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THE DECLINE OF THE PHONEME /r/ IN ENGLISH

I. In an earlier paper¹ we submitted some evidence for the theory that a slight functional load of a phoneme may act as a motive for its ultimate elimination from the given phonematic system. The tendency aiming at such elimination was demonstrated there on a number of concrete instances drawn from the development of English (see, especially, the all but complete elimination of the /h/-phoneme in Modern English, the disappearance from M[iddle] E[nglish] of the voiced velar spirant phoneme /ʒ/, the abandonment by E[arly]ME of the voiceless sonant phonemes /R, L, N/ and — last but not least — /J/, etc.). It was also duly stressed there that the operation of the quantitative factors asserting themselves in such eliminating processes is always closely co-ordinated with the operation of factors of qualitative order, and that noteworthy co-ordination can also be ascertained between the operation of phonic factors of both orders on the one hand and the needs and wants of higher language levels, grammatical and lexical, on the other (a striking instance of the latter kind of co-operation was examined in another of our papers).²

The most typical of the discussed issues was certainly that of the English phoneme /h/ which in present-day sub-standard English has been almost discarded as a phoneme because its only surviving manifestation, the word-initial prevocalic [h]-sound, is evaluated rather as a stylistic means signalling emphasis than as a means used for distinctive purposes. Even though the present-day Southern British³ Standard is much more conservative and does not go the length of the road covered by its sub-standard species, there can be no serious doubt that the trend of the phonematic development of /h/ in the former does not substantially differ from the trend established in the latter.

A closer look at the phonematic history of English will reveal that the case of the /h/-phoneme does not stand isolated. In the present paper we want to discuss another case of a phoneme whose functional load has become gradually reduced to such a degree that the preservation of its phonematic status in the future development of English is beginning to be felt questionable. This other phoneme is the SB /r/ which, as is commonly known, can occur in prevocalic positions only,⁴ in striking contrast to its ancestor, the O[ld] E[nglish] phoneme /r/ which could also occur in a number of other word-positions from which, however, it was to become barred later on. Thus the OE /r/ could be found before consonants (see, e. g., *hierde*, *heorte*, *wiersa*, etc), in word-final positions before a pause (such as in *feor*, *þær*, *æcer*), in gemination (*cierran*, *steorra*), and in some word-initial clusters inadmissible in ModE (cf. *hræfen*, *writan*). As is commonly known, in all such word-positions the Southern English /r/-phoneme was to become eliminated sooner or later, with the result that

the functional load of the present-day /r/-phoneme is much smaller than used to be that of its OE ancestor.

Some of the eliminations go back to a relatively early period. As the earliest of all might be denoted the prehistoric change of the syllabic *r*-sound into the sequence *i* + *r*, later reduced to *e* + *r* (see instances like *æcer*, *hider*, *mēder*, etc., analysed by K. Luick, *Historische Grammatik der englischen Sprache* [henceforth cited as HG], Leipzig 1914 — 40, § 317 — 20). Here the insertion of the svarabhakti vowel clearly led to the elimination of pre-OE /r/ in one of its positions of occurrence, and so to a slight decrease of its functional load; yet it appears that in such positions the syllabic *r*-sound was often restored by morphological analogy (see Luick, l. c.). Under these circumstances, the first really undoubted step clearly reducing the functional load of the English phoneme /r/ was to take place only somewhat later, in the historical period of the language. It was the familiar change of the cluster *hr* into voiceless *R* which may have taken place already in OE⁵ or in EME at the latest.⁶ Later in the ME period, but again relatively early, came the abolition of the geminated *-rr-* (most probably it should be ascribed to the close of the 14th century).⁷ Throughout the ME period, however, the English /r/-phoneme managed to uphold most of its word-positions and, as is generally known, in some instances its postvocalic variant influenced the preceding vowel sound to a non-insignificant degree.

The said influence reached its highest point by the lowering of preceding vowels (as in LME *er* > *ar*) and by the emergence of the svarabhakti mixed vowel between the vowels (especially the long ones) and *r* in the latter half of the 15th century.⁸ These developments naturally raise the question of the phonetic character of the English *r*-sound throughout the development of English. At present we will confine our attention to the phonetic character of the LME non-prevocalic *r*, because it is exactly this variant of *r* which is concerned in the above-said two developments. It seems probable that this LME non-prevocalic *r* was an inverted fricative sound. Positive evidence of this is submitted by the state of things observable in the NE and GA standards of English, while negative evidence is supplied by the situation existing in the Scottish standard.⁹

One might be tempted to suppose with E. Sievers¹⁰ that the OE *r* (or at least its non-prevocalic variant) was also an inverted sound, as it too exercised notable influence on the vowels preceding it (see especially the changes commonly labelled as breaking). It is interesting to note, however, that most experts in OE disagree with Sievers on this point. H. Sweet, H. C. Wyld, K. Luick and E. J. Dobson¹¹ are unanimous in assuming the trilled articulation of the OE *r*-sound. Dobson has rightly insisted, following the earlier hints by Bülbring and Luick, on the necessity of distinguishing the "rounding influence of *r*" under which heading the OE breaking undoubtedly belongs from the other two processes for which *r* was responsible, viz. the "lowering influence" and the development of the glide *ə* before *r*. Dobson asserts that the rounding influence is "due to the lip-protrusion which accompanies the articulation of the consonant... and may operate at any time in the history of English" (l. c.). This assumption appears perfectly sound; it accounts for the absence of breaking by *r* both in short back vowels (which already possessing a labial quality could not take on labial glide) and in long vowels generally (in which, owing to their bimoric quantity,¹² the final labial glide could not become conspicuous and therefore did not transcend the limits of a purely incidental, functionally non-essential phenomenon). To sum up, the influence of OE non-prevocalic *r* on the preceding vowels cannot be regarded as equivalent to the influence exercised on the preceding vowels by the ME and EModE non-prevocalic *r*; consequently, there is no reason to postulate a phonetic identity (or close proximity) of the two.

