, that is to say, to preserve the correllation of consonantal softness in its phonematic pattern and, at the same time, to disengage it, to a considerable extent, from morphological functioning. This is best shown by instances like *pięta* : *pięcie*, *woda* : *wodzie*, *prasa* : *prasie*, *koza* : *kozie*, and, of course, *gwara* : *gwarze*, in which the alternating phonematic pairs /t/ : /c'/, /d/ : /dz'/, /s/ : /s'/, /z/ : /z'/, /r/ : /ž/ do not constitute members of the correlation of consonantal softness. As is commonly known, the correlative partners in that correlation of the soft consonant phonemes /c'/, /s'/, /z'/ are, respectively, the hard phonemes /č/, /š/, /ž/. The hard phonemes /t/, /d/,

/s/, /z/, /r/ possess, in fact, no "soft" counterparts in the Polish phonematic pattern, and /ž/, which possesses one, viz. /z'/, is not opposed to it morphematically, but to /r/, while /z'/ alternates with /z/, which, again, is not its correlative partner. Besides, the "hard" /ž/, when opposed to /r/, occurs in those positions in which the "soft" phoneme should be expected to occur. It is, of course, true that the labially implemented phonemes /p, b, m, f, v/ and the dental /n/, together with their soft partners /p', b', m', v', f'/ and /n'/, are still engaged in morphological functioning. But the number of the alternating pairs which have outstepped the limits of the said correlation is too big to be dismissed as mere "exceptions that prove the rule": they must rather be regarded as progressive phenomena, indicative of the tendencies that are at work in the language. Viwed in this light, the replacement of /ř/ by /ž/ in Polish was in full agreement with the morphonematic tendencies that had been at work in the system of language, and thus may be regarded as a fully organic step in its development.

But one should not lose sight of the fact that the morphonematic situation was only one of the factors that contributed to the elimination of the Polish phoneme /ř/ and that there was another force whose operation must be taken into account here. Unlike the above-discussed factor, the force to be pointed out now had a purely phonematic motivation. It has already been stressed here above that, exactly as its Czech opposite number, the Polish /ř/-phoneme, too, constituted a structurally isolated element of its phonematic pattern, a peripheral element of the kind most likely to be eliminated from the language on account of its insufficient integration in its pattern. The importance of this phonematically motivated factor should not be underestimated: if a sort of hierarchy is to be established between the two factors that were to bring about the elimination of the Polish /ř/-phoneme, then the phonematic factor ranks as primary, constituting an active force that gave the first impulse driving towards the elimination of /ř/, while the morphological and morphonematic situation, though undoubtedly important too, ranks as a factor of a distinctly secondary, more passive, order, because it "only" provided the setting for the actual assertion of the force issuing from the primary, phonematic factor. It should be stressed very emphatically that this formula is not to be taken as dismissing the morphological motivation of the change as unimportant or negligible: the preservation of /ř/ in Czech, where the morphematic situation did not support a phonematic trend analogous to the one established above for Polish, furnishes convincing evidence of the importance of the factors denoted above as secondary and more passive. Here, as elsewhere (see above, Note 12), the thesis urging that in the course of its development language tends to harmonize the needs and wants of all its sub-systems proves to be fully justified. For all this, however, it cannot be denied, that the primary force that called forth the whole process (whether its ultimate goal was to be reached, as in Polish, or missed, as in Czech) had been motivated by the needs and wants of the phonematic level of the language.

Having pointed out some interesting aspects of the development of the /ř/-phoneme in Czech and Polish, we want to mention, in passing at least, the phonematic status of what is believed to have been the [ř]-sound of Lusatian. In both varieties of that language (Upper and Lower Lusatian) the supposed development of [ř] has followed lines distinctly different from those seen both in Czech and in Polish. From Czech both varieties of Lusatian differ by their non-preservation of the sound [ř] which is said to have been replaced in Lusatian by a fricative devoid of all vibration, so typical of the trilled sound. This does not mean, however, that the Lusatian development was the