The rise of the glide *ə* between the vowel and the non-prevocalic *r*-sound prepared the ground for a further, very radical reduction of the functional load of the

English /r/-phoneme. The *a*-sound, that is to say, was ready to take over most of the distinctive functions of the following *r*-sound, and in view of its vocalic character, ensuring high audibility as well as easy articulation, it turned out to be, even on purely material grounds, more eligible for these functions than the consonantal sound which until then had only been propped by it. As a result, the consonant *r* became dropped in the above-specified positions;¹³ the phonematic consequence of this was not only the elimination of the *r*-phoneme from a vast number of the words originally containing it but also the rise of a new vowel phoneme *a*.¹⁴

After the above-described reductions of its functional load, the present-day SB phoneme /r/ can occur only in prevocalic positions. From this it follows that the only consonant clusters in which it may participate are the word-initial ones, and that /r/ always constitutes the last element of such clusters. After the LME change of *wr-* into *r-* (see Horn—Lehnert, LL § 486) the structure of the remaining clusters is fairly monotonous, presenting in principle two types only, viz. “*s* + muta + *r*” (i. e. *pr*, *br*, *spr*; *tr*, *dr*, *str*; *kr*, *gr*, *skr*), and “voiceless fricative other than *s* + *r*” (i. e. *fr*, *θr*, *ʃr*). On the other hand, the number of clusters remains relatively high. It might appear, therefore, that despite the many reductions of occurrence pointed out above, a fairly high number of the possibilities of occurrence has been left to our /r/-phoneme and that, under such circumstances, one should think twice before one places it (as we have done in the opening paragraphs of the present paper) into the same category as the phoneme /h/ whose possibilities of occurrence in the SB standard are incomparably more limited.

At first sight such conclusion seems sound indeed; there can be no doubt whatever that compared with the /h/-phoneme the SB phoneme /r/ is holding firmer ground. And yet, a closer examination of its manifestations in SB cannot fail to reveal unmistakable signs pointing to the fact that the position of /r/ in the SB phonematic system has been appreciably shaken. There are at least three symptoms indicating such diagnosis; each of them will be briefly discussed here.

II. The first symptom are the familiar cases of the so-called “linking *r*”. As is generally known, the SB word-final postvocalic *r* is not dropped if immediately followed by a word beginning in a vowel (note the well-known differences [its *hiə* — *hiər* it *iz*; its *fa:* — its *fa:r ə'wei*] and the like). The *r*-sound emerging in such sandhi situations is synchronically evaluated as a means preventing hiatus contact of the two vowel bordering on *r*. That such evaluation of the linking *r* is really present is evidenced by the familiar instances of the so-called “intrusive *r*”, i. e. of such cases of the hiatus *r*-sound as are etymologically illegitimate, in other words, of those cases in which the emergence of *r* is motivated exclusively by the the phonematic structure of its context (note again the often quoted instances of the type [ind^əɪər əfɪs, θə lɔ:r əv θə lænd] etc.).¹⁵ A thing to be particularly noted is the almost universal use of this hiatus *r* by people of all classes, educated and uneducated alike (this was stressed especially by A. Lloyd James, quoted by Horn—Lehnert, l. c.);¹⁶ this may certainly be taken as evidence that such universal use is conditioned by the structural situation of the SB phonematic system.

The main aspect of that structural situation may be summed up by stating that such an inserted *r*-sound is a fact of syntactical phonematics, not of word-phonematics, like the SB *r*-sound in words of the type *red*, *crab*, *spring* etc. Clearly, despite the phonetic identifiability of the hiatus and non-hiatus *r*-sounds, their phonematic evaluation must be basically different. As the hiatus *r*-sound is not indispensable for conveying the meaning of the word to which it is attached, its main function

is rather to clearly delimit that word from the following word-unit within the sentence.¹⁷ Obviously, the delimiting, non-distinctive function of the one category of the *r*-sounds cannot fail to affect the other, distinctively functioning category of the *r*-sounds, whose situation in the SB phonematic system is consequently felt as less clear than the situation of those phonemes which do not possess such homophonous non-distinctive counterparts. On the other hand, the distinctive function performed by the *r*-sounds in words of the type *red*, *crab*, *spring* necessarily affects the evaluation of those *r*-sounds which are non-distinctive: the distinctive functional capacity of the sound, evidenced by the cases of the former type, will of necessity appear somewhat frustrated if employed for "merely" delimitative purposes.

To put the thing differently, the functional ambiguity of the SB *r*-sound must necessarily lead to some uncertainty about the exact status of the phoneme /r/ in the SB phonematic system. And it is exactly this uncertainty that may be responsible for the peculiar development which, according to the English phoneticians,¹⁸ has been of late rapidly spreading in the pronunciation of the younger generation, viz. for a complete abandonment of the linking *r* (and of course for the non-introduction of the intrusive *r*). This development, that is to say, may be accounted for most conveniently as an attempt to restrict the use of the phoneme /r/ to the exclusive performance of its distinctive functions, and to disengage it from the functions of non-distinctive, purely delimitative character.¹⁹ Conversely, the above-discussed very strong tendency to employ the linking and intrusive *r*-sounds, might be accounted for as evidence for an opposite attempt, aimed at restricting the use of the phoneme /r/ to the exclusive performance of delimitative, non-distinctive functions. (Under this assumption, the instances in which *r* serves distinctive purposes, as in *red*, *crab*, *spring*, must be disposed of in the manner referred to below in the discussion of our symptom No. 3.)

The above analysis of the first of our symptoms, viz. of the linking *r* and the phenomena connected with it, will have revealed with sufficient clearness that the position of the phoneme /r/ in the phonematic system of SB is far from clear and firm, despite the fact that after so many reductions of its functional load the phoneme has managed to preserve what at first sight appears to be a fairly high number of the possibilities of occurrence. That even these possibilities of occurrence are not invulnerable will be shown by an examination of the second and third of our symptoms, to which we are now turning our attention.

The symptom No. 2 concerns the present-day SB word-initial clusters /tr-/ and /dr-/. As is commonly admitted, in the articulation of each of these clusters its two component sounds have been welded together so intimately as to produce something that, from the purely phonetic standpoint, must be regarded as an affricate sound. As is well known, both clusters are classified as affricates by the English phonetic authorities.²⁰ It is of course true that in the SB standard pronunciation the affricates [tr, dr] are always kept apart from their nearest articulatory analogues, the respective affricates [tʃ, dʒ], from which — in spite of their acoustic similarity — they can always be distinguished by their ability to tolerate the insertion of an off-glide between their two component parts (so that one can pronounce [t-ri:, d-rai], while a pronunciation like [t-ʃin, d-ʒæm] is inadmissible). In the Cockney dialect of London, however, the situation is different: there the affricates [tr], [dr] sound so very much like [tʃ], [dʒ] that word-pairs like *train* and *chain*, *drove* and *Jove* become virtual homonyms.²¹ This fact may serve as evidence of the ambition of the affricate phonemes /tʃ, dʒ/ to replace the clusters /tr, dr/.

It might be objected, naturally, that the attainment by Cockney of this stage of development cannot be taken as conclusive evidence for the phonematic situation existing in the SB standard. And yet, such evidence may be regarded as amply justified. It has been pointed out more than once²² that popular dialects, free from the conserving influence imposed upon the standard language by civilizational factors (such as schools, theatrical and cinema performances, broadcasts, lectures, sermons, etc.), can manifest the tendencies of development characteristic of the given language system more openly and more reliably than the literary standard. What may be regarded as particularly illuminating, are some phenomena observable in children's speech: they reveal that in the common colloquial style the SB children speakers are often unable to tell the affricate [tr-] from [t,-], and similarly [dr-] from [dʒ-].²³ One can conclude, therefore, that in present-day SB a more or less clear tendency has been taking shape, aimed at the ultimate elimination of the phonematic clusters /tr-/ and /dr-/ by way of their replacement by the respective affricate phonemes /tʃ/ and /dʒ/. Although the tendency has not yet progressed very far, the existence of the forces putting it through can hardly be a matter of doubt.

While the symptom No. 2 revealed a tendency working for the elimination of two of the clusters containing /r/, the tendency No. 3, to be discussed now, disposes of virtually all occurrence possibilities of that phoneme, whether standing alone or participating in consonantal clusters. Phonetically its operation is displayed by a notable labialization of the articulation of *r*. This labialization was recorded in the 'thirties by D. Jones, and Ida C. Ward mentions it as a peculiarity of the younger generation.²⁴ But it must have been quite frequent already in the 19th century (see below evidence of this drawn from the writers of that period). The participation of the lips in the articulation may become so strong as to shift the articulation of the tongue-tip (which in any case is often very weak) into the background. The result then is that both acoustically and physiologically the sound, as Horn and Lehnert put it, "makes the impression of a *w*-sound." This impression is borne out by the way in which writers recording such pronunciation put down the sound — they invariably use the letter *w* for the purpose (Horn and Lehnert quote writings by various authors, starting from Dickens and Thackeray; e. g. *wough*, *wail*, *fwont*, *dwiver*, *notowious*, *Freedewick*, *vevy wong*, etc.).²⁵

On the ground of such spellings, and which is still more important, on the ground of the acoustic impression which was the motive leading to such spellings, one is led to conclude that the labialized pronunciation of the *r*-sound, and the ensuing replacement of that sound by what is identified as *w*, must reflect deeper changes in the phonematic system of those speakers who have adopted this new way of pronunciation. It appears that such speakers are resorting to a radical measure capable of disposing, at a single blow, of the above-noted functional ambiguity sticking to the present-day SB /r/-phoneme. Such speakers, that is, replace the /r/-phoneme in all its remaining positions by the /w/-phoneme, thus bringing about the phonematic merger of the two. — Another important point deserves to be noted: none of the phonetic authorities registers an analogous labialization of the linking and intrusive *r*-sounds. In terms of phonematics this means that the non-distinctive *r* is not merged with *w* but that it continues to perform its delimiting function; in other words, the *r*-sound is thus entirely relegated to the status of a non-phonematic delimitative signal.

A number of interesting features can be observed in the impending phonematic merger of /r/ and /w/. Three of them will be singled out here. First, it is certainly

no chance that the same kind of merger can occasionally be found in the Eastern regions of the USA (according to the statement by H. Kurath, quoted by Horn — Lehnert), in which the *r*-sound is characterized by the same functional ambiguity as in SB. Identical causes have obviously led to identical results. In the GA variety of American English, on the other hand, no such merger is evidenced, clearly because GA does not know linking and intrusive *r*'s and therefore the functional ambiguity of the phoneme /r/ does not exist there. In GA, as is well known, the consonantal *r*-sound (the inverted [ə¹]) and the vocalic inverted [ə¹] undoubtedly constitute allophones of one and the same phoneme.

The second feature, duly noted by Horn and Lehnert again, though in a different context, is the very fact of a labializing process occurring in the present-day period, otherwise characterized by the very opposite tendencies of articulation. As is well known, reduced activity of the lips has been regarded as one of the most outstanding features of the English "Artikulationsbasis",²⁶ and a number of very important sound-changes, traceable throughout the history of English, have a common denominator exactly in the weakening of labial articulation. The emergence in this context of a strong labializing process can hardly be due to a chance: the motives that have brought it about could not have been of a purely mechanical character — rather they may have been prompted by the needs and wants of the system of language, in this particular case by the functional ambiguity of the phoneme /r/ and by an effort to do away with it.

The third feature is the remarkable ability of the SB phonemes /r/ and /w/ to be subjected to the merger. A closer examination of the distributional rules of the two phonemes reveals that they share relatively few positions of occurrence. Thus, /w/ is found extremely rarely in intervocalic positions and it is quite unknown in the initial clusters of the type *pC*, *bC*, *ʃC* and *ʒC* (where C means a consonant), while /r/ is common in all such situations. On the other hand, /r/ never occurs in initial clusters of the type *sC*- in which /w/ is commonly found. Consequently, there is no danger of an excessive number of homonyms arising from the phonematic merger of /r/ and /w/. And in those relatively very few instances in which new homonyms are bound to arise (see, e. g., *red* — *wed*, *ring* — *wing*) the sentence context will enable the listener to identify the intended meaning without any major difficulty. In other words, the phonemes /r/ and /w/ are, to a relatively high degree, complementary with regard to the word-positions in which they occur. This fact is able to throw some additional light on the impending phonematic merger of our two phonemes. It might prove to be beneficial not only to /r/ but to /w/ as well, because it supplies the latter with a number of new positions in which it might occur or, to put the thing differently, because it promises to increase the functional load of the /w/-phoneme and so to make that phoneme a more efficient component part of the phonematic system of SB. Undoubtedly, by increasing its efficiency, the /w/-phoneme might obtain a firmer footing in the system of language than it has had so far²⁷ (see also below, Note 37).