same as in Polish: first, the supposed Lusatian [ř]-sound had not replaced the original [r']-sound in all positions of the word, but only in the original clusters of the type *kr, pr, tr* before *j* or a palatal vowel. The [ř]-sound believed to have arisen in such groups passed then into Upper Lusatian [š], while in Lower Lusatian one finds it represented by [s']. In Upper Lusatian the fricative even managed to replace the original trilled sound before any sort of woel (through before a velar vowel the fricative must have emerged at a later period and, most probably, was due rather to the operation of analogy than to an actual sound-change).[17] All this shows that the supposed emergence of [ř] in Lusatian and its consequent replacement by a non-trilled fricative cannot be mechanically identified with the emergence of /ř/ in Czech and Polish (and, naturally, with the replacement of the trilled sound by a frivative [ž/š] in that language).

In asserting the phonematic value of the Lusatian [ř] one should proceed with some caution because what is going to be said here rests on a hypothesis which, though probable, has never been quite convincingly proved. Owing to the relatively very late emergence of Lusatian written documents and in wiev of the very imperfect application of German graphical means in putting down spoken Lusatian in the earliest documents, one lacks, as a matter of fact, any direct evidence of the real existence of the Lusatian sound [ř]. The use of the grapheme *ř* (pronounced as [š]) in Present Day Upper Lusatian cannot furnish such evidence because this use was obviously prompted by the cultural influence of Czech. It is certainly significant that the greatest authority on Lusatian, K. E. Mucke,[18] does not assert the former existence of the [ř]-sound in it; he seems rather inclined to believe that the original [r']-sound changed first into [rš] or [rž] which, in its turn, was simplified into a simple fricative of the [š]-type. The actual existence of the ř-sound in earlier Lusatian was inferred, e. g., by W. Vondrák (op. cit., p. 386), who asserted that the original [r'] "zunächst zu *ř* wurde, woraus sich weiter in Obersorbischen ein *š* ..., im Niedersorbischen ein *s*' entwickelte." This statement may be true, being supported by some graphical arguments[19] but one cannot wholly exclude the possibility of a direct change of the voiceless [r'] in the above-mentioned clusters into [š] or, respectively, [s']. So much should be kept in mind before attempting an answer to the question of the phonematic value of the Lusatian [ř]-sound.

Supposing, then, that the Lusatian [ř]-sound did exist, one will easily see that this sound may have acquired the status of an independent phoneme only in those positions in which it could be opposed to [r] or, possily, [r']. Such is the case in a word like Lower Lus. *pśeśiwo* against (Upper Lus. přećiwo, pron. [pše-]), which can be opposed to a word like Lower Lus. *prjedny* (pron. [pr'ed-] the first, Upper Lus. *prědni*); in the latter two words the cluster *pr'-* was to emerge only after the operation of the metathesis of liquids, the original form of the stem having been **perd-*.

It is fairly obvious that the number of instances in which the newly arisen [ř]-sound could function as a phoneme must have been very limited. If one besides realizes that, as in the cases of the Czech and Polish /ř/-phonemes, the Lusatian /ř/ cannot have been very firmly integrated in the system of liquids of its language, it will become perfectly clear that the Lusatian /ř/ must have been felt as a peripheral element of its phonematic system even more strongly than its Czech and Polish opposite numbers because it was handicapped not only qualitatively but quantitatively as well, on account of its insignificant functional yield. Further, being limited to clusters of the type *pr, tr, kr*, which can only rarely occur at the limits of stem and ending morphemes and at the same time be opposed to non-palatalized *pr, tr, kr*, the /ř/-phoneme must have been much less embedded in the morphological and morphematic

system of its language than its Czech and Polish counterparts. One cannot be surprised, therefore, that its elimination was to be effected very shortly.

The above very brief survey of the positions of the /ř/-phonemes in Slavonic languages, though only schematic and necessarily incomplete, may have convincingly revealed one thing at least, viz. that a consistent application of the conception regarding language as a system of systems is able to throw new light at some points of its development. It may not be too immodest to claim that the said conception enables the linguist to discover a number of problems that so far have been overlooked, and even to suggest some ways in which such problems might be effectively tackled.

NOTES

[1] See J. Chlumský, *Une variété peu connue de* r *linguale: le* ř *tchèque.* Revue de phonétique 1, 1911, pp. 33 ff.