To our above analysis it might be objected that our phonematic interpretation of the "labialized *r*" cannot reflect the actual evaluation of that sound by the speakers using it, since such speakers cannot disengage themselves from the powerful influence of the written norm of the language, in which the *r*-sound, whether labialized or not, has invariably one and the same optical counterpart, the grapheme *r*. To this it should be answered that we are deeply aware of the more or less close correspondence which is bound to tie up the spoken and the written norm in any

language community.²³ We are also ready to admit, especially in cultured communities, some amount of influence exercised by the structure of the written norm upon the structure of the spoken norm²⁴ and even, though to a more limited extent, upon the development of the latter. In our opinion, it is most probably this latter influence — together with the influence of other civilizational factors — which has so far prevented the merger of the phonemes /r/ and /w/ from spreading all over the SB speaking community. And yet, for all these concessions we are ready to make, we consider it imperative not to lose sight of the fact that, for all their mutual influence, the spoken and the written norm constitute two separate systems and that the evolution of either of them is primarily motivated by its own structural laws (although, of course, it would be quite wrong and unduly immanentist to rule out the possibility of the secondary factors — like those of the written norm, and of a number of external structures, linguistic and extra-linguistic — intervening in that evolution).³⁰

In other words, despite the discrepancy arising in the spoken and written norms of those speakers who in their spoken utterances have merged /r/ and /w/ but in their written utterances continue keeping apart the graphematic correlates of the two phonemes, we have no choice but to admit that the phonematic merger may really take place in the spoken norm of such language users. After all, cases of continued graphematic distinction which is no longer justified by a distinction on the level of phonemes are abundantly found in the development of languages of cultured speaking communities. It is true that a large majority of such discrepancies must be allotted to the domain of vowels, but a number of them may be registered also in the consonantal domain (see, e. g. the case of Polish: there the digraph *rz* continues to be employed although the phoneme /ʐ/ corresponding to it has long been abolished, having been merged with /ʒ/ and, in other situations, with /ʃ/). To sum up, the continued usage of the grapheme *r* in present-day SB cannot be used as argument against our theory of the impending phonematic merger of /r/ and /w/ in the language system of some SB speakers.

III. The analysis of our three symptoms has clearly ascertained that the position of the phoneme /r/ in the phonematic system of present-day SB is by no means firm and that one can even detect a number of tendencies working for its elimination from that system. Viewed in the light of such tendencies, the entire history of the SB /r/-phoneme, traced from the earliest OE down to the present day, appears to take on the shape of a gradual decline, effected by successive stages. The fact of such declining process is found the more remarkable since in the pre-OE period the functional load of the /r/-phoneme had been markedly increased by the familiar West Germanic change of *z > r.³¹ This being so, it is only natural that the historian of the language is expected to lay down the motives that have called the eliminating process into being.

In Section II of the present paper we submitted a theory accounting for the latest stages of the eliminating process partly by the reduced functional load of the phoneme /r/ and, especially, by the tendency to put an end to the functional ambiguity of that phoneme in present-day SB. Now it remains to find out the motives lying behind the opening stages of the eliminating process.

It will be recalled that the opening two changes that definitely started the process were those of OE (or EME) *hr-* into voiceless *R-* and the ME simplification of the geminate *-rr-* into *-r-*. The motivation of the first of the two changes is clearly seen from the fact that by the side the process of *hr-* > *R-* we also find parallel processes

of *hl-* > *L-*, *hn-* > *N-*, and *hw* > *W-*. As has been shown in our paper quoted above, Note 1 (p. 26), these four changes must have been motivated by the tendency striving after the elimination of the initial /h/-phoneme, common to all the eliminated clusters. The change, therefore, though depriving the phoneme /r/ of one of its positions of occurrence, was not primarily directed against it. Furthermore, the fact that at the period of these changes no tendency existed in the language against the phoneme /r/ *quâ* /r/, is clearly demonstrated by the fact that the newly arisen voiceless phoneme /R/, whose functional load was very slight, was soon to become voiced and so merged with the voiced /r/-phoneme (for particulars, see again our paper quoted in Note 1). The prestige of /r/ became thus somewhat strengthened, although the number of the occurrence positions of that phoneme (its "distributional capacity", as we might call it) was to remain definitely reduced by one important item, viz. by that of /hr/.

The elimination of the phoneme /r/ in gemination, that probably took place at the close of the 14th century, tells virtually the same story as the elimination of the cluster /hr/. As is clearly seen from the convincing analysis given by H. Kurath (see his paper referred to above, Note 7), the elimination of the geminate /rr/ and of all other ME geminate consonant phonemes was by no means directed against the phoneme /r/ (or, for that matter, against any other ME consonant phoneme) but was the natural outcome of a different complex of changes, which started with the lengthening of short vowels in open syllables, and was closely connected with the loss of vowels in syllables lacking stress. Obviously, here again no specific tendency directed against the phoneme /r/ *quâ* /r/ can be detected yet.

Under these circumstances it appears clear that a really radical intervention in the distributional capacity of the English /r/-phoneme was not to take place before the close of the 15th century in colloquial speech (in the SB standard even much later); as is commonly admitted, it was only at that time that the *r*-sound was to become dropped in non-prevocalic positions. The data undoubtedly look very late, but one should not lose sight of an important circumstance to which attention was directed above in Section I: as a matter of fact, the dropping of non-prevocalic *r*-sounds in Southern English had been prepared earlier by the development of a purely phonetic *ə*-glide between the *r*-sound and the vowel preceding it. It was also pointed out above that after some time this glide was to prove capable of taking over virtually all functions of the following *r*-sound, and so to contribute most effectively to its elimination. It is obvious then that the rise of the phonetic *ə*-glide, which dates back to about the latter half of the 15th century, was an event which was to prove decisive for the future development of SB non-prevocalic *r*-sounds. The question of why the glide emerged in English at the time indicated is therefore essential for a correct estimate of the forces which were at work in setting the scene for the future decline of the /r/-phoneme.

Although not all aspects of the phonic situation in ME (and especially LME) have been established satisfactorily by now, one thing seems clear beyond any doubt: the rise of the *ə*-glide cannot have taken place while the non-prevocalic *r*-sound was still articulated as a trilled consonant — this follows not only from physiological considerations but is strikingly borne out by the situation in the Scottish standard in which the non-prevocalic *r*-sound has preserved its trilled pronunciation by now and in which the gliding sound between this *r* and the preceding vowel is quite unknown. One can certainly agree with Dobson (see above, Note 9) when he connects the lowering influence of *r* on the preceding vowel (and,

in the long run, the rise of the *a*-glide as well) with the change in the articulation of the *r*-sound from a trill to a fricative. As to the character of this fricative, most plausible seems to be the assumption voiced by Luick and more recently by Horn and Lehnert, holding the non-prevocalic *r*-sound which was to enable the *a*-glide to arise for a sound of an inverted articulation. On this assumption, the rise of the glide would not only conform to physiological considerations but, in addition to this, would be in perfect agreement with the well-known GA and NE development of non-prevocalic /r/.³²

Whatever may have been the place of articulation of the LME non-prevocalic *r*, one thing appears certain: the abandonment of the trilled manner of articulation was to prove an important turning-point in the development of the SB /r/-phoneme. Various kinds of evidence, such as are adduced by Luick, Horn — Lehnert, and Dobson reveal that in non-prevocalic positions this turning-point must have been reached relatively early (by about the middle of the 15th century). Before a vowel, especially in word-initial positions, the trilled articulation was to hold on much longer (as is generally known, Ben Jonson heard the initial *r* "sounded firme" as late as the beginning of the EModE period), and the character of the fricative that was to develop in the initial word-positions is still a matter of discussion.³³

Speaking in purely phonetic terms, the background of the change from the trill to the fricative is comparatively easy to see: the change is one of the numerous manifestations of articulatory relaxation, characteristic of the phonic development of English. The same principle may account for the fact that non-prevocalic *r*, placed in a position of relatively weak intensity of articulation, was to give up its trills earlier than the prevocalic *r*, whose intensity of articulation was relatively very strong (cf. Horn — Lehnert, LL § 431). From the linguistic standpoint one should add that the word-initial positions also prove to be more important semantically than the word-final, and especially than the word-central positions,³⁴ so that the endurance of the non-prevocalic *r*-sounds was not likely to be propped up by semantic factors either. On the other hand, the word-initial *r*-sound (and the *r*-sound participating in word-initial clusters) had a relatively high degree of endurance also because it was propped up by a high amount of semantic relevancy.

We should like to make a point of stressing this remarkable instance of harmony of form and function (i. e. of physiologico-acoustic and semantic factors) in the development of language. Many, though certainly by no means all, impulses to phonic changes in language undoubtedly come from physiological quarters (the well-known principle of the economy of articulation playing here a highly important part). But the realization of such impulses is liable to the control of the semantic factors: only such physiological impulses can be effected as do not stand in open contradiction to the basic function of language, i. e. that of being an instrument of mutual communication.³⁵ It should only be added here that the articulatory weakening of *r*, consisting in the change of a trill into a fricative, was by no means contradictory to the needs of semantic clarity — as long as a phoneme becomes manifested in an audible, discernible way, the manner of its articulation is not particularly relevant. Only when that manner of articulation is about to become inaudible or indistinctive, the needs of semantic clarity may be jeopardized. At such moments semantic factors may be mobilized to intervene either by preventing the elimination of the threatened phoneme from being carried out or by enforcing such phonic change as may restore the endangered functional efficiency of the concerned phoneme. Incidentally, the labialization of the present-day SB prevocalic *r*-sound, analysed above in Section II as a process primarily intended to do away with the functional ambiguity of SB /r/, may have been partly prompted also by the small acoustic distinctness of the prevocalic *r*-sound, which sometimes loses its fricative character altogether and becomes replaced by something like a non-syllabic mixed vowel [ɹ].³⁶

IV. It is time to summarize, as briefly as possible, the provisional findings of our analysis. It has been ascertained that the process reducing the functional load of the English phoneme /r/ started by two early changes (OE *hr-* > *R-* and ME *rr* > *r*) which in themselves were not directed against the phoneme /r/ as such. It has been further found that the LME and EModE wholesale elimination of the non-prevocalic *r*-sound was only an ultimate consequence of the change of articulation of the *r*-sound from a trill into a fricative. Even this wholesale elimination, therefore, had not been primarily directed against the /r/-phoneme *quā* /r/-phoneme. Still, it resulted in reducing the functional load of the /r/-phoneme so radically as to call forth some tendencies aimed at the elimination of the phoneme whose highly reduced distributional capacity was no longer a satisfactory guarantee of its being efficiently employed. It is, then, only after the wholesale elimination of the non-prevocalic *r* that quantitative factors may have entered into the process of the decline of our phoneme. Still, the above analysis has clearly revealed that it would be a mistake to make these quantitative factors exclusively responsible for the operation of the tendencies that attack the phoneme in present-day SB. As in the case of the SB phoneme /h/, here too the activity of the quantitative factors is co-ordinated, and indeed closely and inseparably interwoven, with that of the qualitative factors.

One such qualitative factor was singled out above in Section II, viz. the functional ambiguity of the SB sound resulting from its use partly in the distinctive, and partly in the non-distinctive, delimitative function. That this ambiguity is really in the play, is convincingly shown by the fact that two of the three present-day tendencies attacking the phoneme are obviously concerned with the abolition of that ambiguity, and that, either separately or jointly, they succeed in attaining that aim. As has been shown above, one of the tendencies, if consistently put through, would result in restricting the *r*-sound to its distinctive use, while the consistent application of the other tendency would entail the use of *r* for exclusively delimitative purposes.

There is, however, another important qualitative factor that essentially contributes to the decline of the SB /r/-phoneme and that probably adds much vigour to the tendencies attacking the remaining strongholds of that phoneme. This other factor is the structural isolation of the /r/-phoneme in the SB phonematic system.³⁷ In other words, there is no SB phoneme with which /r/ could enter into a kind of direct phonematic opposition.³⁸ Before the change of the trilled articulation into the fricative, the *r*-sound had a related counterpart in the English phonematic system, viz. the phoneme /l/. The feature common to these two phonemes was their common membership in the group of liquids. As was convincingly shown by acousticians,³⁹ the link uniting the category of liquid consonants is the existence of a partial obstruction placed in the way of the air-current emitted from the lungs to pass through the organs of speech. In the case of a trilled *r*, the flow of the air-current through the speech organs is intermittent, i. e. the above-said obstruction is effected in terms of time; in the case of the *l*-sounds, only one part of the passage (usually the central) is closed to the air-current while the remaining parts are open, i. e. the partial obstruction is effected in terms of space.