[2] Cf. P. Zima, *Souhláska* ř *v českém systému znělostní asimilace* [*The Consonant* ř *in the Czech Pattern of the Assimilation of Voice*]. Sborník slavistických prací věnovaných IV. mezinárodnímu sjezdu slavistů v Moskvě, Praha 1958, str. 36—43.

[3] See H. Kučera, *The Phonology of Czech.* 's-Gravenhage 1961, p. 31.

[4] R. Jakobson, *Observations sur le classement phonologique des consonnes.* Proceedings of the Third International Congress of Phonetic Sciences, Ghent 1939, pp. 34—41.

[5] See, most recently, M. Komárek, *Historická mluvnice česká. I. Hláskosloví*[2]. [*Historical Grammar of Czech. I. Phonology.*] Praha 1962, p. 44.

[6] In A. Martinet's terms, "pleinement intégré" (see his *Économie des changements phonétiques.* Berne 1955, pp. 80 f.

[7] See M. Komárek, op. cit. p. 41.

[8] Olaf Broch, *Slavische Phonetik.* Heidelberg 1911, p. 51 f.

[9] Cf. Travaux du Cercle Linguistique de Prague 2, 1929, p. 10.

[10] For three stages of changes leading to this abolishment see Komárek, op. cit. p. 44.

[11] The working of this tendency in English has been traced by J. Vachek, *On Peripheral Phonemes of Modern English*, to be published in Brno Studies in English 4, 1963.

[12] The term was used by V. V. Vinogradov in his Prague lecture in 1957.

[13] For some concrete specimens of the operation of such interdependences of language levels, see J. Vachek in SPFFBU A6, 1958, pp. 94—106.

[14] What has been said above of the relation of /t, d, n/ in Slovak to /ť, ď, ň/ respectively, applies also to that of /l/ and the "soft" /ľ/; although, objectively, the opposition of the two phonemes ranks as fairly old, its functional yield in Standard Slovak is relatively low (see E. Paulíny, *Fonológia spisovnej slovenčiny* [Phonology of Standard Slovak], Bratislava 1961, p. 82.

[15] It is certainly not without interest that the Southern Slavonic languages which failed to develop /ř/ have deviated even more from the inflexional type of grammatical structure (this is especially true of Present Day Bulgarian which abolished the softness of consonants altogether).

[16] On the morphological type of Czech see especially V. Skalička. *Vývoj české deklinace* [*The Development of Declension in Czech*], Praha 1941; Same, *Typ češtiny* [*The Type of Czech*], Praha 1951.

[17] Cf. W. Vondrák, Vergleichende Slavische Grammatik I[2], Göttingen *1924*, p. 386 f.

[18] K. E. Mucke, *Historische und vergleichende Laut- und Formenlehre der niedersorbischen (niederlausitzisch-wendischen) Sprache.* Leipzig 1891, pp. 220 ff.

[19] The strongest argument speaking in its favour is the old spelling of the type *-rsch-*, reminding one closely of the Old Czech spellings in which *ř* is put down as if consisting of *r* + *š* or, respectively, *r* + *ž*. For the latest discussion of the subject see P. Zima, l. c.

POSTAVENÍ HLÁSKY /ř/ V STRUKTURÁCH SLOVANSKÝCH JAZYKŮ

Čeština si zachovala v své fonologické struktuře foném /ř/, vzniklý z dřívějšího /r'/, ač jde o foném jasně periferní, nedostatečně začleněný do soustavy fonémů v jazyce. Perifernost se projevuje jednak akusticko-artikulačním oddálením realizací /ř/ od výrazně hrčivých realizací fonémů /r/-ových, jednak specifičností asimilačních procesů, jichž se hláska [ř] účastní. Přes tuto peri-

fernost se foném /ř/ v češtině bezpečně drží, zatímco v polštině a v lužické srbštině obdobně vzniklý foném /ř/ byl v průběhu vývoje zlikvidován splynutím s fonémy, jež jsou realizovány frikativami typu [š, ž].