After the English /r/-phoneme had become manifested by a fricative, the link joining it to the /l/-phoneme became severed, and the isolation of /r/ in the phonematic system of English became an established fact. Although the phoneme /r/ thus came to be manifested by a fricative sound, it was not to enter into phonematic relation with any of the other fricative phonemes. Under these circumstances two

courses were open to the English /r/-phoneme: either to become merged with some of the older fricative phonemes of English (as was shown above, such course was adopted by the Polish /ʃ/-phoneme which, after losing its trilled character, coalesced with the phoneme /ʒ/ or, in some specified positions, with /ʒ/) or to dissociate itself phonetically from the fricative group and seek new possibilities of getting out from its structural isolation. Each of the two ways was tried in the SB area, though none of them with systematic consistency. An attempt to follow the first way seems to be indicated in the pronunciation of those speakers who allow their initial clusters *tr-* and *dr-* to be sounded like *tʃ* and *dʒ*, respectively. This, however, must be denoted as a speech habit which has not penetrated into the standard pronunciation on an appreciable scale; besides, this type of the elimination of /r/ is confined to the two above-said initial clusters, leaving the /r/ of other word-positions and other clusters entirely intact.

The other of the two ways has had a wider positional application, although by no means all speakers of the SB standard have adopted it. Those who have, pronounce the *r*-sound without any audible friction, rather like a non-syllabic mixed vowel (cf. D. Jones, *Outline*⁸ § 796). Such manifestation of the /r/-phoneme may reflect the tendency to establish a phonematic merger of such non-syllabic *ɹ* with the syllabic *ɹ* of unstressed syllables.⁴⁰ Such a tendency, however, is bound to fail in SB for two reasons. First, the non-syllabic *ɹ* followed by a vowel is found to be very unexpressive both acoustically and physiologically (cf. Horn—Lehnert, LL § 440), and so it is often felt necessary to replace the non-syllabic *ɹ* by a sound that would be more distinct in the above-said respects. This leads either to the restoration of the fricative *r* or to the labialization of *ɹ*, resulting, as has been seen in the present paper, ultimately in *w*. Second, the syllabic unstressed *ɹ* does not show any signs of inclination for a phonematic union with the too unstable non-syllabic *ɹ*; it reveals a much greater propensity to a phonematic merger with the vowel-phoneme /ʌ/.⁴¹

To sum up, not even the abandonment of its fricative manifestation can help the present-day SB /r/-phoneme to get out from its structural phonematic isolation, as long as it sticks to its non-labialized character. The position of the /r/-phoneme in the SB phonematic system is thus confirmed to be perceptibly shaken; it undoubtedly constitutes one of the sore points of its system, and this qualitative fact certainly adds some vigour to the above-enumerated tendencies, quantitative and qualitative alike, attacking the position of the /r/-phoneme in the SB standard of today.

The survey of the history of the English /r/-phoneme sketched in the above pages necessarily had to confine itself to the roughest outlines of the examined process. Even so, it may be hoped that the survey has revealed something of the delicate network of the structure exposed to the process and of the variety of forces, both qualitative and quantitative, that have participated in shaping it. In addition, the survey will have fulfilled its task if it has convinced the reader of the presence of a number of problems in the present-day phonematic structure of SB and if it has given him some idea of the work of the forces striving after some solution of such problems.

NOTES

¹ J. Vachek, On the Interplay of Quantitative and Qualitative Aspects in Phonemic Development, *Zeitschr. f. Anglistik u. Amerikanistik* 5, 1957, pp. 5–28.

² J. Vachek, Notes on the Phonological Development of the NE Pronoun *She*, *SPFFBU* 1954, A 2, pp. 67–80.

³ Further cited as SB; NE will stand for Northern English (while ModE is Modern English) and GA for General American.

⁴ See, e. g., D. Jones, *An Outline of English Phonetics*⁹ (Cambridge 1956), § 755.

⁵ This dating has been advocated by the most recent handbooks of OE: R. Quirk — C. L. Wrenn, *An Old English Grammar* (London 1955), § 21, A. Campbell, *Old English Grammar* (Oxford 1959), § 461.

⁶ This older estimate was voiced, among others, by K. Luick, *HG* § 704.

⁷ Cf. the penetrating remarks by H. Kurath, *The Loss of Long Consonants and the Rise of Voiced Fricatives in Middle English*, *Language* 33, 1956, pp. 435–445.

⁸ See K. Luick, *HG* § 505f.

⁹ See K. Luick, *HG* § 567. According to W. Horn — M. Lehnert, *Laut und Leben* [further cited as LL] (Berlin 1954), § 430, the EModE *r* was „ein zurückgebogener Laut.“ — Most recently, E. J. Dobson, *English Pronunciation 1500–1700* (Oxford 1957), p. 724, is inclined to ascribe the lowering influence exercised by *r* on the preceding vowels simply to “a change in the nature of the consonant, from point-trilled to a variety of the PresE point fricative”, leaving aside the question of whether there was any inverted articulation about this fricative or not. Still, in the following lines Dobson endorses D. Jones’s statement concerning the equivalence of the frictionless continuant variety of *r* to a weakly pronounced “retroflex [ə]”; he opines that the mutual resemblance of the two sounds can account for the rise of the *a*-glide before *r*. It is perhaps not too bold to argue that this endorsement shows that Dobson’s opinion does not necessarily contradict here the theses voices by Luick and Horn — Lehnert. Dobson may be perfectly right in attributing the specific influence of ME and EModE non-prevocalic *r* upon the preceding vowels to the essential fact that such *r* had ceased being a trill and become a fricative; if this was so, it was hardly of importance whether the friction was taking place in the alveolar region or further back, against the front part of the palate — both ways of articulation may have had the same effect. It is only on the above-mentioned evidence of the NE and GA standards that one is led to the assumption of the inverted articulation of the EModE non-prevocalic *r*-sound.

¹⁰ E. Sievers, *Angelsächsische Grammatik*,³ (Halle 1898), p. 130; his opinion is upheld by the more recent version of the book, prepared by K. Brunner (e. g. *Altenglische Grammatik*, Halle 1942, p. 149).

¹¹ H. Sweet, *A History of English Sounds from the earliest period* (Oxford 1888), § 506; H. C. Wyld, *A Short History of English*³ (London 1937), p. 34; K. Luick, *HG* § 143; E. J. Dobson, l. c., p. 724.

¹² The bimoric value of OE long vowels and “long diphthongs” is discussed by J. Vachek, *Notes on the Quantitative Correlation of Vowels in the Phonematic Development of English*, *Mélanges F. Mossé* (Paris 1960), pp. 444–456.

¹³ The omission of *r* in such positions must have taken place by the close of the 15th century in colloquial speech but about two and a half centuries later in cultivated speech (Luick, *HG* § 567; Horn — Lehnert, LL § 431f.).

¹⁴ On this point, see J. Vachek, *Phonemic Remarks on the “Short Mixed Vowel of Modern English”* *SPFFBU* A 4, 1956, pp. 81–92.

¹⁵ For particulars, see D. Jones, *Outline*,⁸ § 759f.; W. Horn — M. Lehnert, LL § 433, who point out that the phenomenon has also been registered in English local dialects and the Eastern variety of American pronunciation.

¹⁶ A peculiar instance of the use of the hiatus *r* by a child was kindly communicated to me by Dr. W. R. Lee: a little girl, aged 8, used the form [ə ræpl], meaning *an apple*.

¹⁷ It may be of interest to note that the delimitative *r* somewhat resembles the French “mots de liaison”, like /z/, /t/ etc., established by V. Hořejší, *Pokus o fonologický výklad t. zv. liaison ve francouzštině* [An Attempt at a Phonematic Explanation of the So-Called *liaison* in French], *Časopis pro mod. filol.* 37, 1955, pp. 154–160.

¹⁸ See, e. g., D. Jones, *Outline*,⁸ § 758, see also his *Everyman’s English Pronouncing Dictionary*¹¹ (London 1956), p. xxv.

¹⁹ V. Hořejší in the paper referred to above (Note 17) explains the decrease of the use the *liaison* in French as a manifestation of an effort to individualize the French word (i. e., to achieve

its clearer delimitation in the context of the sentence). If this motive is also present in the above-described English tendency to abolish the hiatus *r*, it can hardly claim to be the primary force underlying the process; it may, of course, be regarded as a sort of catalyzer, contributing to the intensity of the said tendency.

²⁰ See, e. g., D. Jones, *Outline*,² §§ 628, 631.

²¹ Cf. W. Horn—M. Lehnert, LL § 434.

²² Cf. J. Vachek, Prof. Karl Luick and Problems of Historical Phonology, Čas. pro mod. fil. 19, 1933, pp. 273—292 (see esp. p. 277f.); also the same author's paper quoted above Note 1 (esp. p. 6).

²³ An interesting piece of evidence of the above fact was kindly communicated to me by Prof. D. B. Fry: A little girl was instructed by her parents to pronounce words like *train*, *truck* in a careful manner. Soon she astonished her parents by pronouncing the word *satchel* like [sætrel].

²⁴ D. Jones, *Outline*³, Leipzig 1933, §§ 749, 797; Ida C. Ward, *The Phonetics of English*⁴ (Cambridge 1945), § 360.

²⁵ W. Horn—M. Lehnert, LL § 440.

²⁶ See O. Jespersen, *Lehrbuch der Phonetik*, Leipzig 1904, p. 245.

²⁷ Incidentally, the phonematic merger of /r/ and /w/ also exposes the inadequacy of the phonematic interpretation of English *u*-diphthongs as "vowel + /w/". If this kind of interpretation were correct, members of SB word-pairs like *curry* — *cowie* [kari — kawi] would have to be regarded as homonymous after the merger. And yet they continue being kept apart as (kawi — kauri). This clearly demonstrates the unpracticability of phonematic interpretations evaluating the second component part of the English *u*-diphthongs as *w*.

²⁸ For more details concerning this correspondence, see J. Vachek, *Two Chapters on Written English*, *Brno Studies in English* 1, 1959, pp. 7—38 (esp. pp. 14—17).

²⁹ Many books and papers have been devoted to this subject; for English see especially E. Bachmann, *Der Einfluss des Schriftbildes auf die Aussprache im Neuenglischen* (Breslau 1940); for French, V. Buben, *Influence de l'orthographe sur la prononciation du français moderne* (Bratislava 1935).

³⁰ More comment on the co-operation of internal and external motives in language development may be found in our paper quoted above, Note 1 (see especially pp. 21—22).

³¹ Most recently, this change was discussed by A. I. Smirnitskiy in his posthumously printed, highly original paper *Otpadenie konechnogo z v zapadogermanskikhazykakh i izmenenie z v r* [The Loss of the final *z* in West Germanic Languages and the Change of *z* to *r*], *Trudy Institutaazykoznanija AN SSSR* 9, 1959, pp. 115—136.

³² Theoretically, it might be possible to assume that the LME non-prevocalic *r*-sound was an alveolar fricative (this seems to be held by E. J. Dobson); physiological considerations would not necessarily contradict this theory, but, as noted above, the NE and GA facts distinctly advocate the opinion held by Luick and Horn—Lehnert.

³³ Horn and Lehnert opine that the initial trilled *r* did not develop to the present-day SB alveolar fricative *via* the inverted *r* but directly (see LL § 430); this, of course, leaves unexplained the GA state of things in which the articulation of the initial *r* is just as inverted as that of the non-prevocalic *r*. But this issue is irrelevant for our main theme, the decline of the /r/-phoneme in SB, and therefore we will not work it out in detail.

³⁴ The various amounts of semantic relevancy, typical of various positions in the word, are remarkably borne out by the findings of the modern theory of information (see esp. Jerome S. Bruner—Donald O'Dowd, *A note on the informativeness of parts of words*, *Language and Speech* 1, 1958, pp. 98—101).