Zvláštní postavení českého /ř/ pomůže objasnit podrobnější přihlédnutí k historii jeho vzniku. Fonetikové již dávno ukázali, že při artikulaci např. ruského palatálního [r'] snadno vzniká souhláskový šum *š*-ové kvality. V ruštině však systémový tlak souhláskové měkkostní korelace udržuje tento šum v mezích pouhého doprovodního, nefonologického zvukového jevu. V češtině, kde korelace souhláskové měkkosti byla jako jev celosystémový zlikvidována, překročil *š*-ový šum tyto meze a vznikl tak foném /ř/. Je to, jak už řečeno, periferní složka systému; jestliže se v češtině dodnes udržel, je příčinu toho patrně třeba hledat v jeho pevném zakotvení v morfonematické stavbě češtiny, kde /r/ alternuje s /ř/ zcela obdobně jako /t, d, n/ alternuje s /t', d', n'/. Toto pevné zakotvení je těsně spjato s výrazně flektivním rázem češtiny. Naproti tomu v slovenštině se /r'/ neměnilo v /ř/, ale naopak ztvrdlo v /r/, protože tu měkkostní protiklad souhláskových fonémů hrál méně důležitou úlohu než v češtině, hlavně v důsledku synkretismu deklinačních typů tvrdých a měkkých (nemluvě o pravidelné neutralizaci protikladů /t : t'/, /d : d'/ atd. před /e/). Jeví se tedy v slovenštině snaha vyvázat měkkostní protiklad souhláskových fonémů z fungování v morfologické stavbě jazyka.

Obdobná snaha se jeví i v polštině, kde se však o stejný cíl usiluje jinými prostředky než v slovenštině. Na rozdíl od slovenštiny se tu protiklad souhláskové měkkosti sice ve vysoké míře zachoval, ale v gramatických alternacích se vzrůstající měrou uplatňují protiklady fonémů, jež nejsou členy souhláskové měkkostní korelace (např. /t : c'/, /d : dz'/, /s : s'/, /z : z'/). Proto mohl v polštině z /r'/ foném /ř/ nejen snadno vzniknout, ale i později úplnou ztrátou kmitavé artikulace přejít v /ž/, resp. /š/. Tak se k výše uvedeným alternacím připojila další, totiž /r : ž/ (v písmě dosud *r* : *rz*). Vznik této alternace byl umožněn právě tím, že gramatická funkce měkkostní souhláskové korelace byla existencí výše uvedených protikladů oslabena do té míry, že gramatický systém jazyka nebyl s to poskytovat existenci fonému /ř/ takovou oporu, jakou existenci českého /ř/ poskytoval (a poskytuje dodnes) gramatický systém český. Za této situace se v polštině mohly prosadit fonologické tendence usilující o likvidaci periferních fonémů, tendence, jejichž prosazení v češtině brání právě potřeby plánu morfologického.

Lužickosrbské /ř/ — jestliže v jazyce vskutku existovalo — mělo velmi malé funkční zatížení, poněvadž se vyskytovalo jen v bývalých skupinách *pr*, *tr*, *kr*. Mohlo fungovat jako foném v protikladu k /r'/ jen v omezeném počtu případů, a proto bylo jeho periferní postavení v systému lužické srbštiny ještě žřejmější než postavení českého a polského /ř/ v systémech jejich jazyků. Přirozeným důsledkem tohoto periferního postavení lužickosrbského /ř/ byla jeho likvidace, k níž došlo splynutím s /š/ v horní lužičtině, popř. s /s'/ v dolní lužičtině.

Naše poznámky ukazují, že pojetí jazyka jako soustavy soustav je s to objevit v jazyce problémy dosud přehlížené a také ukázat na cesty vedoucí k jejich řešení.

ПОЛОЖЕНИЕ ЗВУКА [ř] В СТРУКТУРАХ СЛАВЯНСКИХ ЯЗЫКОВ

Чешский язык сохранил в своей фонологической структуре фонему /ř/, развившуюся из былого /r'/, несмотря на ее яркий периферийный характер и недостаточную связанность ее с фонематической системой языка. Периферийный характер чешского /ř/ проявляется, с одной стороны, в отдалении его реализаций в акустико-артикуляционном отношении от выразительно брожащих реализаций фонем типа /r/, с другой стороны в специфике ассимиляционных процессов, которые ее затрагивают. Несмотря на указанный периферийный характер фонема /ř/ в чешском языке прочно держится, тогда как в польском и сербо-лужицком языках фонема /ř/, возникшая аналогично чешскому /ř/, была ликвидирована, совпав с фонемами, реализующимися шипящими типа /š, ž/.

Более внимательное рассмотрение истории возникновения чешского /ř/ поможет объяснить особенность его положения. Фонетисты еще давно указывали на то обстоятельство, что при артикуляции, напр. русского мягкого /r'/ легко возникает шипящий шум. В русском языке, однако, давление системы корреляции твердых — мягких согласных фонем не позволяет этому шипящему шуму выйти за рамки простого сопутствующего звукового явления, не имеющего фонологического характера. В чешском языке, где корреляция твердых ~ мягких согласных фонем была ликвидирована как характерная черта всей фонологической структуры в целом, вышел указанный шипящий шум за первоначально ограничивавшие его рамки, образовав фонему /ř/. Фонема /ř/ является, как уже указывалось, фонемой периферийного характера; причину того,

что /ř/ в чешском все таки сохранилось следует искать по видимому в его тесной связи с морфонематической структурой чешского языка, где /r/ чередуется с /ř/ паралельно с чередованиями /t, d, n/ с /t', d', n'/. Эта тесная связь с морфонематической структурой языка вызвана ярко флективным характером чешского языка. В словацком языке былое [r'] не превратилось в [ř], а, наоборот, отвердело в [r], так как в словацком корреляция мягких согласных играла менее значительную роль, чем в чешском языке, главным образом вследствие синкретизма твердых и мягких типов склонения (неговоря о регулярной неутрализации противопоставлений /t : t'/, итд. в положении перед /e/. Таким образом, в словацком проявляется тенденция выключить противопоставление мягких и твердых согласных фонем из функционирования в морфологическом строе языка.

Аналогичная тенденция выступает также в польском языке, который стремится к той же цели что и словацкий язык, используя, однако, другие средства. В отличие от словацкого языка противопоставление твердых и мягких согласных в высокой степени сохранилось, но в грамматических чередованиях во все большой мере выступают пары фонем, которые не являются членами корреляции твердых ~ мягких (напр. /t : c'/, /d : dz'/, /s : s'/, /z : z'/). Поэтому в польском фонема /ř/ могла не только легко развиться из /r'/, но и впоследствии в результате утраты брожащей артикуляции перейти в /ž/ или /š/. Таким образом, к указанным чередованиям можно причислить еще одно, а именно /r : ž/ (на письме до сих пор *r* : *rz*). Возникновению этого чередования способствовало как раз то, что грамматическая функция корреляции твердых ~ мягких согласных была ограничена указанными выше чередованиями до той степени, что грамматическая система языка не в состоянии была служить фонеме /ř/ такой опорой, какой для чешского /ř/ являлась, и до сих пор является, грамматическая система, чешского языка. В этой обстановке могли осуществиться в польском языке фонологические тенденции, направленные на ликвидацию периферийных фонем, проявлению которых в чешском языке препятствовали именно потребности морфологического плана.

Сербо-лужицкое /ř/ — если оно в языке и существовало — отличалось чрезвычейно малой функциональной нагрузкой, поскольку оно встречалось только в былых сочетаниях *pr*, *tr*, *kr*. Оно выступало в качестве противопоставления /r'/ только в ограниченном количестве случаев и поэтому периферийный характер его в системе сербо-лужицкого языка был еще более ощутимым чем периферийность чешского и польского /ř/ в системе чешской и польской соответственно. Закономерным следствием указанного периферийного характера сербо-лужицкого /ř/ было его исчезновение в результате слияния с /š/ в верхне-лужицком или /s'/ в нижне-лужицком языках.

Наши заметки относительно характера и судеб /ř/ в славянских языках показывают, что понимание языка как системы систем в состоянии обнаружить в языке проблемы, до сих пор не привлекавшие к себе должного внимания, а также указать пути их решения.

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