³⁵ One can heartily agree with A. Martinet when he urges (*Économie des changements phonétiques*, Berne 1955, p. 169f.) that the loss of inflexional endings in originally synthetical languages, developing more or less analytical grammatical structures, cannot be explained on purely mechanical grounds, as exclusively due to the reducing influence of strong dynamic accent. The operation of such accent, that is to say, was rendered possible by the greater semantic importance which the members of the language community began to attach to the word-stem at the expense of the ending morphemes. It is fair to state that an analogous theory was propounded (though unfortunately never published) by V. Mathesius in his lectures on the development of English.

³⁶ Cf. D. Jones, *Outline*,² § 797.

³⁷ A similar structural isolation is a characteristic feature of three more ModE consonant phonemes, viz. /h/ (see our paper quoted above, Note 1, p. 11), /w/ and /l/. As has been shown in Section II of the present paper, an attempt at dealing with the problem of /w/ in the SB phonematic system may be detected in the intended phonematic merger of /r/ and /w/; such

merger would considerably increase the distributional capacity of /w/ and so prop up its position in the language. — As regards /l/, its distributional capacity in ModE is relatively high, so that no sign of any tendency working against it can be ascertained, at least not in the SB standard. (We deliberately omit from the list of the structurally isolated ModE phonemes the *j*-sound which, in our opinion, is not a phoneme in its own right, but an allophone of the vowel phoneme /i/.)

³⁸ The fact that structural isolation in the phonematic system entails lack of efficiency (and thus signalizes a weak spot in the system) was convincingly laid down by A. Martinet in his book quoted above, Note 33; see especially p. 79f.

³⁹ See Proceedings of the Third International Congress of Phonetic Sciences, Ghent 1939, pp. 34—41 (esp. pp. 40f.).

⁴⁰ To all evidence, such phonematic union has really been effected in the GA standard of English where non-syllabic prevocalic [ə] (as in *red*) obviously constitutes an allophone of the non-prevocalic syllabic [ə] (as in *better, part*); see our paper quoted above, Note 14, footnote 26.

⁴¹ Cf. our paper quoted in Note 14, esp. pp. 86—87.

SOMRAK FONĚMU /r/ V [ANGLIČTINĚ

Autor připomíná své starší pojednání, v kterém ukázal, jak byl v průběhu vývoje angličtiny postupně likvidován foném /h/. Do jisté míry lze podobný vývoj zjistit i u jihoanglického fonému /r/, který v průběhu vývoje angličtiny byl eliminován ze značného počtu svých bývalých výskytových poloh. Přestože mu dosti značný počet výskytových poloh ještě zbývá, svědčí některé fonetické jevy (vznik a naopak zánik hiátového *r*, labialisace *r* a tím jeho přechod ve *w* u některých ja. mluvčích, sklon ke splynání počátečních skupin *tr-*, *dr-* s afrikátami *č*, *dž*) o tom, že postavení fonému /r/ je dnes v ja. standardu značně otřesené.

Stejně jako u fonému /h/, i zde vyplývá postupná likvidace /r/ z pohnutek rázu jak kvantitativního (zmenšení počtu výskytových poloh), tak kvalitativního. Kvalitativní činitelé, kteří tu hráli a hrají důležitou úlohu, jsou hlavně dva: 1. Funkční obojakost ja. /r/, které má jednak funkci rozlišovat významy slov, jednak funkci vymešovaci (hiátové *r* je signálem mezislovné hranice). 2. Strukturální osamocení ja. fonému /r/ ve fonologickém systému ja. standardu, datující se od doby, kdy hrůvka výslovnost hlásky *r* přešla ve výslovnost třenou (patrně invertní). Pozornost je věnována i chronologii všech procesů.

Pokud jde o řešení situace ja. /r/, vznik i zánik hiátového /r/ se zřejmě snaží zrušit funkční obojakost ja. fonému. O radikální vyřešení všech problémů ja. /r/ usiluje tendence k splynutí tohoto fonému s ja. /w/. K tomuto splynutí však dochází pouze u některých mluvčích, jinde mu brání civilisační činitelé. Tak zůstává ja. /r/ bolavým místem ja. fonologického systému.

РЕГРЕСС ФОНЕМЫ /r/ В АНГЛИЙСКОМ ЯЗЫКЕ

Автор напоминает о своем ранее напечатанном исследовании, в котором была показана постепенная ликвидация фонемы /h/ в развитии английского языка. В определенной мере можно подобный процесс установить также у южноанглийской фонемы /r/, которая с развитием английского языка исключалась постепенно из значительного числа своих позиций. Несмотря на то, что она еще сохраняется в довольно многих позициях, некоторые фонетические явления (возникновение и, наоборот, исчезновение *r* в глатусе, лабиализация *r* и, тем самым, его переход в *w* у некоторых южноанглийских говорящих, склонность к слиянию начальных групп *tr-*, *dr-* с аффрикатами *č*-, *dž*-) свидетельствуют о том, что положение фонемы /r/ в настоящее время в южноанглийском стандарте значительно расшатано.

Подобно тому как у фонемы /h/, и здесь постепенная ликвидация /r/ имеет своей причиной с одной стороны факторы количественного характера (уменьшение числа позиций, в которых она встречается), с другой стороны факторы качественного характера. Из последних, игравших здесь и играющих до сих пор важную роль, следует назвать два: 1) Функциональную двуразность южноанглийского /r/, которое обладает как различительной функцией (оно различает значение слов), так и распределительной функцией (*r* в глатусе — сигнал границы слов). 2) Структуральная изолированность южноанглийской фонемы /r/ в фонологической системе южноанглийского стандарта

относящаяся к тому времени, когда дрожащее r перешло во фрикативное (вероятно, инвертированное). В статье обращается внимание и на хронологию всех процессов.

Относительно разрешения общего состояния южноанглийского /r/ можно предположить, что возникновение и исчезновение r в гватусе направлено на ликвидацию функциональной двусторонности южноанглийской фонемы. На окончательное решение всех проблем, связанных с южноанглийским /r/, направлен намечающийся процесс слияния данной фонемы с южноанглийским /w/. Но само слияние происходит только у некоторых говорящих; в других случаях ему препятствуют общекультурные факторы. Итак, южноанглийское /r/ остается большим местом южноанглийской фонологической системы.

Перевел С. Жажга